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High-Quality Employment For Haredi Women

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This is a short summary, for the full paper (in Hebrew) see

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Aaron Institute for Economic Policy

In the name of Aaron Dovrat z"l

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High-Quality Employment for Haredi Women

The employment rates of Haredi women have risen dramatically in recent decades, however the income gaps between Haredi and non-Haredi women have remained high. The objective of this study is to analyze the barriers preventing the integration of Haredi women in high-quality employment, which would reduce the income gaps between them and non-Haredi women.

This study is based on analysis of surveys conducted by the Israel Central Bureau of Statistics (CBS) and administrative data, and it indicates that the main two reasons for the income gaps are the employment sectors in which Haredi women are employed, which are characterized by low wages, and the prevalence of part-time employment among them. Barriers to high-quality employment include the limited range of training subjects in women's seminaries, as well as training quality which does not always meet the required standards. Consequently, our main recommendations are incorporating vocational training courses spanning 500 hours or more within the framework of seminary studies, while expanding the range of available study courses, as well as encouraging seminaries (by means of tiered funding) to incorporate academic studies within the seminaries themselves.

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1. Introduction

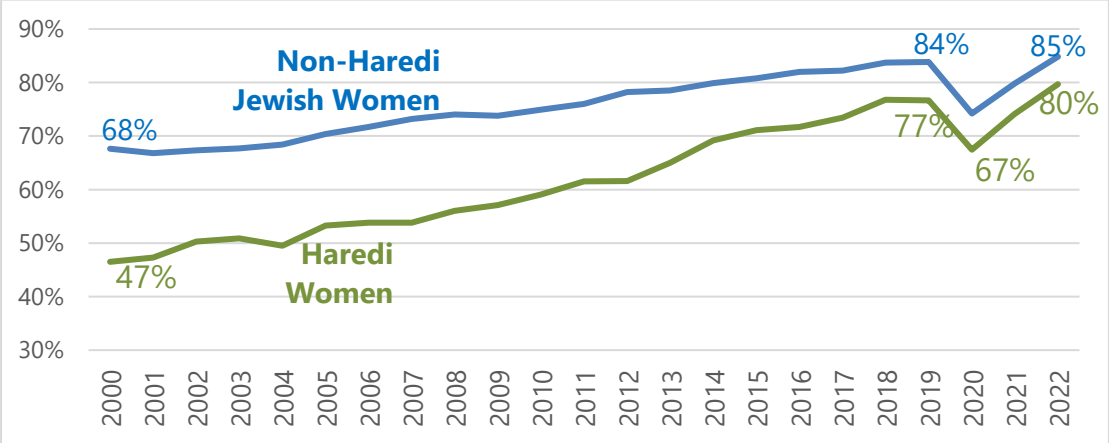
Between 2003 and 2011, Israeli governments had made several decisions aiming to remove barriers to the entry of Haredi women into the labor market, such as increasing the support for establishing and subsidizing daycare facilities for working women, creating employment hubs for women in Haredi municipalities, and more (Malach, Cohen, Zicherman, 2016). Simultaneously, a policy had been implemented to support the transition from welfare to employment, which included a rapid and substantial reduction of child benefits and stipends for yeshiva students (Loewenthal, Gordon, Malach, 2022). These processes expedited the integration of many Haredi women in the labor market. In the framework of the Israeli-Haredi "society of learners," these women act as primary bread-earners who support their spouse during his studies, taking on professions and vocations outside their community in sectors including accounting, bookkeeping and financial professions, mainly in industries such as insurance, design and architecture, customer service call centers, programming and computers, among others.

Despite this increase in the employment rates of Haredi women, which has nearly closed the employment gaps relative to non-Haredi Jewish women, the income levels of Haredi women are still lower (averaging around 73% of the income of non-Haredi Jewish women), suggesting additional barriers which hinder Haredi women from productive, high-quality integration in the labor market. In this context, high-quality employment means that the individual's salary (i.e., average hourly wages and appointment percentages) is higher than the average salary among individuals with similar skills in the current situation.

2. Current Situation - Employment and Wages

For around 20 years, the employment rates of Haredi women have shown a clear and steady upward trend. The employment rate of Haredi women aged 25 to 64, which stood at 47.3% in 2001, has climbed up to 80.1% by 2022 (Figure 1), employment rates which are very close to those of non-Haredi Jewish women (84.6%).

Figure 1: Employment rates of Haredi and non-Haredi Jewish women aged 25 to 64

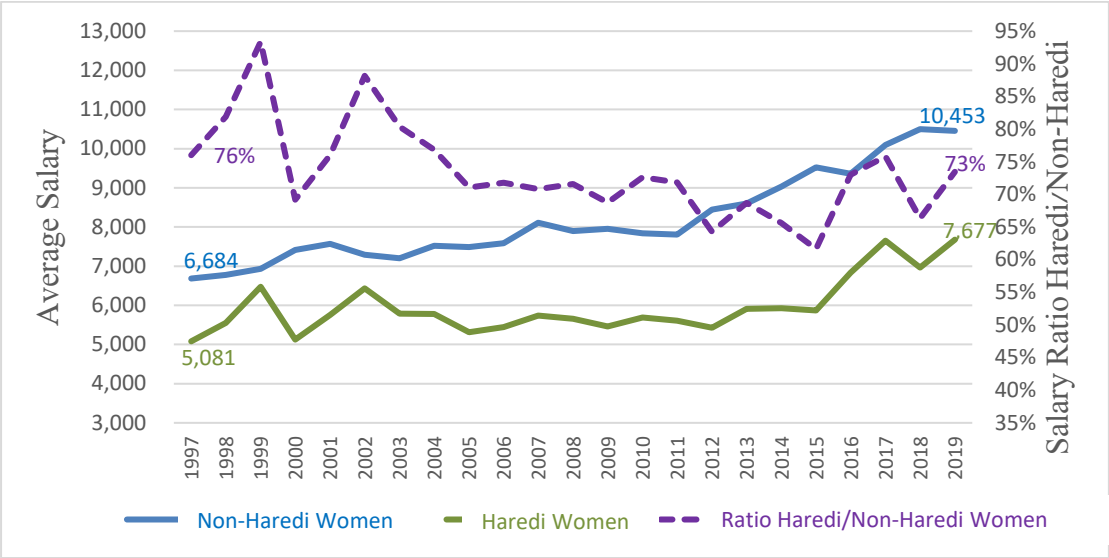


Haredi women identified by most recent educational institution up to 2013, and by self-definition since 2014.

Source: Aaron Institute tabulations of data from CBS Labor Force Surveys.

During this same period, there was also an increase in the wages of women across all population groups, however the wage gaps between Haredi and non-Haredi Jewish women have increased by 5 percentage points between the years 2000 and 2019 (Figure 2).

Figure 2: Monthly salaries of Haredi and non-Haredi Jewish women aged 25 to 64



Real gross wages in 2019 prices. Haredi women identified by most recent educational institution and Haredi municipalities (e.g., Bnei Brak, Kiryat Sefer, and El'ad) up to 2013, and also by self-definition of household since 2014.

Source: Aaron Institute tabulations of CBS file, "Tracking Government Employment Targets".

The Committee for Employment Advancement Towards 2030 dealt extensively with employment in Haredi society, its characteristics, and the various employment barriers facing Haredi men and women and impeding their integration into the labor market. As part of the committee's report (Ministry of Labor, Welfare and Social Services, 2020), an employment rate target for 2030 was set at 81% for Haredi women aged 25 to 64 (which was nearly achieved by 2022), alongside an employment quality target designating an increase of 3.3% per year in the nominal monthly wage for the 25-39 age group. **The main objective of the present study** is to analyze the barriers which hinder the realization of the employment quality target, and to propose policy measures for resolving these barriers.

Government intervention is required for resolving these barriers due to the existence of a market failure, manifested in the lack of sufficient and appropriate investment in human capital to support integration into the labor market (Ministry of Labor, Welfare and Social Services, 2020), resulting in educational disparities relative to non-Haredi women, along with a limited scope of training and preparation for a competitive and dynamic labor market. Government support towards the acquisition of human capital is widely accepted as a fundamental principle throughout the developed world, considering the inherent market failure in this domain which stems from the external influences on economic growth of the educational level of civilians in general, and those participating in the workforce in particular, which leads to a situation where the value gained by society as a whole from the additional education of the individual is higher than the value gained by the individual herself. Consequently, without government intervention, the scope of human capital acquisition may be lower than desired. This market failure is caused, among other things, by the difficulty in obtaining funding for human capital acquisition and the uncertainty regarding the expected return on education (which cannot be insured against), and is indeed a well-known, universal market failure which is not necessarily unique to the Haredi population.

3. Methodology

This study utilized a quantitative analysis based on collecting and analyzing CBS data:

Labor Force Survey: a key applicable statistical tool which enables tracking developments in the Israeli workforce and labor market, including the realization of employment targets for Haredi women and men which were set by the government. This survey contains data on employment characteristics in Israel, as well as education data and demographic data of households. From 2012 to 2013, Haredi women had been identified according to their most recent educational institution, and since 2014 (up to 2022) they have been identified by self-identification.

Household Income and Expenditure Survey: one of the main surveys conducted by the CBS, aiming in part to assess the population's standard of living and to inform policy making in various areas, such as taxation, privatization, welfare, and education. This study used survey data from the years 2014-2019. Haredi women were identified by self-identification.

