

# Top Decile Wage Earners in Israel

**Michael Debowy, Gil Epstein, and Avi Weiss**

## Taub Center for Social Policy Studies in Israel

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## Introduction

Which workers earn the highest wages in Israel? What characterizes this group relative to the rest of the labor force? How does one join this group? And what determines the distribution of wages within it?

This study attempts to answer these questions by means of a mapping of the upper wage deciles in the Israeli labor market and by examining the effect of the human capital of education and experience on the wages of workers in those deciles. In the recent literature on the labor market in Israel, returns to education, experience, and skills have been evaluated in general for Israeli workers,<sup>1</sup> while studies of poverty and inequality have focused on the lower deciles of the wage distribution. This paper complements the literature with its focus on the upper end of the wage distribution and an examination of the differences between the highest wage earners and the other workers in the labor force.

We will describe the occupational and demographic characteristics of the different wage deciles, based on data from the Central Bureau of Statistics (CBS) collected during 2017 and 2018. We will also present a statistical analysis of wages by means of a two-stage estimation procedure that measures the marginal effect of various factors on the probability of reaching the top decile and on the wages of individuals within it. It appears that the role of experience and formal education in predicting who will be in the top decile is far more important than their role in predicting wages within the top decile (in other words, education and experience explain wages only up to a certain earning threshold). It also appears that education narrows gaps between workers

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1 See Brand, 2019; Debowy et al., 2021; Frish, 2009; Melzer, 2014.

from various populations and that an increase in education among workers from weaker populations raises their chance of reaching the top decile until it equals that of their counterparts from stronger populations.

Top-earning workers have attracted attention in Israeli public discourse.<sup>2</sup> Interest in this group grew in particular during the COVID-19 pandemic, when workers with high wages were less harmed, if at all, by the shocks affecting the market.<sup>3</sup> An in-depth analysis of these workers and the factors predicting their position in the wage distribution may enable decision makers to draw conclusions and design policies that will benefit the economy as a whole.

The finding that formal education has no effect on success within the top wage decile suggests that individual characteristics that predict success within that very top are not necessarily acquired in academia, but may rather encompass personal traits or occupational skills. This interpretation implies that public investment in the human capital of workers should not limit professional training just to low-skill workers, but also extend it to experienced and highly skilled workers; such training may enable these workers to increase their output and further realize their skills.

## Literature review: Background

The research literature on top wage earners is relatively sparse. No studies of this topic explicitly focus on Israel (although as we will see there are two studies that relate also to Israel) and the literature of the past decade usually consists of descriptive assessments of workers at the upper end of the wage distribution (primarily the top percentile). Therefore, this review includes two subsections: a review of the research on top wage earners in the world, and a more general review of research pertaining to wage differences in Israel that is not focused on the upper end of the wage distribution.

Wolff (2010) focused on the characterization of top percentile workers in the US, and Joyce et al. (2019) conducted a similar analysis for the UK. Unsurprisingly, the two studies concluded that the representation of older white males in the top wage percentile is greater than their share in the overall working-age population. Denk (2015) looked at the factors that predict being in the top wage percentile for workers in 18 European countries using *SES* (Structure of Earnings Survey) data collected by the EU during the preceding

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2 See, for example, Boimfeld, 2017; Heruti-Sover, 2019.

3 For a comprehensive study, see Swirski et al., 2021.

decade, which includes information on more than 10 million workers. He found that the likelihood of selecting into the top percentile increased significantly with a worker's age (although the statistical significance of this finding drops after the age of 60) and that it increases only for the first five years of seniority in a workplace (after which it stabilizes). He also found that higher education significantly increases the likelihood of reaching the top percentile while high school education does not necessarily have an effect.

Fournier and Koske (2012), while examining the drivers of wage inequality in OECD countries, analyzed the determinants of wages at various income levels in 32 countries, including Israel. For each country, they present wage equations for workers in the lower, middle, and upper deciles. The estimates for Israel, in similar manner with those for the other countries in the study, were based on a survey of household income and expenditure, conducted by the CBS in 2005. For the top decile in Israel, they found a high return to both a high school education and an academic education. Specifically, a high school education increases a worker's wage by about 24% and an academic education by about 55%. We will see that this estimate is much higher than our own, although the differences in methodologies make it difficult to compare the two studies. Furthermore, the researchers found that wages increase with age up to around age 56–57, which is similar to the relationship we find between years of potential experience and the likelihood of selecting into the highest decile, as will be described.

The recent literature includes numerous studies of inequality *within* the elite, and in particular the representation of women in the top wage deciles. Atkinson et al. (2018) looked at the presence of women in the top decile, the top percentile and the top thousandth in eight countries using tax data and found that the representation of women has grown in recent years, although at a rather slow pace. Bobilev et al. (2020) used income data from the Luxembourg Income Survey (LIS) of 28 countries, including Israel, and found that in 1980 women constituted slightly more than 10% of the top decile in those countries, a figure that increased to almost 30% in 2013. However, their estimates for Israel were based on only 150 observations (cumulatively between 1980 and 2013), and, therefore, should be taken with a grain of salt. Another very comprehensive study of the subject was carried out by Guvenen et al. (2015) based on US tax data collected between 1981 and 2012. They found that the share of women in the top decile grew consistently throughout the period, but they also found that the chances of women dropping out of the

top decile (to a lower one) are much higher than for men and that, on average, women remain at the top for fewer earning years than men.

As mentioned, there are no previous studies focused on the highest wage earners in Israel, although there are many studies of wage gaps by gender and ethnic group. A survey of these studies will be helpful in determining whether patterns observed in the top decile are similar to those in the population as a whole.

Fuchs (2017) analyzed the various factors explaining the gender wage gap among the general working population in Israel based on data from the CBS Household Income and Expenditure Survey for 2010–2011. She estimated the gap in monthly wages as between 32% and 42% and found that the most important factors explaining it are the number of work hours (which explains about 57% of the gap) and the choice of occupation and industry (which explains about 14%). About 20% of the gap remained “unexplained” in this initial analysis. She conducted an additional analysis based on 2008 data, which included Bagrut (matriculation) and psychometric scores for surveyed university graduates aged 29–31 along with income data and demographic information, which made it possible to control for the worker’s “quality.” After adding these explanatory variables, she found that the number of hours worked is responsible for only 29% of the gap, the choice of occupation and industry is responsible for about 56%, and the unexplained portion is only 6%.

Fichtelberg-Barmatz (2016) examined gender wage differences in various occupations in Israel for Jews and Arabs separately, based on data from the CBS Household Income and Expenditure Survey for 2014. She found the gap in monthly income to be about 32% on average and the gap in hourly income to be about 27%. Furthermore, she found that women in “feminine” occupations (in which there is a significant majority of women) do not earn less than women in “masculine” occupations, although within the former the gender wage differences are larger.

A large body of literature explores the distribution of earnings between ethnic groups in Israel. In our previous study (Debowy et al., 2021), we demonstrated that differences in employment and wages between Jews of various origins — to the extent they exist — disappear when there is a similar level of education, indicating that education is the main engine for narrowing such gaps. We also showed that education has a lower return for non-Jews, and they can expect to receive a lower wage than their Jewish counterparts

at all levels of education.<sup>4</sup> Cohen et al. (2021) examined gaps in education and income among Ashkenazi Jews and Mizrahi Jews across different generations in Israel based on National Insurance Institute data, which included about 1.3 million individuals. The researchers found that the statistically significant gaps in education between second-generation Ashkenazi and Mizrahi Jews in Israel did not diminish in the third generation but remained as they were. Furthermore, it was found that Israel-born Jews of “mixed” origin are more similar in their educational characteristics to Ashkenazi Jews than to Mizrahi Jews. Moreover, it was found with respect to income that at a young age men of Mizrahi origin are somewhat ahead (apparently due to fewer years of education and the resulting accumulation of early experience) and that after the age of 30 men of Ashkenazi origin enjoy a lead that reaches 20% by the age of 43, among both the second and third generations. These findings are consistent with previous studies.<sup>5</sup>

Melzer (2014) examined the returns on education that workers of different ethnicities enjoy in the Israeli labor market, based on 2008 census data, finding substantial differences between various groups. First, Jewish men enjoy a higher return than their non-Jewish counterparts while the opposite was found among women. Second, the return on education among Mizrahi Jews is significantly higher than among Ashkenazi Jews. These findings are in line with those presented in this study, which shows a corresponding effect on the *probability of reaching the upper wage deciles*. On the other hand, while Melzer identified a drop in the marginal return on advanced degrees (and in particular PhDs), our study (Debowy et al., 2021) found that the marginal return increases with the level of education, including at the PhD level.

In summary, the current literature clearly shows the existence of gaps between various ethnic groups in Israeli society, with respect to both education and income. It was found that Jews, for the most part, have an advantage over non-Jews and that Ashkenazi Jews (and those of “mixed” origin) do better than Mizrahi Jews on these two metrics. Furthermore, there is evidence that weaker groups enjoy a high return on education and that education may be an important engine for closing gaps between workers across ethnic groups. In this study, we will examine these gaps at the upper end of the wage distribution.

