The Marriage Premium in the Israeli Labor Market

Michael Debowy, Gil S. Epstein, and Avi Weiss

Introduction

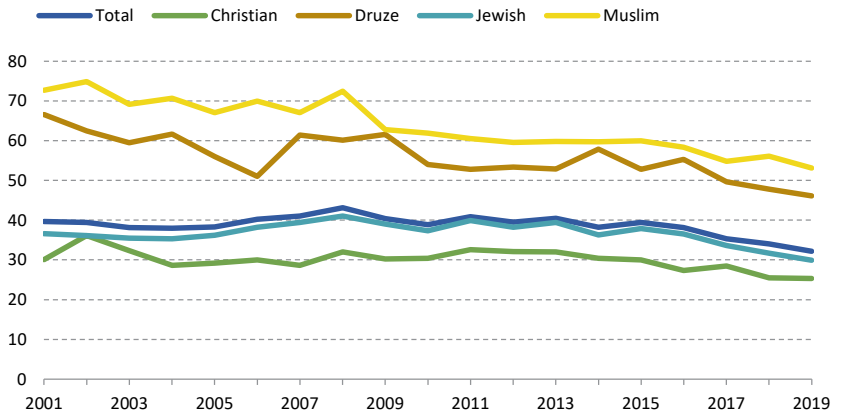
A well-known phenomenon in the labor market is the existence of a *marriage premium* — the consistent tendency of married men to earn more than their unmarried colleagues, even after taking into consideration other factors that affect wages, such as age, education, and occupation. The phenomenon has been documented since the second half of the 20th century among men (especially in the US, see Hill, 1979; Korenman & Neumark, 1991), and has expanded in recent decades so that today it also exists for women. In many developed countries, marriage premiums are documented for both men and women, although the premium tends to be lower for women. Furthermore, the phenomenon has been documented on various scales for same-sex married couples (Burn & Jackson, 2014; Martell & Nash, 2020) and cohabiting unmarried couples (Barg & Beblo, 2009; Cohen, 2002).

In the Israeli context, it appears that only Sharabani (2004) has examined this issue using data from the 1983 and 1995 censuses. Since then, though, there have been wide-ranging developments in family structure and the institution of marriage in Israel — developments that combined with demographic, economic, and social processes that began earlier. Alongside changes in fertility and a considerable increase in women's employment rate, in recent years there has been a decline in marriage rates, an increase in the marriage age, and a delay in the age at which women give birth for the first time. The rate of people getting married out of all unmarried people began declining in 2009 among Jews and Muslims, in 2010 among Druze, and in 2014 among

* Michael Debowy, Researcher, Taub Center for Social Policy Studies in Israel. Prof. Gil S. Epstein, Principal Researcher, Taub Center; Professor of Economics and Dean of the Social Sciences Faculty, Bar-Ilan University. Prof. Avi Weiss, President, Taub Center; Department of Economics, Bar-Ilan University

Christians (Figure 1). Several factors contribute to this decline, including an increase in the rate of couples who choose to marry without official state recognition and the increase in the rate of couples cohabiting (Figure 2).[1] There has also been a consistent increase in the marriage age: in 2019, the population's average age of grooms and brides was 27.3 and 24.9, respectively (and specifically among Jews — 27.4 and 25.6) — more than a two-year increase in the age of grooms since 1970, and a four-year increase in the age of brides (CBS, 2021). Accordingly, the percentage of single men aged 25–29 more than doubled (from 28% to 63%) between 1970 and 2019, and the percentage of single women in the same age group jumped from 13% to 48% (Figure 3). There was even a large increase in older singles. These processes and others have a significant impact on the labor market and the behavior of individuals in it. Relationships, families, and joint household management have an impact on employees' preferences, constraints, bargaining power, and ability to manage risks from potential employers.

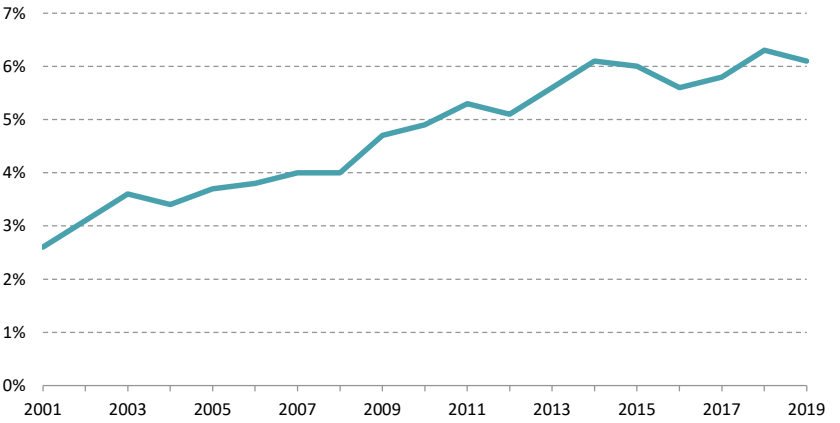
Figure 1. Number of people getting married per 1,000 unmarried people ages 15 and over, by religion



Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS, 2021

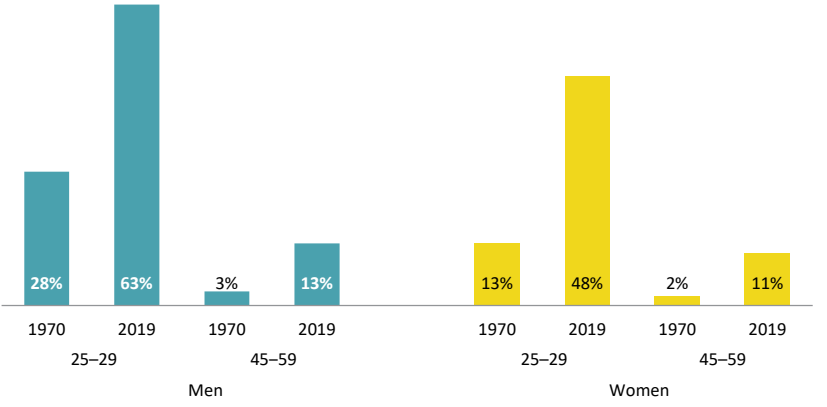
1 A couple who are not married to each other and living together in a joint residence.

Figure 2. The share of individuals living together out of all Jewish couples



Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS, 2021

Figure 3. The share of singles in selected age groups, 2019 vs 1970



Note: The data are based on the marriage registry for marriages in Israel and abroad of the Israel residents registry.
Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS, 2021

In developed countries that have undergone similar processes, effects of these demographic developments have been observed within the labor market, particularly with regard to the relative situation of married and unmarried workers. In comparison to these countries, Israel is unique in many ways. For instance, in Israel, marriage rates among all groups are higher, divorce rates are lower, and only about 8% of children are born outside of marriage (compared to almost 50% in the US, for example). Our goal is to examine the relationship between marriage, employment, and wages in the Israeli labor market in recent years using updated data — especially in light of the changes in family structure and marriage behavior in Israeli society — and to estimate the *marriage premium* for workers from different populations.

The database we used is the Central Bureau of Statistics (CBS) *Household Expenditure Survey* for 2017 and 2018, which includes individual-level data on employment, wages, work hours, education, age, gender, marital status, level of religiosity, ethnic origin and nationality, occupation, economic sector, and geographic district. As with other CBS surveys of this type, most of the data are based on self-reporting, including marital status. Therefore, the definition of marriage is based on the individual identifying as *married* and not on the State institutions' official recognition. The database contains about 34,000 observations of working-aged individuals, of which about 61% were married at the time of the survey and another 9% were previously married — a group that includes divorced men and women (6.1%), widows and widowers (1.6%), and separated couples (people who are still legally married but who do not live in a joint household, 1.1%).

Our analysis shows significant differences between the married and single populations over and above differences resulting from the age distribution. Among men, there appears to be a significant correlation between marriage and employment, with marriage corresponding to a 10-percentage point increase in the probability that a man of working age will be employed. Among Jewish women, the likelihood of employment is similar or slightly higher for married women than for single women, while for non-Jewish women, marriage entails lower employment rates than for single women. It also appears that marriage entails significantly higher wages for all workers: married men and women earn 30% and 20% more than their unmarried colleagues, respectively (21% and 12%, respectively, after controlling for a possible bias that can stem from factors that affect the likelihood of both employment and marriage). When differentiating between workers with different occupations, this result holds

for *blue-collar* workers, while married workers from *white-collar* occupations earn 16% more than their single colleagues, regardless of gender. Moreover, women in white-collar occupations who were married but are no longer are expected to continue seeing a wage advantage of about 12% over their single co-workers, while the men's advantage disappears.

Literature review

There is no single agreed-upon explanation among economists, demographers, and sociologists for the phenomenon of the marriage premium, and the literature offers several possible explanations. One explanation is that there is no direct relationship between marriage and wages, but rather an indirect relationship driven by unobservable factors — such as the character traits of the individual — that affect both salary and the probability of marriage. Personal characteristics such as perseverance, dedication, loyalty, or charisma cannot be found in the data, but are likely to affect both salary and marital status of the employee, creating a spurious correlation between the factors. Another example, which has been documented indirectly, is health. Studies have shown that health affects the likelihood of marriage on the one hand and employment and wages on the other, but a single database with information on health, wages and marriage is almost nonexistent. Therefore, it is usually impossible to control for the health variable despite its known effect.[2]

Another explanation derived from the same approach is that salary affects marriage and not the other way around. In other words, men whose wages are adequate or who have the potential to make a decent living are perceived as more desirable partners, and, therefore, their marriage rates are higher than those of their peers who are perceived as less desirable. Ludwig and Brüderl (2018) tested this theory using cross-sectional data that tracked American workers from 1979 to 2012, finding that a high wage base or the prospects of a high salary increase boosts men's chances of getting married. They claim that there is no marriage premium, but that workers with higher earning potentials exhibit higher marriage rates. Between 1979 and 2003, Chen (2007) made a comparable estimation for workers in Taiwan (which is more similar to Israel than the US in terms of marriage rates) and reached a similar conclusion.

2 For a discussion of how health affects the probability of marrying, see, for example, Guner et al., 2018. For a discussion of how health impacts employment and wages, see, for example, Halla and Zweimüller, 2011.

