

جمعية الجليل الجمعية العربية القطرية للبحوث والخدمات الصحية
The Galilee Society The Arab National Society For Health Research & Services



مركز بنك المعلومات حول المجتمع الفلسطيني في إسرائيل
Rikaz The Databank on the Arab Community in Israel



مدي الكرمل المركز العربي للدراسات الاجتماعية التطبيقية
Mada al-Carmel Arab Center for Applied Social Research



إعلام مركز إعلامي للمجتمع العربي الفلسطيني في إسرائيل
I'lam Media Center for Arab Palestinians in Israel



Arab Women in the Labour Market: Empirical Implications and Policy Orientation

Policy Paper

Dr. Sami Miaari

january 2012



This project is funded by the European Union
The content of this publication is the sole responsibility of the Galilee Society
and can in no way be taken as views of the European Union

Arab Women in the Labour Market: Empirical Implications and Policy Orientation

Author: Dr. Sami Miaari
English translation: Zvi Shulman
Design and production: Wael Wakeem

This Publication is funded by the European Union

Shefa-Amer - 2012

© All Rights Reserved to The Galilee Society – The Arab National Society for Health Research & Services.

P.O. Box 330, Shefa-Amr 20200, Israel
Phone: (972) 4 986 1171, Fax: (972) 4 986 1173 ,E-mail: admin@gal-soc.org

Opinions expressed in this publication are solely those of the authors and do not necessarily reflect the opinions of the Galilee Society – RIKAZ Databank.

Contents

Preface	5
Summary	6
1. Introduction	7
2. Participation of Arab Women in the Labor Market in Israel	12
2.1 Source of the Data	12
2.2 Changes in Rate of Participation over the Years	13
2.3 Comparison with Other Countries	16
2.5 Participation Rate by Age Group	22
2.6 Percentage of Participation by Marital Status and Children in the Family	23
3. Legislation and Budget Allocations to Improve Equality in the Labor Market	28
3.1 Development of Feminist Legislation in Israel	28
3.2 Enforcement of the Statutes Relating to Arab Women	34
3.3 Budget of the Women Employment Division and of the Authority for the Regulation and Enforcement of the Labor Laws	36
4. Empirical Examination for Measuring Participation in the Labor Force	39
4.1 The Participation Equation	40
4.2 The Empirical Method and Data	40
4.3 Results of the Estimation	41
4.4 Explanation of the Low Participation Rate of Arab Women	49
5. Conclusion and Policy Recommendations	51

Tables & Graphs	
Table 1: Participation rate of persons aged 15-64 in the labor market	10
Graph 1: Participation rate of women and men, 1998-2009	13
Graph 2: Participation rate, by gender and ethnic nationality, 1998-2009	14
Graph 3: Participation of Arab and Jewish women in Israel compared with women in Western, Muslim, and neighboring Arab countries, 2009	17
Graph 4: Arab women and Jewish women in Israel, by level of education, 2009	19
Graph 5: Participation rate of Arab women and Jewish women in the labor force, by level of education, 2009	20
Graph 6: Changes in participation rate of Arab women, by level of education, 1998-2009	21
Graph 7: Participation rate of Arab women and Jewish women, by age group, for years 1999, 2005, and 2009	22
Graph 8: Participation rate of Jewish women by marital status, for years 1999, 2005, and 2009	23
Graph 9: Participation rate of Arab women by marital status, for years 1999, 2005, and 2009	24
Graph 10: Population of Arab women by age group and marital status, 2009 (by percentage)	25
Graph 11: Participation rate of Jewish and Arab women, by family status (single, married without children, married with children) and age group, 1998-2009	26
Graph 12: Participation rate of Arab and Jewish women, by type of community (mixed and non-mixed), 1998 to 2009	27
Table 2: Gross wages of employees and number of work hours, by population group and gender	29
Graph 13: Arabs on the board of directors of government companies, by gender, 2000-2007	31
Graph 14: Arabs and Arab women among all Civil Service employees, 1995-2009 (by percentage)	32
Table 3: Budget Framework of the Women Employment Division, Ministry of Industry, Trade and Labor, 2009 and 2010	37
Table 4: Budget of the Women Employment Division, by allocation for daycare construction and for supervision of compliance with the labor laws in the Ministry of Industry, Trade and Labor, 1998-2009	39
Table 5: Regression results for participation in the labor force – entire population, 1998-2009	41
Table 6: Regression results for participation in the labor force – Arab women and Jewish women, 1998-2009	43
Table 7: Regression results for participation in the labor force – Arab women in mixed towns versus non-mixed communities, 1998-2009	46

Preface

In recent decades, the role of the budget has come to increasingly affect economic and political disparities between different population groups and determine the limits of economic activity and the status of various population groups. Thus, the analysis of the budget and its economic particulars, political and social implications, and effects on distributive justice, has become one of the most important means in the struggle for equality and social justice, specifically the improvement of rates of women's participation in the public sphere and in the development of society at large.

This policy paper focuses analytically on the budget of the Ministry of Industry, Trade and Labor through the lens of ethnicity and gender. It is part of a broader research project on "centering gender and ethnicity in the state budget", which seeks to raise awareness of the budget, increase transparency in the budgeting process, and achieve maximum public involvement in ensuring this process' equitability. The project at large focuses on understanding the political and economic system's effects on poverty among Arab women in Israel, so done through a thorough study of the state budget in three main Ministries: those of Health, Industry, and Education, respectively.

The project's primary goal is to convince decision-makers to adopt a more gender sensitive budget by encouraging them to take into account the aspects of gender and ethnicity while preparing the distribution of public resources through the budget. Such an achievement, we believe, will advance social justice and equality between men and women in general, and between Arab men and women in particular. The budgets of three government Ministries have been identified as having the most decisive impact on poverty levels among Arab women.

With great appreciation, we would like to thank the European Union for their contribution towards this project.

This research project was shared by three Arab organization: The Galilee Society – The Arab National Society for Health Research & Services, Rikaz – The Databank of the Arab Community in Israel; Mada Al-Carmel – Arab Center for Applied Social Research; and I'Lam – Media Center for Arab Palestinians in Israel.

Project team

Summary

This paper describes the patterns of participation of Arab women in the labor market, examines how various barriers affect the number of working Arab women, and discusses ways to increase the level of their participation.

The research findings show that, despite an increase over the years in the participation rate of Arab women in the labor market, it has remained very low, both compared to Jewish women and to Arab men and Jewish men. At first glance, the rate of participation by age clearly shows that Arab women leave the labor market earlier than Jewish women. Additionally, employment patterns differ for married and single Arab women. Traditional attitudes, motherhood, and number of children in the family affect the extent to which Arab women join the labor market, and place of residence also plays a meaningful role in their participation.

The paper offers a number of policy proposals to increase the participation rate of Arab women in the labor market and to close the gap between Arab women and Jewish women joining the labor force.

1. Introduction

In recent decades – especially following the Fourth UN Conference on the Status of Women, held in Beijing in 1995 – special attention has been given to the state budget’s effect on the economic status of women. Since the Beijing Conference, there has been a kind of general agreement whereby integration of women in the economic growth and improvement in women’s financial condition call for gender mainstreaming in drafting the budget. For example, the budget should reflect greater sensitivity to the special needs of the different gender groups.

Traditionally, in drafting and implementing the budget, no distinction was made between women and men with respect to rights, needs, areas of responsibility, and capabilities. Traditional approaches ostensibly assumed gender and ethnic-national neutrality, and viewed the needs of all the state’s citizens as identical. The imaginary neutrality impedes identifying the special needs of men and women, making it impossible to distinguish the differences in the economic status and level of development of each gender. In Israel, this neutral approach also does not allow for distinguishing between Jews and Arabs. The failure to deal with the differences has worked to maintain the inequality in gender and ethnic-national matters.

The principal argument made in this policy paper is that, to improve the economic status of Palestinian women in Israel, it is necessary to provide them the tools required to enable them to take part in the state’s economic growth, by increasing their numbers in the labor force, by giving them better jobs in the various segments of the economy and occupations, and by enabling them to participate in decision-making and in setting policy. One way to achieve these goals is by adopting a budget that is sensitive to gender and ethnic nationality, in part with respect to the Ministry of Industry, Trade and Labor. One of the aims in preparing a gender-sensitive budget is to make gender

issues (and also, in our case, the needs of ethnic groups) an integral part of the budget-making and approval process. Doing so would result in a more just and efficient allocation of financial resources and in proper handling of the special needs of the diverse groups in society. It would enable solutions focused on integrating, in particular, Palestinian women who have children. This would require nursery schools and daycare centers along with action to ensure respect for the labor law (minimum wage, work hours, and conditions). The measures will improve the likelihood that Palestinian women will share in the economic growth and development, improve their employment and economic status, and reduce the poverty in which they live.

Addressing those immediate needs which are covered by the Ministry of Industry and Commerce does not fully address the problem of poverty and the economic status of Arab women. These remedies must be part of a broader solution, one that improves the human capital of Palestinian women by improving the system of education, their health, public transportation, and development of industrial areas.

Solutions for the care of small children and compliance with the labor laws are a necessary first step in removing obstacles preventing labor market assimilation. This understanding is based on the experience of other countries and societies, in which increased participation of women in the labor force did not lead to substantial improvement in their economic status and did not change the existing socioeconomic stratification. Their greater assimilation in the labor force was limited to employment in the “feminine-labeled” jobs that offer low pay, or in unstable, temporary positions. In a situation of this kind, the socioeconomic stratification in which women find themselves would not change significantly (Guy 1989; Marchand et al. 2000; Moghadam 1999). Indeed, women need not be confined to these kinds of jobs. In other places, women are experiencing higher rates of employment in public administration, social services, and other fields (Moghadam 1997).

The policy of non intervention of the state is not a guaranteed recipe for improving the economic status of women; such a policy might actually increase the male power structure, and in our case, also the national power structure, and exploit the weakened women (Nadera Shalhoub-Kevorkian 2010; Nahala Abdo 2011; Moghadam 1999, Nagar et al. 2002).

Improvement in the economic status of Palestinian women can be achieved, in part, by allocating resources to encourage them to join the labor market and by encouraging Arab schoolgirls to specialize in technology and science specialization. This change will make it more worthwhile for Arab women to join the labor market and give them the skills in fields that are in demand in the central-Jewish labor market in Israel. It will also alter the labor patterns of Palestinian women in the local Arab labor market. Such a change represents a necessary layer of the solution.

Given the lack of available data and of information from the Ministry of Industry and Commerce on its budget allocations for Arab women, especially the budget items aimed at achieving enforcement of the labor laws and building pre-nursery and daycare facilities, this policy paper will focus on the contribution these budget allocations make in increasing their participation in the labor force. These allocations are the first step in bringing about change in the composition of the Ministry's budget and in drafting a budget that meets the needs of Palestinian women in Israel.

This paper also examines the causes of the low participation of Arab women in the labor force. To do this, we use labor-force surveys conducted by the Central Bureau of Statistics, examine the legislation enacted to achieve employment equality, focus on the items in the Ministry's budget that encourage employment of women and in building daycare and afternoon care facilities, and enforcement of the labor laws. We also investigate whether these changes have reduced the gap between Arab women and other groups in participation rate in the labor market.