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4 About 75% of the non-Jewish group are classified as “Arab” and the rest are classified as “Other” (neither “Jew” nor “Arab”).

5 For example, Cohen et al., 2007; Dahan et al., 2002; Friedlander et al., 2002.

## The top wage deciles in Israel: Data and definitions

As noted, we utilized data from the Household Income and Expenditure Survey conducted by the CBS in 2017 and 2018. The survey records employment status, earnings, work hours, education, age, gender, marital status, religious observance, ethnicity, occupation, economic sector, and geographic region for the individual. According to the methods used in the CBS surveys, most of the data is based on self-reporting by respondents (the most important exceptions being income and employment). The database includes about 27,000 observations for individuals of working age; of these, we focused on about 24,900 who reported being employed. For a more detailed description of the data, see the separate appendix *The Multivariate Model and Methodology*.

The wage deciles themselves were defined according to gross monthly income from work, which is the accepted practice. An initial breakdown of the data revealed that the top decile includes workers who earned more than NIS 20,380 in 2017 and more than NIS 21,430 in 2018. These thresholds are largely in line with those presented in CBS publications (NIS 20,508 in 2017 and NIS 21,568 in 2018).<sup>6</sup> In order to confirm our findings, we also examined hourly (gross) wage deciles, based on the reported work hours by the respondents. Qualitatively, most of our findings remain the same under this alternative definition of the top decile.<sup>7</sup>

The survey data classify respondents according to the broad national categories Jewish, Arab, and “Other.” The survey does not identify Jewish individuals by ethnicity, and to determine this, we relied on the individual’s country of birth and that of their parents. Jewish individuals were characterized as Ashkenazi or Mizrahi according to their country of birth (or those of their parents if the individual is Israel-born). Using this method, we were able to categorize a little under half of the Jews in the sample: 25% of them were Ashkenazi and 21% Mizrahi. The rest of the Jews, which include those whose parents were born in Israel or on different continents, were characterized as a

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6 CBS, Income of Individuals Aged 15 and Over — data from the 2018 Household Expenditure Survey, Table 7; CBS, Income of Individuals Aged 15 and Over — data from the 2017 Household Expenditure Survey, Table 7.

7 The threshold for the top hourly wage decile is about NIS 120 for the two years examined. About 26% of the hourly top-decile earners are not monthly top-decile earners and vice versa. Workers in the top deciles according to both definitions are very similar in most of the observed characteristics and the only major difference between them, for obvious reasons, is the number of hours worked.



kind of intermediate group. In view of the history of immigration to Israel and the up-to-date nature of the data, this method creates a situation in which the individuals whose ethnic group we clearly identified are significantly older (by more than a decade on average, although the gap narrows in the higher deciles) than other Jews and non-Jews in the sample (see Appendix Table 1). For further details on the ethnic classification, see the separate appendix *The Multivariate Model and Methodology*.

Although the data do not identify the ethnic group of the respondent, namely Ashkenazi or Mizrahi, they do report whether the respondent's country of origin was in the former Soviet Union (FSU). The immigrants from these countries have their own unique characteristics (alongside significant internal heterogeneity) and selecting into this group sometimes also coincides with ethnic identity (Ashkenazi, Mizrahi, or non-Jewish). Indeed, immigrants from the FSU account for about half of the Ashkenazi Jews and about a fifth of the Mizrahi Jews at all wage levels, while their share among the rest of the Jews and among non-Jews is smaller at the lower wage levels, reaching up to a quarter in the upper deciles (see Appendix Table 2).

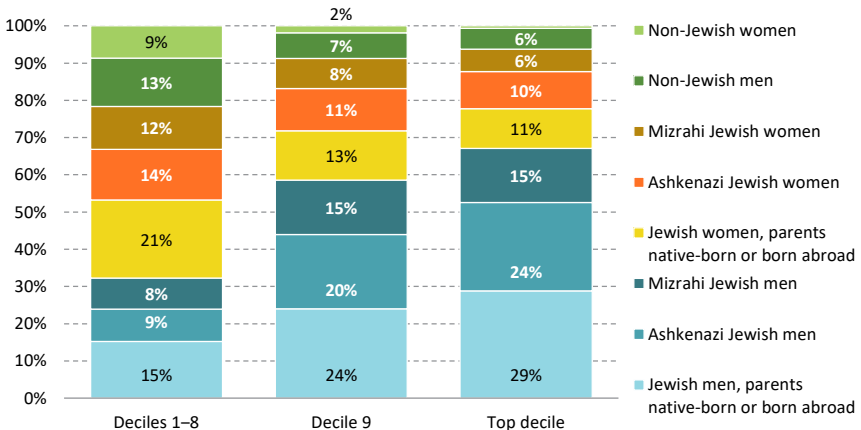
Comparing FSU immigrants to the rest of the population within various ethnic and income groups, shows that belonging to this immigrant group does not predict statistically significant differences, at least not with respect to income, education, and demographic characteristics (see Appendix Table 2b). Therefore, in the analysis we present, we generally do not single out this category of migrants. An exception in this context is within the non-Jewish category, in which FSU immigrants constitute a distinct group. They also constitute the majority of individuals belonging to the ethnic group "others" (in contrast to "Arabs") among non-Jews. This issue is resolved therefore by distinguishing between the two non-Jewish ethnic groups ("Arabs" and "others"), particularly in the multivariate analysis.

## Differences between top earners and the rest of the workers: Background information

Before investigating the earnings of workers in the upper deciles, it may be worthwhile to examine what sets them apart from the rest of the labor market. In order to illustrate the differences between the highest-earning workers and the rest, we present the background information separately for three wage groups: deciles 1 to 8, the ninth decile, and the tenth decile.

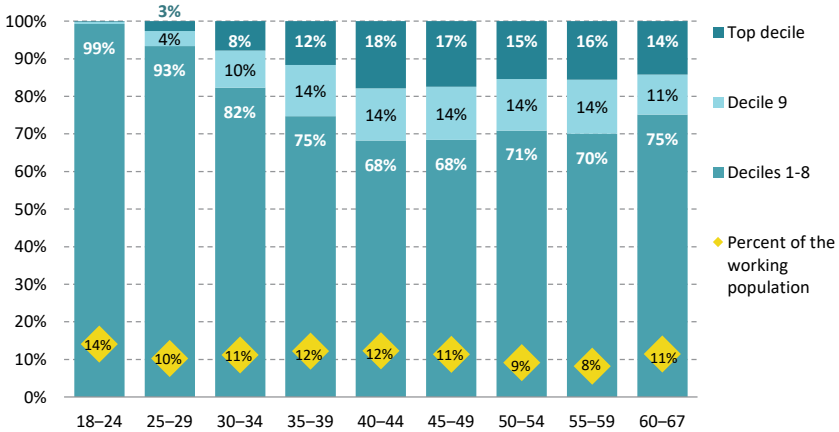
Figure 1 presents the distribution of the various wage groups by ethnicity and gender. The distribution in deciles 1–8 is very similar to that in the overall working-age population. The graph shows that the upper deciles are more Jewish and more Ashkenazi and that the large share of non-Mizrahi Jews among them relative to the lower deciles comes primarily at the expense of non-Jews. Furthermore, the share of women in the upper deciles is significantly lower: women account for 55% of workers in the lower deciles, 35% in the ninth decile, and only 27% in the tenth decile. The gap between men and women can be seen in all the ethnic groups, but is particularly substantial among non-Jewish workers.

**Figure 1. Breakdown of income groups by ethnic group, origin, and gender**



Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

There is a high level of variance also by age in the various deciles. Figure 2 shows that while the share of workers in the lower deciles decreases with age, in the upper deciles it reaches a peak in the 40–60 age group and from there diminishes. The graph indicates that the older a worker becomes, the higher the likelihood of being in the upper wage deciles, at least until the age of 40–50. In other words, reaching the upper wage deciles usually takes time.

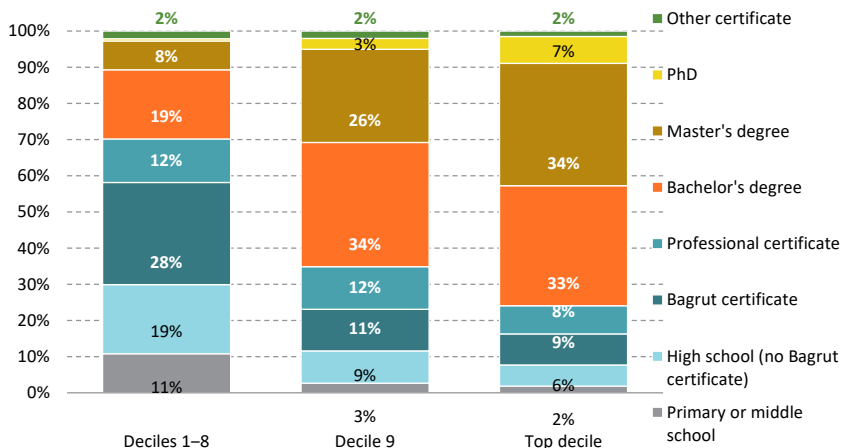
**Figure 2. Distribution of income groups by age**

Note: The division of each column shows the share of each income group within an age group. The yellow diamonds indicate the percentage of the age group within the total population of workers.

Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

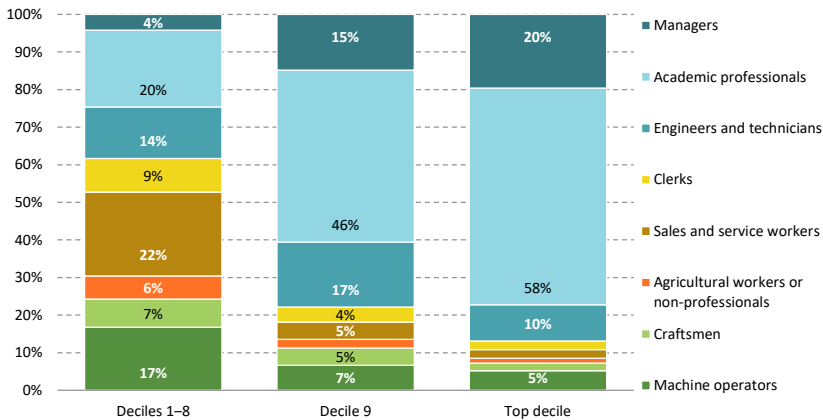
Figure 3 shows that there are significant differences in the distribution of educational attainment across the various deciles. For example, while individuals with an academic education constitute about one-quarter of the workers in the lower deciles, they constitute more than one-half in the ninth decile and about three-quarters in the top decile. Moreover, it appears that the share of individuals with advanced degrees among those with an academic education increases in the upper deciles.

**Figure 3. Distribution of education according to wage decile**



Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

Significant differences between the various income groups can also be seen with respect to choice of occupation. Figure 4 presents the differences between the deciles according to occupation. It can be seen that the shares of administrative workers, salespersons, non-professional workers, and craftsmen declines in the upper deciles, in favor of managers, engineers and technicians, and academic professionals.

**Figure 4. Distribution of occupations according to income group**

Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

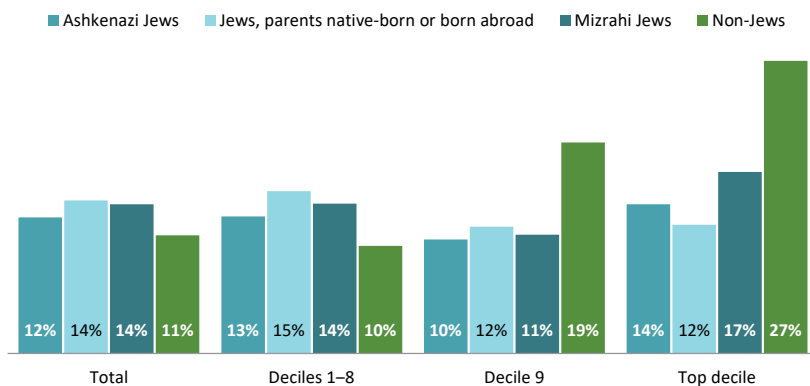
Another way wage deciles are differentiated is in workers' employment status; that is, self-employed vs. employee.<sup>8</sup> The self-employed constitute about 12% of the labor force, and men outnumber women among them two-to-one (not presented). In the upper deciles, the share of the self-employed increases, constituting about 15% of the top decile. The share of women among the self-employed in the top decile drops to one-quarter. A similar phenomenon can also be seen in the share of women among employees: their share drops from one-half in the overall population to less than one-third in the top decile.

8 Research on wages usually omits data on the self-employed and examines only employees, due to, among other things, the concern that worker characteristics (education, experience, etc.) affect wages differently in each of these two populations and in view of the problem of endogeneity in the decision of whether to be self-employed or an employee (where the choice of whether to be self-employed influences wages while at the same time wages influence the choice of whether to be self-employed). In this study, we chose to include the data on the self-employed while checking whether their inclusion alters the results. We found that the qualitative findings that we present in the multivariate analysis do not change when the self-employed are omitted. If the regressions are run only for the self-employed similar results are obtained, except for two differences: unlike in the case of employees, gender and education level do not affect the likelihood of selecting into the top decile in the case of the self-employed.

An attempt to control for endogeneity by directly modeling the choice between being an employee and being self-employed produced fairly similar findings to those presented below; however, the instrumental variables used were limited and therefore it may be that the results for employment status are biased in one direction or another and may not be efficient.

There are also differences in the share of self-employed across ethnicities, as seen in Figure 5. The share of self-employed within the overall population of Jewish workers is similar throughout the income distribution, although it is somewhat higher in the top decile, primarily among Mizrahi Jews. In contrast, among non-Jews the share of self-employed rises sharply over the income distribution, from 10% in deciles 1–8 to 27% in the top decile.

**Figure 5. Share of the self-employed by income group, origin and ethnic group**



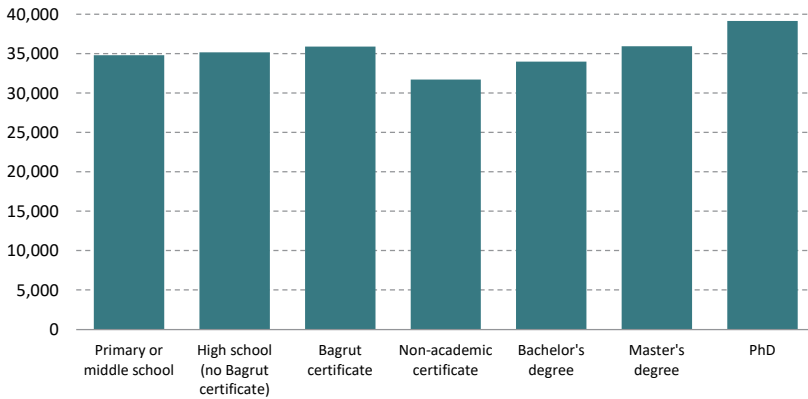
Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

## Wage differences — without controlling for other variables

Figure 6 presents the average monthly wage for different levels of educational attainment in the top decile without controlling for other explanatory variables. It can be seen that, in general, there is no significant difference in the incomes of workers with different levels of educational attainment. Exceptions are workers with PhDs or “other diplomas” who earn more and holders of post-secondary professional (non-academic) certificates who earn somewhat less. We stress that the standard deviations are very large and, therefore, none of the average differences are statistically significant.

**Figure 6. Average monthly income in the top decile by educational attainment**

NIS per month, gross wage



Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

The same is true of other wage comparisons between the various population groups. Women in the top decile earn NIS 32,500 per month on average in contrast to men who earn NIS 36,300. This difference is not statistically significant and is largely explained by the difference in work hours. Thus, the work hours of women in the tenth decile are 91% of those of men (in contrast to 72% in the lower deciles). In contrast, the standard deviation of men's wages in the top decile is much larger than that of women's wages, which indicates that the highest earners (those who are positive outliers) are usually men.

A breakdown by country of origin and ethnic group shows that in the top decile Ashkenazi Jews earn somewhat more than others (a gross average wage of about NIS 38,000 versus NIS 36,000 for Mizrahi Jews and non-Jews and NIS 34,000 for the rest of the Jews). Here, too, the average wage of Ashkenazi Jews is inflated by specific outliers, where within a standard deviation from the top-earner Ashkenazi mean one may even find a wage of NIS 67,000 per month, an amount observed only among workers in this group.

A difference in monthly wages can also be seen between the self-employed and employees, as presented in Table 1. Thus, along the entire wage distribution, the monthly income of the self-employed is higher than that of their employee counterparts. The same is true when we look at the hourly-wage top decile, where the self-employed earn a gross hourly average wage of

NIS 290 in contrast to only NIS 150 earned by employees, a difference of over one standard deviation.

**Table 1. Gross monthly wages by employment status and income level**

	Employees	Self-employed
Deciles 1–9	NIS 8,000 (NIS 5,110)	NIS 8,400 (NIS 5,340)
Top decile	NIS 34,000 (NIS 18,800)	NIS 42,500 (NIS 35,300)

Note: Standard deviations appear in parentheses.

Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

The observed differences in human capital between the self-employed and employees are negligible and are unable to explain these wage gaps (see Appendix Table 3). A potentially important factor that could shed light on these gaps is the choice of occupation and industry. However, there is no statistically-significant relationship between the average wage and the share of the self-employed within an occupational group. Furthermore, the correlation between these factors is weak and sensitive to control variables, such as the standard deviation of wages in each occupation, which represents the variance of wages among workers in the same occupation (see Appendix Figure 1a and Appendix Table 4). The connection between this variance and the share of the self-employed in the occupation is positive and statistically significant, even given the average wage (see Appendix Figure 1b and Appendix Table 4). This means that the share of self-employed is larger in occupations that appear to have a high “risk” component and a broader range of expected incomes.