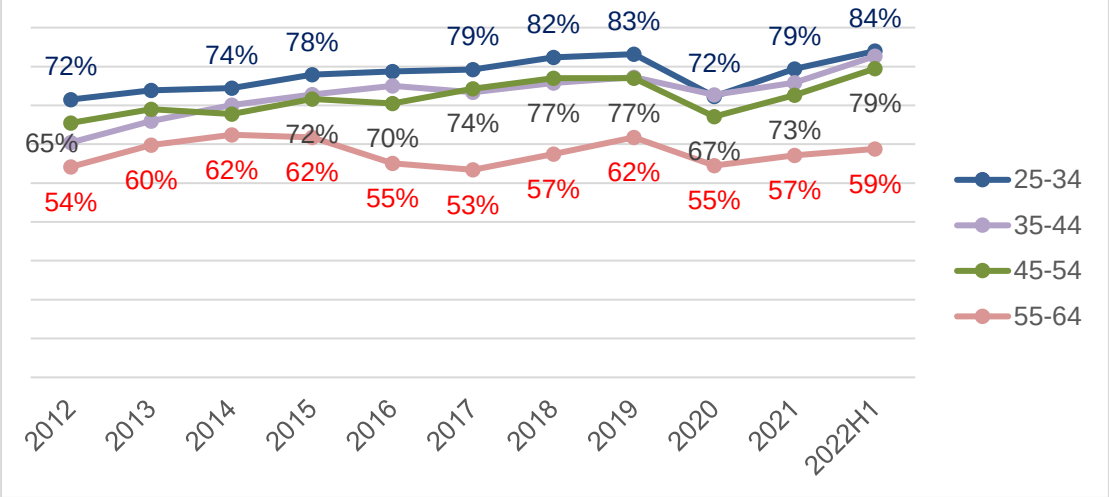
Administrative Data:[1] an extensive database on individual level, containing all female Israeli citizens born between 1980 and 1999, amalgamating data from various official, administrative sources such as The Population Authority, The Tax Authority, The Council for Higher Education (CHE) and The Ministry of Education, comprising demographic data (year of birth, place of residence, background variables such as parents' education and income, marital status, and number of children), education and schooling data (matriculation data, participation in tertiary education – type of certificate and type of educational institution), and labor market data (salary, months of employment, economic sector, occupation – from a partial sample).

[1] According to the limitations of CBS data availability, most recent data are from 2020, and some data are updated only up to 2019. The full database contains all Israeli citizens born between 1975 and 2002.

4. Main Findings

The Haredi women population is mostly young, as in 2022 around 70% of Haredi women in working ages were aged 25 to 44, and only 12% were aged 55 to 64. Examining employment rates by age groups (Figure 3) reveals that apart from the oldest age group, the three younger age groups exhibit similar employment rates among them (without any statistically significant difference in employment rates among these groups), ranging as of 2021 from 73% to 79%. With the exception of the COVID-19 period, employment rates among women aged 25 to 54 have been characterized by a long-term upward trend compared to the beginning of the previous decade, with the most significant increase occurring in the 35-44 age group, whose employment rates have risen by 20 percentage points over the last decade.

Figure 3: Employment rate of Haredi women by age group

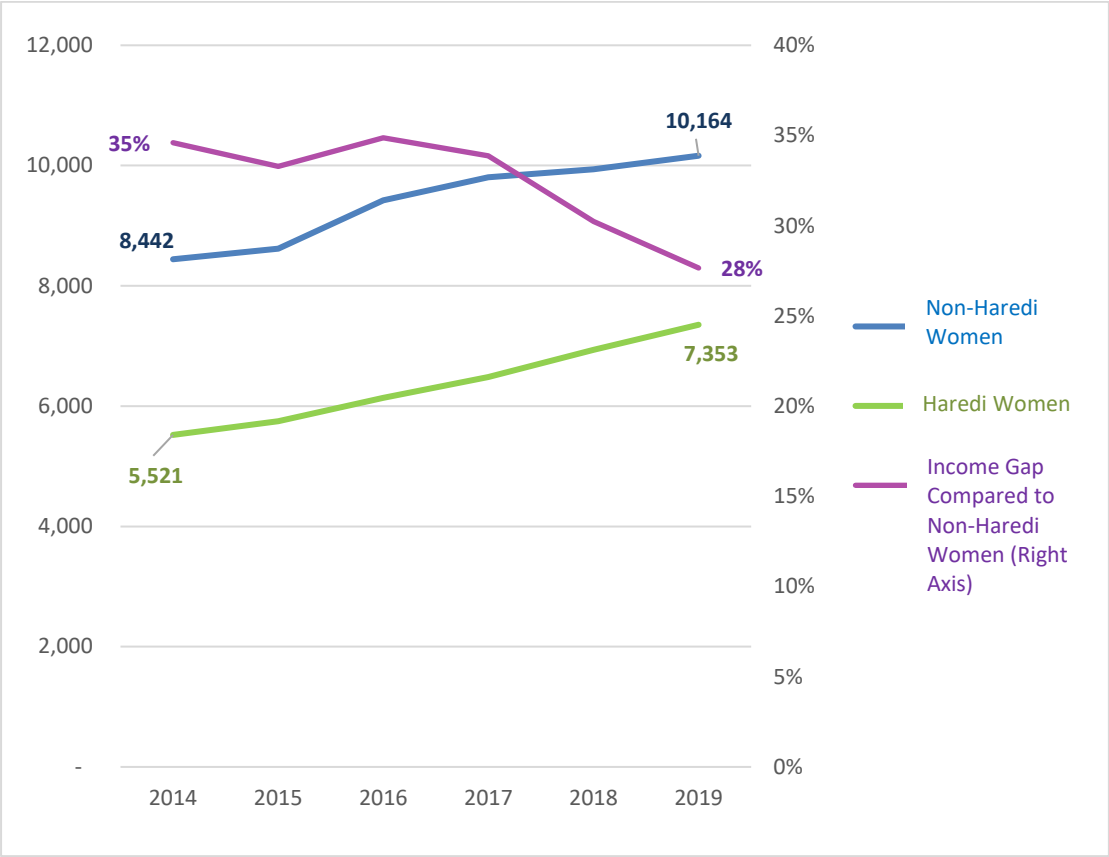


Haredi women identified by most recent educational institution before the age of 18 up to 2013, and by self-identification since 2014.

Source: Aaron Institute tabulations of data from CBS Labor Force Surveys.

Despite the positive trend in employment rates, there are still significant income gaps between Haredi and non-Haredi Jewish women. However, data from the years 2014-2019 regarding women aged 25 to 39 indicate that the income gap was reduced by 7 percentage points, from 35% in 2014 down to 28% in 2019 (Figure 4).

Figure 4: Wages of Haredi and non-Haredi Jewish women aged 25 to 39



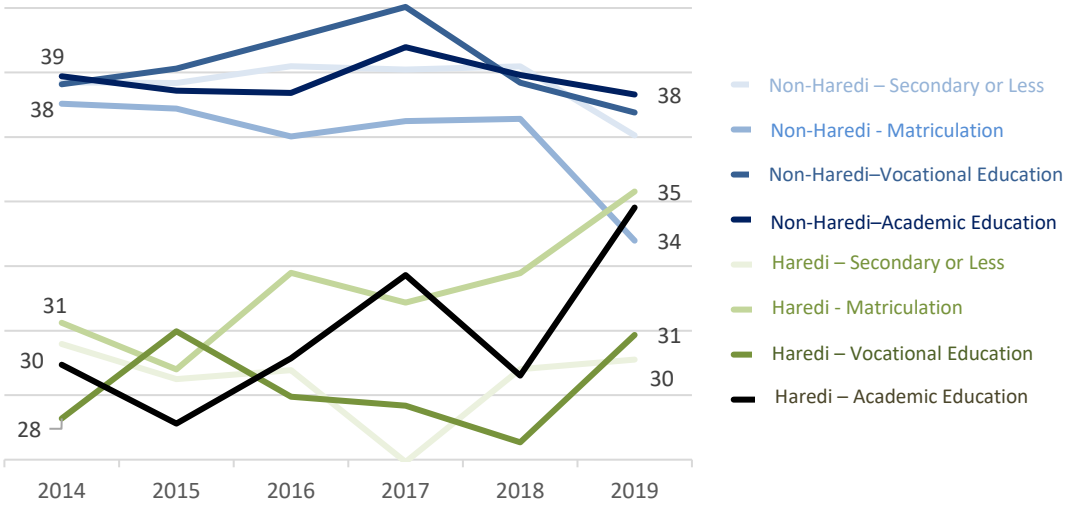
Real wages in 2019 prices. Income from salaried work, non-Haredi women - salaried + self-employed.

Source: Aaron Institute tabulations of CBS administrative data.

Causes of Wage Gaps: Hours of Work

Haredi women work less than non-Haredi Jewish women across all educational levels, however since 2014 there has been a notable increase in the average number of working hours of Haredi women (Figure 5), with the most significant increase exhibited among those with non-academic post-secondary education (17%). This increase appears to reflect necessity stemming from the subsistence needs of Haredi households, along with cost of living expenses. In average terms, in 2019 the share of Haredi women working part-time (fewer than 42 weekly hours) out of all working Haredi women was higher (88%) in comparison to the share of non-Haredi women working part-time (62%). Therefore, it is not surprising that an analysis of hourly wages shows smaller gaps (around 12% in the year 2019) compared to the gaps in monthly wages.