The framework of the paper is as follows: Section 2 presents data, based on

demographic variables, on the percentage of Arab women in the labor force. Section 3 discusses the development of feminist legislation in Israel, the extent to which these laws have been enforced with respect to Arab women, and the government’s budget allocations aimed at encouraging employment of women and enforcement of the labor laws. Section 4 offers explanations for the said data and presents an econometric valuation of participation equations, including a detailed statement of the results and their significance. Section 5 states the paper’s conclusion and offers policy recommendations.

The Current Situation

The participation rate in Israel is lower than in other Western countries, such as the OECD countries and the United States.¹ In 2009, 64.1 percent of Israelis aged 15-64 were employed, compared to 70.6 percent in the OECD and 73.5 percent in the United States. Two population groups poorly represented in the labor market in Israel include ultra-Orthodox Jewish men and Arab women. This paper examines the causes for the low participation rate of Arab women and the possible tools to alter this phenomenon.

Table 1 compares the percentage of men and women, Jews and Arabs, aged 15-64, in the labor market in Israel with the relevant percentages in the OECD countries and the United States.

Table 1: Participation rate of persons aged 15-64 in the labor market in Israel, OECD countries, and United States, 2009

	Arabs	Jews	OECD	US
Men	62.8	68.2	79.8	79.0
Women	24.6	68.4	61.5	67.9

Does not include Arabs living in East Jerusalem and in the Golan Heights.

Sources: The figures on Israel are taken from the Central Bureau of Statistics, on the OECD from the OECD’s website, and on the United States from the International Labor Organization’s website.

1 The participation rate is the percentage of all persons aged 15-64 who are in the civilian labor force.

Table 1 clearly shows that much smaller participation rate of Arab women in Israel comparison with Arab men (24.6 percent for the women, 62.8 percent for the men). The figure is low also in comparison with the participation rate of Jewish women in Israel (68.4 percent), in OECD countries (61.5 percent), and in the United States (67.9 percent).

Employment is a decisive variable in a household's efforts to avoid poverty. According to figures of the National Insurance Institute for 2009, only 3.7 percent of families with two or more breadwinners were in poverty, while those with only one breadwinner or nobody in the labor force, the figures were 24.9 and 68.9 percent, respectively.² Clearly, it is important for both heads of the household to be working. Especially since the NII also found that, in 2009, 57.4 percent of Arabs lived in poverty, compared with only 16.9 percent of Jews.

Employment also has an effect on the growth of the economy: there is a 0.99 correlation between the number of persons employed and GDP.³ These data indicate the need for a government policy that increases the participation of Arab women in the labor market in Israel. Indeed, Arab women are an important source of economic growth and prosperity for Israel.

Over the years, the percentage of Arab women who work has been lower than that of Jewish women, and of every other population group except for ultra-Orthodox Jewish men. Various explanations have been given to explain the low percentage of employed Arab women: the traditional Arab attitude that objects to Arab women working outside the house (Aromolaran 2004; Reimers 1985), the low level of education among Arab women (Adler and Blass 1996; Lavy et al. 2000), residence in the periphery (Fichtelberg 2004), and the lower wages in the Arab sector, particularly for Arab women (Flug and Kasir (Kaliner) 2001).

2 National Insurance Institute, Research and Planning Administration, *Extent of Poverty and Social Gaps – Annual Report for 2009* (Jerusalem, 2010).

3 The correlation between GDP in fixed prices and the number of employed persons in the years 1965-2009, based on annual data. Source: Central Bureau of Statistics, *Statistical Abstract of Israel 2010*.

2. Participation of Arab Women in the Labor Market in Israel

The participation rate of a specific population group is measured in terms of the civilian labor force.⁴ The figures in this paper deal with the participation rate of persons in the 15-64 age group, which is the major group in the civilian labor force.

2.1 Source of the Data

The research for this paper is based on micro-data from labor force surveys conducted by the Central Bureau of Statistics in 1995-2004.⁵ These data were derived from repeated interviews with a random sample of persons. The Central Bureau of Statistics surveys examined the selected households four times over six three-month periods: initially, they interviewed the participants in two consecutive quarters, and after a break of two quarters, interviewed them again in each of the next two quarters. Following that, they sifted these households from the sample. Each panel interviewed some 2,700 households. The survey group included almost the entire Arab and Jewish population of working age – persons aged 15 to 64. The Arab classification included Muslims, Druze, and Christians who were born in Israel. In 2001, a distinction was made between Christian Arabs and other Christians; thus, it is important to note that this research does not include data on non-Arab Christians or on survey participants without religious classification, who were included in the Arab classification prior to 2001. The sample of Arabs did not include Arabs from East Jerusalem or from the Golan Heights.

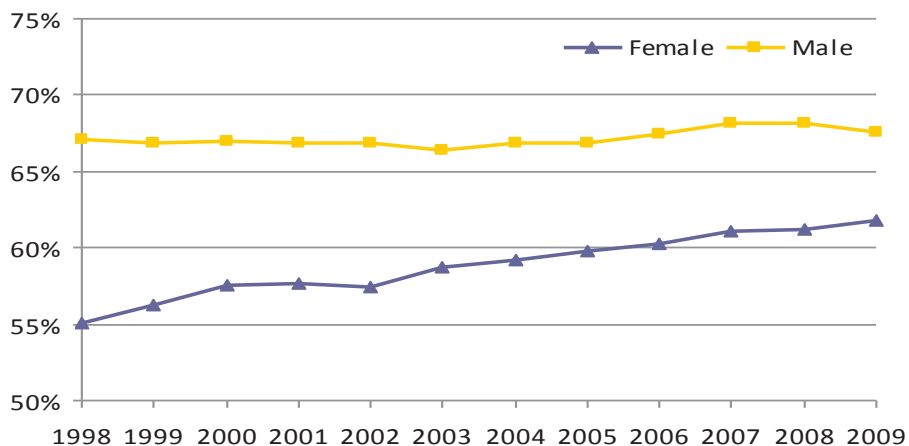
The survey population included about one-half million female workers aged 15-64, in 1998-2009, of whom 19 percent were Arab.

4 A detailed definition of civilian labor force appears on the Central Bureau of Statistics' website, <http://www.CBS.gov>.

5 Other data on participation rates in the labor force, according to demographics, were obtained from the database of the Ricaz Data Center, of the Galilee Society (<http://www.ricaz.org>), which is based on data from Central Bureau of Statistics labor-force surveys.

2.2 Changes in Rate of Participation over the Years

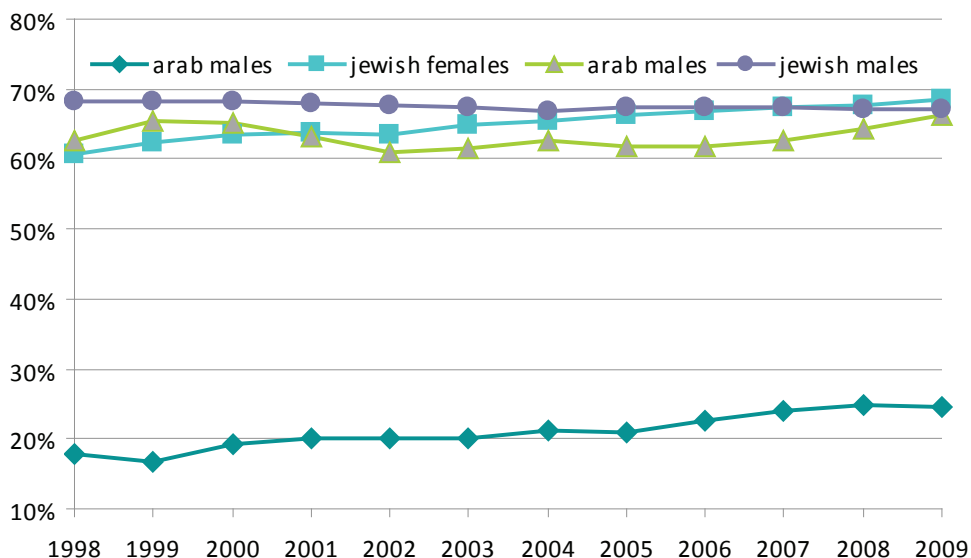
Graph 1: Participation rate of women and men, 1998-2009



Source: Adapted from the Central Bureau of Statistics surveys on the civilian labor force. The data relate to the major segment of the labor force – persons aged 15-64.

As can be seen in the above graph, the participation rate of women is lower than that of men. Division by population group shows that the low percentage of working women in Israel results from the extremely low percentage of Arab women in the labor force, as we see in Graph 2.

Graph 2: Participation rate, by gender and ethnic nationality, 1998-2009



It does not include Arabs from East Jerusalem and the Golan Heights. The data relate to the major segment of the labor force – persons aged 15 to 64.

Source: Adapted from the Central Bureau of Statistics surveys on the civilian labor force.

Graph 2 shows that the participation in the labor force, of both Jewish women and Arab women in Israel, has been increasing, as has been the case in many Western countries. In countries where this increase has led to significant advances in labor market equality, such as the United States, Juhn and Potter (2006) explain the phenomenon as a result, in part, of the increase in level of education, lower fertility rates, and social change. Since 2001, the percentage of working Jewish women has been higher than that of Arab men. This figure illustrates the hardship Arabs face in the labor market. In 2009, the percentage of working Jewish women was higher than that of Jewish men, a result of the low numbers of ultra-Orthodox men in the labor force.

Despite the increased participation by Arab women, the figure is still quite low compared to the others – Jewish women, Arab men, and Jewish men. Research studies explain the factors leading to the low percentage of working

Arab women, as follows:

- A higher level of education brings about increased participation in the labor market. The quality of education plays a significant role in this regard. In the Arab sector, the quality of education is substantially lower than in the Jewish sector (Adler and Blass 1996 and Lavy et al. 2000). Shatiwi (2008) found a close correlation between the level of education and participation of women, particularly Arab women, in the labor force. The greater the number of years of schooling, the greater the participation rate of Arab women. These trends are echoed globally.
- Another substantive factor that helps explain the difference in the participation rate of Arabs and Jews, and particularly among women, is place of residence. A much higher percentage of Arabs, in comparison with Jews, live in small communities. This fact has a crucial effect on participation in the labor force and on unemployment among Arabs: Fichtelberg (2004) shows that Arab women living in urban communities enter the labor force at twice the rate of rural Arab women.
- Arab women face structural obstacles to their assimilation in the labor market. These obstacles include the lack of public transportation between Arab communities and the centers of employment in the country, the absence of industrial areas in Arab communities, and inequality and discrimination in the labor markets in Israel (Shehadeh 2004; Miaari 2011).
- As shown by labor-market data, the wages Arab employees receive are substantially lower than that of Jews. Flug and Kasir (Kaliner) (2001) show that the wages of non-Jews are clearly lower than that of Jews, and that the likelihood that an Arab woman will not be employed (both due to her not actively seeking work and not being able to find a job) is four times higher than for a Jewish woman. This