## Multivariate analysis

Both the probability that individuals will select into the top wage decile and their income within that decile are correlated with a number of factors. These include employment status, occupation, education, experience,<sup>9</sup> geographic location, gender and family status, and ethnicity (as noted above). There is usually mutual dependence between these factors, and multivariate estimation

9 The data only allow us to measure potential experience, which is equal to age less number of years of schooling less 6 (the age of entry into Grade 1). For individuals with less than 10 years of schooling (who account for only a small number of observations), potential experience is equal to age less 16.



procedures are required to derive the conditional correlation between the various characteristics on the one hand and the probability of reaching the top decile and the associated wage level on the other hand. A two-stage model is used: in the first stage we examine selection into the top decile, and in the second stage we examine the factors that are correlated with the wage level in that decile, while accounting for the results of the first stage.<sup>10</sup> It is important to note that this is not a causal estimation since individuals choose many of their characteristics (education, employment status, occupation, etc.), and it is likely that this choice is correlated with unobserved factors, such as ability or motivation. Our goal is simply to characterize the workers and the wage distribution in the upper income deciles.

### First stage: Selection into the top decile

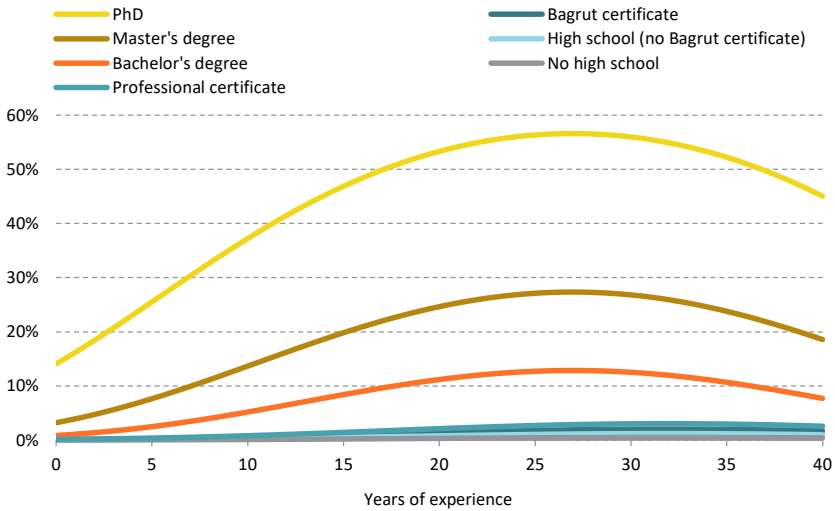
Results for the first stage of the model (selecting into the top decile) are presented in Appendix Table 5. The model shows that education (and in particular higher education) has a critical effect on the likelihood of an individual selecting into the top decile, even given the rest of the professional and demographic characteristics. Every degree increases the individual's chances of selecting into the top decile. Furthermore, experience also plays a role at each education level, such that there are differences between the various education groups in the effect of each additional year of experience on the probability of selecting into the top decile. For example, the likelihood of a worker with a bachelor's degree selecting into the top decile rises from only 1% upon graduation to 13% after 28 years of experience, while high school graduates with a Bagrut (matriculation) certificate reach a peak of only 2% after 32 years. About 9% of individuals with a PhD are expected to be in the top decile upon attainment of their degree and 57% of them after 28 years of

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10 This is a wage equation model that uses the Heckman correction, which is commonly employed when analyzing subsamples or populations that were not selected randomly, such as workers with the highest wages who are differentiated from the rest of workers by certain characteristics. In the first stage, two instrumental variables are used: the value of the home owned by the family (and zero otherwise) and number of children under the age of 10 living in the home (for additional details, see Debowy et al., 2021). The main results of the model are presented in Appendix Tables 5 and 6, where each numbered column in the two tables presents the result of the first and second stages, respectively, of the estimation under a particular model. For further details on the method of estimation and the model's full results, see the separate Appendix *The Multivariate Model and Methodology*. For theoretical background, see Puhani (2000) and Heckman (1976).

experience. Figure 7 presents the likelihood that workers at various education levels will belong to the top decile as a function of years of experience (when all the other variables take the average value of that education group).

**Figure 7. The effect of years of experience on the probability of selecting into the top decile by level of education**



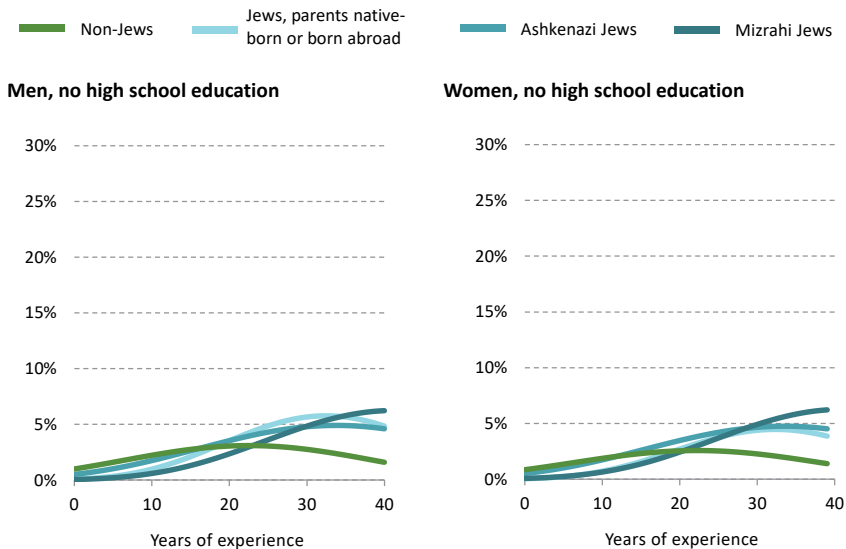
Note: The probabilities are calculated by calibrating all of the background variables (apart from education and experience) to the average value for each education group.

Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

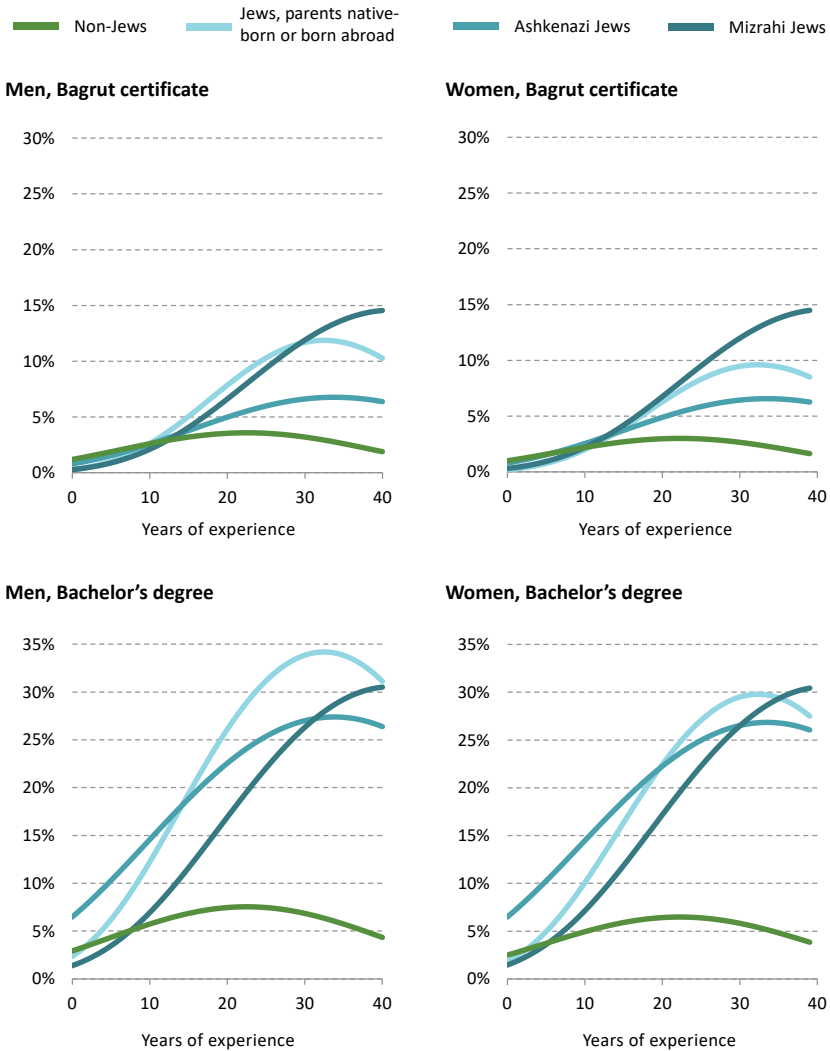
Significant differences were found by ethnicity (Figure 8). Despite the over-representation of Ashkenazi Jews in the top decile, the likelihood that an Ashkenazi Jew will reach the top decile given all other factors is in fact lower than for other Jews (the over-representation of Ashkenazi Jews is largely the result of differences in those “other” factors, such as education). Similarly, non-Jews are expected to be in the top decile at lower rates. There were no significant differences observed in the effect of education among Jews of various origins, although there are differences in the averages between the groups. A professional post-secondary certificate can be expected to increase the chances of non-Jews selecting into the top decile more than it affects the chances of Jews, while academic degrees have a similar effect on the chances of workers from all ethnic backgrounds, although on average advanced degrees are correlated with a higher likelihood of selecting into the top decile among non-Jews.