The findings of Cornaglia and Feldman (2011) challenge this theory. They examined the direct relationship between employee productivity and marriage among a unique group — American baseball players — whose performance (i.e., productivity) is documented in detail. They showed that there is no connection between the marital status of the athletes and their performance (at any given moment or future forecast), and that controlling for their productivity in wage estimations does not affect the marriage premium. In their opinion, an alternative explanation is that unmarried athletes are discriminated against, although they mention that this may be a phenomenon unique to the American world of sports, and it does not necessarily reflect the labor market as a whole.

Another explanation for the marriage premium concerns household dynamics — the division of labor and the *economy of scale* available from joint household management. Couples can share household chores, leaving more time for work (in traditional societies, this means increasing the working hours of the man at the expense of the woman's working hours). Ahituv and Lerman (2005) tested this hypothesis and analyzed the development of working hours and salaries of single and married men (based on the same 1979–2012 US data used by Ludwig & Brüderl, 2018). As a result of marriage, a sharp increase in men's working hours was noted, and a moderate increase in salary is seen after a notable delay. According to them, the findings suggest that the marriage premium involves a substantial increase in the productivity of married men due to an accelerated accumulation of experience since they can afford to work more hours than their unmarried counterparts. The researchers, therefore, determine that the combination of high salaries and the tendency to remain married are mutually reinforcing.

Pilossoph and Wee (2019) also showed that the *safety net* provided by the shared household allows the couple to invest more time and resources in job searching, to find jobs that better utilize their skills, and to demand higher wages instead of compromising on a job that is easy to obtain but pays less. The researchers add that in such a situation, the couple has an additional incentive to find a high-paying job as it will provide the safety net that they will spread for their partner when they seek higher-paid employment.

McConnell and Valladares-Esteban (2020) focused on identifying the causal effect of marriage on salaries. They examined cross-sectional data from 1977–2018 in the US and focused on the assumption that cultural norms affect the probability of individuals getting married regardless of their salaries.

The researchers attempted to estimate these norms by a rough calculation for each individual of the marriage rate among other individuals with the same level of education who live in the same area and are several years older. This *percentage of those who are married and similar to me* served as an instrumental variable to identify variance in personal status that is *exogenous* to the individual, where the relationship between this variance and the variance in the salaries of individuals constitutes the causal effect of marriage on wages. Using this method, the researchers discussed the development of the marriage premium for American women over the years. In the 1970s and 1980s it was negative, and at the time of the study (2020) it was positive and was about 9% (compared to about 20% for men — a figure that remained stable throughout most of the period).

In Israel, the literature regarding the marriage premium is scarcer. In her study of the impact of family structure on gender wage gaps, Sharabani (2004) estimated the marriage premium in Israel based on data from the 1983 and 1995 censuses. The researcher focused on full-time employees aged 23–44 who comprise the core of the Israeli labor force. She found that controlling for background variables, the marriage premium for men was stable throughout the two periods, at about 11%, while the marriage premium for women — also positive — increased from 6% to 7% over that period. As we will show in the summary, the great difference between our findings and Shahrabani's findings arises mainly from the selection criteria used in her research. Duplicating Shahrabani's estimation procedure (including the selection criteria) using the more recent data used in this study yields similar results to those in the 1980s and 1990s for men, while for women we found that the marriage premium has increased slightly.

Employment, wages, and marriage in Israel: A statistical analysis

To examine whether there is a *marriage premium* in employment and wages, we ran a multivariate model that examines the relationship between several observed characteristics. The model included the marital status of the individual, and distinguishes between *currently married* (those married at the time of the survey), *previously married* (a group that includes divorced, separated, and widowed individuals), and workers who *have never been*

married.[3] The two-stage model uses the Heckman correction and includes a preliminary estimation of the effect of various factors on the probability of the individual working. Therefore, the marriage premium is estimated after correcting for possible bias from the impact of various factors, including marriage, on employment.[4] The estimated model is almost identical to that presented by Debowy et al. (2021) and includes a number of control variables such as education, experience, occupation, economic industry, working hours, geographic location, gender, ethnicity (including separate dummy variables for *others*[5] and Arabs), and religiosity. The resulting estimates are presented in Appendix Table 1. In addition, another series of estimations was conducted in the framework of a two-stage model that relies on double selection in the first stage — that is, a simultaneous estimation of the individual's likelihoods of being married and being employed. In this manner the estimated marriage premium accounts for unobservable factors that affect both marriage and employment (see Appendix Table 2).[6]

3 We distinguish between currently married and previously married in the multivariate model only. The distinction is insignificant with respect to the descriptive statistics, partly due to the fact that there are relatively few individuals who were married in the past and not in the present (less than one-seventh of all previous and present marriages in the sample) and they are relatively similar in demographic characteristics to those currently married.

4 For the first stage, we used two instrumental variables: the number of children under the age of 10 in the household and the *prevailing wage* in their labor environment, whether they work or not (the average wage of working individuals belonging to the same gender, ethnicity, level of education, geographic subdistrict and age group of the individual). Estimation of the model using only the second instrumental variable (*prevailing wage*) yielded almost identical results.