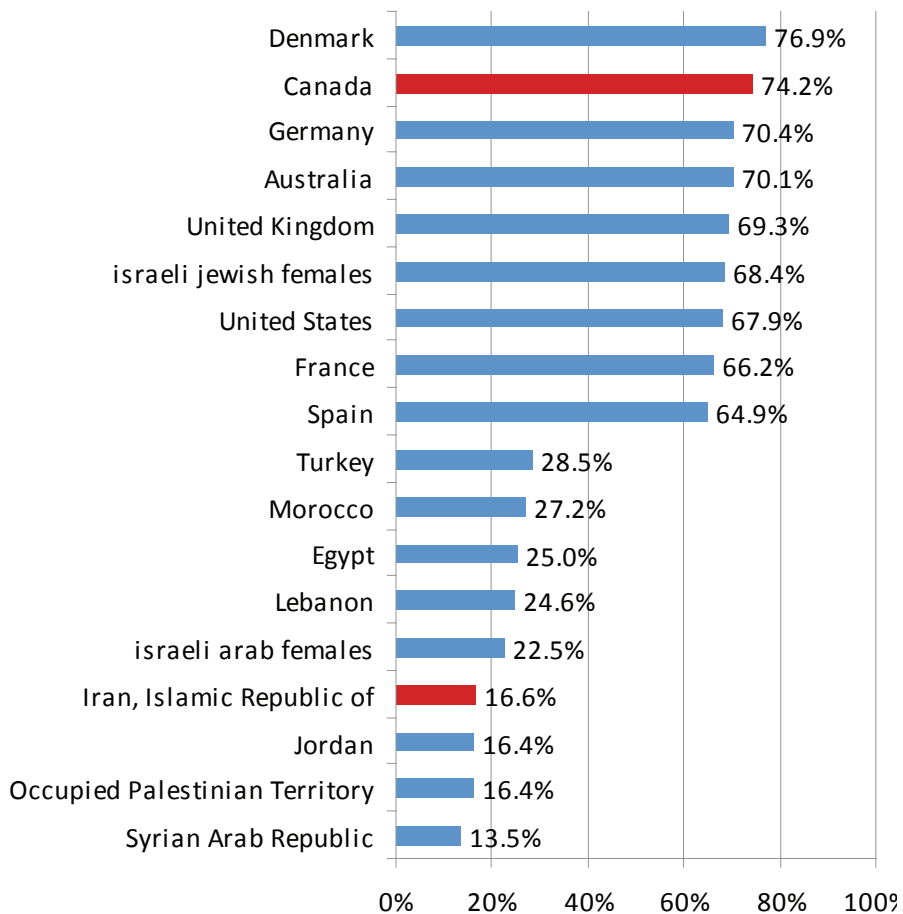
disparity does not change when other variables are considered, such as age and marital status. According to the two authors of the study, the low pay in the Arab sector arises from discrimination in wages and the limited number of workplaces that hire Arabs.

- Another major obstacle to Arab women's participation in the work force is the lack of frameworks for child care in Arab communities (Kama 1984; Abu Jaber 1992; Shatiwi 2008). To enable women with small children to join the labor force, it is necessary to provide nursery-school facilities at low cost to the parents. Research studies in Israel and elsewhere show that where such facilities exist, women's participation in the labor market is higher (Lefebvre and Merrigan 2005; Bradshaw 1997; Ish Shalom 2000).

2.3 Comparison with Other Countries

The participation rate of Arab women in Israel is closer to that of women in Arab and Muslim countries than to women in Western countries. Graph 3 illustrates this reality.

Graph 3: Participation of Arab and Jewish women in Israel compared with women in Western, Muslim, and neighboring Arab countries, 2009



It does not include Arabs from East Jerusalem and the Golan Heights.

Source: The data on Arab women and Jewish women in Israel are adapted from the Central Bureau of Statistics' surveys on the civilian labor force. The data on the other countries are taken from the ILO website (<http://kilm.ilo.org>). All the data relate to the major group in the labor force, persons aged 15-64.

As we see from Graph 3, in 2009, in Arab and Muslim countries, the percentage of women aged 15-64 in the labor force was significantly lower than in Western countries. The participation of Jewish women in Israel was closer to that of women in Western countries; with respect to Arab women in Israel,

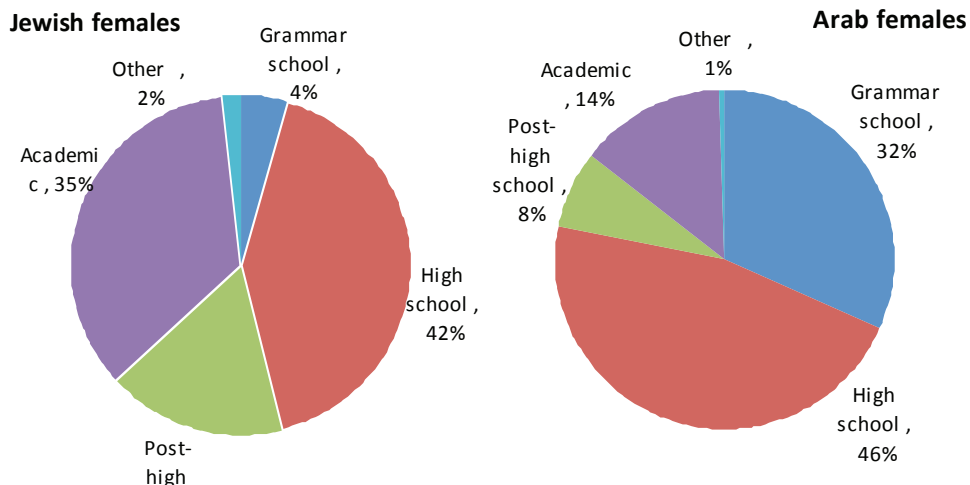
the figure was closer to that of women in the Muslim and Arab countries. It should be noted that there were also significant differences between Arab and Muslim countries: for example, the participation rate of Moroccan women was twice as high as Syrian women. This difference cannot be attributed to a traditional attitudes toward women working outside the house or to demand for workers in the labor market in these countries, given that the differences in the participation rate of men was much smaller (79.4 percent in Morocco compared to 74.6 percent in Syria).

2.4 Effect of Education on Participation in the Labor Market

The level of education of a population has a strong influence on the group's participation in the labor market. The data prove that education increases the number of working women, of Palestinian women in particular: the more years of schooling, the higher the participation rate of Palestinian women.

The level of education of Arab women and Jewish women differs greatly. Graph 4 provides a breakdown on Arab women aged 15-64 by level of education in comparison with Jewish women in that age group. The graph provides figures relating to five levels of education: grammar school (or no schooling), high school, post-high school, academic, and other. The figures are for 2009.

Graph 4: Arab women and Jewish women in Israel, by level of education, 2009

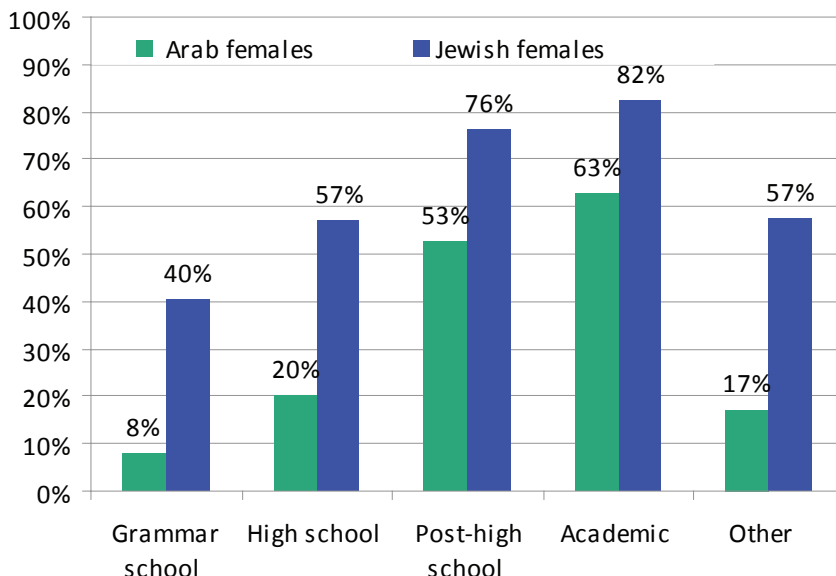


Does not include Arabs living in East Jerusalem and in the Golan Heights. The data relate to the major segment of the labor force – persons aged 15 to 64. Grammar school includes women with no schooling, post-high school also includes teachers’ colleges, academic refers to bachelor’s and advanced degrees. Source: Adapted from the Central Bureau of Statistics surveys on the civilian labor force.

As we see from the graph, more than half of Jewish women in the principal age group of workers have a post-high school or academic education (52 percent), compared to only one-fifth (22 percent) of Palestinian women.

Graph 5 presents the percentage of Arab women and Jewish women in the labor force, by level of education, using the same educational categories, for that year, 2009.

Graph 5: Participation rate of Arab women and Jewish women in the labor force, by level of education, 2009



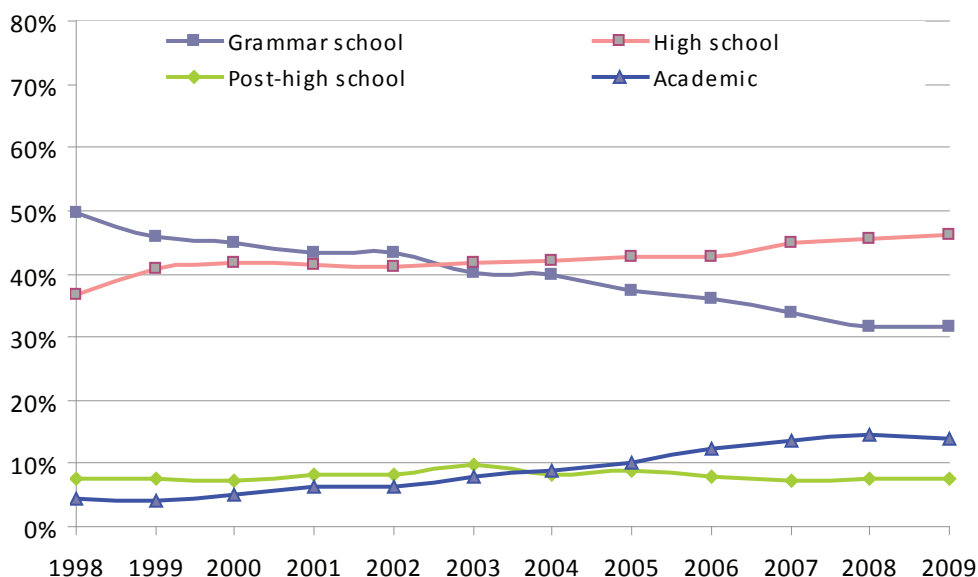
Does not include Arabs living in East Jerusalem and in the Golan Heights. The data relate to the major segment of the labor force – persons aged 15 to 64. Grammar school includes women with no schooling, post-high school also includes teachers’ colleges, academic refers to bachelor’s and advanced degrees. Source: Adapted from the Central Bureau of Statistics surveys on the civilian labor force.

We see from Graph 5 that participation indeed increases with the level of education, for both Arab and Jewish women. Also, the employment gap between the two groups decreases as the level of education rises. In other words, level of education has a greater effect on the participation rate of Arab women than it does on Jewish women: Arab women with a post-high school or academic education are employed in the labor force at a rate four times higher than Arab women with a lesser education (60 percent compared with 15 percent), while among Jewish women, the difference is only 1.5 times as great (80 percent compared with 55 percent). However, the disparity in level of education between Jewish women and Arab women cannot completely explain the low participation of Arab women. As the figures show, the percentage of working Arab women is lower than Jewish women having the

same level of education.

Graph 6 presents the changes in the participation rate of Arab women by level of education, using the same categories as above, for the years 1998-2009.

