Cultural Beliefs, Religiosity, and Work

Nitsa (Kaliner) Kasir

Sami H. Miaari

Eran Yashiv

Cultural Beliefs, Religiosity, and Work

Nitsa (Kaliner) Kasir [1]   Sami H. Miaari [2]   Eran Yashiv [3]

February 2023

Abstract

Arab-Israeli women have low labour force participation rates with only 1 in 3 women being employed. This paper investigates how cultural factors, such as attitudes towards women in the workplace, affect this group's labour force participation conditional on economic and demographic characteristics. Using a novel survey that collects details information about women's cultural beliefs, we find measures of a woman's "modernity" have a positive impact on labour market participation. In particular, conditioning on economics and demographic variables, women with more proficient computing skills and women with a driving license are more likely to participate in the labour market. Consistent with existing studies, we find that more highly educated women are more likely to be employed while women with more children are less likely to be employed. We also find that women who live in households with more salaried members are more likely to participate in the labour market.

Keywords: *Female labor force participation, culture, beliefs, Muslim, Israel*

[1] Nitsa (Kaliner) Kasir, the National Insurance of Israel.
[2] Sami H. Miaari, the Department of Labor Studies, Tel Aviv University.
[3] Eran Yashiv, the Eitan Berglas School of Economics, Tel Aviv University.

1. Introduction

Arab women in Israel have low rates of labour market participation compared to their both Jewish women and Arab men in Israel. Since the early 2000s, the employment rate among Jewish women of working age in Israel has risen sharply to 82% in 2018. However, the employment rate among Arab-Israeli women continues to be low, only reaching approximately 38% in 2018. Although the employment rate of both Jewish and Arab-Israeli women continues to rise, the gap between these two groups has not converged.

This paper aims to investigate reasons for the low labour force participation rate among Arab-Israeli women. While the existing literature primarily focuses on economic and demographic characteristics that affect labour force participation, this paper also considers the role of cultural factors on labour market outcomes.[4] Such cultural factors include variables such as religion, the degree of religiosity, views on the role of women in work and in the household, and the use of "modern" technology. Existing research suggests that cultural factors, and in particular a woman's degree of "modernity", affects labour supply, making this a fruitful area to study. [5]

Understanding the connection between cultural beliefs and the integration of Arab-Israeli women in the labour market is important for several reasons. **First**, increasing employment among this group could be one of the key factors to reduce high levels of poverty in the Arab population. According to the National Insurance Institute (NII), 57.4% of Arabs were living poverty in 2009, compared to only 16.9% of Jews. Only 3.7% of families with two or more salaried workers were in poverty, while for those with one or no salaried work in the family, the figures were 24.9% and 68.9% respectively. **Second**, increasing labour force participation among Arab-Israeli women could also be seen as an important route to increasing

---

[4] Thus, for example. Lifschitz (2004) found, in all the simulations, she ran, that 'modern' women (defined as belonging to a family in which both spouses are considered equal) participate in the job market more than 'traditional' women (belonging to a family in which the man is the primary provider).

[5] Kasir (Kaliner) and Yashiv (2010, 2013a, 2013b), and King, Beon and Valda-Zadik and Habib (2009) researched the various factors affecting (the emergence of Arab women in) the likelihood of Arab women accessing and fully participating in the labour market; Kasir (Kaliner) and Yashiv (2021) researched the barriers facing Arab women and the changes in the nature and extent of these barriers over a 40 year period. In so doing, they distinguished between pre-job barriers to entry, i.e. Barriers to obtaining human capital, and barriers to entry and advancement in the job market itself; Lifschitz and Thaoco (not yet published) examined the effect that knowledge of the Hebrew language has on the employment of Arab women; and Schlosser (2006) examined the effect of providing free pre-KG education on employment offers for Arab mothers.

Besides the academic research, analyses have been published which examine various issues relating to female employment: Kasir (Kaliner) and Yashiv (2011) focused on employment among young women; Malki (2011) and Barak (2019) addressed the contribution of public transport to the ease with which Arab women could gain access to the labour market in Israel; Fuchs and Friedman and Wilson (2018) surveyed the changes which have occurred over the years in the education of Arab women.

empowerment and creating economic independence of Arab women. **Third**, increasing Arab-Israeli women's participation in the labour force will also contribute to the Israeli economy. An analysis of long-term economic trends in Israel from 1965 to 2009 suggests a high correlation between the number of people employed and GDP. Since Arab-Israeli women comprise one of the groups with the lowest employment participation rates, they are an important source of potential economic growth and prosperity for Israel. We expect our findings to be informative for policymakers who wish to increase labour force participation among this group. [6]

In this paper, we use a unique survey dataset to examine this question. This survey allows researchers to measure various aspects of culture that are not commonly available in other datasets. For example, we have information on the religion of the woman, their level of religiosity, their opinions about female labour force participation, and their family's attitude towards females working outside the home. By collecting information on the respondents' proficiency with computer software and whether the respondent has a driving license, the survey also provides us with information about how "modern" or "traditional" the woman is.

Using this data, we estimate OLS, probit, and 2SLS models to investigate the determinants of female labour force participation. Our results indicate that measures of a woman's "modernity" have a positive impact on labour market participation. In particular, conditioning on economics and demographic variables, women with more proficient computing skills and women with a driving license are more likely to participate in the labour market. Consistent with existing studies, we find that more highly educated women are more likely to be employed while women with more children are less likely to be employed. We also find that family background matters: women who live in households with more salaried members are more likely to participate in the labour market.

The rest of this paper is structures as follows. Section 2 describes related literature. Section 3 discusses the data used and related descriptive statistics. Section 4 presents a simple labour supply model. Section 5 presents the empirical model. Section 6 presents the main results. Section 7 concludes and discusses avenues for potential research.

---

[6] Government decision 1539, dated 21.3.2010; Government decision 922, dated 30.12.2015. For further details on the plans, steps, policy tools used, and the budgets allocated for this purpose, see Kasir (Kaliner) and Tsachor-Shai (2016) and Kasir (Kaliner) and Yashiv (2021).

2. Literature Review

This paper is related to several strands of literature. **First**, it is related to a large literature exploring the economic and demographic determinants of female labour supply. Traditionally, this literature focuses on economic and demographic variables such as education, fertility, own and spouse income, taxes and subsidies. Killingsworth and Heckman (1986), Blundell and Macurdy (1999), and Blundell et al. (2007) provide detailed reviews of this literature.

A key pattern documented by this literature is the large rise in female labour force participation (LFP) in developed economies over the 20th century. For example, in the US, female LFP rose from 2% at the beginning of the 20th century to almost 72% in the late 1990s. This increase in female LFP is attributed to various factors including technological progress affecting home production, a rise in education levels, a decrease in the cost of childcare, medical advances, and the introduction of the contraceptive pill and associated declines in fertility. Costa (2000) and Goldin (1990, 2006) provide reviews explaining the rise in female LFP.

Second, this paper is related to studies focusing on how cultural factors contribute to female LFP. The main hypothesis of this literature is that a society's cultural beliefs and norms surrounding the role of women and men in the labour market affects LFP. The Oxford English Dictionary defines culture as *"the distinctive customs, achievements, product, outlooks, etc., of a society or groups; the way of life of a society or group"*. In practice, economics and sociological studies examining cultural factors usually focus on variables such as religiosity, beliefs about the role of women in the labour market and household, and propensity to use modern technologies such as cars, computers, and the internet.

Given that cultural beliefs differ across societies and religions, the cultural approach to explaining LFP is a potentially promising way of explaining the well-documented gap LFP between Muslim and non-Muslim women (Connor and Koenig, 2015; Khattab et al., 2018; Klasen and Pieters, 2012; Pastore and Tenaglia, 2013). Abdelhadi (2017) investigates the correlation between female employment and the level of religiosity of Muslim women (measured by mosque attendance, prayer habits, and self-reported perceptions of the importance of women). The author finds a positive correlation between mosque attendance and employment. In contrast, a woman's prayer habits and the importance of the place of religion have no significant impact on employment. Read and Bartowski (2000) provide evidence that culture, measured by the tendency to wear traditional dresses and costumes, is negatively

correlated with women's employment. This could partly reflect supply side factors: women who are more likely to adhere to traditional dress codes also have other beliefs that limit labour force supply. It could also reflect demand-side factors: employers may discriminate against women who dress in a traditional fashion.