Differences were also found in the effect of experience on the likelihood of selecting into the top decile, although these differences were not always statistically significant. For example, among men with a bachelor's degree there is a likelihood of 6% that Ashkenazi Jews without experience will belong to the top decile, in contrast to 1%–2% for other Jews and 3% for non-Jews. Among those same Ashkenazi Jews, the likelihood of selecting into the top decile reaches a peak of 27% after 33 years while among Jews of mixed origin and those who are third generation in Israel it is expected to reach a peak of about 34% after a similar period of time. Among Mizrahi Jews, the likelihood continues to rise over a period of 40 years, reaching a peak of 31% among the few who have accumulated that much experience. The highest likelihood of reaching the top decile for non-Jews with a bachelor's degree is reached after 23 years and is only 8%. Figure 8 presents the probability of a worker selecting into the top decile as a function of years of experience, by education level and ethnicity for men and women separately. The figure shows that, conditional on educational attainment, Ashkenazi Jews are not more likely to belong to the top decile and therefore their relative advantage is the result of aggregate gaps in education between the populations.

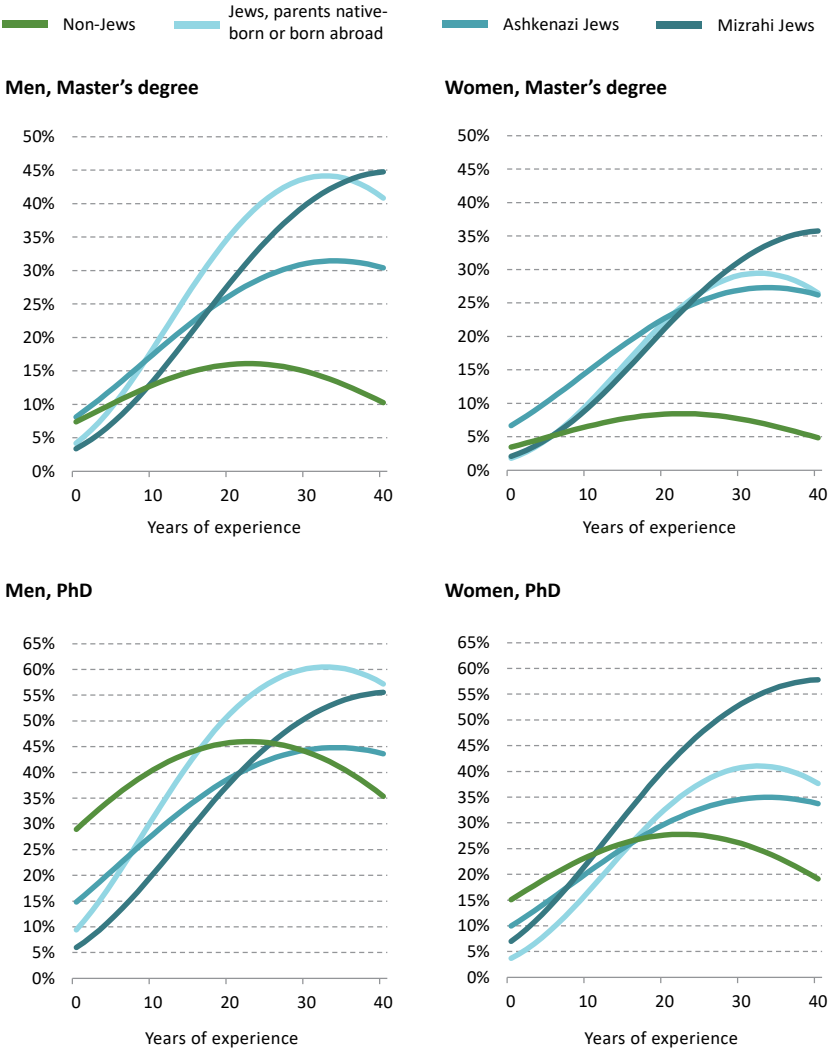
**Figure 8. The probability of selecting into the top decile according to years of experience, by gender, educational attainment, and ethnicity**



**Figure 8 (continued). The probability of selecting into the top decile according to years of experience, by gender, educational attainment, and ethnicity**



**Figure 8 (continued). The probability of selecting into the top decile according to years of experience, by gender, educational attainment, and ethnicity**



Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

As seen in the figures, although there are no significant gender differences in the relationship between education and experience and the likelihood of selecting into the top decile, the likelihood of women selecting into the top decile is much lower than for men. Table 2 presents the difference between men and women in their probability of selecting into the top decile. It can be seen that the gap is more or less preserved across education levels, although it may in fact be larger among individuals with an academic education. Furthermore, the gender gap is somewhat smaller among non-Jews and is particularly large among Jews whose parents are Israeli-born or born on two different continents.

**Table 2. The difference between men and women in the probability of selecting into the top decile**

By education		By ethnicity			
With academic education	With no academic education	Ashkenazi Jews	Jews, parents Israel-born or born abroad	Mizrahi Jews	Non-Jews
-7.0%*** (0.5%)	-6.9%*** (0.6%)	-6.7%*** (0.6%)	-8.1%*** (0.6%)	-6.5%*** (0.7%)	-5.3%*** (0.9%)

Note: The table presents the average marginal effect of a gender dummy variable with the standard error underneath it in parentheses, based on the model presented in Appendix Table 5. The two left-hand columns were calculated based on the estimation presented in Column 2 of Table 5, while the four right-hand columns were calculated based on the estimation presented in Column (3).

Significance level: \*\*\*p < 0.01.

Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

Significant differences were also found between employees and the self-employed in various populations. Table 3 presents the difference between the probability that the self-employed in various groups will belong to the top decile and the same probability for employees, based on the multivariate model. Among male university graduates, the self-employed status predicts a significantly lower likelihood of selecting into the top decile — about 5% less than that for an employee with the same characteristics. In contrast, among individuals without an academic degree — whether male or female — the status of being self-employed predicts a likelihood of selecting into the top decile that is 4%–6% higher than for an employee with the same characteristics. The four right-hand columns of Table 3 present the differences in the likelihood of selecting into the top decile by origin and ethnic group. Among Jews overall, the status of being self-employed does not affect the likelihood of selecting

into the top decile. In contrast, among non-Jews, self-employed men have a 6% advantage over employees.

**Table 3. The difference between the self-employed and employees in the probability of selecting into the top decile**

	By education		By ethnicity			
	With academic education	With no academic education	Ashkenazi Jews	Jews, parents Israel-born or born abroad	Mizrahi Jews	Non-Jews
Men	-5.0%*** (1.1%)	5.6%*** (0.9%)	1.3% (1.1%)	-0.7% (1.1%)	0.2% (1.3%)	5.9%*** (1.4%)
Women	-0.9% (0.8%)	4.4%*** (1.1%)	0.8% (0.7%)	-0.4% (0.6%)	0.1% (0.8%)	3.0% (0.8%)

Note: The table presents the average marginal effect of a self-employed dummy variable and underneath it the standard error in parentheses, based on the model presented in Appendix Table 5. The two left-hand columns were calculated based on the estimation presented in Column (2) of Table 5, while the four right-hand columns were calculated based on the estimation presented in Column (3).

Significance level: \*\*\*p < 0.01.

Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

All of these findings align with an interpretation that there are different routes to the top decile for the self-employed and employees. On the one hand, there may be a path on which an employee with formal education and experience is able to advance to the top of the distribution, and that path is taken advantage of by workers from stronger sectors of the population. On the other hand, there may be a path for the self-employed within which education and experience have less weight and this path is utilized by workers from weaker sectors of the population.

## Second stage: The wage distribution within the top decile

After estimating the probability of an individual selecting into the upper income deciles, we present the factors that predict wages *within* the top decile. The results of this estimation, which constitutes the second stage of the wage prediction model (which takes into account the likelihood that a particular individual will select into the top decile) are presented in Appendix Table 6. The two-stage procedure is required, as our estimations reveal a negative and statistically significant correlation between the unobserved factors that are

likely to affect the probability of selecting into the top decile and unobserved factors that are likely to affect wages.

Within the top decile, a worker with a bachelor's degree is not expected to earn more than a worker who has not finished high school. In other words, given that a worker is in the top income decile, *their level of education is almost of no value in predicting wages*. From a broader perspective, the model veers away from the idea that experience and education contribute to a worker's income. While in the previous section we demonstrated that these factors have a major effect on the probability that a worker will exceed the high earnings threshold and select into the top decile, it now appears that in the case of workers with the highest incomes, education and even experience are less able to predict the distribution of wages.