Graph 6: Changes in participation rate of Arab women, by level of education, 1998-2009



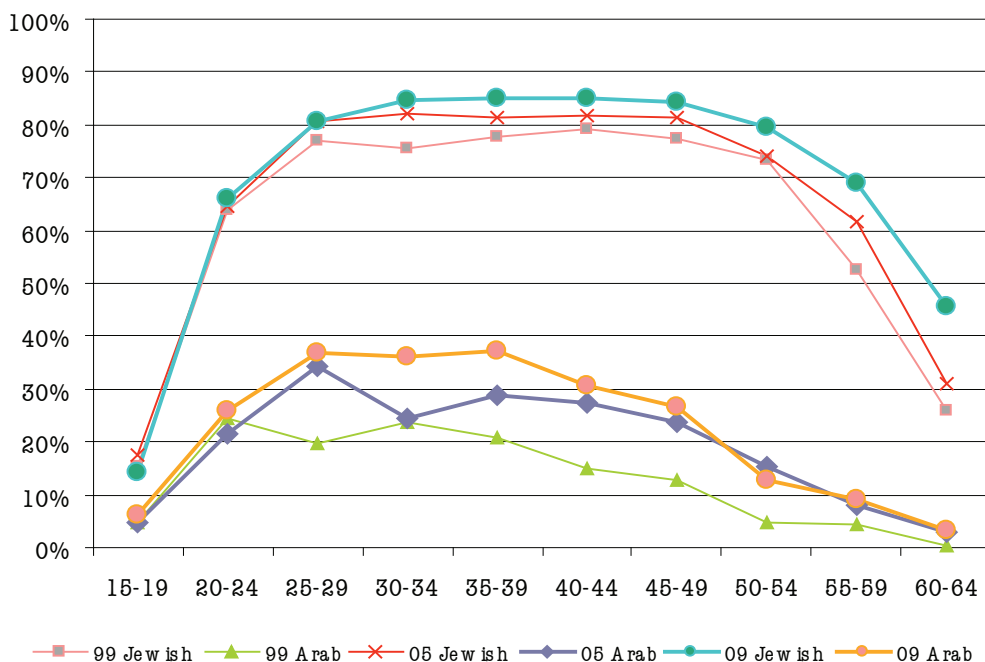
Does not include Arabs living in East Jerusalem and in the Golan Heights. The data relate to the major segment of the labor force – persons aged 15 to 64. Grammar school includes women with no schooling, post-high school also includes teachers' colleges, academic refers to bachelor's and advanced degrees. Source: Adapted from the Central Bureau of Statistics surveys on the civilian labor force.

Graph 6 shows that the participation rate of women with very little education (no more than grammar school) dropped significantly, from 50 percent in 1998 to 32 percent in 2009, while the percentage of employed women with high school or academic diplomas rose sharply, from 4 percent in 1998 to 14 percent in 2009. This increase explains part of the increase in the participation rate of Arab women in the labor force over the course of this 12-year period (see Graph 2).

2.5 Participation Rate by Age Group

As it appears through statistics on participation by age group, Palestinian women clearly leave the labor market at an earlier age than Jewish women. Graph 7 presents a profile of participation for Arab and Jewish women in the labor force by five-year increments from age 15 to age 64, for the years 1999, 2005, and 2009.

Graph 7: Participation rate of Arab women and Jewish women, by age group, for years 1999, 2005, and 2009



Does not include Arabs living in East Jerusalem and in the Golan Heights.

Source: Adapted from the Central Bureau of Statistics surveys on the civilian labor force.

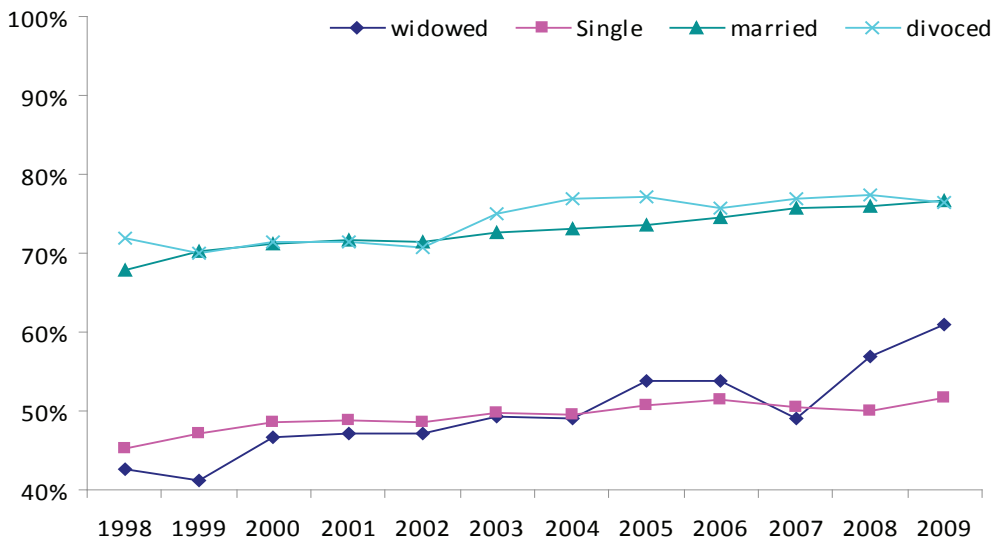
For Jewish women, we see, the drop in employment begins at age 50: in 2009, 84 percent of Jewish women aged 45-49 were employed, compared to 79.7 percent for the 50-54 age group, and 45.5 percent for women 60-64 years old. Even the latter figure is relatively high, and is higher than the

highest-percentage age group of Arab women. In the case of Arab women, the drop begins at age 40: in 2009, the figure was 37 percent for the 35-39 age group, only 30.6 percent for Arab women aged 40-44, and it declined to an extremely low 3.2 percent for 60-64 year olds. This behavior remained constant, for both populations, over the years.

2.6 Percentage of Participation by Marital Status and Children in the Family

Examination based on marital status and children in the family indicates significant differences between Jewish and Arab women. Graphs 8 and 9 present the marital-status figures for Jewish and Arab women for the years 1998 to 2009.

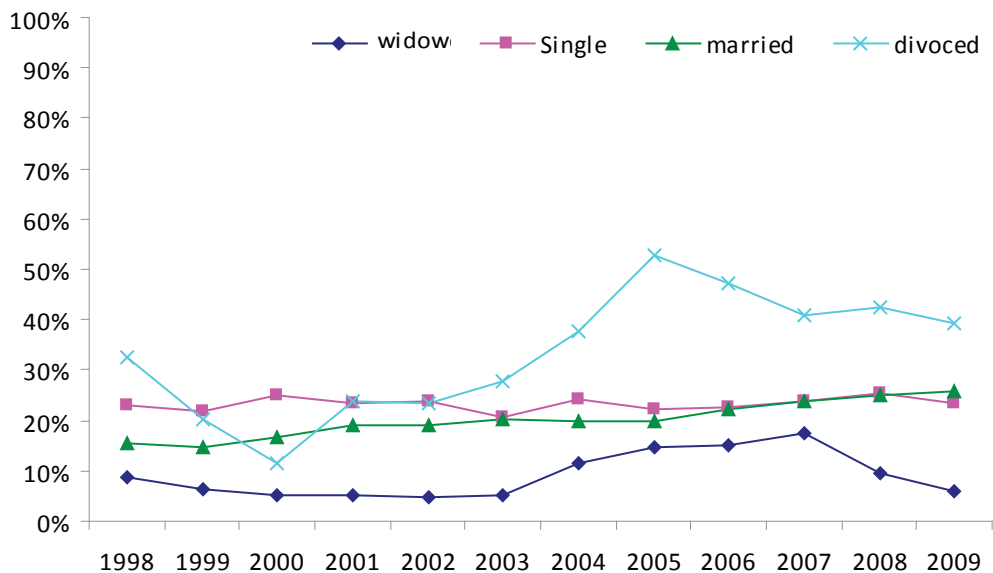
Graph 8: Participation rate of Jewish women by marital status, for years 1999, 2005, and 2009



The data relate to the major segment of the labor force – persons aged 15 to 64.

Source: Adapted from the Central Bureau of Statistics surveys on the civilian labor force.

Graph 9: Participation rate of Arab women by marital status, for years 1999, 2005, and 2009



Does not include Arabs living in East Jerusalem and in the Golan Heights. The data relate to the major segment of the labor force – persons aged 15 to 64.

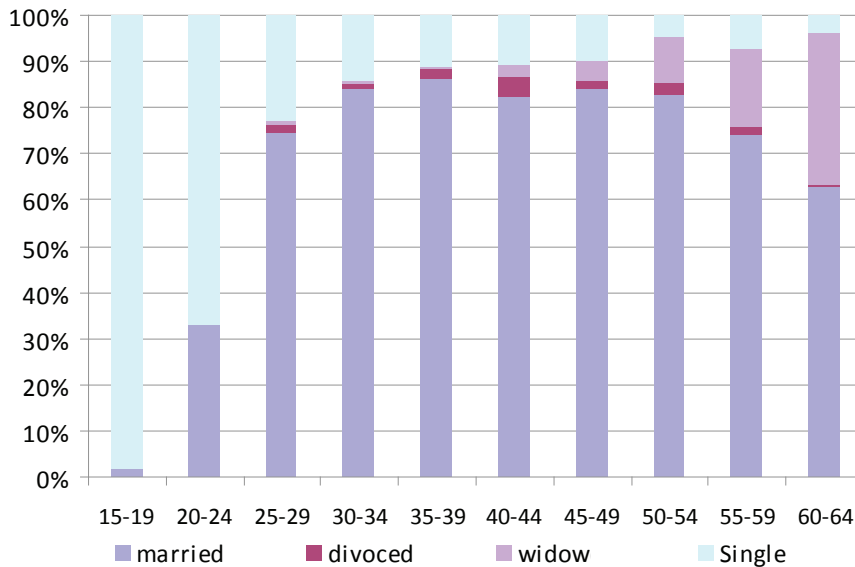
Source: Adapted from the Central Bureau of Statistics surveys on the civilian labor force.

As we see from Graph 8, the participation of Jewish women rose for each group. Divorced and married women had higher employment rates than single women and widows, the primary reason being age: single women are younger than divorcees and married women, and widows are older than married women and divorcees (in 2009, the average age of single women was 24, of widows 55, of married women 42, and of divorcees 47).

Among Arab women there was a different pattern: in 2003, we see from Graph 9, the percentage of divorced Arab women in the labor force was appreciably higher than the other groups. With respect to married women, the percentage grew steadily year by year; it was lower than that of single women until 2005. Contrary to the patterns of behavior of Jewish women, it is not possible to attribute the patterns of behavior of Arab women by family status to the average age of the women in each group. In 2009, the average age of

divorcees was 42, of married women 38, of single women 23, and of widows 54 (figures that have changed little over the years). In other words, divorcees had a higher rate of participation than married women, even though divorcees are older. Single women are much younger than the married women, yet they had a higher rate of employment than the married women in most years. To better understand the reason for the low participation of Arab women, it is necessary to examine the participation rate by marital status and age. Graph 10 presents the distribution of employed Arab women by marital status and by five-year increments from age 15 to age 64, for 2009.

Graph 10: Population of Arab women by age group and marital status, 2009 (by percentage)



Does not include Arabs living in East Jerusalem and in the Golan Heights.