Several studies also document the importance of cultural factors in advanced Western countries. Antecol (2000) finds evidence of gender gap in LFP across home country groups among US immigrants. Over half of the overall variation in the gender gap across home country groups can be attributed to home country labour force participation rates. Fernandez (2007) and Fernandez and Fogli (2009) examine the impact cultural factors on hours worked by studying second-generation American women. They find that culture – proxies for by the past female LFP and total fertility rates from the country of origin – can explain female LFP, even after controlling for various individual characteristics.

3. Data

This paper uses unique survey data collected for this paper. The survey sample consists of a representative sample of Arab women in Israel, excluding East Jerusalem and Golan (a list of communities included in the survey can be found in the appendix). Survey interviews were carried out over a two-and-a-half-week period between September 25 2016 and October 13 2016. The sample includes roughly 1,000 women over 18 years old.

Variables. This survey is suitable for our research question for several reasons. Most importantly, in addition to standard demographic and socio-economic variables, this survey also collects information on various aspects of culture. In particular, with regards to cultural factors, the survey first asks questions about attitudes regarding a woman's gender role: their perceptions of their own identity, the attitude of their husbands, and the attitudes of their family members. Second, information is collected on the level of religiosity of the woman, her spouse, and the family that raised her. We define the degree of religiosity along the following scale: very religious, religious, traditional-religious, traditional, and secular. Religious individuals are those who follow and practice Islam in a devout fashion (e.g. fasts and prays according to the rules of Islam) while traditional-religious individuals are those who respect the rules of Islam but may not necessarily practice it. Third, the survey collects information on the woman's attitudes on modern dress, modern knowledge, and computing skills. In particular, the survey asks questions about the woman's command of Hebrew and England, command of softwares

typically required for working in a computerized environment, and whether the woman has a driving license.

Furthermore, the survey collects information on exogenous factors that are not affected by the woman's LFP. Such information includes the educational attainment of the parents and the mother's participation into the labour market. The survey also contains detailed information about the woman's labour market outcomes. We focus on two measure: (i) labour force participation which takes on a value of 1 if the woman has been working for at least one hour per week or is unemployed but is seeking work; (ii) employment status which takes on a value of 1 if the woman has worked one or more hours in salaried work in the past week.

Sampling method. The survey population is selected by sampling different layers of the Israeli female population. The first sampling layer concerns the interviewee's religion. In particular, the population is divided into three sample cells: Muslims, Christians, and Druze. Since the minority population includes small ethnic groups, a disproportionate sampling method was selected to over-represent small groups in the targeted population (Druze and Christian women). The second sampling layer concerns the interviewee's age. Women were divided into six age groups (19-24, 25-34, 34-44, 45-54, 55-64, and 65 or over). These age groups were then sampled according to their relative size in the target population. To weight our sample observations, we used weights based on data from the Central Bureau of Statistics.

3.1. Descriptive Statistics

This section presents descriptive statistics to examine the correlation between various cultural characteristics and the LFP of Arab-Israeli women. We focus on three central aspects of culture: (i) attitudes towards female LFP, (ii) the use of advanced technology ("modernity"), and (iii) religiosity. It is worth emphasizing that the findings in this section capture statistical rather than causal links. Furthermore, these findings do not focus on the relationship between various cultural variables.

Attitudes towards female labour force participation. Is there a correlation between spousal attitudes towards female LFP and actual female employment? The findings in Figure 1 shows that 48% of women whose husbands encourage them to participate in the labour market are indeed employed. In contrast, among women whose husband objects to them being employed, the employment rate is only at 4%. The figure suggests that over half of the men

samples encourage their wives to participate in the labour market, but this rate is low at 58%. Similarly, there appears to be a correlation between family's attitude towards female LFP and actual female employment. In particular, the employment rate among women whose family encourages female LFP is around 51. In contrast, the employment rate among women in families who discourage female LFP is only 16%. This data suggests that the attitudes of a woman's spouse and family could be an important determinant of LFP. It is interesting to note that the reported rate of familial discouragement oft LFP (8%) is roughly half of the reported rate of spousal encouragement of LFP (15%).

[Insert Figure 1 here]

There also appears to be a correlation between attitudes towards women's dress and employment rates. Employment rates among women who believe that Arab women should dress traditionally, with a veil, are significantly lower than employment rates among women who believe that Arab women should dress in a modern fashion (around 25% and 59%, respectively). Note that this correlation between attitudes towards dress code could capture both religious and cultural beliefs and the expectation that employers may be hesitant about employing women wearing religious-traditional dress.

Figure 2 shows that there is a correlation between mothers' employment status and actual female LFP. The employment rate among women whose mothers worked for many years is high compared to women whose mothers only worked a few years, and much higher than that among women whose mothers did not work at all (78% of all women). Furthermore, the employment rate of women with at least one parent who graduated from high school is significantly higher than that of women whose parents did not graduate high school. This suggests that there may be an intergenerational component in female LFP: women are more likely to work if their mother also worked and if at least one of their parents acquired high-school education.

[Insert Figure 2 here]

Use of advanced technology. Figure 3 shows that the employment rate among women who hold a driving license is higher than the employment rate among women who do not possess a driving license: 48% of women in the former group are employed while only 20% in the latter group are employed. The survey also reveals a correlation between women's proficiency in software use and employment rates. Around half of the women who report that they are proficient in using software typically used in computerized environments are

employed. In contrast, only 18% of women who report being not proficient in using these software are employed.

Level of religiosity. A large proportion of religious families characterizes Arab society. Around 32% of women surveyed stated that they are religious or very religious. An additional 32% report being religious in a traditional sense. Furthermore, the reported rates of religiosity of a woman's parents is even high: 39% report their parents being religious or very religious and 36% report their parents being religious in a traditional sense. Figure 4 shows that there is a negative correlation both between the level of religiosity of the women and her probability of being employed and between the level of religiosity of her parents and the woman's probability of being employed.

[Insert Figure 4 here]

Summary of descriptive patterns. Overall, Figures 1 to 4 provide preliminary evidence that the level of modernity is strongly correlated with a woman's LFP. To examine this hypothesis further, we categorized women into "modern" and "traditional" groups. In particular, we define a "modern" woman as a woman with 13 years of education or over, with a driving license, whose level of English is medium or higher, who is proficient in using software compatible with working in a computerized environment, who is not religious or traditional, and whose family or spouse encourages her to go out to work. In contrast, a "traditional" woman was defined as a woman with up to 10 years of education, who doesn't have a driving license, who is not proficient in a software compatible with working in a computerized environment, who has a low level of English competency, who is religious or tradition-religious, and whose family or spouse doesn't encourage (or even opposes) her participation in the labour force. According to this categorization, 13% of the population are "modern" and 11% are "traditional".

Figure 5 shows that there is a large difference in employment rates between "modern" and "traditional" women. The majority of "modern" women participate in the labour market and their employment rates are similar to average rates of employment of women in Israel, a rate that is much higher than the average rate of women in the OECD. In contrast, very few "traditional" women are employed outside the home. These findings are robust to other methods of defining modernity, including definitions, which did not include the level of religiosity. This finding is similar to the finding of Kasir and Yashiv (2010).

[Insert Figure 5 here]

4. Labour supply model

This section presents a simple labour supply model based on Blundell and Macurdy (1999). Each woman i has a quasi-concave utility function increasing in consumption c and leisure l. A woman who works h_i earns an hourly wage of w_i and receives non-labour income y_i. We capture cultural factors through a vector v_i of individual characteristics. Utility derived from consumption c and leisure l depends on a vector v_i of individual characteristics. We allow the vector v_i to include both cultural and demographic characteristics that vary across individuals. Examples of cultural elements include views on the role of women in society, views on the extent to which women should participate in the labour market, and the "rightful" role of women in the household, and the degree of religiosity.