Figure 5: Weekly work hours of Haredi and non-Haredi Jewish women aged 25 to 39 by educational level



Haredi women - salaried workers only. Vocational Education - non-academic post-secondary.

Source: Aaron Institute tabulations of data from CBS Income and Expenditure Surveys.

Causes of Wage Gaps: Low-Income Employment Sectors

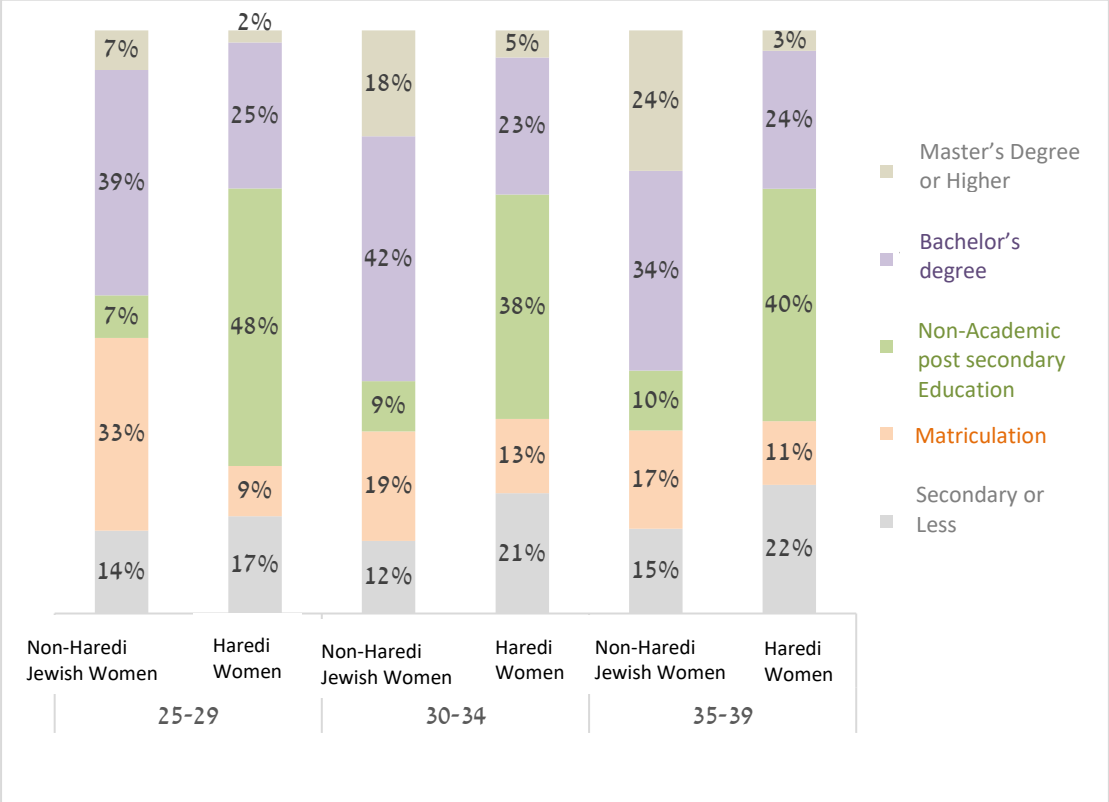
The majority of Haredi women are concentrated in employment sectors and occupations which pay low wages. It should be noted that the administrative data suggest a trend of Haredi women moving into fields with higher income levels. Thus, for example, there is an evident increase in the number of Haredi women aged 25 to 39 who are employed in the high-tech sector, from 3.3% in 2014 to 5.3% in 2021, and in high-tech occupations an increase from 6.5% to 9.7% over the same period. However, a large share of Haredi women are still employed in teaching and education-related jobs, as well as welfare and nursing care services (in 2021, this sector employed around 13% of Haredi women aged 25-39 and 18% of Haredi women aged 40-64).

4.1 Barriers in Educational Tracks

From an economic perspective, enhancing human capital improves employment and reduces income gaps. Improvement of human capital also has huge significance with regard to boosting growth and increasing labor productivity across the economy. Therefore, the following analysis will map the major barriers to high-quality employment across all educational levels.

In the primary working age (25-64), around 35% of Haredi women have secondary (high school) level education (with or without matriculation), 37% of Haredi women have non-academic post-secondary education (certification studies, seminaries, and so forth), and around 28% have an academic degree. Figure 6 shows the changes which have occurred between different age cohorts, such as the rise in the numbers of women who seek non-academic post-secondary education and the decrease in the number of young women whose educational level is secondary or lower.

Figure 6: Jewish Haredi and non-Haredi women by educational levels and age groups, 2019



Source: Aaron Institute tabulations of data from CBS Labor Force Survey.

1. Matriculation Eligibility

Administrative data for 2019 shows that the share of Haredi women with matriculation eligibility is higher among younger age groups. Matriculation eligibility rate in the 35-39 age group is 13%, compared to 21% among those aged 20 to 24. However, these data do not include women who have taken Sald exams, which are common in Haredi schools and comparable to partial matriculation. Employment rates among women with secondary or lower education are only 57% as of 2019, lower than those of non-Haredi women (74%). Among Haredi women with matriculation eligibility, employment rate is 65% (compared to 81% among non-Haredi Jewish women). Wage levels of women with matriculation eligibility range between NIS 5,300 and NIS 5,600 per month. The wage gaps between Haredi and non-Haredi women at this educational level stand at 27% on average.

Barriers to High-Quality Employment at the Matriculation Eligibility Stage

Most graduates of the Haredi school system do not have a matriculation certificate, and without it they face difficulties integrating into the regular higher education system. Consequently, they have to enroll in dedicated institutions for Haredi students or catch up on basic educational gaps, thereby increasing both the duration and the cost of their training period.[2] In regard to this educational level, we examined why many women do not seek further education beyond 12 school years. Two main barriers came up in conversations with professionals in this field:

Economic barrier: this barrier applies to women, mostly from the Sephardi-Mizrahi educational stream, who cannot afford the high cost of further studies. Studies in seminaries are expensive (annual tuition fees of around NIS 14,500) and place a heavy burden on parents who cannot afford to pay such amounts. While academic colleges for Haredi women offer scholarships or even free tuition, the learning atmosphere in these colleges is not suitable for women who wish to study in more conservative institutions, such as seminaries for Haredi women which provide Biblical studies, faith studies concerning the observances of the Jewish home, and so forth.

[2] This catching up is usually done in seminaries for Haredi women and in colleges which are adapted to the Haredi way of life, maintaining separation between men and women through separate teaching days and hours.

Dearth of study opportunities in the geographical periphery and small range of available vocations: this barrier will increasingly worsen, due to the rapid trend of many young Haredi families who leave Jerusalem and Bnei Brak in favor of peripheral towns such as Sefad, Tiberias, and Arad.

2. Non-academic Post-secondary Education

Among Haredi women in the 35-39 age group, 40% have non-academic post-secondary education, compared to 48% with non-academic post-secondary education among Haredi women aged 25 to 29 (Figure 6). This shift suggests a trend whereby young Haredi women invest in training and human capital acquisition more than the investment previously made by Haredi women aged 35 to 39, with higher numbers earning vocational certificates in order to integrate into the labor market.

Some of this non-academic post-secondary education is provided within the seminaries themselves, in grades 10 to 14, while some is scientific-technological training comprising study courses subsidized by The Government Institute for Technology and Science Training (MAHAT). Administrative data for 2019 reveals that the share of Haredi females who earn eligibility for MAHAT certificates have greatly increased among young Haredi women, from 2.6% in the 35-39 age group up to 7.9% in the 25-29 age group. According to Ministry of Education estimates, nearly 40% of students who study today (2023) in the framework of seminaries for Haredi women are studying practical engineering in courses supervised and subsidized by MAHAT. The employment rates of Haredi women with non-academic further education (a graduation certificate from a tertiary institution which is not an academic diploma) are on the rise, reaching 84% as of 2021 – only one percent lower than the employment rates of non-Haredi women. The income level of Haredi women with non-academic post-secondary education is lower in comparison to non-Haredi Jewish women, and the gap is 28% on average.

Barriers to High-Quality Employment at the Non-academic Post-secondary Stage

Poor range of available training subjects in seminaries (beyond the fields of teaching and education), detached from the needs of the labor market. This is also due to insufficient knowledge among seminary heads regarding current demands for various vocations and occupations. In addition, teaching contents and syllabuses in seminaries are not adapted in accordance with market shifts. For example, technological training courses do not always match the demands of the economy. Furthermore, in these professions the labor market prefers applicants with an academic degree, placing those who only have vocational education in an inferior position.

The aforementioned also affects **training quality**, which is not always up to par, for example if the teaching staff is comprised of seminary graduates who lack practical experience in the industry or in the field, or if studies are conducted only in Hebrew, without Internet access, with low levels of English language proficiency, and so on. Students complete their training with **knowledge gaps in English and math**, which are only taught at a low level in seminaries. This constitutes a barrier for many women, particularly in occupations and employment sectors like the high-tech industry, which require substantial grasp of these subjects. This finding is also linked to **unprofessional teaching staffs** at some of the seminaries, due to the fact that teachers' compensation is not high, which drives many highly qualified and talented teachers out of these institutions.