In the top wage decile, the contribution of experience to a worker's income is limited. Experience provides an average return of a little less than 1% annually, and it rises linearly. Nonetheless, when we examine the return to experience according to education level, it is revealed that for workers with an academic degree, experience produces a positive return that reaches its peak after about 32 years, while among workers without an academic degree, the role of experience is not statistically significant. It is worth noting that the increasing return on experience for individuals with an academic degree also represents a certain return on education, since the connection between these two factors is what makes it possible for workers to improve their earning power over time. For example, an individual with an academic degree can expect a higher wage than his less educated counterparts after accumulating 24–25 years of experience — the average level of experience in the top decile — and this is even more pronounced among individuals with advanced degrees.

There is a certain amount of variation across ethnic groups. There is evidence of a return to certain levels of education for mixed-origin and third-generation Jews, where all degrees are expected to produce a wage that is between 16% and 26% higher relative to an individual who did not finish high school (the return to the various degrees does not rise consistently and there are large differences between one degree and another). Jews of all origins obtain a similar return to experience (with the part that is statistically significant being similar to the linear return found among the overall population), while among non-Jews there is no statistically significant correlation between experience and wages within the top decile. It should also be mentioned that the “unexplained” differences that remain between ethnic groups are not large



and non-Jews are even slightly ahead. Therefore, it can be said that the higher one goes up the wage ladder, ethnicity loses its power to predict wages, as in the case of education, experience, and other observable characteristics, and it appears that a larger share should be attributed to ability, reputation, or other factors that cannot easily be quantified or estimated. Moreover, workers with identical characteristics reach wage levels that are so similar that no differentiation can be made between the genders. However, it is important to mention that the probability that women will belong to the top decile is much smaller than that of men, and women constitute a minority at the upper end of the wage distribution.

As noted, self-employed workers in the top decile usually enjoy a larger income than their employee counterparts. Table 4 presents the differences in gross hourly wages (in percent) between the self-employed and employees in the various groups in an identical format to that of Table 3. It can be seen that while the connection between employment status and selecting into the top decile worked in the opposite direction for individuals at different levels of education, within the top decile, a self-employed status predicts a positive premium that is similar for both groups. In other words, while the self-employment status is correlated with a greater likelihood of selecting into the top decile among those lacking a higher education and a lower likelihood among those with a higher education, it is correlated with a higher wage in both groups, even to a similar extent.

**Table 4. Hourly wage differences between the self-employed and employees within the top decile**

	By education		By ethnicity			
	With academic education	With no academic education	Ashkenazi Jews	Jews, parents Israel-born or born abroad	Mizrahi Jews	Non-Jews
Men	20.2%* (9.1%)	20.0%*** (5.8%)	23.2%*** (4.7%)	13.3%* (5.3%)	22.7%*** (7.0%)	12.2% (10.4%)
Women	16.1%** (6.2%)	21.9%*** (5.1%)	26.1%** (10.4%)	16.1%** (5.8%)	23.5%** (6.4%)	9.1% (9.8%)

Note: The table presents the average marginal effect of a self-employed dummy variable with the standard error underneath it in parentheses, based on the model presented in Appendix Table 6. The two left-hand columns were calculated based on the estimation presented in Column (2) of Table 6, while the four right-hand columns were calculated based on the estimation presented in Column (3).

Significance levels: \* $p < 0.10$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ .

Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

With respect to ethnicity, the situation is reversed. While the self-employed status does not contribute to the probability of Jews of any origin reaching the top decile, it contributes significantly to wages within that decile. In contrast, while the top-decile selection chances of the non-Jewish self-employed are better than those of their employee counterparts, their situation is not significantly better within the top decile. It can be assumed that despite the ability of the non-Jewish self-employed to exploit their earning power more efficiently than employees, the ethnic separation between the labor markets creates a glass ceiling that limits the success of the non-Jewish self-employed. In summary, the findings from the multivariate model — which are similar to those derived from the descriptive statistics — show that an academic education has only a limited effect on wages in the top decile. Moreover, this effect — if it exists — is concentrated in very specific occupational and educational groups (academia, top-level bureaucrats, etc.). These groups are comprised primarily of non-Mizrahi Jews, and belonging to one of them in terms of wages is not necessarily preferable to belonging to other occupational circles in this decile.

## Summary of the findings and their socioeconomic significance

We have seen that formal education has a critical effect on the probability that a worker will belong to the top income decile; however, this effect is not uniform across all ethnic groups. A high school education or vocational education, which have no benefit for non-Mizrahi Jews, are a boon to Mizrahi Jews (and to a lesser extent to non-Jews as well). An academic education is to the advantage of all of the groups, with Mizrahi Jews benefiting from the highest return (which is even higher in the case of advanced degrees). In a breakdown by gender, while men enjoy a higher likelihood of reaching the top decile, women can close the gap if they accumulate sufficient education. Thus, the advantage of men over women narrows significantly among bachelor's degree holders, disappears among master's degree holders, and reverses among holders of a PhD (among whom the likelihood of a woman reaching the top decile is higher than that of a man, at least early on in their careers). Within the top decile, education alone is a significantly weaker predictor of wages, although workers with an academic education achieve a positive return to their accumulated experience, in contrast to workers lacking an academic education, for whom more experience does not result in higher wages.

With respect to the self-employed, our findings are consistent with the literature, which identifies a high level of variation in the income of the self-employed and in their convergence to the upper and lower ends of the income distribution, an indication of the risk implicit in being self-employed. An interesting finding in this context is the fact that, among Jews, the probability of a self-employed worker selecting into the top decile is no higher than that of an employee, although the wage of a self-employed worker within the top decile is higher. The difference between the self-employed with an academic education and those without is worth noting; while the aforementioned pattern is observed among the former group, among the latter group, being self-employed leads to a greater chance of belonging to the top decile and also of attaining a higher wage within it.

Even after controlling for other background variables, the relative difficulty experienced by women and non-Jews in reaching the top decile may reflect factors that are determined by individual choice, such as occupation, number of work hours, and willingness to be mobile, or factors determined by employers (in the case of employees) or customers (in the case of the self-employed), such as discrimination. It may, of course, be the case that the source of this difference is historical and represents the slow adjustment of the labor market to new norms, such as the penetration of women into the senior management of corporations (which only began in the last few decades and so is less common in older age groups). To the extent that the explanation is related to the choices made by workers, there is no need for policy measures, and to the extent that it is related to historical factors, the differences are likely to disappear on their own over time. However, if the factors are related to discrimination, then intervention — including intervention by the government — is called for in order to uproot the phenomenon.

The main goal of this study has been to characterize the effect of education and experience on the chance of reaching the top wage decile and on a worker's position within it; nonetheless, the results have policy implications for the income distribution in Israel and the potential to increase social mobility. The measures that can contribute to this effort are discussed and analyzed in studies of the income distribution in general (such as Debowy et al., 2021). The contribution of the current study is the insight that the importance of education and experience does not diminish even high up on the wage scale.

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## Appendix

**Appendix Table 1. Demographic characteristics, by income group, ethnicity, and sector**

**a. Average age**

	Non-Jews	Parents native-born or born abroad	Mizrahi Jews	Ashkenazi Jews	Total population
Working-age population	38.5 (19.7)	33.5 (15.5)	50.2 (17.2)	47.3 (19.2)	41.0 (17.8)
Deciles 1–8	38.2 (19.9)	31.0 (15.3)	50.2 (17.9)	46.9 (20.3)	39.7 (18.2)
Decile 9	44.7 (14.1)	40.6 (13.1)	49.9 (13.9)	46.6 (15.1)	44.7 (14.1)
Top decile	46.9 (13.7)	43.3 (12.5)	50.4 (13.2)	50.1 (14.5)	46.9 (13.5)

Note: Each cell contains the average value for the group, and beneath it, the standard deviation in parentheses.