Maximization problem. Each period, the woman i solves the following maximization problem

$$\max_l U(c_i, l_i; v_i) \tag{1}$$

Subject to

$$c_i = y_i + w_i h_i \tag{2}$$

$$l_i = 1 - h_i \tag{3}$$

The corresponding first order conditions are given by:

$$U_c(c_i, l_i; v_i) = \lambda_i \tag{4}$$

$$U_l(c_i, l_i; v_i) \geq \lambda_i w_i \tag{5}$$

where λ, the lagrange multiplier, is the marginal utility of income. If the inequality in equation (5) holds strictly, then the women will choose not to work. This allows us to define a reservation wage w_i^R by the following equation.

$$U_l(c_i, l_i, v_i) = \lambda_i w_i^R$$

The woman's participation decision is then given by the following condition:

$$p_i = 1\{h_i^* > h_i^0\}$$

Where

$$h_i^* = h_1(w_i, y_i; \boldsymbol{v_i}) \tag{6}$$

$$h_i^0 = h_2(w_i^R, y_i; \boldsymbol{v_i}) \tag{7}$$

In particular, when the value of h_i^* exceeds the value h_i^0, the woman participates in the labour force ($p_i = 1$), otherwise the woman decides not to participate in the labour force ($p_i = 0$). The precise functional forms of h_i^* and h_i^0 depend on the specification of the utility function (see Blundell et al., 2007).

5. Empirical methodology

In light of the model described in Section 4, in order to study the determinants of female labour force participation, we adopt the following functional forms for h_i^* and h_i^0:

$$h_i^* = \delta_0 + z_{1i}\delta_1 + \ln w_i \, \delta_2 + \ln y_i \, \delta_3 + \zeta_i \tag{8}$$

$$h_i^0 = \gamma_0 + z_{1i}\gamma_1 + \ln w_i \, \gamma_2 + \ln y_i \, \gamma_3 + \xi_i \tag{9}$$

where δ_0 and γ_0 are constants; z_{1i} is a vector of exogenous independent variables such as age and education; $\ln w_i$ is the natural logarithm of the wage offered to the woman; $\ln y_i$ is the natural logarithm of the individual's non-labour income; and ζ_i and ξ_i represents unobserved characteristics. The parameters of interest are $\{\delta_1, \delta_2, \delta_3, \gamma_1, \gamma_2, \gamma_3\}$.

We break down the vector z_{1i} into two components consisting of demographic variables z_{1i}^D (e.g. education and age) and cultural variables z_{1i}^C (e.g. religiosity and attitudes to female LFP):

$$z_{1i} = [z_i^D, z_i^C]$$

Given these functional form assumptions, the participation equation can therefore be written as:

$$p = 1\{\delta_0 + z_{1i}\delta_1 + \ln w_i \, \delta_2 + \ln y_i \, \delta_3 + \zeta_i > \gamma_0 + z_{1i}\gamma_1 + \ln w_i \, \gamma_2 + \ln y_i \, \gamma_3 + \xi_i\} \tag{10}$$

For women who do not participate in the labour force, wages are not observed. To deal with this, we assume that wages are given by the following process:

$$\ln w_i = \theta_0 + z_{1i}\theta_1 + z_{2i}\theta_2 + \omega_i \tag{11}$$

where z_{2i} is a vector of exogenous variables, θ_0 is a parameter, θ_1 and θ_2 are parameter vectors, and ω_i captures unobserved characteristics.

Furthermore, we assume that non-labour income y_i is determined by the following process:

$$\ln y_i = \Pi(z_i) + \chi_i \tag{12}$$

where $z_i = [z_{1i}, z_{2i}, z_{3i}]$ is a vector of variables which includes the demographic and cultural variables, along with an additional vector of exogenous variables z_{3i}. χ_i captures unobserved characteristics.

Combining equations (10), (11), and (12), the participation equation is therefore given by:

$$p_i = 1\{\beta_0 + z_{1i}\beta_1 + z_{2i}\beta_2 + z_{3i}\beta_3 + u_i > 0\} \tag{13}$$

where $\beta_0, \beta_1, \beta_2, \beta_3$ are parameters that are a function of the previous parameters, z_{1i}, z_{2i}, z_{3i} are as described previously, and u_i represents unobserved characteristics.

The appropriate method to estimate equation (13) depends on the assumptions regarding the distribution of unobserved characteristics. In this study, we estimate equation (13) by running OLS, probit, and 2SLS regressions. In particular, we run regressions of the following form:

$$Y_i = \alpha_1 X_1 + \alpha_2 X_2 + u_i$$

Where Y is participation or employment X_1 is a vector of economic and demographic variables. In this vector, we include age, number of children, language skills, district of residence, education, and marital status. X_2 is a vector of cultural variables. In this vector, we include religion (Muslim or Druze, measured relative to Christian), the level of religiosity, attitude towards work, indicators for their use of modern technology such as having a driving license or having computing skills, and their support for traditional clothing for women. In our main tables, we represent the α parameters.

One concern is that the cultural variables in vector X_2 are endogenous (Wooldridge, 2010). For example, cultural change may be a consequence of labour market participation. Fernandez (2013) develops a model where cultural change is a consequence of intergenerational learning of the long-term wage level of women in the labour market. According to this model, female labour force participation and cultural beliefs may be

simultaneously determined. To account for this potential simultaneity, we also estimate (13) using 2SLS. We instrument for variables in X_2 by including religious background variables available in the survey such as the religiosity of the woman's family, an indicator for whether the mother works, and an indicator for whether her parents and other family members encourage female labour force participation.

6. Results

Table 1 columns (1) and (2) present OLS and probit estimates of the α parameters in equation (13) where the dependent variable is labour force participation.[7] Column (1) firstly indicates that several cultural factors are correlated with an increase in female labour force participation. Firstly, women who have higher computer software skills are more likely to participate in the labour market. Second, women who have a driving license are more likely to participate in the labour market. Third, women whose family encourages them to work are more likely to participate in the labour market. This is confirmed by the probit estimates in column (2). Overall, this indicates that several aspects of "modernity", such as aptitude for computing software, are positively correlated with labour force participation. In contrast, variables such the particular religion of the woman, their level of religiosity, and their opinions about whether should wear traditional dress are not correlated with labour force participation.

Table 2 columns (1) and (2) repeat the same exercise by changing the dependent variable to employment.[8] The findings are very similar to those when the dependent variable was labour force participation (Table 1).

[Insert Tables 1 and 2 here]

Tables 3 and 4 include economic and demographic variables into the regression. When these additional controls are included, we see that there is still a positive correlation between having a driving license and labour force participation. However, the effect of computing skills diminishes when an indicator for having a driving license is included. This possibly suggests that the two variables are correlated and that both capture some underlying notion of modernity. In line with the findings of Table 1 and 2, religion, religiosity, and support for modern dress do not appear to have an effect on labour force participation or employment.

---

[7] As discussed in Section 3, the labour force participation variable takes on a value of 1 if the women has been employed for one hour or more in the past week or is unemployed but seeking work.
[8] As noted in Section 3, the employment variable takes on a value of one if the woman has worked for one or more hours in the past week.

In terms of the economic and demographic variables that are important for labour market outcomes, Tables 3 and 4 indicate that higher levels of education (BA, MA, and beyond) and the number of salaried individuals at home are positively correlated with labour force participation. In contrast, having more children is negatively correlated with labour force participation. Overall, including the economic and demographic variables raises the R^2 by around 0.1, depending on the specific specification.

[Insert Tables 3 and 4 here]

As mentioned previously, a concern is that the cultural variables are endogenous to labour market outcomes. In order to deal with this, in Tables 5 and 6, we present 2SLS estimates of equation (13) where we instrument the potentially endogenous cultural variables by familial characteristics such as the religiosity of the parents, the religiosity of the siblings, the employment status of other family members, and whether other family members support female labour force participation. The F tests reported at the bottom of the tables indicate that the correlation between the instrumental variables and the potentially endogenous religiosity variable is high (F-stat = 46.4). However, the correlation is much weaker for the computer skills variable (F-stat=292).