5 Arabs are just over three-quarters of the non-Jews, and *others* are just under a quarter of this group. When the model is separately estimated for Arabs and others, most of the effects presented here for non-Jews are similar in direction and size to those estimated for Arabs only, while for others, no significant effects were found (in part because this is a very small subsample in the survey data).

6 This model roughly follows Wetzels and Zorlu (2003), but it estimates the probability of being married and working in a simultaneous Probit model (compared to a double selection in the Heckman-Probit model in their paper). The instrumental variables that are used to predict the probability of being employed are the prevailing wage and the number of children under the age of 10 in the household, and the instrumental variable for predicting the probability of being married is the marriage rate of other individuals from the same gender-ethnicity-religiosity group of the individual and in the age range of up to five years older or younger, as a rough measure of the sociocultural marriage norm faced by the individual.

The Israeli employment premium

Table 1 presents the results of the first phase of the regression — an estimate of the correlation between marriage and employment given all the other observable factors that affect employment. The probability that a currently married man will work is 10 percentage points higher than that of his colleague who has never been married, and previously married men have a 3 percentage point advantage in the likelihood of working over their colleagues who have never been married. Based on the mechanisms discussed in the literature review, it is likely that this advantage reflects unobservable factors that affect the likelihood of both being employed and belonging to the *previously married* group, or, that this advantage reflects a long-term effect of marriage on the employment of the individual, an effect that persists for the previously married. Among women, the importance of the distinction between past and current marriage is even greater: the probability that a currently married woman is employed is about 2 percentage points lower than that of a single woman, while divorced, separated, and widowed women are 2 percentage points more likely to be employed than single women.

Table 1. The difference in the probability of working by marital status

In percentage points

		Total	By subpopulation and sector			
			Ashkenazi Jews	Jews, parents Israeli-born or from different continents	Mizrahi Jews	Non-Jews
Currently married vs never married	Men	**10.0**	**8.9**	**8.7**	**8.4**	**15.8**
	Women	**-2.2**	-1.5	**3.2**	2.5	**-2.7**
Previously married vs never married	Men	**3.0**	1.0	**7.4**	**3.7**	2.7
	Women	**2.2**	1.8	**9.6**	**3.8**	**-7.2**

Note: Each cell displays the point estimate for the group. Blue numbers show statistically significant values. The findings presented in the table are based on an estimate of the average marginal effect (AME) of dummy variables for current and past marriages given age, education, experience, geographic location, religiosity, gender, ethnicity, employment status, the value of the home owned by the household, and the number of children under the age of 10 in the household. The model's findings are presented in Appendix Table 1.

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

Substantial differences were found when examining the results by ethnicity.[7] The employment probability of married Jewish men is 8–9 percentage points higher than that of their unmarried colleagues, while among non-Jews, it is 15.8 percentage points higher. Among male Jews whose parents were born in Israel or on different continents (hereinafter referred to as *third-generation or of mixed origin*) this gap decreases slightly for those previously married, among Mizrahi Jews it is halved, and among Ashkenazi Jews it disappeared altogether. The lower probability of a currently married women to be employed obfuscates opposing effects for women of different ethnicities. The employment probability of third-generation or mixed origin married Jewish women is higher than that of single women. The predicted employment rates of married Ashkenazi and Mizrahi women are similar to those of their single counterparts, and non-Jewish married women tend to work less than those not married, holding constant all other factors. Similarly, past marriages correspond to 4–10 percentage points higher in employment for non-Mizrahi Jewish women, and about 7 percentage points lower for non-Jewish women.

In conclusion, holding all else constant, the employment probability of Israeli men and women who were married in the past is 2–3 percentage points higher than that of their colleagues who never married. As noted previously, this figure can simultaneously reflect both the effect of unobservable characteristics on employment and marriage and the long-term effect of the marriage itself (which persists after the marriage is terminated). However, currently married men are expected to work with an even higher probability, and there is a statistically significant difference between them and those who were married in the past (the employment advantage of married men over their never-married counterparts is about 10 percentage points, while for those previously married it is 3 percentage points). Non-Ashkenazi Jewish women show similar employment patterns, although the employment effect is smaller than for men and is greater for those previously married. Among Ashkenazi women and non-Jewish women, however, current or past marriages do not result in heightened employment rates, and among non-Jews they actually result in lower employment. This gender difference is possibly due

7 Individuals were divided into four groups: Ashkenazi Jews — Jews who were born or whose parents were born in Europe or America; Mizrahi Jews — Jews who were born or whose parents were born in Asia or Africa; all other Jews — those whose parents were born in Israel or on different continents (i.e., one parent was born in Europe/America and the other in Asia/Africa); and non-Jews, which include both Arabs and others.

to the division of labor within the household, which is expressed differently in different populations, and may also be due to the fact that non-Jewish married couples tend to prioritize the employment of men at the expense of women.

The Israeli marriage premium

The model's main findings, which are presented in Table 2, show that in the second decade of the 21st century there is a positive and significant marriage premium for workers in Israel. The hourly wages of married men tend to be about 30% higher than those of their unmarried colleagues (an advantage that is nonexistent for those previously married). Furthermore, on average, the hourly wage of married women is about 20% higher than that of single women (this advantage is 10% for those previously married). These estimates are similar to those found in other developed countries. However, these average estimates mask differences between workers from different populations, and, in particular, the gap between Jews and non-Jews.

Table 2. The marriage premium, the general working population

		Total	By subpopulation and sector				By occupation	
			Ashkenazi Jews	Jews, parents Israeli-born or from different continents	Mizrahi Jews	Non-Jews	Blue collar	White collar
Currently married vs never married	Men	**29.5%**	**27.3%**	**36.5%**	**25.5%**	-5.6%	**36.1%**	**16.6%**
	Women	**20.4%**	**17.0%**	**30.8%**	**22.1%**	**-10.3%**	**23.6%**	**14.5%**
Previously married vs never married	Men	4.3%	8.4%	**27.8%**	-8.8%	-15.9%	**7.9%**	-2.9%
	Women	**10.4%**	3.7%	**19.0%**	**15.1%**	**-16.1%**	**9.6%**	**11.9%**

Note: Each cell displays the point estimate for the group. Blue numbers show statistically significant values. The findings presented in the table are based on an estimate of the average marginal effect (AME) of dummy variables for current and past marriages given age, education, experience, geographic location, religiosity, gender, ethnicity, employment status, the value of the home owned by the household, and the number of children under the age of 10 in the household. The model's findings are presented in Appendix Table 1.
Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

Dividing the population by ethnicity, the premiums for men and women show radically different results. Third-generation or mixed origin Jewish men benefit from the highest premium of 36.5%, followed by Ashkenazi and Mizrahi men with premiums of about 25%–27%, while non-Jewish married men earn the

same as their unmarried counterparts (i.e., they have no marriage premium). This is true for those currently married only; for male employees who were previously married and are no longer married there are no wage advantages over unmarried individuals, with the exception of third-generation or mixed origin Jews for whom most of the premium carries over to the previously married group.

Among women, Ashkenazi women benefit from a marriage premium of about 20% (which is approximately 62% of the premium of Ashkenazi men), while non-Ashkenazi married Jewish women enjoy a premium that is roughly 13%–16% lower than that of men of the same ethnicity. Non-Ashkenazi Jewish women who are divorced, separated, or widowed generally have a premium similar to that of their married colleagues, except for Ashkenazi women who only enjoy the premium while married. Among non-Jewish women, current and past marriages correspond to wages that are about 10% and 16% lower than those of unmarried women, respectively.

Another division that demonstrates interesting differences is by occupation (the relationship between marriage and employment is not estimated in this division, since, by definition, only people who work are included). Married men and women receive a similar premium of about 14%–16% among *white-collar* workers (managers, academic occupations, practical engineers, and technicians).[8] The gender difference is more prominent, and the premium is slightly higher than its average level in the general population, among *blue-collar* workers. Previously married women have a similar wage advantage for both types of occupations, while previously married men who are *blue-collar* workers enjoy a premium of about 8%.

To complete the picture, we estimated the marriage premium in another model, where the probability of being married (in parallel with the probability of working) is explicitly estimated in the first stage, and the gross hourly wage is estimated in the second stage, so that the influence of unobservable factors affecting both marriage and wages is controlled for (Appendix Table 2). This analysis focused on currently married versus unmarried individuals. The results indicate lower marriage premiums in relation to the base model, although the relative gaps between the groups are maintained. Based on this estimation,

8 The statistical hypothesis that both male and female *white collar* workers receive a marriage premium of 16% cannot be rejected at the 95% confidence level.

the average premium for married men is about 21% and for married women about 12%. This is due to slightly smaller premiums than in the base model for Jews of all ethnicities, while the relationship between marriage and wages remains the same as for non-Jews without modeling the selection for marriage.

In summary, the findings converge into solid evidence of the existence of a marriage premium in Israel for Jewish men and women which is similar in scale to estimates from other developed countries. Marriage leads to higher hourly wages for men and women even after controlling for a range of factors related to wages and marriage. This premium is not uniform, varying with gender and occupation. *White collar* workers enjoy a smaller-than-average premium, which is similar among men and women. Meanwhile, *blue-collar* workers enjoy a slightly larger-than-average premium, where men have a distinct advantage over women. The marriage premium also varies by ethnicity — non-Jewish male workers do not benefit from it, and non-Jewish female workers are *penalized* by their marriage when it comes to their predicted wages. Nonetheless, for Jewish workers of all ethnicities, the marriage premium remains significantly positive. Interestingly, among male and female Ashkenazi Jews, the premium is not expected to be maintained should the marriage end (i.e., there is no advantage to *previously married* but only to the *currently married*). In contrast, among Mizrahi Jewish women, and among third-generation and mixed origin Jews, most of the premium is expected to be maintained among those previously married — a distinction similar to the results of the relationship between marriage and employment. Differences in background factors (observable and unobservable) and cultural differences may drive different mechanisms in the relationship between marriage and employment and wages that manifest as these differences by ethnicity.

Summary

In this paper, we have shown that a marriage premium exists in the Israeli labor market for both employment and wages. The employment probability of married men is about 10 percentage points higher than that of unmarried men. Furthermore, within the general population, married men's wages are about 30% higher than that of unmarried men, while married Jews of various ethnicities receive premiums ranging from 25% to 36%. While the probability of married women working is 2 percentage points lower than that of unmarried women in the general population, when separated by ethnicity

it was found that only non-Jewish married women are likely to work at lower rates than unmarried women, while married Jewish women are likely to work at similar or even higher rates than unmarried women. Non-Ashkenazi Jewish women who are divorced, separated women, or widows have a higher employment probability than single women who have never been married, while the relationship between past marriages and employment among non-Jewish women is negative. The wages of married women are about 20% higher than the wages of unmarried women. Among Jewish women — women whose parents were born either in Israel or on different continents benefit from the highest premium for marriage (31%). Ashkenazi women have the lowest premium (17%), while non-Jewish married women not only do not benefit from a premium, they suffer 10% lower wages.

In addition, we found that the marriage premium is significantly lower among *white-collar* workers. *Blue-collar* workers who were married in the past have a high positive premium, and among women who were married in the past, the premium is similar regardless of their occupation. An attempt to trace unobservable background factors that affect both the probability of getting married and wages and controlling for them in the statistical estimation suggests that most of the numbers cited are 30%–40% greater than the actual premium. However, their direction, significance, and ratios correctly reflect the relationship between the institution of marriage and the Israeli labor market.

The scarcity of past research on this subject in Israel, the changes that have been made over the years in the CBS household surveys, and the considerable changes that have taken place in the institution of marriage in Israel in recent years inhibit comparisons that will allow us to draw solid conclusions on how things have changed over time. As mentioned, the main research carried out on this subject was that of Shahrabani (2004). The current study differs from that paper in several significant aspects, such as the age range of individuals, the scope of their employment, the background variables that are controlled for, the focus on hourly wages versus monthly wages, and the choice of statistical model. In an attempt to uncover the extent to which the differences in the findings between the two studies result from actual changes that have occurred in the Israeli economy rather than from the differences mentioned above, we endeavored to duplicate Sharabani's model to the extent possible using current data.

We found a monthly wage premium of 13.9% for men and 12.5% for women using Shahrabani's methodology on the 2017 and 2018 data. The premium for men is not statistically different from the 11% estimated by Shahrabani, however for women the confidence interval for the premium does not include the 7% estimated in that paper, but it nearly does. All told, it seems that since the 1980s and 1990s the marriage premium of men has not changed, while that of women has increased. This trend is in line with findings from other countries, such as those of McConnell and Valladares-Esteban (2020).

Unfortunately, the analysis in this paper and the available data made it impossible to take into account all the changes that have occurred in the Israeli marriage institution, the most significant being the increased rate of couples who choose to cohabit without being married (Figure 2). It would be interesting to see whether a similar premium exists for these individuals as well or only for those in an official marriage. It is possible that one of the causes for the premium's existence may be the stability of the arrangement, as implied by Pilossoph and Wee (2019), and such stability may be just as prevalent for couples who are not officially married but not necessarily for every couple who choose to cohabit. Another interesting line of investigation is whether the increase in the age of marriage and share of single individuals in different age groups (Figure 3) has an impact on the size of the marriage's premium. In order to answer these and other questions, long-term panel data is required to distinguish between different relationship patterns and to account for demographic developments.

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Hebrew

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Appendix

Appendix Table 1. The findings of the multivariate model: the probability of working and the gross hourly pay

	Overall		By origin and sector		By occupation
	Dependent variable: Probability of working[1]	Dependent variable: Log of gross hourly wage	Dependent variable: Probability of working[1]	Dependent variable: Log of gross hourly wage	Dependent variable: Log of gross hourly wage
Married — reference group: Never married					
Currently married x man	0.4399***	0.2947***			
	(0.0335)	(0.0181)			
Currently married x woman	-0.0755*	0.2041***			
	(0.0313)	(0.0173)			
Previously married x man	0.1302*	0.043			
	(0.0626)	(0.04)			
Previously married x woman	0.0702	0.1036***			
	(0.0429)	(0.0228)			
Currently married x man x Ashkenazi			0.3899***	0.2733***	
			(0.0558)	(0.0287)	
Currently married x man x Jewish, parents Israeli-born or from different continents			0.3898***	0.3652***	
			(0.0432)	(0.0252)	
Currently married x man x Mizrahi			0.4049***	0.2546***	
			(0.0673)	(0.0374)	
Currently married x man x non-Jew			0.5744***	-0.0560	
			(0.0504)	(0.0458)	
Currently married x woman x Ashkenazi			-0.056	0.1699***	
			(0.0521)	(0.027)	
Currently married x woman x Jewish, parents Israeli-born or from different continents			0.1273**	0.3076***	
			(0.0419)	(0.0217)	
Currently married x woman x Mizrahi			0.0934	0.2206***	
			(0.0649)	(0.0358)	
Currently married x woman x non-Jew			-0.4814***	-0.1034***	
			(0.0458)	(0.0294)	
Previously married x man x Ashkenazi			0.032	0.0844	
			(0.113)	(0.063)	
Previously married x man x Jewish, parents Israeli-born or from different continents			0.3377**	0.2783***	
			(0.1246)	(0.0498)	
Previously married x man x Mizrahi			0.1667	-0.0884	
			(0.1072)	(0.0959)	
Previously married x man x non-Jew			0.0927	-0.1595	
			(0.1486)	(0.0968)	
Previously married x woman x Ashkenazi			0.0531	0.0367	
			(0.0692)	(0.0329)	

Appendix Table 1 (continued). The findings of the multivariate model: the probability of working and the gross hourly pay

	Overall		By origin and sector		By occupation
	Dependent variable: Probability of working[1]	Dependent variable: Log of gross hourly wage	Dependent variable: Probability of working[1]	Dependent variable: Log of gross hourly wage	Dependent variable: Log of gross hourly wage
Previously married x woman x Jewish, parents Israeli-born or from different continents			0.3553***	0.1901***	
			(0.0978)	(0.0466)	
Previously married x woman x Mizrahi			0.1449	0.1506***	
			(0.0792)	(0.0414)	
Previously married x woman x non-Jew			-0.2122**	-0.1610***	
			(0.0793)	(0.0452)	
Currently married x man x *blue collar* employment					0.3609***
					(0.0190)
Currently married x man x *white collar* employment					0.1659***
					(0.0197)
Currently married x woman x *blue collar* employment					0.2364***
					(0.0199)
Currently married x woman x *white collar* employment					0.1449***
					(0.0216)
Previously married x man x *blue collar* employment					0.0798*
					(0.0513)
Previously married x man x *white collar* employment					-0.0292
					(0.0318)
Previously married x woman x *blue collar* employment					0.0956**
					(0.0436)
Previously married x woman x *white collar* employment					0.1193*
					(0.0691)
Origin and sector — reference group: Ashkenazi Jew					
Jewish, parents Israeli-born or from different continents	0.0409	0.0133	-0.033	0.0133	0.0124
	(0.0243)	(0.0125)	(0.0419)	(0.0125)	(0.0125)
Mizrahi	0.1634***	0.0603***	0.0845	0.0603***	0.0606***
	(0.0285)	(0.0152)	(0.0649)	(0.0152)	(0.0152)
Non-Jew	-0.5501***	0.0108	-0.4720***	0.0108	0.0078
	(0.032)	(0.0187)	(0.0494)	(0.0187)	(0.0189)
Intercept	-2.4994***	5.7143***	-2.4673***	5.7250***	5.7937***
	(0.1155)	(0.1091)	(0.1208)	(0.1115)	(0.1120)
Additional variables: age, education, gender, experience, occupation, industry branch, work hours, employment status, origin and sector, geographic locale, religious observance, survey year	Yes	Yes	Yes	Yes	Yes

Appendix Table 1 (continued). The findings of the multivariate model: the probability of working and the gross hourly pay

	Overall		By origin and sector		By occupation
	Dependent variable: Probability of working[1]	Dependent variable: Log of gross hourly wage	Dependent variable: Probability of working[1]	Dependent variable: Log of gross hourly wage	Dependent variable: Log of gross hourly wage
Additional variables: number of children in household under the age of 10, prevailing wage	Yes	No	Yes	No	No
Additional variables: probability of working	No	Yes	No	Yes	Yes
λ	0.0675***		0.0454***		0.0688***
	(0.0069)		(0.0082)		(0.0103)
χ^2	26,292.2		26,033.3		25,182.9
(p-value)	(0.0000)		(0.0000)		(0.0000)
Number of observations	34,401		34,401		34,401
Number of workers	24,867		24,867		24,867

Note: The table presents the findings of the multivariate model regarding the individual's probability of working and gross hourly pay. The two columns on the left show the estimates of the first and second stages in the model that estimates the overall premium. The two columns in the middle present the estimates of the first and second stages in the model in which the premium is estimated separately by ethnicity. The furthest right column displays the estimate by occupation.
Significance level: *p < 0.10; **p < 0.05; ***p < 0.01.
1 Any amount of work for any salary.
Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

Appendix Table 2. The findings of the dual processing model: gross hourly pay

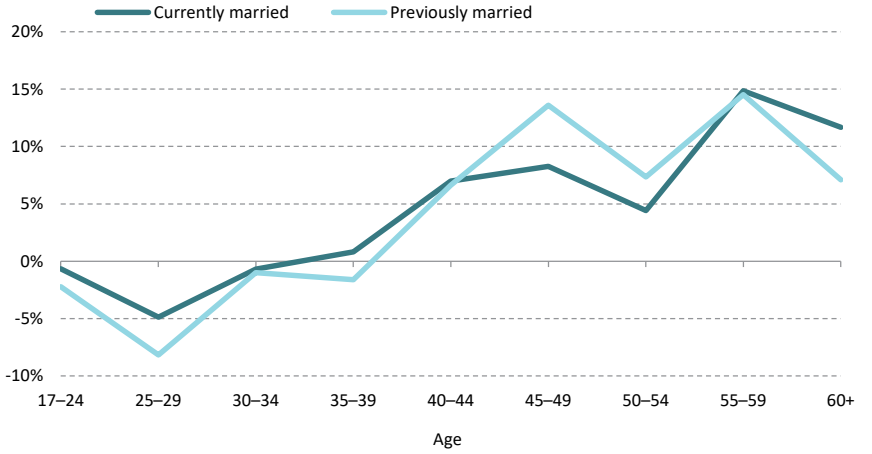
	Dependent variable: Log of gross hourly wage		
	Overall	By origin and sector	By occupation
Married — reference group: Never married			
Currently married x man	0.2063***		
	(0.0148)		
Currently married x woman	0.1155***		
	(0.0127)		
Currently married x man x Ashkenazi		0.2372***	
		(0.0232)	
Currently married x man x Jewish, parents Israeli-born or from different continents		0.3080***	
		(0.0238)	
Currently married x man x Mizrahi		0.2203***	
		(0.0325)	
Currently married x man x non-Jew		-0.0583*	
		(0.0247)	
Currently married x woman x Ashkenazi		0.1230***	
		(0.0199)	
Currently married x woman x Jewish, parents Israeli-born or from different continents		0.1896***	
		(0.0204)	
Currently married x woman x Mizrahi		0.1580***	
		(0.0266)	
Currently married x woman x non-Jew		-0.1160***	
		(0.0264)	
Currently married x man x *blue collar* employment			0.2663***
			(0.0193)
Currently married x man x *white collar* employment			0.1631***
			(0.0185)
Currently married x woman x *blue collar* employment			0.1816***
			(0.0169)
Currently married x woman x *white collar* employment			0.0461**
			(0.0166)
Origin and sector — reference group: Ashkenazi Jew			
Jewish, parents Israeli-born or from different continents	0.0055		
	(0.0124)		
Mizrahi	0.0201		
	(0.0162)		
Non-Jew	0.0212		
	(0.0190)		
Intercept	3.7767***		
	(0.2548)		

Appendix Table 2 (continued). The findings of the dual processing model: gross hourly pay

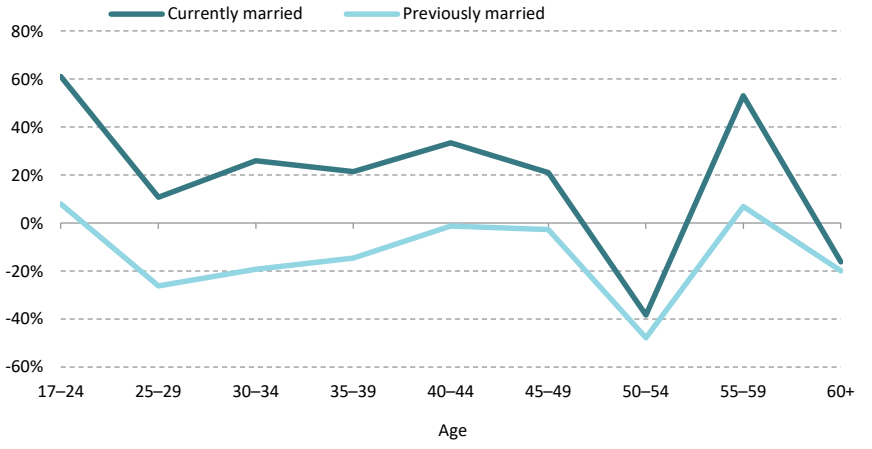
	Dependent variable: Log of gross hourly wage		
	Overall	By origin and sector	By occupation
Additional variables: age, education, gender, experience, occupation, industry branch, work hours, employment status, origin and sector, geographic locale, religious observance, survey year	Yes	Yes	Yes
Additional variables: probability of working, probability of being married	Yes	Yes	Yes
λ employment	-0.0422***	-0.0438***	-0.0338***
	(0.0076)	(0.0067)	(0.0070)
λ marriage	-0.0211***	-0.0219***	-0.0224***
	(0.0023)	(0.0023)	(0.0022)
χ^2	21,496.1	24,511.7	30,351.3
(p-value)	(0.0000)	(0.0000)	(0.0000)
Number of observations	34,401	34,401	34,401
Number of workers	24,867	24,867	24,867

Note: The table presents the findings of the second stage within the framework of a double selection model in line with Wetzels and Zorlu (2003). In the first stage, the probability of the individual working and the probability of the individual being married are estimated using a simultaneous Probit model. The instrumental variables used to predict the probability of being employed are the prevailing wage and the number of children under the age of 10 in the household. The instrumental variable for predicting the probability of being married is the marriage rate of other individuals from the same gender-ethnicity-religiosity group of the individual and in an age range of up to five years older or younger than the individual.
Significance level: *p < 0.10; **p < 0.05; ***p < 0.01.
Source: Michael Debowy, Gil Epstein, and Avi Weiss, Taub Center | Data: CBS

Appendix Figure 1a. Difference in employment rate between currently married and those who have never been married, by age group



Appendix Figure 1b. Gross hourly wage gaps between currently married couples and those who have never been married, by age group



Note: The figures show average differences between married or previously married couples and individuals who have never been married, in different age groups. Appendix Figure 1a shows the percentage difference in employment rates, and Appendix Figure 1b presents the percentage difference in gross hourly wages. It should be noted that among older individuals (age 50+), those who have never been married constitute a very small subsample, therefore the documented gap is based on a few observations regarding unmarried individuals. Apparently, this is the origin of the anomalous gaps observed in these ages.

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