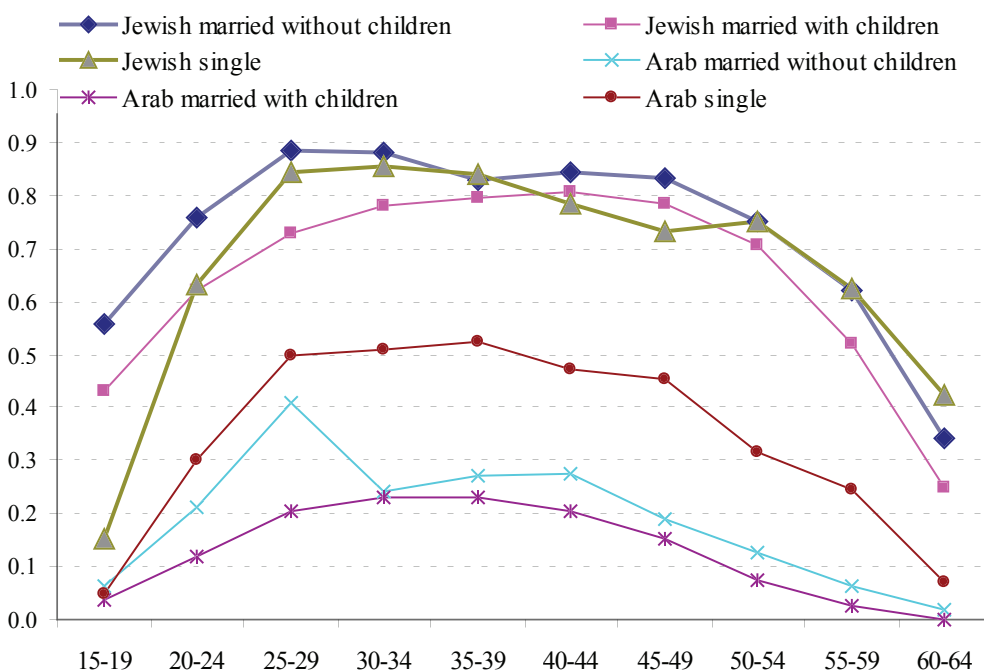
Source: Adapted from the Central Bureau of Statistics surveys on the civilian labor force.

The above figures indicate that, in the principal age groups of employed Arab women (ages 25-44, see Graph 7 above), more than 80 percent, on average, are married (married women constitute 75 percent of all women in the 25-29 age group, 84 percent for women aged 30-34, 86 percent for ages 35-39,

and 82 percent in the 40-44 group). The participation of divorced women and widows in the principal working-age groups is minimal. Thus, married women constitute the vast majority of Arab women of working age, so the main potential for increasing the participation rate of Arab women in the labor market lies in the married-women group.

Since married women comprise the majority of Arab women and their participation is less than that of single and divorced women, the effect of marriage and motherhood, by age group, was examined. Graph 11 presents the rate of employment of Arab and Jewish single women, married women with children, by age group, for the years 1998 to 2009.

Graph 11: Participation rate of Jewish and Arab women, by family status (single, married without children, married with children) and age group, 1998-2009



Does not include Arabs living in East Jerusalem and in the Golan Heights.

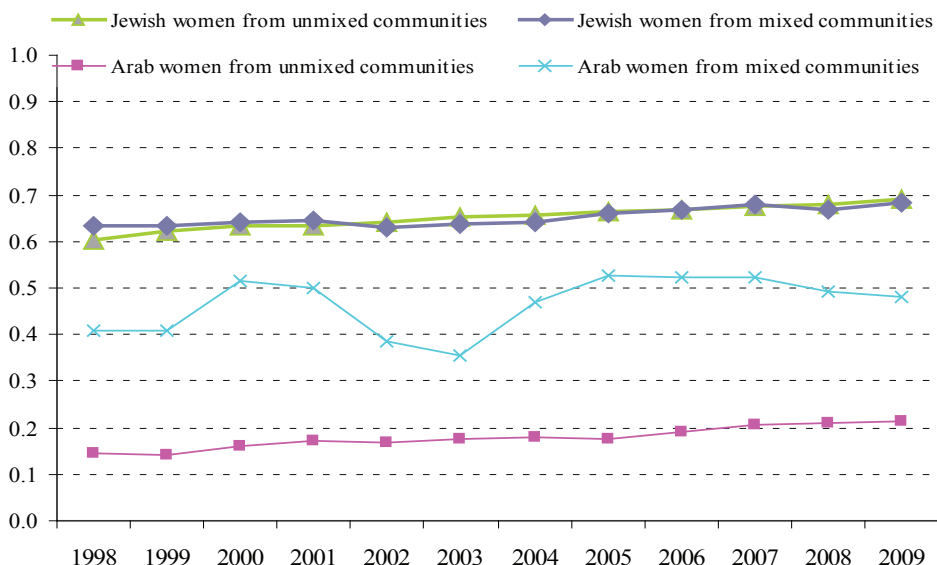
Source: Adapted from the Central Bureau of Statistics surveys on the civilian labor force.

As we clearly see, being married and having children has a negative effect on the participation rate of Arab women in the labor market. Until age 29, motherhood has a stronger effect than marriage, but from age 30, the marriage factor is dominant, with single women having a significantly higher participation rate than married women (with or without children).

2.7 Effect of Place of Residence on Participation in the Labor Market

Another significant factor, which explains to some extent the difference in employment rates between Arabs and Jews, particularly among women, is place of residence. Arab women who live in mixed-population towns have a higher rate of employment than Arab women living in Arab villages and towns. Graph 12 presents the percentage of Arab and Jewish women in the labor force based on their place of residence, in a mixed or non-mixed community, for the years 1998 to 2009.

Graph 12: Participation rate of Arab and Jewish women, by type of community (mixed and non-mixed), 1998 to 2009



Does not include Arabs living in East Jerusalem and in the Golan Heights.

Source: Adapted from the Central Bureau of Statistics surveys on the civilian labor force.

The type of community affects Arab women's participation both due to supply and demand. As for supply, women who live in mixed communities generally have a higher level of education, so, consistent with previous findings, their employment rate is higher. With respect to demand, mixed communities offer greater employment opportunities and do not require the woman to leave her community daily to get to work. In Arab towns and villages, it is hard for women to work outside the community because of the lack of public transportation coupled with transportation expenses. As previously discussed, this is compounded by lower pay among Arab women. Arab women in mixed cities may have increased access to subsidized facilities, including daycare, in comparison to that in Arab localities.

3. Legislation and Budget Allocations to Improve Equality in the Labor Market

The previous discussion described the patterns of Arab women's participation in the labor market based on demographic elements. This section discusses the legislative changes, government decisions, and court rulings that are liable to increase female participation in the labor market, particularly with respect to Arab women. We also present the budgets of the Women Employment Division, in the Ministry of Industry, Trade and Labor, and of the Ministry's Regulation and Enforcement Authority, which is responsible for enforcement of the labor laws.

3.1 Development of Feminist Legislation in Israel

In 2009, the wages for women in Israel were 15.5 percent lower compared to men.⁶ The disparity cannot be explained only by predictable variables, such as education. The gap between Jewish and Arab workers is even greater. Table 2 presents the gross monthly and hourly wages and the number of work

⁶ According to surveys conducted by the Central Bureau of Statistics, the gross hourly wage of men was NIS 50.4, while that of women was NIS 42.6.

hours per week, of Jewish and Arab workers by gender.

Table 2: Gross wages of employees and number of work hours, by population group and gender

	Gross monthly wage (NIS)	Number of work hours per week	Gross hourly wage (NIS)
Arab women	4,387	31.9	32.5
Jewish women	6,470	35.6	43.7
Arab men	5,691	44.6	30.3
Jewish men	10,428	44.9	55.1

Source: Central Bureau of Statistics, Income Survey for 2009, including East Jerusalem.

As the table shows, Arab men’s wages in 2009 were 45 percent lower than that of Jewish men. Arab women earned 25.6 percent less than Jewish women. In the late 1980s, there was a wave of affirmative-action legislation in favor of Arabs and women to reduce the gaps between the various population groups, and the High Court of Justice forced the state to implement the new laws. Simultaneously, the Knesset enacted legislation to enforce the labor laws in order to increase participation among less represented groups in the labor market, which had often been harmed by the failure to implement the labor laws (regarding working hours, days of rest, and minimum wage, for example). Below is a description of the principle statutory changes that were intended to increase equality in the labor market between men and women and between Jews and Arabs.

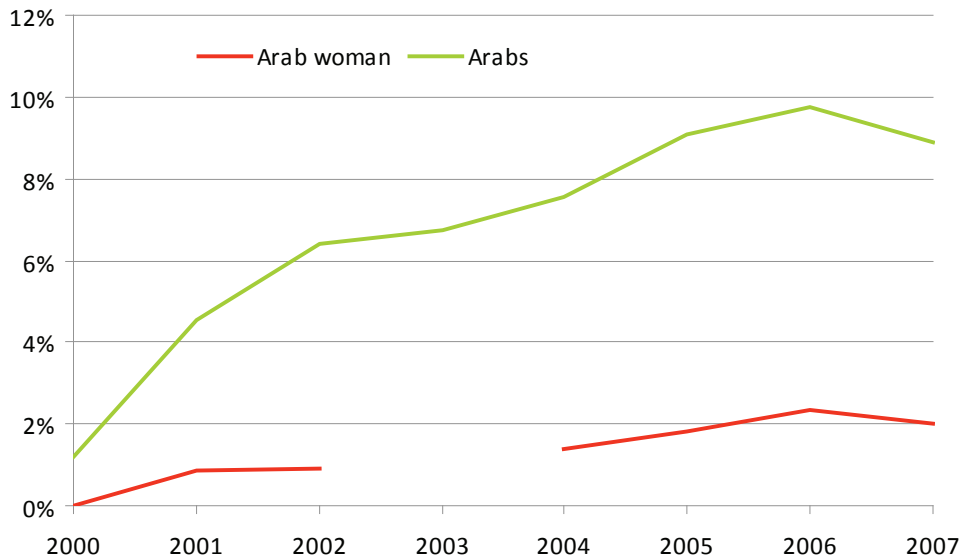
- In 1988, the Knesset enacted the Employment (Equal Opportunities) Law, 5748 – 1988. The statute states, in section 2(a), “An employer shall not discriminate among his employees or among persons seeking employment on account of their sex. . . personal status or because of their age, race, religion, nationality. . .” It is forbidden to discriminate in hiring, in the wages paid and benefits provided, and in dismissal.

Despite enactment of the statute, Gharrah and Cohen (2001) found income gaps between Jews and Arabs and inequality in employment where inequality was defined by the degree of likelihood of Arabs, compared to Jews having the same educational qualifications, being hired in various occupations. In 2006, the Knesset amended the statute to establish an Equal Employment Opportunities Commission. The Commission's function is "to promote recognition of rights under the equal-employment legislation and its implementation."

- In 1993, the Government Companies Law, 5735 – 1975, was amended to include a provision that the board of directors of a government company shall provide suitable expression to representation of both genders, and also to representation of minority groups. The amendment prescribes that, in the case of gender inequality, the ministers shall appoint directors of the gender that is not suitably represented, to the extent that circumstances permit. In 1994, the statute was strengthened when the High Court of Justice nullified the appointment of three directors (one in the Ports and Trains Authority, and two directors of Oil Refineries Ltd.), all of them male, on the grounds that they should have considered appointing women to the board of directors in these instances (HCJ 453/94). Other statutes, enacted in 1998 and 2000, relate explicitly to the need for representation of Arab citizens on boards of directors.