When we instrument for the cultural variables, the results indicate that possessing computer skills (modernity) is still positively and significantly correlated with labour force participation. Although owning a driving license is positively correlated with labour force participation, the estimated impact is not statistically significant. Consistent with the previous OLS and Probit findings, this table also confirms the finding that the level religiosity does not have a significant effect on labour force participation; that religion does not have a significant effect; and that attitudes towards traditional dress do not have a significant effect.

Regarding the other economics and demographic variables included in the vector X_1, the 2SLS estimates indicates that more educated and older women are more likely to be employed. Women with more children are less likely to be employed. Women who live in households with more salaried individuals are also more likely to participate in the labour force. Marital status and residential areas do not appear to have a significant effect on labour force participation. Knowledge of Hebrew has a positive effect on participation and employment, although the effect is only significant for employment. Interestingly, knowledge of English does not have a significant effect on participation and has a negative effect on employment. This could be due to multicollinearity between several variables. When we omit certain control

variables (in particular the education variables and the number of salaried members in the household), the negative correlation disappears.

[Insert Tables 5 and 6 here]

To examine this potential issue of multicollinearity, Table 7 presents correlation coefficients between the various explanatory variables. The table shows that education is highly correlated with knowledge of Hebrew, knowledge of English, computer skills, owning a driving license, and family support for work. It is negatively correlated with levels of religiosity, opinions about traditional dress, and the religiosity of parents and siblings. Since all of the cultural variables, which have a positive correlation with the education variables appear to be negatively correlated with, age, this indicates that multi-collinearity may be an issue.

[Insert Table 7 here]

7. Conclusion

Arab-Israeli women have low labour force participation rates with only 1 in 3 women being employed. This paper examines the reasons for low labour force participation, focusing on the role of cultural factors such as religiosity and modernity on actual employment. We use a unique survey dataset to examine this question. This survey contains information on the religion of the woman, their level of religiosity, their opinions about female labour force participation, and their family's attitude towards females working outside the home.

Our results indicate that measures of a woman's "modernity" have a positive impact on labour market participation. In particular, conditioning on economics and demographic variables, women with more proficient computing skills and women with a driving license are more likely to participate in the labour market. More highly educated women are more likely to be employed while women with more children are less likely to employed. We also find that women who live in households with more salaried members are more likely to participate in the labour market. We expect that our findings will be useful for policy makers interested in increasing the integration of Arab-Israeli women in the labour market.

References

החלטת ממשלה 1539 (מיום 21.3.2010) על תכנית חומש לפיתוח כלכלי של ישובים במגזר המיעוטים.

החלטת ממשלה 922 (מיום 30.12.2015) על פעילות הממשלה לפיתוח כלכלי באוכלוסיית המיעוטים בשנים 2016–2020.

Abdelhadi, E. (2017). Religiosity and Muslim women's employment in the United States. *Socius*, *3*, 2378023117729969.

Antecol, H. (2000). An examination of cross-country differences in the gender gap in labor force participation rates. *Labour Economics*, *7*(4), 409-426.

Barak, A. (2019). The impact of public transport on employment in Arab society. A series of articles for discussion (March 2019**). Bank of Israel.**

Blundell, R., & MaCurdy, T. (1999). Labor supply: A review of alternative approaches. In Handbook *of labor economics* (Vol. 3, pp. 1559-1695). Elsevier.

Blundell, R., MaCurdy, T., and C. Meghir (2007). Labor supply models: Unobserved heterogeneity, nonparticipation and dynamics. *Handbook of econometrics*, *6*, 4667-4775.

Costa, D. L. (2000). From mill town to board room: The rise of women's paid labor. *Journal of Economic Perspectives*, *14*(4), 101-122.

Connor, P., and M. Koenig (2015). Explaining the Muslim employment gap in Western Europe: Individual-level effects and ethno-religious penalties. *Social Science Research*, *49*, 191-201.

Fernandez, R. (2007). Women, work, and culture. *Journal of the European Economic Association*, *5*(2-3), 305-332.

Fernandez, R., and A .Fogli (2009). Culture: An empirical investigation of beliefs, work, and fertility. *American economic journal: Macroeconomics*, *1*(1), 146-77.

Fuchs, H. and Friedman Wilson T. (2018). "The Integration of Arab Women in the Job Market: Education, Employment and Salary", Policy Summary, Taub Institute.

Goldin, C. (1992). Understanding the gender gap: An economic history of American women. *OUP Catalogue*.

Goldin, C. (2006). The quiet revolution that transformed women's employment, education, and family. *American economic review*, *96*(2), 1-21.

Kasir (Kaliner) N., Miaari S. and G. Liss-Ginsburg (2019). "Cultural viewpoints, level of religiosity, modern knowledge and the employment of Arab women – Findings of a women's survey in Arab society". Ministry for Labour, Welfare and Social Services, senior strategic and policy planning department (review).

Kasir (Kaliner) N. and A. Tsachor-Shai (2016). "Situation Report: Economic Development – the Arab, Druse and Circassia Society", a roadmap to a common society – initiative of Givat Haviva with support from the European Union. Givat Haviva.

Kasir (Kaliner), N. and E. Yashiv (2010). Patterns of workforce participation among Arab Israelis. *Bank of Israel Survey*, *84*, 39-83.

Kasir (Kaliner), N. and E. Yashiv (2011). "Young Arabs in the Job Market". Caesarea Forum 2011, the Institute for Democracy.

Kasir (Kaliner), N. and E. Yashiv (2013a). "The Arabs of Israel's Job Market: a Survey of Characteristics and Alternatives for Policy". Tel Aviv University.

Kasir (Kaliner), N. and E. Yashiv (2013b). "Arab Women in the Israeli Labour Market: Characteristics and Policy Proposals", **Israel Economic Review**, 10, 2, 1–41. Hebrew version: "Employment Policy: The Case of Israeli Arab Women". **Economics Quarterly**, March/June 2011, vol. 1–2, 120–160.

Kasir (Kaliner), N. and E. Yashiv (2021). The arab economy in Israel. In A. Ben-Bassat, R. Gronau, and A. Zussman (Eds.), *The Israeli Economy 1995-2017, Light and Shadow in a Market Economy,* pp. 495-523. Cambridge University Press.

Khattab, N., Johnston, R. and D. Manley. "Human capital, family structure and religiosity shaping British Muslim women's labour market participation." *Journal of Ethnic and Migration Studies* 44, no. 9 (2018): 1541-1559.

King, Y., Neon, D., Wolda-Zadik A. and J. Habib (2009). "Employment of Arab Women aged 18-64", Meyers-Joint-Brookdale Institute.

Klasen, S., & Pieters, J. (2012). Push or pull? Drivers of female labor force participation during India's economic boom.

Killingsworth, M.R. and James J. Heckman, 1986. ÌFemale Labor Supply: a Surveyîin Orley Ashenfelter and Richard Layard (eds.) Handbook of Labor Economics, vol. 1, North-Holland, Amsterdam.

Lifschitz, O. (2004). "The Flexibility of Work Demand in Housekeeping", Bank of Israel Survey 76, January, p. 145-198.

Lifschitz, O. and T. Marianne (not yet published). "The Arab Language as an Obstruction to Employing Arab Women". Herzelia Multidisciplinary Center.

Miaari, S., T. Mish'an, M. Musalha and T. Ron (2015). "Collective Impact – Research Complementing Candidates' Side". Collective Impact.

Malki, S. (2011). "The Place of Public Transport in Women from the Arab Population in Israel Entering the Work Cycle", Koreth NGO, Milko Institute.

Pastore, F., & Tenaglia, S. (2013). Ora et non labora? A test of the impact of religion on female labor supply.

Read, J. N. G., & Bartkowski, J. P. (2000). To veil or not to veil? A case study of identity negotiation among Muslim women in Austin, Texas. *Gender & Society*, *14*(3), 395-417.

Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. MIT press.

Schlosser, A. (2006). "The Impact of Giving Free Preschool Education on the Work Supply of Arab Mothers: Findings from Natural Experiment". The Economic Quarterly, Volume 3.