**b. Share of employed women**

	Non-Jews	Parents native-born or born abroad	Mizrahi Jews	Ashkenazi Jews	Total population
Working-age population	37.3%	51.2%	51.0%	52.0%	48.6%
Deciles 1–8	41.2%	55.1%	54.8%	55.9%	52.5%
Decile 9	21.7%	35.5%	35.8%	36.2%	33.0%
Top decile	11.1%	26.8%	29.3%	29.7%	25.3%

Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

## Appendix Table 2. Immigrants from the former Soviet Union

### a. Share of immigrants from the FSU, by income group,

	Non-Jews	Parents native-born or born abroad	Mizrahi Jews	Ashkenazi Jews	Total population
Working-age population	19.3%	14.7%	19.1%	50.2%	15.8%
Deciles 1–8	18.6%	11.3%	18.8%	52.1%	17.7%
Decile 9	25.5%	22.4%	19.7%	46.0%	11.8%
Top decile	27.2%	25.2%	17.6%	46.1%	16.9%

### b. Immigrants from the FSU relative to the rest of the population by ethnicity and sector

	Gross monthly wage		Gross hourly wage		Years of schooling		Share over age 45	
	FSU	Not FSU	FSU	Not FSU	FSU	Not FSU	FSU	Not FSU
Ashkenazi Jews	₪12,728 (9,909)	₪18,657 (16,465)	₪60.2 (44.4)	₪88.8 (79.5)	14.4 (3.4)	15.3 (3.6)	51%	57%
Parents native-born or born abroad	₪13,902 (11,202)	₪14,257 (12,265)	₪65.2 (61.0)	₪68.1 (57.2)	14.1 (3.5)	14.8 (3.4)	25%	23%
Mizrahi Jews	₪15,669 (9,841)	₪14,507 (11,452)	₪59.8 (56.5)	₪67.1 (53.5)	13.3 (2.9)	13.2 (3.6)	65%	61%
Non-Jews	₪11,556 (12,254)	₪9,662 (6,675)	₪53.2 (49.8)	₪44.5 (29.7)	12.7 (3.1)	11.1 (3.5)	50%	30%

Note: Each cell contains the average value for the group, and beneath it, the standard deviation in parentheses (where relevant).

Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

## Appendix Table 3. Distribution by education and employment status

	Did not complete high school	Completed high school without a Bagrut certificate	Completed high school with a Bagrut certificate	Professional certificate	Other certificate	Bachelor's degree	Master's degree	PhD
Employees	8%	17%	26%	12%	2%	22%	12%	1%
Self-employed	9%	19%	20%	14%	3%	21%	12%	2%

Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

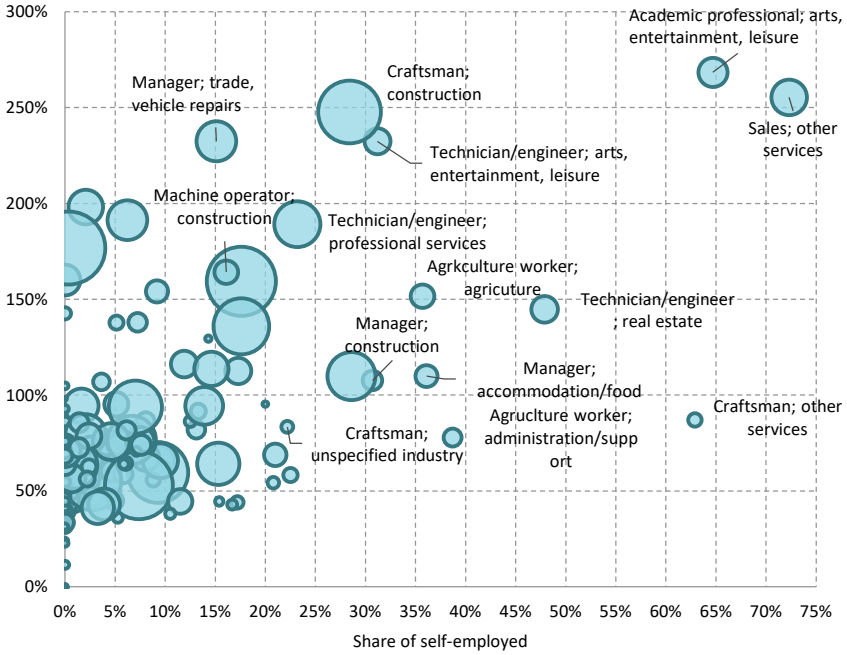
**Appendix Figure 1a. Average gross monthly wage and share of self-employed by occupation and industry**





**Appendix Figure 1b. Standard deviation of monthly income and the share of self-employed by categories of occupation and industry**

Standard deviation of the average hourly wage divided by the average wage



Note: The size of the bubble represents the share of the category out of the total labor force.

Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

**Appendix Table 4. Results of a weighted least squares model: Share of self-employed by categories of occupation and industry**

Dependent variable	Share of self-employed in the occupation		
	(1)	(2)	(3)
Average monthly wage	0.000003 (0.000003)		-0.000009* (0.000005)
Standard deviation of average monthly wage		0.000008* (0.000004)	0.000018** (0.000007)
Intercept	0.0812** (0.037)	0.0491 (0.035)	0.0699 (0.043)
R <sup>2</sup>	0.015	0.069	0.108
F	0.7613	3.299	3.27
Prob (F)	0.384	0.071	0.040
Number of observations	172	172	172

Note: Each cell contains an estimate of the coefficient and the standard deviation in parentheses. Significance levels: \*p < 0.10; \*\*p < 0.05.

Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

**Appendix Table 5. Results of the multi-variate model: Probability of selecting into the top decile**

	Top decile, monthly wage			Top decile, hourly wage		
	Overall (1)	By education (2)	By ethnicity and sector (3)	Overall (4)	By education (5)	By ethnicity and sector (6)
Potential experience	0.0707*** (0.0057)	0.0652*** (0.0092)	0.0541*** (0.0092)	0.0616*** (0.0049)	0.0500*** (0.0077)	0.0594*** (0.0085)
Potential experience squared	-0.0011*** (0.0001)	-0.0009*** (0.0002)	-0.0008*** (0.0002)	-0.0010*** (0.0001)	-0.0007*** (0.0001)	-0.0009*** (0.0002)
Potential experience x higher education		0.0215 (0.0115)			0.0411*** (0.0097)	
Potential experience squared x higher education		-0.0006* (0.0002)			-0.0008*** (0.0002)	
Potential experience x female		-0.0005 (0.0119)			-0.0165 (0.0098)	
Potential experience squared x female		0.0000 (0.0002)			0.0003 (0.0002)	
Potential experience x Jew, parents Israel-born			0.0433*** (0.0130)			0.0165 (0.0116)
Potential experience squared x Jew, parents Israel-born			-0.0007** (0.0003)			-0.0003 (0.0002)
Potential experience x Mizrahi Jew			0.0283 (0.0175)			-0.0077 (0.0156)

**Appendix Table 5 (continued). Results of the multi-variate model:  
Probability of selecting into the top decile**

	Top decile, monthly wage			Top decile, hourly wage		
	Overall	By education	By ethnicity and sector	Overall	By education	By ethnicity and sector
	(1)	(2)	(3)	(4)	(5)	(6)
Potential experience squared x Mizrahi Jew			-0.0002 (0.0003)			0.0003 (0.0003)
Potential experience x non-Jew			-0.0136 (0.0209)			-0.0271 (0.0166)
Potential experience squared x non-Jew			-0.0001 (0.0005)			0.0003 (0.0004)
Self-employed	0.0824 (0.0467)			0.3130*** (0.0400)		
Self-employed x no higher education, male		0.4124*** (0.0674)			0.6120*** (0.0620)	
Self-employed x no higher education, female		-0.3633*** (0.0761)			-0.1436* (0.0718)	
Self-employed x higher education x male		0.5703*** (0.1344)			0.6946*** (0.0872)	
Self-employed x higher education x female		-0.1121 (0.0999)			0.1278 (0.0815)	
Self-employed x Jew, parents Israel-born x male			-0.01292 (0.06754)			-0.09955 (0.06092)
Self-employed x Jew, parents Israel-born x female			-0.11161 (0.11141)			-0.28960** (0.08883)
Self-employed x Ashkenazi Jew x male			-0.03731 (0.12175)			-0.21704* (0.10758)
Self-employed x Ashkenazi Jew x female			0.22219 (0.15677)			0.01297 (0.13716)
Self-employed x Mizrahi Jew x male			-0.27194* (0.13191)			-0.25519* (0.11860)
Self-employed x Mizrahi Jew x female			0.03736 (0.17310)			-0.20226 (0.14713)
Self-employed x non-Jew x male			0.65982*** (0.12897)			0.60264*** (0.10458)
Self-employed x non-Jew x female			0.36463 (0.39449)			0.04776 (0.27911)
Female	-0.3858*** (0.0663)	-0.3704 (0.2717)	-0.3336*** (0.0791)	-0.3094*** (0.0587)	-0.0380 (0.1908)	-0.2547*** (0.0707)
Male, Jew, parents Israel-born	0.0742* (0.0364)	0.0559 (0.0367)	-0.5435* (0.2618)	0.0220 (0.0340)	0.0114 (0.0343)	-0.1825 (0.2312)
Male, Mizrahi Jew	0.0902* (0.0428)	0.0788 (0.0432)	-0.6321* (0.3066)	0.0339 (0.0398)	0.0365 (0.0406)	-0.2148 (0.2778)
Male, non-Jew	-0.2261** (0.0765)	-0.2277** (0.0772)	-0.1256 (0.3201)	-0.2354*** (0.0703)	-0.2325** (0.0711)	-0.0905 (0.2770)