The statute has had a positive effect on the number of Arab directors (redundant) in government companies, including the number of Arab women on the board of directors. Graph 13 presents the percentage of Arabs and Arab women on the board of directors of government companies in the years 2000-2007.

Graph 13: Arabs on the board of directors of government companies, by gender, 2000-2007



Source: Awad and Haider (2008). There are no figures by gender for the year 2003.

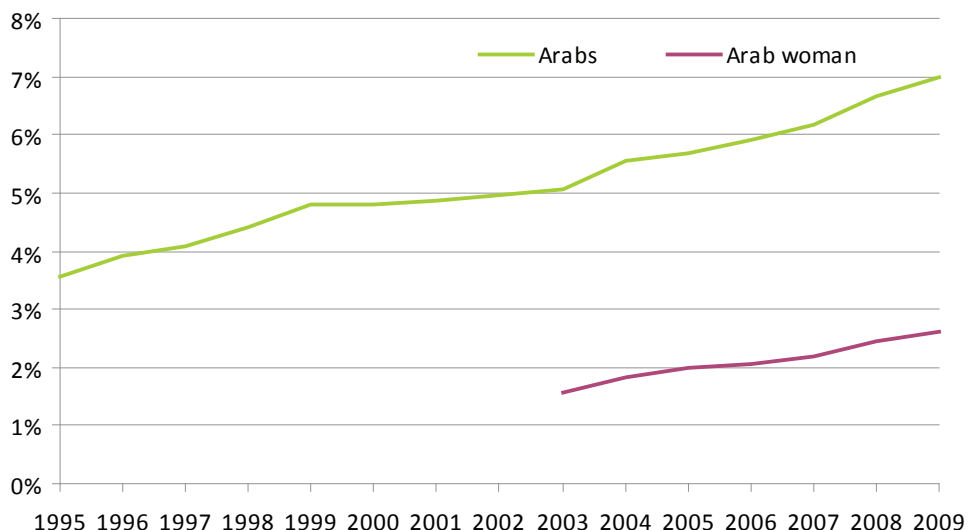
The percentage of Arabs on the board of directors of government companies rose from 1.2 percent in 2000 to 9.8 percent in 2006 (note that in 2007, there was a small drop). The number of Arab women rose from zero percent in 2000 to 2.4 percent in 2006. The number of Arab women as a portion of all women directors rose even more: from 0 percent in 2000 to 6.5 percent in 2006. Still, the percentage of Arabs, and of Arab women in particular, among directors in government companies is far lower than their percentage in the general population.

- In 1995, the Civil Service (Appointments) Law, 5719 – 1959, was amended, adding section 15A, under the heading “suitable representation among workers in the Civil Service.” The amendment prescribes that, “among the employees in the Civil Service, in all levels and occupations, in every ministry and in all support units,

suitable expression, under the relevant circumstances, shall be given to representation of persons of both genders, of persons with disabilities, and of members of the Arab population, including the Druze and Circassian.”

Graph 14 shows the percentage of Civil Service employees who are Arab and Arab women, for the years 1995-2009.

Graph 14: Arabs and Arab women among all Civil Service employees, 1995-2009 (by percentage)



Source: Civil Service Commission (2009); Awad and Haider (2008). Prior to 2003, there are no figures based on gender.

The graph shows a steady increase in the percentage of Arabs employed in the Civil Service, from 3.6 percent in 1995 to 7 percent in 2009. The government has given the Civil Service Commission a target to raise the percentage to 10 percent by 2012, but at the present rate, the target will not be reached. With respect to Arab women, the figures show that, since 2003, there has been a steady increase, from

1.6 percent to 2.6 percent in 2009. The number of Arab women as a percentage of all Arab workers in the Civil Service rose from 31.3 percent in 2003 to 37.6 percent in 2009.

- In 1996, the Knesset enacted the Male and Female Workers Equal Pay Law, 5756 – 1996. The purpose of the law, stated in section 1 of the statute, is “to promote equality and prevent discrimination between the sexes in all matters of pay or of any other remuneration in connection with employment.” The statute prescribes, in section 2: “Male and female employees, employed by the same employer in the same workplace, are entitled to equal pay for the same work, for essentially equal work or for equivalent work.” As pointed out above, this statute is not implemented in full; there are still large gaps in wages between the sexes as well as between different sectors of the population (see Table 2).
- In 1998, the Knesset enacted the Prevention of Sexual Harassment Law, 5758 – 1998, with the purpose, stated in section 1, “to prohibit sexual harassment in order to defend human dignity, freedom and privacy and in order to promote equality between the sexes.”
- Also in 1998, the Knesset passed the Authority for the Advancement of Women Law, 5758 – 1998. The Authority operates as part of the Prime Minister’s Office, its purpose being to promote equality between the sexes in Israel and to examine the effects that proposed legislation on gender equality would bring.
- In 2008, the Knesset enacted the Encouragement of the Advancement and Integration of Women in the Work Force and the Adjustment of Workplaces to Women’s Needs Law, 5768 – 2008. The purpose of this law is to bring about change in the employment culture and to nurture public awareness and thus encourage the integration and advancement of women in the labor force and to adjust the workplace for women and parenthood, including greater numbers of women in senior and

management positions and integration and advancement of women from population groups that have had difficulties in integrating in the workplace.

3.2 Enforcement of the Statutes Relating to Arab Women

Despite these legislative enactments and the increased number of Arab women in the work force, their percentage of participation remains lower than other population groups. Women's pay, particularly that of Arab women, is lower than men's. Women are precluded from advancing beyond middle-level positions into senior positions in the economy. Another major cause for the low rate of employment of Arab women is lack of enforcement of the labor laws.

The failure to enforce the labor laws, especially the minimum-wage laws, offers a negative incentive to seek employment. Researchers, among them Flug and Kasir (1994), Yaniv et al. (1997), and Eckstein (1998), found that the minimum-wage law in Israel is largely ignored. Gottlieb, Flug, and Kasir (2000) showed that failure to comply with the minimum-wage law is more common in the case of Arab employees than of Jewish employees. For example, Gottlieb, Flug, and Kasir reported that, with respect to Arab female employees, the minimum-wage law was complied with in only 73 percent of the cases, whereas it was complied with in 85 percent or more of the cases involving other population groups (not counting foreign workers): Jewish women, 93 percent; Arab men, 85 percent, Jewish men, 95 percent. According to the 2009 income survey of the Central Bureau of Statistics, the disparity between the per-hour wage of male and female employees was substantial, also for persons working in the same occupations. For example, the pay received by female academics was 20 percent lower than that of male academics. The gaps were even greater in the Arab sector. An Arab employee, male or female, earned less than his or her Jewish counterpart in 2009. The data obtained in a July 2000 survey commissioned by the Industrialists

Association to examine the representation and status of women in the elite technology industry in Israel showed that the number of female managers was rising. However, in 15 percent of the companies, the terms of employment of women were less favorable than those of male managers (Werczberger 2001).

Shatiwi (2008) contends that the system for enforcing the labor laws in Israel does not function properly in the case of non-union workers, many of whom are Arabs, and especially with respect to Arab women. In a survey taken by Faris and Hwari (1998), which covered 190 workplaces in Nazareth, 61 percent of the women were paid less than the minimum wage, and their rights to annual vacation, sick days, and overtime were breached.

The legal offices of Na'amat, an organization that seeks to improve the status of women, reported that most women who are discriminated against or denied their rights do not file suit. The reasons for their failure to take legal action are the fear of losing their job and the great expense entailed in a legal proceeding, which might ultimately not benefit them financially (Livni 2004).

It might be that the large income gaps between Arab women and other groups, and the failure to enforce the labor laws, explain (among other explanations) the low numbers of Arab women in the work force.

The Ministry of Industry, Trade and Labor's unit for enforcing the labor laws has, in recent years, increased inspection and enforcement, in particular with respect to the minimum-wage law. In 2009, 43 companies in the Arab section in the north were inspected, and the authorities found that some of them were not paying the minimum wage and were also in violation of other labor laws.

3.3 Budget of the Women Employment Division and of the Authority for the Regulation and Enforcement of the Labor Laws

The Ministry of Industry, Trade and Labor is responsible for the advancement of employment by budgetary, administrative, and legislative means. One of its primary objectives is to increase the size of the work force, including greater participation of special population groups, Arab women and others among them. To encourage women to seek employment, the Ministry budgets allocations for child daycare programs through the Women Employment Division. The Ministry is also charged, pursuant to the Daycare Supervision Law, with overseeing the operation of the daycare centers.

In 2005, the Women Employment Division was moved from the Ministry of Welfare to the Ministry of Industry, Trade and Labor as part of the plan to unify employment affairs in the latter ministry (whose name was altered to reflect the change in function of the Ministry). The Division's budget was NIS 555 million in 2009⁷, which amounted to 16 percent of the Ministry's total budget of 3,455 million shekels).⁸

The main part of the Division's budget is designated for subsidizing daycare for the children of working women. Table 3 presents the Division's budget for the years 2009-2010.

7 The Ministry's budget has three principal items: the main budget (item 36), which includes the allocation for the Division, support of branches of the economy (item 38), and industrial development (item 76).

8 Net expenditures, not including expenditures dependent on revenues and self-authorized Ministry obligations.

Table 3: Budget Framework of the Women Employment Division, Ministry of Industry, Trade and Labor, 2009 and 2010

(in thousands of shekels)

Item	2009		2010	
	Amount	Percentage	Amount	Percentage
Women Employment Division	554,792	100	714,522	100
Subsidy for afternoon daycare	31,000	5.59	31,465	4.40
Support for registration of frameworks	15,500	2.79	-	-
Research and surveys	1,500	0.27	-	-
Daycare center vouchers pilot	4,213	0.76	-	-
Share in providing daycare for working women	477,501	86.07	621,243	86.95
Share in wages of coordinators of pre-nurseries	1,437	0.26	-	-
Mechanization and assimilation	1,696	0.31	1,696	0.24
Operations and maintenance	736	0.13	2,000	0.28
Training of nannies	728	0.13	1,500	0.21
Operation, management and supervision of pre-nurseries	17,231	3.11	20,868	2.92
Center for Monitoring and Examining Subsidy Payments	-	-	7,000	0.98
Daycare centers in caravans project	1,980	0.36	1,980	0.28
Support for construction and renovation of daycare centers and pre-nurseries	1,260	0.23	1,260	0.18
Construction of daycare centers in the periphery	-	-	27,500	3.85

Source: Ministry of Finance, Budgets Department.

The item for support for construction and renovation of daycare centers and pre-nurseries has been part of the Division's budget since 2009 (prior to that, it was a separate item). In 1998, a paltry 4.8 million shekels was budgeted for this item. Yet, over the years, it dropped, to 1.2 million shekels in 2009. Following

a government decision in July 2009, the budget allocation for daycare rose, and in 2010, 27.5 million shekels were allocated for construction of daycare centers in the periphery. In 2011 and 2012, the budgetary allocation for support for construction and renovation of daycare centers and pre-nurseries was set at 50 million shekels and 25 million shekels, respectively.

In addition to regulating and enforcing the labor laws, the Ministry also has the obligation to protect employees' rights and employees' safety.⁹ The function of the Ministry's Authority for the Regulation and Enforcement of Labor Laws is to inspect, regulate the labor market in the country, and enforce 19 labor laws in order to ensure that employees fully benefit from their rights as employees, to uncover breaches of the law, and to reduce the harm to employees resulting from employers failing to pay the minimum wage. The Authority has two arms: regulation and enforcement. Table 4 presents the annual budget of the Women Employment Division, specifying the allocations for construction of daycare centers and the allocation for supervision of compliance with the labor laws, for the years 1998 to 2009.

9 The Ministry's Labor Department, which is charged with enforcement of the labor laws, and to which the Women Employment Division belongs, was part of the Ministry of Welfare until 2005, when the handling of labor matters was unified within the Ministry of Industry and Trade, which became the Ministry of Industry, Trade and Labor.

Table 4: Budget of the Women Employment Division, by allocation for daycare construction and for supervision of compliance with the labor laws in the Ministry of Industry, Trade and Labor, 1998-2009

(in NIS 1,000)

Year	Women Employment Division	Allocation for construction of daycare centers	Supervision of compliance with labor laws
1998	274,694	4,810	8,903
1999	287,178	4,907	9,972
2000	329,123	6,131	10,933
2001	361,538	4,213	10,529
2002	398,975	4,212	21,598
2003	412,783	4,016	2,492
2004	328,442	4,001	2,257
2005	330,045	3,524	140
2006	402,625	2,507	203
2007	476,913	1,970	160
2008	562,248	1,479	22,770
2009	554,792	1,260	9,073

Source: Ministry of Finance, Budgets Department.

4. Empirical Examination for Measuring Participation in the Labor Force

This part of the paper examines, by means of actuarial tools, the patterns of participation in the labor market. The empirical investigation focuses on measuring the relationship between socio-demographic factors and other economic factors (for example, government expenditure on labor- and product-support services in order to supervise business turnover) and patterns of participation of Arab women in the labor force.

4.1 The Participation Equation

The estimated participation equation is:

$$PR_{it} = \alpha_0 + \alpha_1 Arab_i + \alpha_2 X_{it} + \alpha_3 P_t + \varepsilon_{it}$$

When:

- PR_{it} - A dummy variable given a value of 1 if person I in year t participates in the labor force and 0 otherwise;
- $Arab_i$ - A dummy variable given the value 1 if person I is an Arab and 0 otherwise;
- X_{it} - Vector of socio-demographic variables that characterize person I in the same year. The variables include: age, family status, education, type of residential community, number of children under age 10 and under 15, and dummy for mixed community;
- P_t - Vector of economic variables in year t, which include: state budget, budget of Women Employment Division, expenditures for construction of daycare centers and expenditures for enforcement and supervision of the labor laws.

4.2 The Empirical Method and Data

The regression equation is estimated by means of the probit model.¹⁰ The data are taken from labor-force surveys conducted by the Central Bureau of Statistics, which were described in section 2.1 above. The data on government expenditures are taken from the website of the Ministry of Finance, and the data on product are taken from the website of the Ministry of Industry, Trade and Labor. All the data are for the years 1998 to 2009.

¹⁰ The model is computed by the maximum likelihood estimation according to a probit model. The assumption is that the chance of error is a standard normal distribution and thus $Pr ob(PR = 1 | x) = F(x' \beta) = \int_{-\infty}^{x' \beta} \phi(t) dt = \Phi(x' \beta)$ $\Phi(x' \beta)$ is the function of the standard normal distribution.

4.3 Results of the Estimation

Table 5 presents the regression results by use of a sample of all women (Arabs and Jews). Model 1 presents a regression with one explanatory variable – nationality. Model 2 adds the variables of age, years of education, marital status, number of children under 10 and under 15, and type of home community.

Table 5: Regression results for participation in the labor force – entire population, 1998-2009

Variable	Model 1			Model 2		
	Coefficient		Standard deviation	Coefficient		Standard deviation
Arab women	1.262	***	0.005	-0.958	***	0.006
Age group (test: 35-39)						
15-19				-1.651	***	0.011
20-24				-0.581	***	0.010
25-29				-0.167	***	0.009
30-34				-0.034	***	0.009
40-44				-0.093	***	0.009
45-49				-0.153	***	0.010
50-54				-0.370	***	0.010
55-59				-0.753	***	0.011
60-64				-1.356	***	0.012
Years of education (test: 11-12)						
0-8				-0.881	***	0.008
9-10				-0.405	***	0.007
13-15				0.213	***	0.005
+16				0.467	***	0.006
Marital status (test: married)						
Separated				0.155	***	0.021
Divorced				0.038	***	0.009
Widow				-0.147	***	0.013
Single				-0.152	***	0.007
Number of children under age 10				-0.119	***	0.004
Number of children under age 15				-0.057	***	0.003
Rural community (test: urban community)				0.035	***	0.007
Mixed community (test: non-mixed)				-0.007		0.006
Constant	0.188	***	0.007	0.905	***	0.012
Transverse						
Number of observations	508,614			508,614		
Pseudo R ²	0.2924			0.0962		

Source: Adapted from the Central Bureau of Statistics surveys on the civilian labor force.

Note: The sample includes the entire population in Israel aged 15-64, for the years 1998 to 2009. The Arab category does not include East Jerusalem and the Golan Heights. The dependent variable is a dummy, which is given the value 1 if the person is in the labor force and 0 otherwise. In addition to the explanatory variables, there is a dummy variable for the year and quarter. The mixed towns are Haifa, Lod, Ma'ale Tarshiha, Upper Nazareth, Akko, Ramle, Tel Aviv-Yafo, and Jerusalem. *, **, *** is statistically significant at a level of 10 percent, 5 percent, and 1 percent, respectively.

Model 1 of Table 5 indicates that, on average over the sample period, the participation rate of Arab women in the labor force is lower than the participation rate of Jewish women. Also if control variables are added (as in Model 2), the coefficient of the nationality variable remains negative and statistically significant. Model 2 also shows that the participation rate of all women in Israel rises and then drops with age, and the education coefficients present a positive and statistically significant connection between level of education and participation rate; that is, the more years of schooling, the greater the likelihood of participation in the labor market. Also, widows and single women have a lower employment rate than married women and divorced women, and the number of children (both under 10 and under 15) has a negative effect on rate of employment of women.

Table 6 presents the regression results by use of a sample of Jewish women and Arab women separately. The variables are age, years of education, marital status, number of children under 10 and under 15, type of residential community, and religion (for Arab women). The analysis is intended to provide an understanding of the factors that explain participation of Arab women and to compare their participation with that of Jewish women.

Table 6: Regression results for participation in the labor force – Arab women and Jewish women, 1998-2009

Variable	Jewish women			Arab women		
	Coefficient		Standard deviation	Coefficient		Standard deviation
Age group (test: 35-39)						
15-19	-1.635	***	0.012	-1.542	***	0.027
20-24	-0.509	***	0.011	-0.782	***	0.024
25-29	0.123	***	0.011	-0.261	***	0.022
30-34	-0.022	***	0.010	-0.055	***	0.020
40-44	-0.104	***	0.010	-0.037	***	0.022
45-49	-0.178	***	0.011	-0.123	***	0.025
50-54	-0.399	***	0.011	-0.439	***	0.032
55-59	-0.801	***	0.011	-0.722	***	0.037
60-64	-1.416	***	0.012	-1.217	***	0.060
Years of education (test: 11-12)						
0-8	-0.842	***	0.009	-0.712	***	0.017
9-10	-0.363	***	0.008	-0.483	***	0.019
13-15	0.169	***	0.006	0.462	***	0.018
+16	0.405	***	0.007	0.922	***	0.019
Marital status (test: married)						
Separated	0.088	***	0.022	0.466	***	0.069
Divorced	-0.024	***	0.009	0.722	***	0.034
Widow	-0.157	***	0.014	-0.022	***	0.038
Single	-0.323	***	0.008	0.559	***	0.018
Number of children under age 10	-0.149	***	0.005	-0.003	***	0.009
Number of children under age 15	-0.050	***	0.004	-0.065	***	0.007
Rural community (test: urban community)	0.088	***	0.008	-0.199	***	0.019
Mixed community (test: non-mixed)	-0.024		0.006	0.524	***	0.027
Religion (test: Muslim)						
Christian				0.346	***	0.018
Druze				0.255	***	0.020
Constant	0.971	***	0.012	-0.507	***	0.033
Number of observations	412,207			96,407		
Pseudo R ²	0.223			0.261		

Source: Adapted from the Central Bureau of Statistics surveys on the civilian labor force.

Note: The sample includes the entire population in Israel aged 15-64, for the years 1998 to 2009. The Arab category does not include East Jerusalem and the Golan Heights. The dependent variable is a dummy, which is given the value 1 if the person is in the labor force and 0 otherwise. In addition to the explanatory variables, there is a dummy variable for the year and quarter. The mixed towns are Haifa, Lod, Ma'ale Tarshiha, Upper Nazareth, Akko, Ramle, Tel Aviv-Yafo, and Jerusalem. *, **, *** is statistically significant at a level of 10 percent, 5 percent, and 1 percent, respectively.

In analyzing the results of Table 6, we learn the following:

- As the age coefficients show, the participation rate increases and then drops as the woman ages, both among Arab and Jewish women, such that, when control variables are used, the participation profile by age group takes the shape \cap .
- With respect to the education coefficients, we see a positive and statistically significant connection between level of education and participation in the labor force, for both Arab and Jewish women. The participation rate of women with 16+ years of schooling (relative to 11-12 years of education) is higher than that of women with 13-15 years of schooling. Thus, the more years of schooling, the greater the likelihood of joining the labor market. The gaps are greater among Arab women than among Jewish women, meaning that level of education has a greater effect among Arab women.
- Among the Jewish population, married women have a higher employment rate than do widows, divorcees, and singles. In the Arab population, the situation is different: the rate of married women is lowest and that of divorcees is the highest.
- In families with children under age 10, the effect is negative and statistically significant in the case of Jewish women, but is not statistically significant among Arab women. The effect of having children under age 15 has a negative and statistically significant effect in both population groups.
- Arab women living in rural communities have a lower percentage of participation in the labor market than do female Arab urban dwellers; among Jews, the situation is the opposite, with the women living in rural communities having a higher employment rate. Thus, the explanation that a low percentage of Arab women work because they live in the periphery is not supported by the data. Rather, it suggests that the reason for the low employment rate of Arab women is a lack

of jobs in all Arab communities. Support for this contention is evident in the data on mixed communities, where the employment rate of Arab women is higher than in non-mixed communities. .

To support the findings indicating the effect of the mixed-community variable on participation of Arab women in the labor force, the analysis relates separately to Arab women from mixed towns and those from non-mixed communities. Table 7 presents the regression results using a sample of Arab women only, by type of community in which they live – mixed or non-mixed. The variables are age, years of education, marital status, number of children under age 10 and under 15, and rural compared with urban (in the non-mixed communities), and religion.

Table 7: Regression results for participation in the labor force – Arab women in mixed towns versus non-mixed communities, 1998-2009

Variable	Arab women from mixed community			Arab women from non-mixed community		
	Coefficient		Standard deviation	Coefficient		Standard deviation
Age group (test: 35-39)						
15-19	-1.255	***	0.108	-1.569	***	0.028
20-24	-0.272	***	0.098	-0.813	***	0.025
25-29	-0.251	***	0.103	-0.253	***	0.022
30-34	0.023	***	0.101	-0.057	***	0.021
40-44	0.232	***	0.099	-0.050	***	0.023
45-49	-0.011	***	0.109	-0.126	***	0.026
50-54	-0.581	***	0.114	-0.410	***	0.033
55-59	-0.645	***	0.132	-0.737	***	0.039
60-64	-1.283	***	0.153	-1.168	***	0.064
Years of education (test: 11-12)						
0-8	-0.561	***	0.080	-0.724	***	0.018
9-10	-0.358	***	0.076	-0.496	***	0.019
13-15	0.345	***	0.063	0.459	***	0.019
+16	0.584	***	0.082	0.944	***	0.019
Marital status (test: married)						
Separated	0.338	***	0.173	0.425	***	0.076
Divorced	0.002	***	0.124	0.776	***	0.036
Widow	-0.575	***	0.138	0.037	***	0.038
Single	-0.067	***	0.069	0.604	***	0.019
Number of children under age 10	-0.083	***	0.046	0.000	***	0.009
Number of children under age 15	-0.014	***	0.034	-0.065	***	0.007
Rural community (test: urban community)		***		-0.200	***	0.019
Religion (test: Muslim)						
Christian	0.203		0.051	0.374	***	0.019
Druze	1.690		0.220	0.243	***	0.020
constant	0.146	***	0.132	-0.519	***	0.034
Transverse						
Number of observations	3,665			92,742		
Pseudo R ²	0.201			0.257		

Source: Adapted from the Central Bureau of Statistics surveys on the civilian labor force.

Note: The sample includes the entire population in Israel aged 15-64, for the years 1998 to 2009. The Arab category does not include East Jerusalem and the Golan Heights. The dependent variable is a dummy, which is given the value 1 if the person is in the labor force and 0 otherwise. In addition to the explanatory variables, there is a dummy variable for the year and quarter. The mixed towns are Haifa, Lod, Ma'ale Tarshiha, Upper Nazareth, Akko, Ramle, Tel Aviv-Yafo, and Jerusalem. *, **, *** is statistically significant at a level of 10 percent, 5 percent, and 1 percent, respectively.

Table 7 indicates that Arab women from mixed communities leave the labor force later than Arab women from non-mixed communities. In mixed communities, education has a lesser effect on women's participation in the labor market, so the difference in participation rate in the labor market between educated women and non-educated women is not as great in mixed communities. This finding proves that Arab women from mixed communities have a higher participation rate not only because they are better educated, but also because they have more extensive and diverse employment opportunities. We also see from Table 7 that the negative effect of having children under age 15 is less in mixed communities, a result due to the greater availability of daycare centers, pre-nurseries for very young children, and afternoon programs for older children. Also, Table 7 indicates there is no difference in the participation rate of Arab women from Arab villages and Arab women from non-mixed communities (the coefficient of rural community in the sample of Arab women in non-mixed communities is not statistically significant). This result testifies to the lack of employment opportunities and employment-support services, such as daycare, in Arab communities, large and small.

In addition to the regression results presented in Tables 5-7, another equation was estimated by using a sample of Jewish women, Arab women in mixed communities, and Arab women from non-mixed communities. The variables in the regression included the state budget and the budget of the Women Employment Division, allocations for construction of daycare facilities (delayed one year) and inspection of compliance with the labor laws (as they appear in Table 4). The regression also included all the variables that appeared

in Table 6 and the growth rate in the economy. The findings were as follows:

1. There is a positive and statistically significant effect of the state budget on the participation rate in all the groups, but it is not uniform: the effect on the participation rate of Jewish women is much greater, and in the case of Arab women from non-mixed communities is extremely small.
2. The budget of the Women Employment Division, too, has a positive and statistically significant effect on the participation rate in all the groups, and the effect is not uniform: the effect is felt greater among Jewish women than Arab women, and Arab women from non-mixed communities are less affected than Arab women from mixed communities. These findings indicate that Arab women benefit from the budget less than Jewish women. This is true especially for Arab women from non-mixed communities, a result, apparently, of the smaller allocations earmarked for Arab communities.
3. The effect of budget allocations for construction of daycare facilities has a negative effect on the participation rate of Jewish women and Arab women from non-mixed communities, but a positive effect on the participation rate of Arab women from mixed-communities. All the results were statistically significant. The result was expected since, in the years 1998 to 2009, expenditure for construction of daycare facilities fell, while the participation rate of both Arab and Jewish women rose.
4. The effect of the budget allocations for inspection of compliance with the labor laws on the participation rate of Arab women in mixed communities is positive and statistically significant. No effect on the other groups was discerned.

4.4 Explanation of the Low Participation Rate of Arab Women

A few obstacles are the cause of the low participation rate of Arab women in Israel in the labor force:

- The education gap between Jewish women and Arab women is a major cause of the lower participation rate of Arab women, but a lower participation rate of Arab exists also where no education gap exists.
- Place of residence is an important factor in the participation rate of Arab women. The rate is higher for Arab women living in mixed communities than for Arab women living in non-mixed communities. There are two reasons for this. The first reason is the lack of jobs in Arab communities. It bears noting that the towns and villages in the periphery do not lack employment opportunities: the participation rate of Jewish women from the periphery is actually higher than the rate for Jewish women from the population centers. In other words, jobs are lacking in Arab communities, large and small.

The second reason is the lack of employment-support services for women, such as daycare facilities, in Arab communities. A survey of Arab women aged 25-29 (the beginning of the major age groups of working women), carried out by the Bank of Israel (“Report for 2009”), found that poor access of Arab women to daycare and other employment-support services is one reason for their low participation rate. In 2010, the State Comptroller, in an examination of the Ministry of Industry, Trade and Labor’s handling of recognized daycare, pre-nurseries, and afternoon-care frameworks, that only 2.5 percent of the recognized daycare facilities in Israel (some 40 among about 1,600) operate in the Arab sector, although the Arab sector contains 27 percent of the toddler (children under four years of age) population.

Research conducted in Israel and elsewhere shows that the development of educational institutions for very young children at low cost has

a positive effect on the participation rate of married women. Analia Schlosser (*Economic Quarterly* 2006), who studied the effect of pre-compulsory education for three- and four-year-old children on the labor supply of Arab mothers, found that free pre-compulsory education in the Arab communities raised the participation rate of the children's mothers by 7 percent. No effect was found on the number of women seeking work who were from communities that offered free pre-compulsory education and did not have children of pre-school age. These findings show that economic incentives can have a significant effect on the participation rate of Arab women in the labor market.

- More years of education, means higher participation rate. Divorcees and single women join the labor force more than married women (and the negative effect of marriage on the participation rate of Arab women is even greater than the effect of motherhood), women in mixed communities have a higher participation rate than women from Arab communities, and Christian and Druze women have higher participation rates than Muslim women. Despite these findings, all the responsibility for the low participation rate of Arab women in the labor force cannot be blamed on societal norms. This was the finding of the research conducted by Spierings and Smits (2007), who examined the factors affecting the participation of women in the labor force in various Arab countries. They found differences in the participation rate of women also among the Arab and Muslim states themselves.
- Nor can we disregard another cause for the low participation rate of Arab women – the division of the labor market in Israel. The labor market is comprised of a main, central market for the Jewish population, and a secondary, peripheral, local, and ethnic market for the Arab minority. Therefore, the Arabs play a reserve role in the labor force, serving the central economy. This reality explains the employment difficulties

of Arabs in Israel in general, and among Arab women in particular (Shehadeh 2004; Sami Miaari, Ola Nabwani, and Nabil Hatab 2011).

To sum up this section, the findings indicate that a combination of low pay (primarily due to meager education), lack of employment opportunities in Arab towns and villages (working near home saves time and transportation costs), and many children for whom daycare facilities and nursery schools are not available at low cost, do not make it financially worthwhile for Arab women to take a job.

5. Conclusion and Policy Recommendations

The participation rate in the labor market in Israel is relatively lower than in OECD states, the United States, and other Western countries. This paper examined the factors for the low participation rate of Arab women and suggested tools to increase the number of Arab women in the labor force.

Over the years, the participation rate of Arab women has been lower than the rate of Jewish women and of Arab men and Jewish men. Various explanations are given: limited education, living in peripheral geographic areas, and low pay in the Arab sector in general, particularly among Arab women. In addition to making the known finding that the participation rate of Arab women is lower than that of Jewish women in every working-age group, this paper showed something more: Arab women leave the labor market earlier than Jewish women.

The findings of this research show that the low level of education of Arab women is indeed one reason for their low participation rate. But the gap between the participation of Arab women and that of Jewish women narrows as the level of education increase; that is, level of education has a greater effect among Arab women than it does for Jewish women. However, the gaps

in level of education do not fully explain the low participation rate of Arab women, as is evident from the fact that the participation rate of Arab women is lower than that of Jewish women having the same level of education.

The low participation rate of Arab women harms the whole economy, the Arab population, and Arab women. Among the negative effects are the waste of human capital and the failure to utilize the potential inherent in Arab women to increase the Gross Domestic Product (GDP) ; the resultant increase in socioeconomic gaps between Arabs and Jews, which intensifies Arab citizens' feeling of alienation from the state and its institutions, and reinforces the low status of Arab women in society, particularly in Arab society. These consequences clearly confirm the importance of governmental intervention in increasing the participation rate of Arab women in the labor force.

Governmental intervention must focus on providing the tools to encourage Arab women to join the labor market. To increase the participation rate of Arab women and to narrow the gap in the participation rates of Arab women and Jewish women, the government must:

- Set a political objective to increase the level of education of the Arab population and encourage Arab women to pursue academic degrees in order to increase their chances of finding employment and higher wages. Achievement of the objective will enable, in the long run, Arab society to escape the cycle of poverty and will reduce income gaps between Arabs and Jews.
- Develop industrial areas in Arab communities and create new jobs, in part by encouraging business ventures.
- Increase the number of daycare and pre-nursery facilities in Arab towns and villages. Doing so will enable married women (who comprise the vast majority of Arab women), primarily the women with little education and employed in poor-paying jobs, to join the

labor market. This is a way to reduce the disparity in participation rate between Arab women and Jewish women. This conclusion has been strengthened by research studies that have shown that the lack of quality and inexpensive educational frameworks for very young children is a substantial obstacle to increasing the employment rate of women, particularly Arab women, who have many children. Unfortunately, there are no precise figures on the number of daycare and pre-nursery facilities in Arab communities, or on the allocations from the budget of the Women Employment Division that are earmarked to aid Arab women. Therefore it is impossible to measure the effect of these variables on the participation rate of Arab women. For the same reason, it is hard to state precisely the amount of resources needed to build the daycare facilities and pre-nurseries and to subsidize their operation.

- To increase awareness among Arabs, of the importance of women going to work outside the home, for economic reasons and to enable the women to attain a higher degree of self-fulfillment.
- Improve enforcement of the labor laws, whose breach constitutes a major obstacle for disadvantaged populations wanting to join the labor market. It is also necessary to increase the Arab awareness of the labor laws and employees' rights; this is especially important for Arab women, most of whom are unaware of their rights in the workplace.
- Increase and promote suitable representation of Arab employees, including Arab women, in the public sector.