Figures and tables

Figure 1: Rate of Employment of Women by Family Support for Going Out to Work

b. Positions of Family (wife's or husband's) | a. Husband's Positions
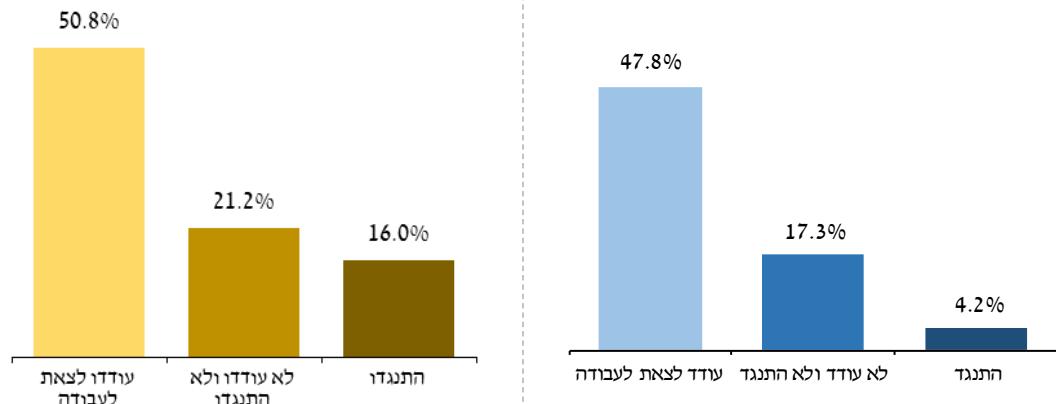
Source: Kasir (Kaliner), Miaari and Liss-Ginsburg, 2019. Ministry of Labour, Welfare and Social Services.

Figure 2: Employment Rate of Women According to Mother's Employment Status and Parents' Last Certificate

b. By Parents' Last Certificate | a. By Mother's Employment Status
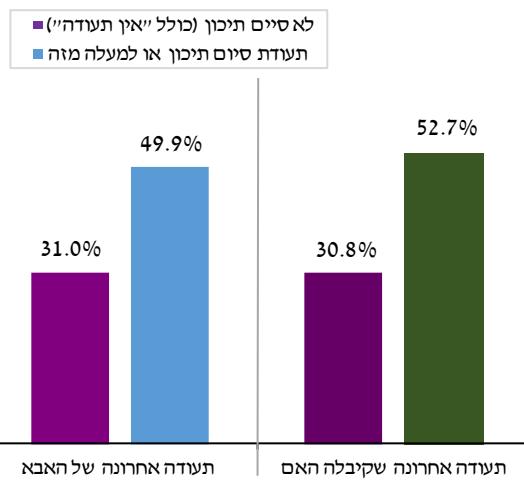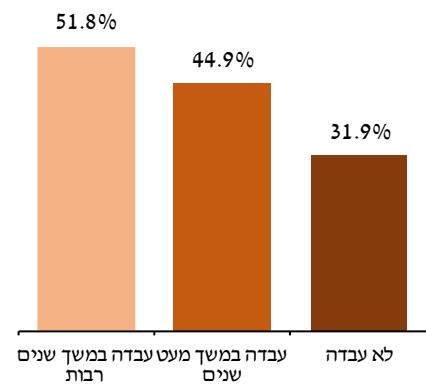
Source: Kasir (Kaliner), Miaari and Liss-Ginsburg, 2019. Ministry of Labour, Welfare and Social Services.

Figure 3: Employment Rates of Women According to Possession of a Driving License and Software Proficiency

b. By Proficiency in Software in Computerized Environment	a. By Possession of a Driving License
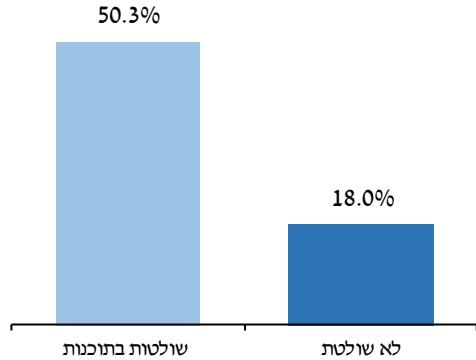
b. By Proficiency in Software in Computerized Environment

50.3%

18.0%

שולטות בתוכנות   לא שולטת

a. By Possession of a Driving License

48.4%

20.1%

בעלות רישיון נהיגה   ללא רישיון נהיגה

Source: Kasir (Kaliner), Miaari and Liss-Ginsburg, 2019. Ministry of Labour, Welfare and Social Services.

Figure 4: Employment Rates of Women by Level of Religiosity

b. By Woman's Parents' Level of Religiosity
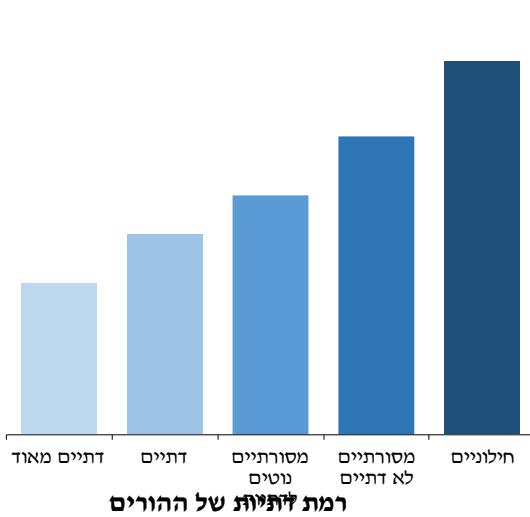
a. By Woman's Level of Religiosity
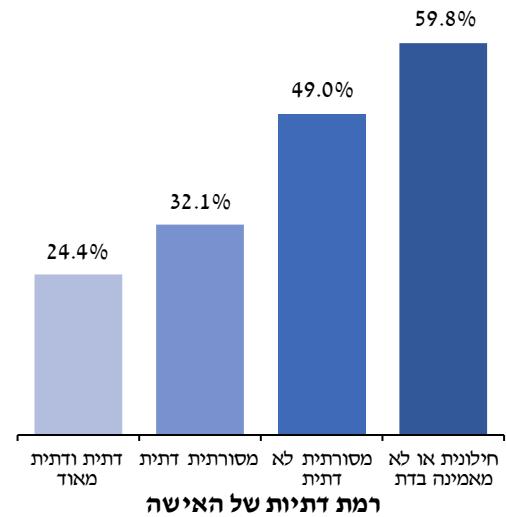
59.8%

49.0%

32.1%

24.4%

דתיים מאוד   דתיים   מסורתיים נוטים   מסורתיים לא דתיים   חילוניים

רמת דתיות של ההורים

דתית ודתית מאוד   מסורתית דתית   מסורתית לא דתית   חילונית או לא מאמינה בדת

רמת דתיות של האישה

Source: Kasir (Kaliner), Miaari and Liss-Ginsburg, 2019. Ministry of Labour, Welfare and Social Services.

Figure 5: Women's Employment Rates – 'Modern' versus 'Traditional'

75.9%

2.5%

נשים 'מודרניות'   נשים 'מסורתיות'

TABLE 1
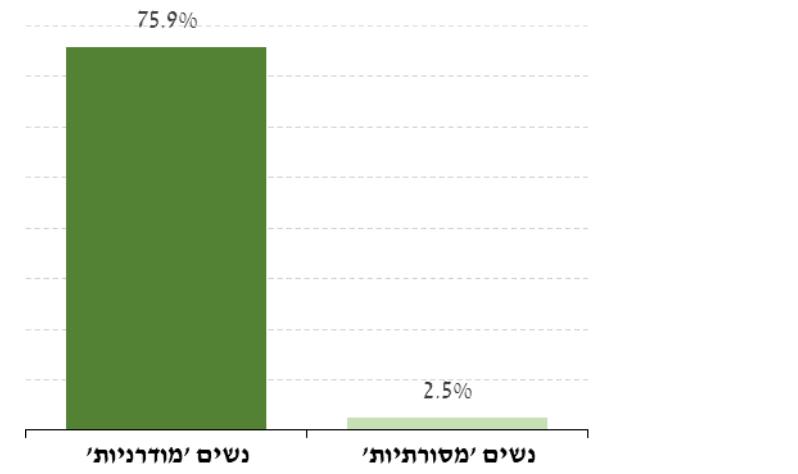
	OLS (1) Labor force participation	Probit (2) Labor force participation
Religiousity	0.000	-0.002
	-0.04	-0.129
Software skill	0.212***	0.601***
	0.036-	0.11-
Traditional dress	-0.067	-0.233
	-0.048	-0.159
Driving license	0.235***	0.700***
	-0.034	-0.106
Muslim	0.083	0.263
	-0.051	-0.168
Druze	0.110	0.359
	-0.059	-0.195
Unaffiliated	0.067	0.186
	-0.11	-0.359
religious parents	0.014	0.041
	-0.043	-0.14
religious brothers	-0.068	-0.213
	-0.038	-0.122
family encourage work	0.218***	0.649***
	-0.033	-0.104
mother worked	0.050	0.139
	-0.041	-0.132
women worked in the family	-0.039	-0.120
	-0.032	-0.104
Constant	0.183**	-0.910***
	-0.064	-0.208
R^2	0.284	
Chi squared		261
Observations	837	837

Note: Dependent variable: labor force participation. Standard errors in parentheses, The symbols *, **, *** represent statistical significance at the 10, 5, and 1 percent levels.

TABLE 2

	OLS (1) Employment	Probit (2) Employment
Religiosity	-0.025	-0.070
	0.041-	0.127-
Software skill	0.160***	0.479***
	0.036-	0.111-
Traditional dress	-0.097*	-0.268
	0.048-	0.151-
Driving license	0.213***	0.680***
	0.034-	0.109-
Muslim	0.036	0.104
	0.052-	0.164-
Druze	0.114	0.352
	0.06-	0.19-
Unaffiliated	0.132	0.385
	0.111-	0.349-
religious parents	0.032	0.106
	0.043-	0.137-
religious brothers	-0.050	-0.158
	0.038-	0.122-
family encourage work	-0.034	-0.104
mother worked	0.000	0.002
	0.042-	0.127-
women worked in the family	0.039	0.124
	0.032-	0.105-
Constant	0.132*	-1.184***
	0.064-	0.21-
R^2	0.224	
Chi squared		205
Observations	837	837

Note: Dependent variable: employment. Standard errors in parentheses, The symbols *, **, *** represent statistical significance at the 10, 5, and 1 percent levels.

TABLE 3

	OLS			Probit		
	(1)	(2)	(3)	(4)	(5)	(6)
	Labor force participation					
Religiosity	-0.042		-0.017	-0.122		-0.048
	-0.034		-0.035	-0.118		-0.124
Software skill		0.132**	0.109*		0.377**	0.313*
		0.044-	-0.044		0.13-	-0.133
Traditional dress			-0.013			-0.035
			-0.045			-0.175
Driving license			0.157***			0.507***
			-0.038			-0.121
Muslim	0.020	0.006	0.036	0.016	-0.035	0.076
	-0.049	0.048-	-0.049	-0.176	0.172-	-0.185
Druze	0.041	0.028	0.088	0.103	0.056	0.271
	-0.057	0.058-	-0.061	-0.21	0.212-	-0.23
Unaffiliated	-0.026	-0.034	-0.015	-0.162	-0.147	-0.078
	-0.096	0.091-	-0.087	-0.352	0.336-	-0.321
Married	-0.046	-0.049	-0.069	-0.175	-0.182	-0.246
	-0.049	0.048-	-0.049	-0.183	0.184-	-0.189
Divorced	0.108	0.109	0.091	0.394	0.399	0.358
	-0.082	0.083-	-0.081	-0.281	0.283-	-0.285
age25-34	0.095	0.109	0.096	0.376	0.426*	0.389
	-0.057	0.057-	-0.056	-0.212	0.212-	-0.214
age35-44	0.130*	0.158*	0.134*	0.507*	0.594**	0.526*
	-0.062	0.062-	-0.063	-0.219	0.223-	-0.228
age45-54	0.014	0.051	0.052	0.153	0.261	0.276
	-0.061	0.062-	-0.062	-0.214	0.221-	-0.223
age55-64	-0.081	-0.036	-0.030	-0.279	-0.146	-0.138
	-0.068	0.069-	-0.068	-0.245	0.252-	-0.255
Num of children	-0.032**	-0.031**	-0.027**	-0.119**	-0.117**	-0.108**
	-0.01	0.01-	-0.01	-0.039	0.039-	-0.039
Jerusalem	-0.217	-0.228	-0.208	-0.565	-0.646	-0.500
	-0.198	0.186-	-0.193	-0.706	0.677-	-0.708
Northern	-0.158	-0.153	-0.166	-0.580	-0.596	-0.640*
	-0.097	0.093-	-0.088	-0.334	0.328-	-0.307
Haifa	-0.193	-0.185	-0.211*	-0.700*	-0.707*	-0.789*
	-0.103	0.099-	-0.096	-0.355	0.351-	-0.336
Central	-0.271*	-0.259*	-0.279**	-0.992**	-0.986**	-1.052**
	-0.109	0.105-	-0.101	-0.372	0.367-	-0.352
Tel-Aviv	0.037	0.061	0.063	-0.113	-0.103	-0.116
	-0.281	0.297-	-0.304	-0.846	0.875-	-0.881
Hebrew Language proficiency…	0.072	0.058	0.037	0.239	0.197	0.131
	-0.038	0.037-	-0.037	-0.123	0.123-	-0.125

English Language proficiency	-0.057	-0.069	-0.070	-0.195	-0.232	-0.242
	-0.04	0.04-	-0.039	-0.142	0.143-	-0.143
Wage Earners	0.105***	0.104***	0.101***	0.371***	0.374***	0.364***
	-0.014	0.014-	-0.013	-0.051	0.052-	-0.051
Elementary	0.035	0.039	0.055	0.113	0.139	0.201
	-0.056	0.054-	-0.053	-0.218	0.217-	-0.221
Secondary	0.131	0.113	0.111	0.448	0.393	0.406
	-0.073	0.071-	-0.07	-0.238	0.238-	-0.242
Bagrut	0.096	0.071	0.049	0.333	0.271	0.207
	-0.062	0.062-	-0.06	-0.218	0.219-	-0.221
Post-Secondary	0.321***	0.284***	0.247***	0.958***	0.870***	0.783***
	-0.068	0.069-	-0.068	-0.231	0.232-	-0.234
BA	0.422***	0.371***	0.321***	1.334***	1.195***	1.062***
	-0.065	0.067-	-0.067	-0.237	0.241-	-0.245
MA-PHD	0.521***	0.450***	0.397***	1.977***	1.774***	1.621***
	-0.073	0.077-	-0.078	-0.415	0.419-	-0.423
Constant	0.363**	0.286*	0.267*	-0.384	-0.590	-0.704
	-0.129	0.126-	-0.125	-0.441	0.443-	-0.437
R^2	0.35	0.358	0.374	0.299	0.305	0.321
Observations	837	837	837	837	837	837

Note: Dependent variable: labor force participation. Standard errors in parentheses, The symbols *, **, *** represent statistical significance at the 10, 5, and 1 percent levels.

TABLE 4

	OLS			Probit		
	(1)	(2)	(3)	(4)	(5)	(6)
	Employment					
Religiosity	-0.048		-0.022	-0.128		-0.043
	-0.033		-0.034	-0.117		-0.123
Software skill		0.104*	0.084*		0.364**	0.301*
		0.042-	-0.041		0.139-	-0.139
Traditional dress			-0.045			-0.155
			-0.045			-0.161
Driving license			0.125***			0.473***
			-0.036			-0.133
Muslim	-0.005	-0.021	0.018	-0.059	-0.113	0.016
	-0.047	0.045-	-0.048	-0.172	0.167-	-0.182
Druze	0.053	0.038	0.100	0.148	0.104	0.325
	-0.058	0.058-	-0.061	-0.212	0.212-	-0.234
Unaffiliated	0.071	0.066	0.088	0.214	0.235	0.293
	-0.099	0.095-	-0.092	-0.364	0.349-	-0.343
Married	-0.010	-0.012	-0.026	0.033	0.028	-0.029
	-0.049	0.049-	-0.049	-0.185	0.186-	-0.189
Divorced	0.017	0.016	0.006	0.208	0.226	0.192
	-0.076	0.076-	-0.077	-0.314	0.316-	-0.326
age25-34	0.113	0.124*	0.116*	0.507*	0.545**	0.536*
	-0.058	0.059-	-0.059	-0.208	0.209-	-0.21
age35-44	0.220***	0.241***	0.226***	0.903***	0.978***	0.938***
	-0.061	0.062-	-0.063	-0.227	0.23-	-0.237
age45-54	0.109	0.137*	0.140*	0.508*	0.595*	0.625*
	-0.061	0.063-	-0.063	-0.232	0.239-	-0.243
age55-64	0.062	0.095	0.105	0.145	0.243	0.275
	-0.065	0.068-	-0.067	-0.255	0.264-	-0.27
Num of children	-0.033***	-0.033***	-0.029**	-0.148***	-0.145**	-0.138**
	-0.009	0.009-	-0.009	-0.044	0.045-	-0.045
Jerusalem	-0.178	-0.188	-0.168	-0.685	-0.721	-0.617
	-0.128	0.13-	-0.12	-0.491	0.507-	-0.475
Northern	-0.123	-0.118	-0.131	-0.543	-0.543	-0.570
	-0.087	0.087-	-0.082	-0.321	0.327-	-0.307
Haifa	-0.100	-0.092	-0.116	-0.483	-0.468	-0.523
	-0.094	0.093-	-0.09	-0.343	0.349-	-0.336
Central	-0.140	-0.130	-0.145	-0.631	-0.608	-0.648
	-0.101	0.1-	-0.096	-0.37	0.375-	-0.36
Tel-Aviv	0.078	0.099	0.097	0.117	0.189	0.226
	-0.252	0.272-	-0.289	-0.705	0.751-	-0.769
Hebrew Language proficiency…	0.074*	0.065	0.046	0.316*	0.283*	0.207
	-0.035	0.035-	-0.035	-0.133	0.136-	-0.137

English Language proficiency	-0.092*	-0.101**	-0.101**	-0.331*	-0.365**	-0.364**
	-0.039	0.039-	-0.038	-0.139	0.139-	-0.14
Wage Earners	0.149***	0.149***	0.146***	0.561***	0.567***	0.563***
	-0.013	0.013-	-0.013	-0.058	0.059-	-0.059
Elementary	0.013	0.014	0.029	-0.005	0.016	0.072
	-0.049	0.048-	-0.048	-0.249	0.251-	-0.256
Secondary	0.012	-0.004	-0.002	0.106	0.055	0.067
	-0.062	0.062-	-0.061	-0.265	0.269-	-0.275
Bagrut	0.053	0.033	0.016	0.212	0.138	0.065
	-0.053	0.052-	-0.052	-0.235	0.235-	-0.238
Post-Secondary	0.173**	0.144*	0.114	0.570*	0.470	0.367
	-0.062	0.062-	-0.062	-0.241	0.243-	-0.245
BA	0.334***	0.295***	0.251***	1.066***	0.929***	0.787**
	-0.061	0.063-	-0.064	-0.246	0.25-	-0.253
MA-PHD	0.531***	0.476***	0.423***	1.830***	1.631***	1.446***
	-0.073	0.076-	-0.078	-0.367	0.375-	-0.374
Constant	0.091	0.025	0.033	-1.436**	-1.655***	-1.707***
	-0.117	0.118-	-0.116	-0.446	0.457-	-0.454
R^2	0.361	0.365	0.377	0.324	0.329	0.343
Observations	837	837	837	837	837	837

Note: Dependent variable: employment. Standard errors in parentheses, The symbols *, **, *** represent statistical significance at the 10, 5, and 1 percent levels.

TABLE 5

	2SLS			IV-Probit		
	(1)	(2)	(3)	(4)	(5)	(6)
			Labor force participation			
Religiosity	-0.133		-0.608	-0.472		-0.750
	-0.072		-0.51	-0.264		-0.486
Software skill		0.934**	0.806		2.740***	0.822
		0.359-	-0.93		0.146-	-1.211
Traditional dress			2.152			2.682***
			-1.3			-0.694
Driving license			0.850			0.990
			-0.77			-0.816
Muslim	0.054	0.021	-0.348	0.155	0.035	-0.466*
	-0.053	0.056-	-0.27	-0.196	0.122-	-0.217
Druze	0.068	0.019	-0.272	0.206	-0.005	-0.376
	-0.06	0.069-	-0.36	-0.22	0.151-	-0.383
Unaffiliated	-0.031	-0.097	-0.514	-0.154	-0.261	-0.643
	-0.104	0.129-	-0.37	-0.389	0.281-	-0.333
Married	-0.046	-0.064	-0.327	-0.174	-0.124	-0.390*
	-0.05	0.061-	-0.19	-0.186	0.138-	-0.154
Divorced	0.119	0.146	-0.081	0.423	0.260	-0.120
	-0.081	0.099-	-0.23	-0.286	0.219-	-0.249
age25-34	0.096	0.194*	-0.035	0.373	0.445**	-0.056
	-0.059	0.081-	-0.21	-0.217	0.166-	-0.246
age35-44	0.135*	0.337**	-0.031	0.520*	0.816***	-0.073
	-0.062	0.11-	-0.32	-0.225	0.176-	-0.386
age45-54	0.024	0.303*	0.208	0.191	0.925***	0.237
	-0.062	0.135-	-0.32	-0.224	0.167-	-0.42
age55-64	-0.071	0.263	0.052	-0.232	0.916***	0.014
	-0.069	0.157-	-0.41	-0.251	0.206-	-0.512
Num of children	-0.030**	-0.021	0.017	-0.109**	-0.014	0.021
	-0.01	0.013-	-0.03	-0.038	0.033-	-0.034
Jerusalem	-0.209	-0.270	-0.373	-0.539	-0.400	-0.354
	-0.203	0.248-	-0.46	-0.746	0.56-	-0.549
Northern	-0.166	-0.145	-0.150	-0.615	-0.218	-0.176
	-0.092	0.112-	-0.21	-0.326	0.264-	-0.261
Haifa	-0.205*	-0.164	-0.221	-0.741*	-0.220	-0.258

	-0.098	0.119-	-0.24	-0.348	0.286-	-0.298
Central	-0.276**	-0.202	-0.390	-1.010**	-0.206	-0.463
	-0.103	0.128-	-0.26	-0.365	0.322-	-0.315
Tel-Aviv	0.023	0.166	0.205	-0.177	0.298	0.120
	-0.225	0.277-	-0.51	-0.748	0.59-	-0.607
Hebrew Language proficiency…	0.062	-0.056	-0.104	0.199	-0.290**	-0.115
	-0.036	0.066-	-0.17	-0.125	0.109-	-0.212
English Language proficiency	-0.058	-0.143*	-0.161	-0.192	-0.327**	-0.172
	-0.038	0.056-	-0.12	-0.133	0.102-	-0.154
Wage Earners	0.103***	0.099***	0.062	0.359***	0.125	0.059
	-0.013	0.016-	-0.04	-0.049	0.068-	-0.064
Elementary	0.046	0.091	0.163	0.151	0.226	0.187
	-0.058	0.073-	-0.15	-0.214	0.155-	-0.175
Secondary	0.143*	0.038	-0.015	0.490*	-0.089	-0.025
	-0.069	0.089-	-0.19	-0.238	0.197-	-0.23
Bagrut	0.101	-0.068	-0.169	0.346	-0.342	-0.182
	-0.061	0.096-	-0.26	-0.216	0.179-	-0.315
Post-Secondary	0.325***	0.074	-0.021	0.961***	-0.339	-0.057
	-0.066	0.123-	-0.38	-0.231	0.254-	-0.464
BA	0.416***	0.043	0.022	1.294***	-0.589	0.008
	-0.066	0.167-	-0.51	-0.242	0.318-	-0.64
MA-PHD	0.516***	-0.002	0.439	1.947***	-0.771	0.605
	-0.089	0.229-	-0.78	-0.413	0.46-	-0.949
Constant	0.395**	-0.095	-1.202	-0.248	-1.454***	-1.953***
	-0.124	0.226-	-0.79	-0.441	0.327-	-0.566
R^2	0.344	0.032	.			
First-stage F statistic	46.4	2.92				
Chi squared	449	308	100	258	1212	1334
Observations	837	837	837	837	837	837

Note: Dependent variable: labour force participation. Standard errors in parentheses, The symbols *, **, *** represent statistical significance at the 10, 5, and 1 percent levels.

TABLE 6

	2SLS				IV-Probit	
	(1)	(2)	(3)	(4)	(5)	(6)
	Employment					
Religiosity	-0.075		-0.172	-0.175		-0.225
	-0.068		-0.354	-0.272		-0.661
Software skill		0.773*	0.984		2.332***	1.853
		-0.331	-0.642		-0.417	-1.059
Traditional dress			0.955			1.715
			-0.894			-1.372
Driving license			0.428			0.876
			-0.532			-0.866
Muslim	0.005	-0.009	-0.199	-0.041	-0.048	-0.401
	-0.051	0.052-	-0.187	-0.199	0.143-	-0.292
Druze	0.061	0.031	-0.114	0.161	0.041	-0.219
	-0.058	0.063-	-0.247	-0.221	0.174-	-0.445
Unaffiliated	0.070	0.013	-0.183	0.215	-0.017	-0.357
	-0.1	0.119-	-0.255	-0.391	0.336-	-0.427
Married	-0.010	-0.025	-0.154	0.034	-0.023	-0.265
	-0.048	0.056-	-0.13	-0.188	0.157-	-0.192
Divorced	0.020	0.047	-0.060	0.212	0.236	-0.049
	-0.077	0.091-	-0.155	-0.311	0.256-	-0.288
age25-34	0.113*	0.194**	0.117	0.507*	0.587**	0.263
	-0.056	0.075-	-0.144	-0.215	0.188-	-0.312
age35-44	0.222***	0.390***	0.275	0.905***	1.121***	0.542
	-0.06	0.102-	-0.222	-0.232	0.209-	-0.503
age45-54	0.112	0.347**	0.380	0.512*	1.057***	0.757
	-0.059	0.125-	-0.22	-0.231	0.197-	-0.417
age55-64	0.065	0.344*	0.344	0.150	0.933***	0.587
	-0.066	0.145-	-0.281	-0.265	0.256-	-0.528
Num of children	-0.032***	-0.025*	-0.005	-0.147***	-0.071	-0.019
	-0.01	0.012-	-0.022	-0.042	0.047-	-0.048
Jerusalem	-0.176	-0.223	-0.287	-0.683	-0.605	-0.500
	-0.195	0.228-	-0.315	-0.852	0.69-	-0.631
Northern	-0.125	-0.111	-0.106	-0.549	-0.359	-0.232
	-0.088	0.103-	-0.142	-0.342	0.303-	-0.285
Haifa	-0.104	-0.074	-0.088	-0.490	-0.275	-0.212
	-0.094	0.11-	-0.163	-0.363	0.318-	-0.313
Central	-0.141	-0.082	-0.147	-0.635	-0.267	-0.311
	-0.099	0.118-	-0.181	-0.38	0.35-	-0.343
Tel-Aviv	0.073	0.186	0.256	0.108	0.390	0.422
	-0.215	0.255-	-0.354	-0.744	0.642-	-0.62
Hebrew Language proficiency…	0.072*	-0.030	-0.086	0.311*	-0.106	-0.157

	-0.034	0.061-	-0.12	-0.136	0.163-	-0.201
English Language proficiency	-0.092*	-0.162**	-0.195*	-0.330*	-0.432***	-0.352*
	-0.036	0.052-	-0.081	-0.136	0.117-	-0.15
Wage Earners	0.149***	0.144***	0.126***	0.560***	0.363**	0.231
	-0.012	0.015-	-0.025	-0.053	0.117-	-0.124
Elementary	0.016	0.057	0.100	0.000	0.156	0.182
	-0.055	0.067-	-0.101	-0.243	0.196-	-0.184
Secondary	0.016	-0.066	-0.131	0.112	-0.143	-0.209
	-0.066	0.082-	-0.132	-0.269	0.225-	-0.227
Bagrut	0.055	-0.083	-0.189	0.213	-0.266	-0.369
	-0.058	0.089-	-0.18	-0.242	0.226-	-0.289
Post-secondary	0.175**	-0.032	-0.163	0.571*	-0.226	-0.370
	-0.063	0.114-	-0.259	-0.251	0.296-	-0.434
BA	0.332***	0.021	-0.109	1.061***	-0.227	-0.338
	-0.063	0.154-	-0.353	-0.256	0.423-	-0.621
MA-PHD	0.530***	0.099	0.130	1.828***	-0.074	0.067
	-0.085	0.211-	-0.538	-0.377	0.647-	-1.042
Constant	0.100	-0.293	-0.959	-1.417**	-2.084***	-2.682***
	-0.119	0.208-	-0.544	-0.467	0.391-	-0.38
R^2	0.36	0.124	.			
First-stage F statistic	46.4	2.92				
Chi squared	471	349	197	244	600	931
Observations	837	837	837	837	837	837

Note: Dependent variable: employment. Standard errors in parentheses, The symbols *, **, *** represent statistical significance at the 10, 5, and 1 percent levels.

TABLE 7

Variable name	Years of schooling	Age
Hebrew Language proficiency	0.5	-0.28
English Language proficiency	0.473	-0.4
Religiosity	-0.314	0.24
Traditional dress	-0.286	0.163
Software skill	0.606	-0.53
Driving license	0.499	-0.3
religious parents	-0.196	0.07
religious brothers	-0.209	0.071
family encourage work	0.394	-0.35
women worked in the family	0.192	-0.09

Appendix: Additional Figures and Tables

The survey is made up of a representative sampling of Arab women in Israel, without East Jerusalem and the Golan. Representation has been given to all sub-districts, and it included 89 different localities, detailed in Table A1.

Table A1: List of settlements included in the survey

Nazareth	Haifa	Tur'an	Mi'ilya	Tira
Shefa'amr	Jatt	Kuseifeh	Fureidis	Julis
Isfiya	Kafr Kanna	Kisra-Sumei	Ramla	Jerusalem
Daliyat-al-Karmel	Kafr Manda	Eilabun	Sha'ab	Sajur
Majd al-Krum	I'billin	Peki'in	Ibtin	Baqa el-Gharbiyye
Sakhnin	Kafr Yasif	Yafa en-Nasseriyeh	Umm al-Qutuf	Jaljulia
Arraba	Reineh	Kabul	Bir al-Maksur	Mazra'a
Umm al-Fahm	Jadeidi-Makr	Mashhad	Wadi Salameh	Sandala
Tayibe	Qalansawe	Rameh	Tuba	Ara
Nahf	Rahat	Tel Aviv-Jaffa	Yanuh-Jat	Ilut
Bi'ina	Daburiyya	Abu Gosh	Kawkab Abu el-Hiju	Ein Kania
Deir Hanna	Ar'ara	Abu Sinan	Kamanneh	Arab el-Aramshe
Deir al-Asad	Iksal	Hurfeish	Ka'abiyye-Tabbash-Hajajre	Sajur
Tamra	Beit Jann	Upper Nazareth	Kisra Sumei	Shibli-Umm el-Ghannam
Kafr Qasim	Jisr az-Zarqa	Fassuta	Majdal Shams	Segev Shalom
Kafr Qara	Lod	Be'er Sheva	Musmus	Sheikh Danun
Maghar	Ein Mahil	Zemer	Mushirfa	Tel Sheva
Acre	Haifa	Zarzir	Na'ura	