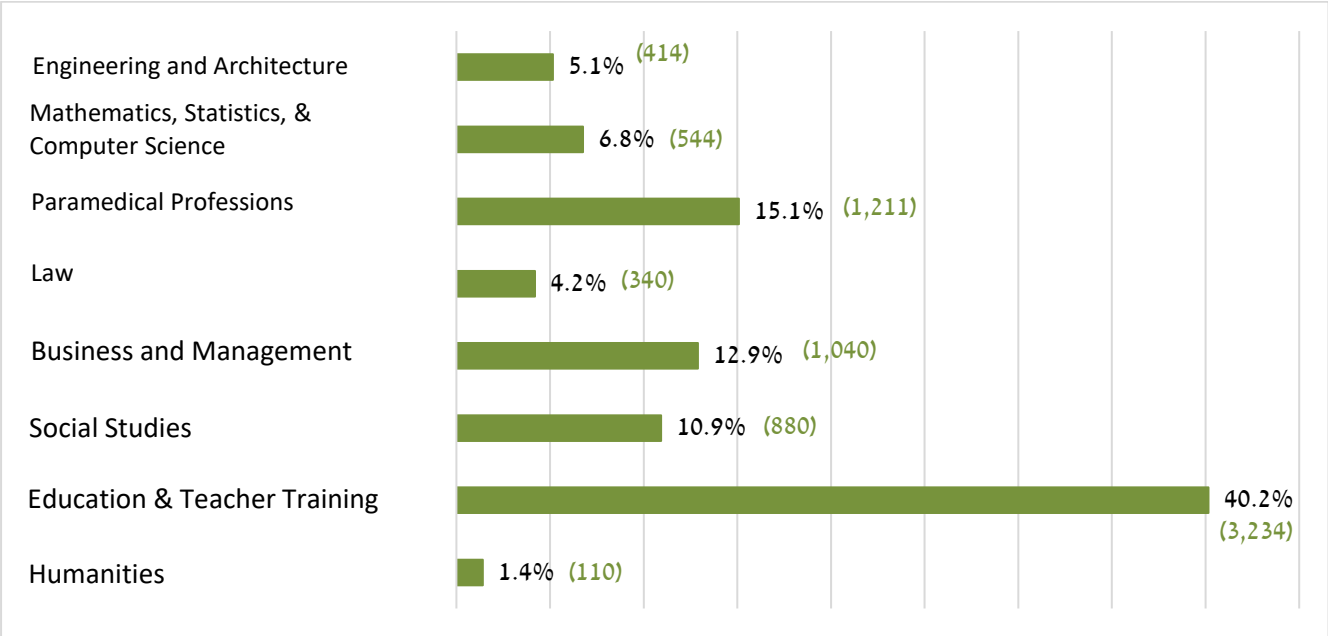
3. Academic Education

One of the milestones leading to socio-economic mobility is academic education (Haveman & Smeeding, 2006), which is a powerful driver of career development and for the acquisition of critical, analytical tools, as well as highly developed reading and analytical skills. Among Haredi women in younger age cohorts, the rate of eligibility for academic degree has been slowly rising, from 13% in the 35-39 age group up to 17% among those aged 25 to 29. Still, these rates are lower than the rates of eligibility for a degree among non-Haredi Jewish women (45% in the 35-39 age group).

The majority of Haredi women who study for an academic degree are attending academic colleges, in dedicated coursed which are adapted for the Haredi community, maintaining varying degrees of gender segregation along with other adaptations. In recent years there has been an increase in the number of Haredi women who study in colleges (either academic or teacher-training colleges).

Haredi women with academic degrees have particularly high employment rates, ranging between 86% and 90%, which are similar to the employment rates of non-Haredi Jewish women with academic degrees. Their income level is higher than average, yet the wage gaps between Haredi and non-Haredi women with academic education stood at 36% on average in the years 2014-2019. This gap can be partly accounted for by the difference in working hours. Another reason is the fact that many Haredi women (around 40%) opt for academic studies in the fields of education and teacher training (Figure 7) in order to enjoy the economic benefits granted to educators with academic degrees. The preference for teaching and education also stems from an inclination towards a practical profession which enables them to work within the Haredi community and helps to steer the younger generation towards the Haredi way of life. This profession is inherently associated with the traditional roles of women and mothers in a conservative society (El-Or, 1994). Finally, this preference is also affected by the range of options available to Haredi women, and by the relative ease of completing an academic degree in this field. Following the completion of a teacher training course in a seminary, an academic degree with a teaching certificate can be earned in a year and a half of studying, and thereafter provide improved wages and employment conditions (albeit still lower than the average wage).

Figure 7: Share (and number) of Haredi women studying in academic institutions by field, average for academic years 2019/20-2020/21



Source: Aaron Institute tabulations of CHE data, excluding PhD at Ariel University and excluding the Open University.

Barriers to High-Quality Employment at the Academic Education Stage

Ideological-cultural difficulty due to concern of harming the Haredi woman's identity and sense of belonging. Wide swaths of the Haredi public harbor deep-seated, principled reluctance and opposition to this educational track, due to the unwanted exposure to values, contents and practices of a liberal, critical nature, which characterize academia and are antithetical to the strict religious view which is prevalent in the Haredi public.

On the practical side, there is a barrier caused by **a limited range of study subjects**, due to the dearth of academic subjects which are adapted and made accessible to Haredi women, thus hindering their mobility and professional advancement. In addition, **tuition fee and the duration of studies** pose a real challenge to many Haredi women, considering the fact that often they are the sole providers for their families.

4.2 Econometric Analysis - Education, Employment, and Monthly Wages

In light of the parameters and barriers revealed in our analysis so far, we used a linear probability model (LPM) to estimate the correlation coefficients of the various factors with regard to education and employment,[3] and a linear model to estimate the correlation coefficients for monthly wages. Our analysis comprises 10 models which include demographic variables such as education, age, district of residence, and parents' education and income. The dependent variable is either education level, employment, or monthly wage. The results for each subject are presented in three tables: for non-Haredi Jewish women, for the gap between Haredi and non-Haredi women, and for Haredi women (full results in the Appendix). This provides separate indication for the correlation's direction and the coefficient of each variable in each group, as well as the gaps between the groups. It should be noted that this regression does not allow for interpreting the results in a causative context, but only in a correlative context. Therefore, our statements refer to group averages.

[3] In a Linear Probability Model the dependent variable receives the value 1 for eligibility for matriculation/academic certificate/employment, and 0 otherwise.

Matriculation Certificate Eligibility

17.6% of Haredi Jewish women born between 1980 and 1994 were eligible for a matriculation certificate in 2019, compared to 56% of their non-Haredi Jewish counterparts. Matriculation eligibility rate is increasing with age cohorts, thus the average eligibility rate among women born between 1990 and 1994 is higher by 10.6 PP (percentage points) among non-Haredi women, and by 4.8 PP among Haredi women, in comparison to those born between 1980-1984.

Gaps in matriculation eligibility across Israel are more significant among Haredi women. In this group, the matriculation eligibility rate in the districts of Jerusalem, Tel Aviv, and Judea and Samaria was lower by 24-40 PP compared to all other districts of Israel, while the gaps in eligibility rates by districts do not exceed 10 PP among non-Haredi women. The share of women hailing from large families who earned matriculation eligibility is lower in comparison to smaller families, and among Haredi women this rate is maintained when accounting for parents' income and education, as opposed to non-Haredi women, where accounting for parents' income and education moderates the negative correlation between family size and matriculation eligibility.

The eligibility rate among non-Haredi Jewish women from families where both parents are highly educated is higher compared to families in which the parents have lower educational level. Among Haredi women, however, matriculation eligibility rate among women with highly educated fathers is lower in comparison to those whose mothers are more educated, and in both groups the eligibility rate is highest among women from families where both parents have similar educational level (Table A-1 – A-3 in the Appendix).

Academic Certificate Eligibility

A relatively low proportion (15%) of Haredi women born between 1980 and 1994 had academic education in 2019, compared to 42% of their non-Haredi Jewish counterparts at similar ages. Since Haredi women enter higher education at a younger age, the share of young Haredi women (born 1990-1994) with academic education in our sample was higher in 2019 compared to their share among older Haredi women (born 1980-1984), whereas among non-Haredi women, the share of older women with academic education was higher by 10 percentage points in comparison to younger women.

Among non-Haredi women, the rate of academic education is similar across all districts, and is exceptionally high among non-Haredi women who had received their 11th grade schooling in the Judea and Samaria District. In contrast, there is significant variance in the rate of academic education according to the district of residence during 11th grade, with the highest share of women with academic education found in the Haifa District, and the lowest in the Tel Aviv District. The rate of academic education among women who hail from large families is lower in comparison to women from smaller families, in a similar manner among both Haredi and non-Haredi women.

Similarly to matriculation certificate eligibility, the share of women with academic education whose parents are highly educated is higher among non-Haredi women, while among Haredi women the rate of academic education is lower among women with highly educated fathers in comparison to those with highly educated mothers. The rate of academic education is higher among women hailing from families where both parents have the same years of education, yet among Haredi women the rate of academic education is higher when the mother is more educated, compared to this rate among Haredi women whose father is more educated, while among non-Haredi women the correlation is the opposite. Accounting for parents' income does not moderate the correlation between parents' education and the eligibility for an academic certificate (Tables A-4 – A-6).

In conclusion, there is an evident increase in the levels of education among younger Haredi women, along with an evident variance between different places of residence, which may suggest differing needs according to each woman's place of residence. With regard to the differences between Haredi and non-Haredi women, it is interesting to note the negative correlation in Haredi society between the educational level of fathers and daughters, as opposed to the positive correlation among non-Haredi Jewish women. In other words, in Haredi society the educational level of women is higher in families where the father has fewer years of education, while in the non-Haredi population the educational level of women is higher in families where the father has more years of education. Finally, the data highlight the issue of "quantity" versus "quality", as in all families, Haredi and non-Haredi alike, there is a negative correlation between family size and the women's level of education. The higher the number of children in a Haredi family, the lower the educational level of the Haredi daughter. This correlation can probably be explained by the costs of acquiring human capital, which families may find difficult to afford for a large number of girls.

Employment

87.5% of Haredi women born between 1980-1994 were employed in 2019, compared to 77% of non-Haredi Jewish women. In both groups, employment rate was higher as the age group was younger.

Employment rate is lowest among women without any certification, and highest among women with academic education. Employment rate is higher among Haredi women across all educational levels, regardless of age. In the non-Haredi Jewish population, employment rate is higher among mothers, and higher still among mothers of large families, while among Haredi women there is no significant difference between mothers and non-mothers, or between mothers of larger and smaller families. The Jerusalem District exhibits the lowest employment rate, across both population groups, and among Haredi women the employment rate in the Northern District is similar to that of Jerusalem. The Haifa District exhibits the highest employment rate among Haredi women, while among non-Haredi women the highest employment rate is found in the Central District. There is a clear correlation between the parents' employment situation at age 17 and the woman's employment at age 25 or more, as in both population groups the employment rate of women whose both parents worked when they were 17 is higher in comparison to women of whom one parent at most was employed when they were 17, with a stronger correlation to the mother's employment (Tables A-7 – A-9).

Wages

The average monthly salary of non-Haredi Hewish women who were born between 1980 and 1994 was NIS 7,703 in 2019, compared to NIS 6,612 among Haredi women. Salary increase with experience is very significant among non-Haredi Jewish women, resulting in large wage gaps between age groups, while among Haredi women the salary increase with experience is not as substantial, hence the age wage gaps are smaller.

The return on education is remarkable in both groups, as the average salary of women with tertiary education is higher and the average salary of academically educated women is the highest, with no substantial difference between Haredi and non-Haredi women in the average additional income correlated with an academic degree.[4]

The average salary of women in the Tel Aviv District is the highest in comparison to all other districts of Israel, in both groups, and also for both groups the average salary of women in the Northern District is the lowest. Wage gaps between districts are more substantial among non-Haredi Jewish women than they are among Haredi women. The average salary of women whose both parents were employed when they were 17 is higher than the salary of women of whom one parent at most was employed when they were 17. This correlation is similar in both population groups, except Haredi women of whom only the father was employed when they were 17, for whom the correlation is weaker in comparison to their non-Haredi counterparts (Tables A-10 – A-12).

[4] The average salary of Haredi women with academic degrees is still lower in comparison to their non-Haredi counterparts, however these gaps stem from the different characteristics of Haredi and non-Haredi women with academic education. When comparing academically educated Haredi women with academically educated non-Haredi women who have similar characteristics, the average salary turns out to be identical.

5. Summary and Conclusions

The main challenges with regard to improving the employment of Haredi women stem from the need to improve their income level, while taking into consideration their unique needs and characteristics. The present study characterized the employment and integration patterns of Haredi women with the aim of locating the barriers to their integration in high-quality employment spheres, particularly barriers which are related to human capital acquisition.

This study utilized quantitative research methods and found that, after around two decades of a steady, consistent upward trend in the employment rate of Haredi women aged 25 to 64, the employment target set for 2030 was almost fully realized by 2022, and the employment rates of Haredi women are very similar to those of non-Haredi women.

Another positive trend is the increase in the average weekly working hours of Haredi women. While Haredi women work less than non-Haredi women across all educational level, there is nevertheless an evident rise the average working hours of Haredi women. At the 25-39 age group, the increase is from 29.4 hours on average in the year 2014 to 32.1 hours on average in 2019.

However, there are still significant income gaps which indicate that the human and social capital of Haredi women does not enable them to make optimal use of their skills and capabilities in the labor market. It is possible that the narrower gaps among younger age groups reflect the recent changes in vocational training schemes and in younger women's choice of occupations and appointment percentages in recent years. These changes also appear to bear on the quality of education at younger ages, particularly the scope and quality of the teaching of core subjects at girls' schools.

Data from the years 2014-2019 regarding women aged 25 to 39 show that the wage gap was reduced by 7 percentage points: from 35% in 2014 to 28% in 2019. One reason may be the shift in employment sectors and occupations among young Haredi women, such as the increase in the share of Haredi women aged 25 to 39 who are employed in the high-tech sector and in high-tech occupations.

From an economic perspective, enhancing the human and social capital of Haredi women improves the quality of their employment. Thus, for example, the average salary level of Haredi women with matriculation eligibility was NIS 5,565 on average in 2019; Haredi women with non-academic post-secondary education earned NIS 7,144 per month on average; and Haredi women with academic education earned NIS 8,779 per month, on average, in 2019.

In general, 78% of the female graduates of the Haredi school system do not have a matriculation certificate (Cahaner and Malach, 2021), the lack of which hinders their ability to integrate into the regular higher education system, or into high-quality post-secondary education, and subsequently their chances to land profitable jobs. Therefore, and due to ideological, cultural and social barriers stemming from the seclusion of Haredi society, they have to enter dedicated institutions which are adapted to the character and the way of life of the Haredi public, or otherwise catch up on basic educational gaps, thus increasing both the duration and the cost of their training period. Barriers encountered in this stage of education include: difficulty affording the cost of further studies, dearth of educational options in the geographical periphery, and small range of available fields of study, as obstacles to the further acquisition of education beyond matriculation eligibility.

The next educational phase, non-academic post-secondary, has become much more common and widespread. Our findings show that nearly half (48%) of Haredi women aged 25 to 29 have a certificate indicating non-academic post-secondary education. Some vocational training consists of scientific-technological training in seminaries, where study tracks are subsidized by MAHAT (21% of women aged 20-39). It should be noted that the employment rates of Haredi women with further non-academic education are almost identical to those of non-Haredi women with similar education.

Barriers encountered in this stage of education include the poor range of available training subjects in seminaries, which may not always meet the changing needs of the labor market; quality of teaching and training in some study tracks; and significant knowledge gaps in English and math studies.

In the academic education stage, there has been a slow increase in the share of Haredi women who are eligible for an academic degree, yet their numbers are still lower in comparison to the degree eligibility rates among non-Haredi women. Employment rates of Haredi women with academic degrees are similar to those of non-Haredi women with academic degrees. However, the income gap between Haredi and non-Haredi women at this educational level is 36%. This is due to the fact that many Haredi women choose to teach education and teacher training in academic institutions, thereby continuing their own professional and personal development in those fields which are widely taught in the teacher-training seminaries within Haredi society. Since this field is characterized by wages which are lower than the average for the economy as a whole, it reflects on the average income of all Haredi women with academic degrees. Barriers encountered in this stage of education include ideological-cultural

difficulties in integrating into academia, limited range of available study subjects, and high cost of tuition fees and long duration of studies.

An analysis of education regressions indicates an upward trend in the educational level of young Haredi women. Another finding is the variance between different districts of residence, which may imply different needs among the residents of each district. With regard to the differences between Haredi and non-Haredi women, it is interesting to note the negative correlation between the father's education level and the daughter's education level in Haredi society, as opposed to the positive correlation among non-Haredi Jewish women. In other words, among the Haredi population the women's educational level is higher in families where the father has fewer years of study, while in the non-Haredi population the women's education level is higher in families where the father has more years of education. Finally, the data highlight the issue of "quantity" versus "quality", as in all families, Haredi and non-Haredi alike, there is a negative correlation between family size and the women's level of education. The higher the number of children in a Haredi family, the lower the educational level of the Haredi daughter.

An analysis of wage regressions indicates that salary increase with experience is very significant among non-Haredi Jewish women, resulting in large wage gaps between age groups, while among Haredi women the salary increase with experience is not as substantial, hence the age wage gaps are smaller. The return on education is remarkable in both groups, as the average salary of women with tertiary education is higher, and the average salary of academically educated women is the highest.

6. Policy Recommendations

In order to resolve the economic barrier, we recommend considering the possibility of providing Haredi women who need financial support with conditional tuition fee loans, reduced tuition fees, or scholarships covering tuition fees, according to clear, publicized criteria set in advance.

Since there is a shortage of tertiary education and vocational training opportunities in the geographical periphery of Israel, into which many young Haredi families are moving, there is a need to keep encouraging the creation of training schemes for vocational education, or the adaptation of existing institutions to also cater for the needs of female Haredi students.

To encourage further acquisition of human capital beyond 12 years of study, we recommend integrating and encouraging expanded Sald exams during the high-school stage of education – at a level of 5 study units in English and math – along with imparting female students with basic and enhanced digital skills, and training teachers as necessary to boost the teaching of core subjects.

In the framework of seminary studies, we recommend incorporating and embedding vocational training courses spanning 500 hours or more, while also expanding and diversifying the available study courses; providing high-quality tuition accompanied by accreditation, for example through “extra-academic” units operated within the seminaries; providing guidance and support in occupational placement; and finally, drawing upon the state to fund studies, while setting the quality criterion for training courses spanning 400 to 1,000 hours at a return of at least 6%, in terms of wages, compared to the expected salary for graduates had they not undergone the training (Ministry of Labor, Welfare and Social Services, 2020).

To increase the rates of academic education, we recommend providing subsistence grants to female students who are married or mothers, encouraging seminaries (by means of tiered funding) to incorporate academic studies within the seminaries themselves, and opening up additional opportunities and study subjects which are adapted to the needs of Haredi women, while matching the subjects taught in seminaries to professions which are in high demand in the employment market.

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Appendix: Econometric Analysis - Education, Employment, and Monthly Wages

Matriculation/Academic Certificate Eligibility

The following tables present 2 models, estimating the probability of eligibility for a matriculation certificate (Tables A-1 – A-3) and the probability of eligibility for a an academic diploma (Tables A-4 – A-6). Each model was estimated cumulatively, i.e. we first examined the basic coefficient of interest (Haredi women indicator) and then gradually added control variables.

The probability of eligibility for a matriculation certificate was estimated for all cohorts, 1985-1999, while given the young age of the 1995-1999 cohorts, they are not included when estimating the probability of eligibility for an academic diploma.

For each model, the first table presents the coefficients for non-Haredi Jewish women ("base coefficients"), the second table presents the additional coefficients for Haredi women ("gap coefficients"), and the third table presents the total coefficients for Haredi women (the sum of the basic and gap coefficients).

The regressions' structure and explanatory variables is listed below:

(1) Haredi women

(2) (1) + age

(3) (2) + district of residence at 11th grade

(4) (3) + number of siblings at age 17

(5) (4) + years of education of father/mother (separately)

(6) (5) + income of father/mother (separately)

(7) (4) + years of education of most educated parent

(8) (7) + total income of parents

(9) (7) + indicator for most educated parent

(10)(8) + indicator for most educated parent

Estimated Model:

$$y_i = \beta_0 + \beta_1 Haredi_i + \alpha AGE_i + \delta Dist_i + \gamma Sib17_i + \pi PARNTEDUC_i + \eta LRINC17_i + u_i$$

y_i – eligibility for certificate (matriculation/academic – 1 for eligible, 0 otherwise).

$Haredi_i$ – binary variable indicating population group (1 for Haredi women, 0 otherwise).

AGE_i – vector of binary variables indicating age group in the year 2019.

$Dist_i$ – vector of binary variables indicating district of residence at age 17.

$Sib17_i$ – number of siblings at age 17.

$PARNTEDUC_i$ – vector of variables for parents' education at age 17.

$LRINC17_i$ – vector of variables for the log of parents' income at age 17.

Table A-1: Matriculation eligibility as dependent on demographic characteristics, coefficients - non-Haredi women

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Constant	56.0%	47.1%	61.3%	69.8%	21.6%	15.4%	23.9%	12.7%	16.5%	6.7%
Year of birth 1985-1989		5.2	4.2	4.2	3.7	3.3	3.2	2.8	3.2	2.9
Year of birth 1990-1994		10.6	8.3	8.4	7.7	6.8	6.7	5.9	6.6	5.9
Year of birth 1995-1999		21.8	17.7	17.9	15.8	14.6	15.4	14.3	15.0	14.0
Northern District			-1.9	-3.1	-0.4	-0.1	-0.3	0.0	0.2	0.3
Southern District			1.4	0.2	5.0	5.1	5.2	5.3	5.6	5.6
Haifa District			1.5	-0.7	2.5	2.4	2.1	2.0	2.5	2.4
Central District			4.4	2.7	5.0	4.8	5.0	4.6	5.3	4.9
Judea & Samaria District			10.0	13.2	8.6	7.8	9.4	8.6	9.2	8.6
Tel Aviv District			5.3	2.7	5.5	5.4	5.5	5.3	5.9	5.6
Number of siblings at age 17				-2.7	-1.8	-1.5	-1.8	-1.6	-1.8	-1.5
Father's years of education					1.6	1.5				
Mother's years of education					2.0	1.8				
Log of father's income at age 17						0.6				
Log of mother's income at age 17						0.5				
Education years of most educated parent							3.2	2.9	3.4	3.1
Log of total parents' income at age 17								1.4		1.3
Most educated parent - father									1.3	1.2
Both parents have same education years									6.5	5.7
Number of observations	1,024,760	1,024,760	801,689	801,689	659,246	659,246	747,460	747,460	747,460	747,460
adj R-sqr	0.0610	0.0840	0.194	0.204	0.254	0.261	0.251	0.259	0.254	0.261

The constant is expressed in percentages, all other coefficients are expressed in percentage points. All coefficients are statistically significant, except those marked by ♀.

Source: Aaron Institute tabulations of CBS administrative data, 2019.

Table A-2: Matriculation eligibility as dependent on demographic characteristics, gap between Haredi and Non-Haredi women

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Constant	-38.40%	-34.50%	-58.30%	-49.40%	-3.84%	-0.28%	4.79%	12.90%	8.01%	14.80%
Year of birth 1985-1989		-2.1	-2.3	-2.1	-1.4	-1.1	-1.5	-1.3	-1.5	-1.2
Year of birth 1990-1994		-5.9	-4.9	-4.7	-3.8	-3.2	-3.3	-2.7	-2.9	-2.5
Year of birth 1995-1999		-13.1	-10.4	-10.2	-7.8	-7.2	-8.3	-7.8	-8.0	-7.6
Northern District			37.9	36.6	35.1	34.2	33.7	33.1	33.3	32.8
Southern District			22.5	22.1	29.5	28.9	20.3	19.9	20.2	19.9
Haifa District			35.1	34.8	37.6	36.8	32.4	32.0	32.2	31.8
Central District			35.4	32.4	27.2	26.4	27.0	26.7	26.5	26.3
Judea & Samaria District			-9.2	-11.9	-7.0	-6.3	-8.3	-7.7	-8.2	-7.7
Tel Aviv District			-2.5	-0.8	-0.7	-1.1	-3.1	-3.2	-3.3	-3.4
Number of siblings at age 17				0.2	-0.4	-0.6	-0.4	-0.6	-0.4	-0.6
Father's years of education					-2.5	-2.4				
Mother's years of education					-0.9	-0.8				
Log of father's income at age 17						-0.2				
Log of mother's income at age 17						-0.4				
Education years of most educated parent							-3.8	-3.5	-3.8	-3.5
Log of total parents' income at age 17								-1.0		-0.9
Most educated parent - father									-3.4	-3.3
Both parents have same education years									-3.0	-2.2
Number of observations	1,024,760	1,024,760	801,689	801,689	659,246	659,246	747,460	747,460	747,460	747,460
adj R-sqr	0.0610	0.0840	0.194	0.204	0.254	0.261	0.251	0.259	0.254	0.261

The constant is expressed in percentages, all other coefficients are expressed in percentage points. All coefficients are statistically significant, except those marked by ♀.

Source: Aaron Institute tabulations of CBS administrative data, 2019.

Table A-3: Matriculation eligibility as dependent on demographic characteristics, coefficients - Haredi women overall (non-Haredi + gap)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Constant	17.6%	12.6%	3.0%	20.4%	17.8%	15.1%	28.7%	25.6%	24.5%	21.5%
Year of birth 1985-1989		3.1	1.9	2.1	2.3	2.2	1.6	1.6	1.7	1.7
Year of birth 1990-1994		4.8	3.4	3.8	3.9	3.5	3.5	3.2	3.7	3.4
Year of birth 1995-1999		8.7	7.3	7.7	8.0	7.4	7.1	6.5	7.0	6.4
Northern District			36.0	33.5	34.7	34.1	33.4	33.1	33.5	33.1
Southern District			23.9	22.3	34.5	34.0	25.5	25.2	25.8	25.5
Haifa District			36.6	34.1	40.1	39.2	34.5	34.0	34.7	34.2
Central District			39.8	35.1	32.2	31.2	32.0	31.3	31.8	31.2
Judea & Samaria District			0.8	1.3	1.6	1.5	1.0	0.9	1.0	0.9
Tel Aviv District			2.8	1.9	4.8	4.3	2.4	2.2	2.6	2.3
Number of siblings at age 17				-2.5	-2.2	-2.1	-2.3	-2.2	-2.2	-2.1
Father's years of education					-0.9	-0.9				
Mother's years of education					1.0	1.0				
Log of father's income at age 17						0.4				
Log of mother's income at age 17						0.1				
Education years of most educated parent							-0.6	-0.7	-0.4	-0.4
Log of total parents' income at age 17								0.4		0.4
Most educated parent - father									-2.2	-2.1
Both parents have same education years									3.5	3.5
Number of observations	1,024,760	1,024,760	801,689	801,689	659,246	659,246	747,460	747,460	747,460	747,460
adj R-sqr	0.0610	0.0840	0.194	0.204	0.254	0.261	0.251	0.259	0.254	0.261

The constant is expressed in percentages, all other coefficients are expressed in percentage points. All coefficients are statistically different than the coefficients of non-Haredi women, except those marked by ♀.

Source: Aaron Institute tabulations of CBS administrative data, 2019.

Table A-4: Academic education as dependent on demographic characteristics, coefficients - non-Haredi women

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Constant	42.2%	44.8%	55.9%	64.4%	2.5%	-4.5%	7.1%	-4.4%	-0.2%	-10.3%
Year of birth 1985-1989		1.6	1.2	1.2	0.3	♀-0.1	-0.1	-0.4	♀0.0	-3.4
Year of birth 1990-1994		-10.0	-14.0	-13.8	-16.1	-17.1	-16.0	-16.8	-16.1	-16.9
Northern District			-4.2	-5.3	-0.5	-0.2	-1.0	-0.6	-0.5	♀-0.2
Southern District			-7.3	-8.4	-1.3	-1.2	-1.7	-1.6	-1.3	-1.2
Haifa District			-1.1	-3.3	1.4	1.3	0.6	0.6	1.0	1.0
Central District			♀0.3	-1.3	2.5	2.3	2.2	1.8	2.5	2.1
Judea & Samaria District			11.2	14.4	9.2	8.2	9.7	8.9	9.6	8.9
Tel Aviv District			-0.5	-3.0	1.5	1.4	1.1	0.9	1.4	1.2
Number of siblings at age 17				-2.7	-1.7	-1.3	-1.6	-1.3	-1.6	-1.3
Father's years of education					2.1	2.0				
Mother's years of education					2.4	2.2				
Log of father's income at age 17						0.6				
Log of mother's income at age 17						0.6				
Education years of most educated parent							3.9	3.6	4.1	3.8
Log of total parents' income at age 17								1.4		1.4
Most educated parent - father									1.7	1.6
Both parents have same education years									6.7	5.8
Number of observations	774,297	774,297	584,940	584,940	479,572	479,572	542,684	542,684	542,684	542,685
adj R-sqr	0.0278	0.0375	0.0795	0.0879	0.143	0.151	0.143	0.152	0.146	0.154

The constant is expressed in percentages, all other coefficients are expressed in percentage points. All coefficients are statistically significant, except those marked by ♀.

Source: Aaron Institute tabulations of CBS administrative data, 2019.

Table A-5: Academic education as dependent on demographic characteristics, gap between Haredi and Non-Haredi women

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Constant	-27.0%	-31.9%	-43.2%	-39.7%	-0.64%	3.97%	12.90%	20.30%	17.20%	23.30%
Year of birth 1985-1989		♀0.3	♀0.2	♀0.3	♀1.8	2.1	1.9	2.2	2.0	2.2
Year of birth 1990-1994		14.1	17.5	17.5	20.6	21.1	20.1	20.6	20.4	20.8
Northern District			8.3	7.5	♀1.9	♀0.7	3.4	2.4	3.3	2.4
Southern District			9.0	9.0	4.1	3.4	3.8	3.1	3.7	3.2
Haifa District			1.1	1.4	-3.0	-4.0	-2.4	-3.2	-2.5	-32.6
Central District			14.5	12.9	6.7	5.7	6.7	6.1	6.2	5.7
Judea & Samaria District			-12.0	-14.9	-12.8	-12.0	-11.2	-10.5	-10.8	-10.2
Tel Aviv District			-3.9	-1.9	-5.7	-6.2	-6.1	-6.3	-6.4	-6.5
Number of siblings at age 17				1.0	♀-0.1	-0.2	-0.2	-0.3	-0.2	-0.3
Father's years of education					-2.3	-2.2				
Mother's years of education					-0.4	-0.4				
Log of father's income at age 17						-0.3				
Log of mother's income at age 17						-0.3				
Education years of most educated parent							-3.6	-3.3	-3.6	-3.3
Log of total parents' income at age 17								-0.9		
Most educated parent - father									-5.0	-4.8
Both parents have same education years									-5.2	-4.4
Number of observations	774,297	774,297	584,940	584,940	479,572	479,572	542,684	542,684	542,684	542,685
adj R-sqr	0.0278	0.0375	0.0795	0.0879	0.143	0.151	0.143	0.152	0.146	0.154

The constant is expressed in percentages, all other coefficients are expressed in percentage points. All coefficients are statistically significant, except those marked by ♀.

Source: Aaron Institute tabulations of CBS administrative data, 2019.

Table A-6: Academic education as dependent on demographic characteristics, coefficients - Haredi women overall (non-Haredi + gap)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Constant	15.2%	12.9%	12.7%	24.7%	1.8%	-0.5%	20.0%	15.9%	17.0%	13.0%
Year of birth 1985-1989		♀1.9	♀1.5	♀1.5	♀2.1	2.0	1.9	1.8	2.0	-1.2
Year of birth 1990-1994		4.1	3.5	3.7	4.5	4.0	4.1	3.8	4.3	3.9
Northern District			4.1	2.3	♀1.4	♀0.5	2.4	1.7	2.8	2.2
Southern District			1.7	0.6	2.8	2.2	2.0	1.6	2.4	2.0
Haifa District			0.0	-1.8	-1.6	-2.7	-1.7	-2.5	-1.5	-31.6
Central District			14.8	11.6	9.2	8.0	8.8	7.9	8.8	7.8
Judea & Samaria District			-0.8	-0.5	-3.6	-3.8	-1.5	-1.6	-1.2	-1.3
Tel Aviv District			-4.3	-5.0	-4.3	-4.8	-5.0	-5.4	-4.9	-5.3
Number of siblings at age 17				-1.7	♀-1.7	-1.5	-1.8	-1.6	-1.7	-1.6
Father's years of education					-0.2	-0.2				
Mother's years of education					2.0	1.9				
Log of father's income at age 17						0.4				
Log of mother's income at age 17						0.3				
Education years of most educated parent							0.3	0.3	0.6	0.5
Log of total parents' income at age 17								0.5		1.4
Most educated parent - father									-3.3	-3.2
Both parents have same education years									1.5	1.4
Number of observations	774,297	774,297	584,940	584,940	479,572	479,572	542,684	542,684	542,684	542,685
adj R-sqr	0.0278	0.0375	0.0795	0.0879	0.143	0.151	0.143	0.152	0.146	0.154

The constant is expressed in percentages, all other coefficients are expressed in percentage points. All coefficients are statistically different than the coefficients of non-Haredi women, except those marked by ♀.

Source: Aaron Institute tabulations of CBS administrative data, 2019.

Employment and Wages

The following tables present 2 models, estimating the probability of employment (Tables A-7 – A-9) and the (log) of monthly wages (Tables A-10 – A-12). Each model was estimated cumulatively, i.e. we first examined the basic coefficient of interest (Haredi women indicator) and then gradually added control variables.

Given the young age of the 1995-1999 cohorts, they are not included in the estimation.

For each model, the first table presents the coefficients for non-Haredi Jewish women ("base coefficients"), the second table presents the additional coefficients for Haredi women ("gap coefficients"), and the third table presents the total coefficients for Haredi women (the sum of the basic and gap coefficients).

The regressions' structure and explanatory variables is listed below:

(1) Haredi women

(2) (1) + age

(3) (2) + highest education certificate

(4) (3) + marital status

(5) (4) + number of children

(6) (5) + district of residence

(7) (6) + years since receiving degree

(8) (7) + indicator for parents education at age 17

Estimated Model:

$$y_i = \beta_0 + \beta_1 Haredi_i + \alpha AGE_i + \eta Educ_i + \mu Mstat_i + \gamma child_i + \delta Dist_i + \psi years_i + \pi Prntemp17_i + u_i$$

y_i – employment (1 for employed, 0 otherwise)/log of monthly wage.

$Haredi_i$ – binary variable indicating population group (1 for Haredi women, 0 otherwise).

AGE_i – vector of binary variables indicating age group in the year 2019.

$EDUC_i$ – vector of binary variables indicating highest education certificate in the year 2019.

$MSTAT_i$ – vector of binary variables indicating marital status in the year 2019.

$child_i$ – number of children in the year 2019.

$Dist_i$ – vector of binary variables indicating district of residence at age 17.

$years_i$ – years since receiving degree.

$Prntemp17_i$ – vector of variables for parents' employment at age 17.

Table A-7: Employment as dependent on demographic characteristics, coefficients - non-Haredi women

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	77.0%	74.4%	60.1%	49.6%	47.1%	42.7%	43.2%	36.3%
Year of birth 1985-1989		2.4	1.6	3.3	4.8	5.1	4.2	3.3
Year of birth 1990-1994		5.7	5.3	10.4	13.1	13.3	11.9	10.0
Matriculation or less			20.0	20.3	20.3	17.4	17.7	11.6
Grades 13-14			20.8	19.3	19.3	16.5	16.5	10.6
MAHAT			24.1	22.6	23.1	20.5	20.5	15.3
Academic			26.0	25.1	25.7	23.3	20.6	20.2
Years since receiving degree							-0.6	-0.6
Married				13.4	8.4	6.5	6.5	6.9
Divorced				20.4	17.4	14.7	14.7	14.7
Widow				14.7	10.9	7.9	7.8	9.3
Number of children					2.8	2.7	2.8	2.6
Northern District						8.4	8.4	5.8
Southern District						9.6	9.7	7.6
Haifa District						7.4	7.5	5.4
Central District						9.9	10.1	7.4
Judea & Samaria District						8.2	8.2	5.8
Tel Aviv District						8.1	8.2	6.4
Only father was employed at age 17								16.4
Only mother was employed at age 17								17.8
Both parents employed at age 17								18.9
Number of observations	774,297	774,297	774,297	773,791	773,791	762,174	762,174	762,174
adj R-sqr	0.006	0.009	0.086	0.109	0.115	0.0993	0.1	0.13

The constant is expressed in percentages, all other coefficients are expressed in percentage points. All coefficients are statistically significant, except those marked by ♀.

Source: Aaron Institute tabulations of CBS administrative data, 2019.

Table A-8: Employment as dependent on demographic characteristics, gap between Haredi and Non-Haredi women

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	10.5%	8.1%	20.9%	27.4%	30.2%	32.2%	13.8%	36.2%
Year of birth 1985-1989		1.3	1.7	♀0.2	-1.5	-1.8	-0.9	♀-0.1
Year of birth 1990-1994		3.0	2.6	-2.1	-5.2	-5.2	-3.9	-2.4
Matriculation or less			-17.7	-17.8	-17.9	-15.3	-15.6	-9.9
Grades 13-14			-17.9	-16.3	16.4	-13.9	-14.0	-8.5
MAHAT			-17.5	-16.0	-16.5	-13.8	-13.8	-9.3
Academic			-16.4	-15.2	-15.9	-13.4	-15.2	-10.0
Years since receiving degree							0.3	0.3
Married				-9.3	-3.9	-2.0	-2.0	-2.6
Divorced				-17.4	-14.4	-11.7	-11.6	-11.7
Widow				-25.8	-21.9	-19.4	-19.3	-20.9
Number of children					-2.9	-2.8	-2.9	-2.7
Northern District						-8.2	-8.2	-5.9
Southern District						-7.9	-8.0	-6.2
Haifa District						-3.1	-3.2	-1.6
Central District						-6.0	-6.1	-4.0
Judea & Samaria District						-4.8	-4.8	-2.4
Tel Aviv District						-4.3	-4.3	-2.9
Only father was employed at age 17								-14.9
Only mother was employed at age 17								-12.4
Both parents employed at age 17								-13.3
Number of observations	774,297	774,297	774,297	773,791	773,791	762,174	762,174	762,174
adj R-sqr	0.006	0.009	0.086	0.109	0.115	0.0993	0.1	0.13

The constant is expressed in percentages, all other coefficients are expressed in percentage points. All coefficients are statistically significant, except those marked by ♀.

Source: Aaron Institute tabulations of CBS administrative data, 2019.

Table A-9: Employment as dependent on demographic characteristics, coefficients - Haredi women overall (non-Haredi + gap)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	87.5%	82.5%	81.0%	77.0%	77.3%	74.9%	57.0%	72.5%
Year of birth 1985-1989		♀3.7	3.4	3.5	3.3	3.3	3.3	♀3.2
Year of birth 1990-1994		8.7	7.9	8.3	7.9	8.1	8.0	7.6
Matriculation or less			2.3	2.5	2.4	2.1	2.1	1.7
Grades 13-14			2.9	3.0	35.7	2.6	2.5	2.1
MAHAT			6.6	6.6	6.6	6.7	6.7	6.0
Academic			9.6	9.9	9.8	9.9	5.4	10.2
Years since receiving degree							-0.3	-0.3
Married				4.1	4.4	4.4	4.5	4.3
Divorced				3.0	3.0	3.0	3.1	3.0
Widow				-11.1	-11.0	-11.5	-11.5	-11.6
Number of children					-0.1	-0.1	-0.1	-0.1
Northern District						0.2	0.2	0.0
Southern District						1.7	1.7	1.4
Haifa District						4.3	4.3	3.8
Central District						4.0	4.0	3.5
Judea & Samaria District						3.4	3.4	3.4
Tel Aviv District						3.8	3.9	3.5
Only father was employed at age 17								1.5
Only mother was employed at age 17								5.4
Both parents employed at age 17								5.6
Number of observations	774,297	774,297	774,297	773,791	773,791	762,174	762,174	762,174
adj R-sqr	0.006	0.009	0.086	0.109	0.115	0.0993	0.1	0.13

The constant is expressed in percentages, all other coefficients are expressed in percentage points. All coefficients are statistically different than the coefficients of non-Haredi women, except those marked by ♀. Source: Aaron Institute tabulations of CBS administrative data, 2019.

Table A-10: Wage as dependent on demographic characteristics, coefficients - non-Haredi women

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	8.86	9.03	8.75	8.69	8.73	8.62	8.59	8.55
Year of birth 1985-1989		-0.10	-0.11	-0.11	-0.13	-0.12	-0.08	-0.08
Year of birth 1990-1994		-0.42	-0.37	-0.35	-0.39	-0.37	-0.30	-0.31
Matriculation or less			0.11	0.11	0.11	0.10	0.09	0.06
Grades 13-14			0.22	0.22	0.21	0.21	0.21	0.19
MAHAT			0.30	0.29	0.28	0.31	0.30	0.03
Academic			0.52	0.52	0.51	0.49	0.37	0.35
Years since receiving degree							0.03	0.03
Married				0.09	0.15	0.16	0.15	0.16
Divorced				-0.01	0.02	0.04	0.04	0.04
Widow				-0.18	-0.13	-0.12	-0.11	-0.10
Number of children					-0.04	-0.03	-0.03	-0.03
Northern District						-0.04	-0.05	-0.06
Southern District						0.03	0.02	0.02
Haifa District						♀-0.002	♀-0.01	-0.01
Central District						0.14	0.13	0.12
Judea & Samaria District						0.16	0.01	0.00
Tel Aviv District						0.22	0.22	0.21
Only father was employed at age 17								0.06
Only mother was employed at age 17								0.08
Both parents employed at age 17								0.10
Number of observations	601,209	601,209	601,209	600,945	600,945	600,549	600,549	600,549
adj R-sqr	0.00335	0.0473	0.135	0.137	0.14	0.153	0.159	0.161

All coefficients are statistically significant, except those marked by ♀.

Source: Aaron Institute tabulations of CBS administrative data, 2019.

Table A-11: Wage as dependent on demographic characteristics, gap between Haredi and Non-Haredi women

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	-0.15	-0.23	-0.03	-0.03	-0.08	0.02	0.03	0.04
Year of birth 1985-1989		0.05	0.04	0.03	0.06	0.06	0.02	0.03
Year of birth 1990-1994		0.26	0.16	0.14	0.19	0.19	0.14	0.14
Matriculation or less			-0.03	-0.03	-0.03	0.00	0.02	0.03
Grades 13-14			-0.07	-0.07	-0.07	-0.08	-0.08	-0.07
MAHAT			0.38	0.38	0.39	0.35	0.35	0.36
Academic			-0.07	-0.06	-0.05	-0.03	-0.02	0.01
Years since receiving degree							0.01	0.01
Married				-0.01	-0.08	-0.09	-0.09	-0.10
Divorced				-0.09	-0.12	-0.13	-0.14	-0.15
Widow				-0.30	-0.35	-0.38	-0.39	-0.40
Number of children					0.04	0.04	0.04	0.04
Northern District						-0.19	-0.19	-0.19
Southern District						-0.14	-0.14	-0.13
Haifa District						-0.09	-0.09	-0.09
Central District						-0.09	-0.09	-0.09
Judea & Samaria District						-0.09	-0.09	-0.08
Tel Aviv District						-0.12	-0.12	-0.12
Only father was employed at age 17								-0.04
Only mother was employed at age 17								-0.01
Both parents employed at age 17								0.00
Number of observations	601,209	601,209	601,209	600,945	600,945	600,549	600,549	600,549
adj R-sqr	0.00335	0.0473	0.135	0.137	0.14	0.153	0.159	0.161

All coefficients are statistically significant, except those marked by ♀.

Source: Aaron Institute tabulations of CBS administrative data, 2019.

Table A-12: Wage as dependent on demographic characteristics, coefficients - Haredi women overall (non-Haredi + gap)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	8.72	8.81	8.72	8.65	8.65	8.63	8.63	8.58
Year of birth 1985-1989		-0.05	-0.08	-0.07	-0.07	-0.06	-0.05	-0.06
Year of birth 1990-1994		-0.16	-0.21	-0.21	-0.20	-0.18	-0.16	-0.17
Matriculation or less			0.08	0.08	0.08	♀0.11	0.11	0.10
Grades 13-14			0.14	0.15	0.15	0.12	0.12	0.11
MAHAT			0.68	0.67	0.67	0.66	0.66	0.39
Academic			0.45	0.45	0.46	0.46	0.35	♀0.36
Years since receiving degree							0.03	0.03
Married				♀0.08	0.07	0.07	0.06	0.06
Divorced				-0.10	-0.10	-0.10	-0.10	-0.10
Widow				-0.48	-0.48	-0.50	-0.50	-0.50
Number of children					0.00	0.01	0.01	0.01
Northern District						-0.23	-0.23	-0.24
Southern District						-0.11	-0.11	-0.12
Haifa District						-0.09	-0.09	-0.10
Central District						0.05	0.04	0.03
Judea & Samaria District						0.07	-0.08	-0.08
Tel Aviv District						0.10	0.10	0.09
Only father was employed at age 17								0.02
Only mother was employed at age 17								♀0.07
Both parents employed at age 17								♀0.10
Number of observations	601,209	601,209	601,209	600,945	600,945	600,549	600,549	600,549
adj R-sqr	0.00335	0.0473	0.135	0.137	0.14	0.153	0.159	0.161

All coefficients are statistically different than the coefficients of non-Haredi women, except those marked by ♀.

Source: Aaron Institute tabulations of CBS administrative data, 2019.