**Appendix Table 5 (continued). Results of the multi-variate model:  
Probability of selecting into the top decile**

	Top decile, monthly wage			Top decile, hourly wage		
	Overall (1)	By education (2)	By ethnicity and sector (3)	Overall (4)	By education (5)	By ethnicity and sector (6)
Female, Jew, parents Israel-born			-0.1073 (0.0726)			-0.1258 (0.0644)
Female, Mizrahi Jew			0.0205 (0.0852)			0.0149 (0.0770)
Female, non-Jew			-0.0669 (0.1461)			0.0412 (0.1105)
High school (no Bagrut certificate)	0.1223 (0.0887)	0.1501 (0.0959)		0.1591* (0.0754)	0.2113* (0.0865)	
Bagrut certificate	0.1785* (0.0868)	0.2277* (0.0942)		0.2433** (0.0754)	0.2718** (0.0872)	
Professional certificate	0.2603** (0.0908)	0.2822** (0.0991)		0.3125*** (0.0779)	0.3131*** (0.0909)	
Bachelor's degree	0.5228*** (0.0849)	0.5872*** (0.1542)		0.5738*** (0.0734)	0.3290* (0.1333)	
Master's degree	0.8785*** (0.0872)	0.9205*** (0.1583)		0.9266*** (0.0761)	0.6464*** (0.1377)	
PhD	1.4966*** (0.1136)	1.5255*** (0.1808)		1.5514*** (0.1033)	1.2459*** (0.1617)	
Other certificate	0.3840** (0.1280)	0.4035** (0.1472)		0.4410*** (0.1085)	0.4998*** (0.1358)	
Intercept	-3.8503*** (0.2424)	-3.9314*** (0.2574)	-3.5068*** (0.2902)	-1.3046*** (0.2067)	-1.3017*** (0.2147)	-1.1659*** (0.2613)
Interaction variables with education-ethnicity and education-gender	Yes	Yes	Yes	Yes	Yes	Yes
Additional variables: home value (0 if not a home owner), number of children under 10, occupation, industry, work hours, location, family status, religiosity	Yes	Yes	Yes	Yes	Yes	Yes
$\chi^2$	3,667.03	2,346.28	3,234.07	3,667.03	2,413.44	3,399.72
(p value)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
No. of observations	24,867	24,867	24,867	24,867	24,867	24,867

Note: All of the estimates can be found in the additional Appendix to this work, [Multivariate Model and Methodology Appendix](#).

Significance levels: \* $p < 0.10$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ .

Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

**Appendix Table 6. Results of the multivariate model: Wage in the top decile, by ethnicity and sector**

	Top decile, monthly wage			Top decile, hourly wage		
	Overall	By education	By ethnicity and sector	Overall	By education	By ethnicity and sector
	(1)	(2)	(3)	(4)	(5)	(6)
Potential experience	0.0096** (0.0035)	-0.0098 (0.0061)	0.0144* (0.0061)	0.0099* (0.0041)	0.0061 (0.0064)	0.0109 (0.0067)
Potential experience squared	-0.0001 (0.0001)	0.0002 (0.0001)	-0.0002 (0.0001)	-0.0002* (0.0001)	-0.0001 (0.0001)	-0.0002 (0.0001)
Potential experience x higher education		0.0253*** (0.0070)			0.0027 (0.0072)	
Potential experience x higher education squared		-0.0004** (0.0001)			-0.0000 (0.0001)	
Potential experience x female		0.0010 (0.0068)			0.0061 (0.0073)	
Potential experience squared x female		-0.0001 (0.0001)			-0.0002 (0.0001)	
Potential experience x Jew, parents Israel-born			-0.0043 (0.0078)			-0.0056 (0.0082)
Potential experience squared x Jew, parents Israel-born			0.0001 (0.0002)			0.0001 (0.0002)
Potential experience, Mizrahi Jew			-0.0029 (0.0110)			0.0134 (0.0112)
Potential experience x Mizrahi Jew			0.0001 (0.0002)			-0.0002 (0.0002)
Potential experience x non-Jew			-0.0283 (0.0168)			-0.0150 (0.0171)
Potential experience squared x non-Jew			0.0006 (0.0004)			0.0003 (0.0004)
Self-employed	0.1181*** (0.0274)			0.1960*** (0.0310)		
Self-employed x no higher education, male		0.1135* (0.0481)			0.2101*** (0.0582)	
Self-employed x no higher education, female		0.1107** (0.0410)			0.2189*** (0.0512)	
Self-employed x higher education x male		0.1605 (0.0908)			0.2017* (0.0919)	
Self-employed x higher education x female		0.0986 (0.0521)			0.1607** (0.0619)	
Self-employed x Jew, parents Israel-born x male			0.1318** (0.0502)			0.1328* (0.0530)
Self-employed x Jew, parents Israel-born x female			0.1603 (0.0493)			0.1611** (0.0577)
Self-employed x Ashkenazi Jew x male			0.0970** (0.0371)			0.2318*** (0.0471)

**Appendix Table 6 (continued). Results of the multivariate model:  
Wage in the top decile, by ethnicity and sector**

	Top decile, monthly wage			Top decile, hourly wage		
	Overall	By education	By ethnicity and sector	Overall	By education	By ethnicity and sector
	(1)	(2)	(3)	(4)	(5)	(6)
Self-employed x Ashkenazi Jew x female			0.1170** (0.0419)			0.2609** (0.1044)
Self-employed x Mizrahi Jew x male			0.1291* (0.0539)			0.2275*** (0.0701)
Self-employed x Mizrahi Jew x female			0.1385** (0.583)			0.2348** (0.0642)
Self-employed x non-Jew x male			0.0877 (0.0748)			0.1217 (0.1038)
Self-employed x non-Jew x female			-0.0517 (0.1006)			0.0911 (0.0980)
Female	-0.0503 (0.0352)	-0.1025 (0.1069)	-0.0511 (0.0401)	-0.1248 (0.0464)	-0.3623* (0.1518)	-0.1255* (0.0515)
Male, Jew, parents Israel-born	-0.0456** (0.0172)	-0.0460** (0.0172)	-0.1259 (0.1768)	-0.0493* (0.0216)	-0.0477* (0.0216)	-0.0420 (0.1749)
Male, Mizrahi Jew	-0.0297 (0.0221)	-0.0248 (0.0220)	-0.1102 (0.2246)	-0.0273 (0.0262)	-0.0269 (0.0261)	-0.0425 (0.2323)
Male, non-Jew	-0.0187 (0.0569)	-0.0224 (0.0570)	0.3885 (0.3340)	-0.0314 (0.0727)	-0.0422 (0.0731)	0.4109 (0.3731)
Female, Jew, parents Israel-born			0.0039 (0.0347)			0.0122 (0.0432)
Female, Mizrahi Jew			0.0070 (0.0458)			0.0084 (0.0504)
Female, non-Jew			0.1038 (0.0883)			-0.0897 (0.0875)
High school (no Bagrut certificate)	0.0794 (0.0655)	0.0564 (0.0714)		0.0077 (0.0809)	-0.0437 (0.0918)	
Bagrut certificate	0.0939 (0.0652)	0.0757 (0.0714)		-0.0392 (0.0749)	-0.0687 (0.0887)	
Professional certificate	0.0118 (0.0653)	-0.0086 (0.0717)		-0.0884 (0.0781)	-0.1601 (0.0904)	
Bachelor's degree	0.0676 (0.0643)	-0.2816** (0.1043)		-0.0802 (0.0748)	-0.1422 (0.1172)	
Master's degree	0.1121 (0.0658)	-0.2360* (0.1067)		-0.0719 (0.0767)	-0.1289 (0.1196)	
PhD	0.1737* (0.0741)	-0.1547 (0.1094)		0.0267 (0.0867)	-0.0362 (0.1254)	
Other certificate	0.1800 (0.0971)	0.1674 (0.1092)		0.0328 (0.1010)	0.0143 (0.1205)	

**Appendix Table 6 (continued). Results of the multivariate model:  
Wage in the top decile, by ethnicity and sector**

	Top decile, monthly wage			Top decile, hourly wage		
	Overall	By education	By ethnicity and sector	Overall	By education	By ethnicity and sector
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	10.3220*** (0.2172)	10.5618*** (0.2153)	10.2923*** (0.2527)	5.8659*** (0.1836)	5.9064*** (0.2020)	5.8584*** (0.2260)
Interaction variables with education-ethnicity and education-gender	Yes	Yes	Yes	Yes	Yes	Yes
Additional variables: home value (0 if not a home owner), number of children under 10, occupation, industry, work hours, location, family status, religiosity	Yes	Yes	Yes	Yes	Yes	Yes
$\lambda$	-0.0598** (0.0207)	-0.0693*** (0.0179)	-0.0570** (0.0210)	-0.1032*** (0.0269)	-0.0934*** (0.0257)	-0.0997*** (0.0267)
$\chi^2$	403.425	174.288	73.398	535.51156	640.87926	337.720
(p value)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
No. of observations	2,502	2,502	2,502	2,486	2,486	2,486

Note: All of the estimates can be found in the additional Appendix to this work, [Multivariate Model and Methodology Appendix](#).

Significance levels: \* $p < 0.10$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ .

Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS