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## Economic Determinants of Divorce among Dual-Earner Couples: Jews in Israel

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# Economic Determinants of Divorce among DualEarner Couples: Jews in Israel 

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#### Abstract

How relevant are the available theoretical perspectives on marriage dissolution for understanding modern family forms? By employing a unique set of longitudinal register-based data for the Jewish population in Israel, this study seeks to find out which of the major theoretical perspectives on economic determinants of divorce best explains the transition to divorce among dual-earner couples. Our findings appear to support theories that assert asymmetry and power relations between the spouses. The women's economic independence hypothesis is not confirmed by our results, which indicate that the wife's earnings do not affect divorce risk. In line with theories of income pooling, higher shared salaries are found to increase marital stability. Nonetheless, our results demonstrate that the basic assumption of symmetry between the spouses in these theories does not hold. Although employment stability for both spouses appears to reduce divorce risk, only the husband's salary is shown to negatively affect the odds of divorce, and only the wife's working hours and sector of employment are found to positively affect marriage instability. Moreover, couples in which the wife earns as much as or more than the husband are found to have the highest divorce risk.


Key words: divorce, dual-earner, dual-career, employment stability, Israeli families, marital dissolution, paid work, register-data, work-family balance.

## Introduction

In an era in which most families in the Western developed world are dual-earner (Blossfeld and Drobnic 2001; Waite and Nielsen 2001; Stier 2010) and the relative shares of economic contributions by men and women to the household income are changing; and in light of the changing foundations of family formation, from household production to household consumption (Cherlin 2000; Stevenson and Wolfers 2007); it is essential to test whether the available theoretical perspectives on marriage dissolution are still relevant in an examination of modern family forms. The current study maps the main theoretical perspectives that seek to explain the economic determinants of divorce, and uses a unique set of register-based data for Jewish dualearner couples in Israel from the late 1990s to clarify the theoretical typology which these perspectives suggest. This paper is an addition to the relatively small number of existing studies on the economic determinants of divorce that have also used registerbased data from different countries (for example, Jalovaara (2001 2003) from Finland; Hansen (2005) from Norway; Kalmijn et al. (2007) from the Netherlands; and Henz and Jonsson (2003) and Dribe and Stanfors (2010) from Sweden). The Jewish population in Israel was chosen because the institutions of marriage and divorce are still relevant for processes of union creation and dissolution among this population (Raz-Yurovich 2010). Moreover, dual-earner families are the most common type of family in this group, and constitute over 60 percent of all families in the study period (Stier 2010).

Dual-earner couples are not a homogeneous group, and different types of dual-earner couples might have different levels of divorce risk. Although Nock (2001) has argued that the marriages of equally dependent spouses (in which each partner generates between $40 \%$ to $59 \%$ of the family earnings) are becoming increasingly
common, Moen and Sweet (2003) have shown that there are variations among dualearner couples in the allocation of the labor market investments of each of the spouses, and also in their quality-of-life levels (i.e., level of satisfaction with the relationship, level of vitality, availability of free-time, etc.). Moreover, Stier and Lewin-Epstein (2000) have found that the part-time or full-time employment of the wife affects various aspects of household arrangements and the degree of gender equality in the household.

Most of the economic, sociological, and psychological theories that seek to explain the relationship between economic activity and marriage dissolution focus mainly on the effect of women's economic activity on divorce. Some of them suggest that wives' economic activity has a destabilizing effect on marriage (Parsons 1940; Manser \& Brown 1980; Becker 1991; Brines 1994; Nock 1995, 2001; Lundberg \& Pollak), while other theoretical perspectives assert that it has a stabilizing effect (Oppenheimer 1977; Cherlin 2000; Moffitt 2000; Rogers 2004). Each of these groups of theories are based on different underlying assumptions regarding the existence of asymmetry or symmetry between the spouses.

Most of these theories focus mainly on wages as the operationalization for economic activity, and fail to consider other economic or employment characteristics which might affect both the salary and the divorce risk of the couples. In this study, we employ data for first marriages among the Jewish population in Israel that were intact at the 1995 census, and for divorces between 1995 and 1998, to analyse how a wide range of economic and employment characteristics of dual-earner couples affect their propensity to divorce.

The crude divorce rate in Israel in 2003 was 1.7 per 1,000 population. By comparison, the corresponding rates were 3.8 in the US, 2.8 in the UK, 2.6 in

Germany, and 2.4 in Sweden; only a few countries had lower rates, such as Poland (1.3), Italy (0.8), and Ireland (0.7) (European Commission 2007). Despite its relatively low overall divorce rate, the Jewish population in Israel has recently experienced an increase in divorce. As divorce rates among younger marriage cohorts are higher than among older cohorts, the cumulative divorce probabilities have increased from $4.8 \%$ after five years of marriage for couples married in 1968-1971, to about $9.3 \%$ for couples married in the mid-1990s (Central Bureau of Statistics 2009).

Compared to other Western developed countries, Israel is also characterized by relatively high fertility rates (TFR of Israeli women was 2.9 in 2004), as well as relatively high labor force participation rates among women in general and mothers in particular, and a high percentage of women who are in full-time employment (Mandel and Semyonov 2006). However, family life and motherhood are strongly emphasized in Israeli culture (Toren 2003), and Israeli women are expected to take on the main responsibilities for the household chores and for raising the children, regardless of their labor market activity (Izraeli 1997; Glickman et al. 2003). Nonetheless, our own calculations using the ISSP 2002 database (ISSP, 2002) show that, although the average Israeli Jewish woman is responsible for $62.6 \%$ of the total time invested in household labor by both spouses, only seven Western developed countries out of the 26 countries that are included in this database have a more egalitarian division than Israel. These unique characteristics of Jewish Israeli society might affect the workfamily conflict experienced by both the husband and the wife in a dual-earner partnership, and may in turn affect the quality of their work lives, their family lives, and their life satisfaction in general (Higgins et al. 1992; Higgins \& Duxbury 1992). Thus, the threshold for divorce among Israeli dual-earner couples may differ from that
of dual-earner couples in other Western developed countries.

## Theoretical Background

Most of the theoretical perspectives on the relationship between economic activity and the transition to divorce concentrate on the role of the wife's, rather than the husband's, employment in promoting marriage dissolution. While some of the hypotheses derived from these perspectives suggest that women's employment has a destabilizing effect on marriage, other hypotheses suggest that it has a stabilizing effect. Each of these theoretical perspectives is closely related to a different measurement of salary. In the following sections, we will present theories which predict that women's economic activity will have either a stabilizing or a destabilizing effect on marriage. Moreover, hypotheses regarding the possible effects of different salary measures will be derived from each group of theories.

## Women's economic activity as a destabilizing factor for marriage

The most widespread theoretical perspectives on the destabilizing effect of wives' economic activity outside the household are based on Becker's (1991) and the New Home Economists' claim that the gain from marriage is highest for both spouses when specialization and pronounced differentiation in gender roles exist within the household. In the context of dual-earner families, Becker's basic assumption of full specialization has to be relaxed to allow for the fact that that the wives in these families make some contribution to the household income. Becker's assertion that "the gain from marriage is reduced, and hence the attractiveness of divorce is raised, by higher earning and labor force participation of married women" (1991:55) has been summarized by the various studies that have investigated this claim as the role
specialization hypothesis (Schoen et al. 2002), the wife's independence hypothesis (Ono 1998; Rogers 2004), the specialization and trading hypothesis (Oppenheimer 1997; Schoen et al. 2002), the interdependence hypothesis (Schoen et al. 2002), the "price" effect (Moffitt 2000), or the division of labor hypothesis (Poortman and Kalmijn 2002). All of these hypotheses suggest that, when wives have higher earnings or income, the propensity of both spouses to divorce increases because the interdependence between them no longer exists-i.e., the wife is no longer dependent on her husband's income-and the husband does not receive the level of household services he would expect under the assumption of full specialization. According to Poortman and Kalmijn (2002), two main arguments are derived from this perception: the independence and the specialization arguments. According to the independence argument, higher earnings for women will make it easier for them to leave a marriage because they are able to support themselves. Poortman and Kalmijn (2002) have suggested that the husband might also feel that it is easier to end the marriage when his wife is able to support herself. According to the specialization argument, the reduced specialization of the spouses will decrease the gains to marriage, because "households goods are more efficiently produced when spouses divide tasks" (Poortman and Kalmijn 2002: 176). Because the basic assumption of Becker's theory is that the husband specializes in the labor market and is the household's main breadwinner, the theory predicts that higher earnings for men would enhance marriage stability.

Studies that have tested these theoretical perspectives in both Europe and the US have produced mixed results (for a review, see Kalmijn et al. 2004 and Oppenheimer 1997). Some studies have found that this theory is only conditionally true, and that the effect of wives' employment or education on divorce changes with
the level of happiness in the marriage relationship (Schoen et al. 2002), the level of women's orientation toward emancipatory values (Kalmijn et al. 2004), the type of union (Brines and Joyner 1999; Kalmijn et al. 2007), and the rate of divorce in the country (Blossfeld et al. 1995). A psychosocial perspective on the destabilizing effect of the wives' labor force participation on marriage is the economic opportunity hypothesis, which proposes that economic independence gives a woman the opportunity to choose to leave an unhappy or abusive marriage (Sayer and Bianchi 2000; Schoen et al. 2002). This hypothesis asserts that the economic independence of women does not destabilize happy marriages, but does allow women to escape unhappy marriages.

The results regarding the positive effect of men's economic status on marriage stability, as derived from Becker's theory, are consistent across studies (for review, see Jalovaara 2003).

Becker's economic model assumes that having a higher household income will increase marital stability, but that there is only one contributor to the family's income, and that this contributor (the husband) is an altruist who makes decisions so that the (single) utility function of the household will be maximized. In their bargaining model, Manser and Brown (1980) and Lundberg and Pollak (1996) criticize Becker's model, and contend that it attributes power in decision making only to the husband. The bargaining model assumes that each of the spouses has a different utility function, and that the spouses try to reach an agreement while maximizing their individual utility functions. If they fail to reach an agreement, divorce might occur. This model assumes that there are power struggles between the spouses, and that control over resources increases each partner's bargaining power. Thus, what matters is not only the total household income or the absolute income controlled by each of the spouses,
but also the fraction of resources controlled by each of them (Pollak 1994). According to this view, a woman's economic independence increases her bargaining power within the household regarding, for example, a more favorable division of household labor. In this dynamic, the risk that the woman will initiate divorce might depend on the level of the husband's participation in domestic chores or his investment in labor market activities (Cooke 2006; De Graaf \& Kalmijn 2006).

Another theoretical perspective on the destabilizing effect of wives' employment is Parsons' status competition theory (Parsons 1940). This theory asserts that, when both spouses are career-oriented, intra-familial stress may occur due to status competition between the spouses, and this might lead to divorce. While Parsons does not argue that women should avoid working, he does appear to suggest that a woman's employment status or salary should not exceed or compete with her husband's status or earnings. According to Oppenheimer (1977), the gender asymmetry which characterizes Parsons' theory stems from his assertion that there is a long-standing norm in society that the husband should be the main provider and status determiner in the family. Therefore, according to this theory, couples in which the wife has a higher career status than her husband (in terms of educational level, employment category, salary, etc.) would be more prone to divorce. As in Becker's theory, the husband's economic standing is supposed to have a stabilizing effect on marriage due to his role as the main breadwinner. A similar perspective can be found in the feminist theories of doing gender (West \& Zimmerman 1987) or gender display (Brines 1994; Goffman, 2007). According to these theories, when traditional perceptions of gender roles exist in a society, a wife who earns more than her husband is not fulfilling her socially accepted gender role, and is therefore more prone to divorce (Blossfeld \& Müller 2002).

Yet another perspective regarding the positive effect of women's economic activity on divorce can be found in Nock's (1995 2001) equal dependency hypothesis. According to this hypothesis, equally dependent spouses, in which each of the partners generates $40 \%$ to $59 \%$ of the family earnings, will have the highest probability of divorce, because the women in these couples have the lowest degree of commitment to marriage. In addition, according to Rogers (2004), the equal dependency hypothesis suggests that both spouses can initiate divorce, because their financial obligations to each other are weakest when their economic contributions are similar. Nonetheless, according to the role collaboration hypothesis (Rogers 2004), the equal dependency of the spouses will make marriage more stable because there is more equality between the partners; this might, however, be dependent on the gender expectations of the spouses and on perceptions of equality in marital relationships.

## Women's economic activity as a stabilizing factor in marriage

Most of the theories regarding the stabilizing effect of women's economic activity on marriage arose from criticism of the role specialization hypothesis of Becker (1991). According to Cherlin (2000) and Stevenson and Wolfers (2007), the specialization model is no longer relevant in the 21st century because the basis of intimate relationships changed during the second half of the 20th century, from specialization and household production to income pooling and household consumption. In line with this criticism, the income effect (Greenstein 1990; Moffitt 2000) or economic partnership (Rogers 2004) perspectives assert that having a higher shared income will allow the spouses to maintain higher standards of living, and also to support one another in times of hardship (e.g., illness, unemployment, educational enrollment, etc.). Moreover, the shared marital assets of the spouses will increase the barriers to
divorce, because these would be reduced if divorce were to occur. Therefore, according to these theories, having a shared income to which both spouses contribute will have a stabilizing effect on marriage.

The status maintenance and status enhancement theory of Oppenheimer (1977) asserts that a woman's employment might help in enhancing her family's position in the social stratification system. According to this theory, both family members and people outside the family evaluate the social standing of the family based on both the husband's and the wife's employment. Therefore, if the wife earns much less than her husband, this would necessarily reduce the social standing of the family. Thus, in contrast to the status competition theory, this theory argues that a woman's economic status enhances rather than destabilizes her marriage.

Unlike Becker's model, these theories assume that both spouses contribute to the family income, and that it does not matter which of the spouses makes this contribution. Thus, these theories do not take into account possible power struggles between the spouses. Instead, they assume that there is symmetry between the partners, with the wife's money being equal to the husband's money.

## Derived hypotheses on the effect of salary measures on divorce

## The sum of spouses' earnings

As was mentioned above, Becker's theory assumes that the total household earnings are composed solely of the earnings of one contributor (the husband). Because in the case of dual-earner couples this assumption has to be relaxed; and because Becker's theory predicts a negative effect of the husband's earnings, but a positive effect of the wife's earnings on divorce; we are not able to predict the direction or the strength of the effect of the total familial earnings when this theory is applied. These two effects
might offset one another, such that, depending on the strength and the direction of the effects of the spouses' salaries, the effect of the sum of earnings can be positive, negative, or equal to zero. The other theories that predict a destabilizing effect of the wife's earnings on marriage (such as the bargaining model, the status competition theory, the gender display theory, and the equal dependency theory) do not refer to the effect of the spouses' total earnings. Thus we cannot hypothesize what the effect of this salary measure would be based on these theories.

All of the theories that predict that a wife's earnings has a stabilizing effect on marriage (the income pooling, income effect, economic partnership, and status maintenance and enhancement theories) assume that the total earnings of the spouses will have a negative effect on divorce.

## The absolute salary of each of the spouses

Regarding the effect of the husband's salary on divorce, it is implied by Becker's theory and by the status competition and gender display theories that the husband's salary has a stabilizing effect on marriage, because the man is expected to be the main breadwinner. Accordingly, lower earnings for husbands are supposed to have a destabilizing effect on marriage.

As for the wife's salary, Becker's theory is the only one among the first group of theories that directly refers to the effect of the wife's absolute earnings, and suggests that the wife's salary has a destabilizing effect on marriage. It is implied by the other theories in this group that the destabilizing effect of the wife's salary on marriage is dependent on the share of her earnings relative to her husband's earnings.

According to the second group of theories, which predict a stabilizing effect of the wife's earnings on marriage, there is full symmetry between the spouses, so
that the absolute earnings of each of the spouses are expected to have a negative effect on divorce.

The share of earnings contributed by the wife
Most of the theories which assert that women's economic activity has a destabilizing effect on marriage base their arguments on comparisons of the share of household income contributed by the wife and by the husband (e.g., the bargaining model, the status competition theory, the gender display theory, and the equal dependency hypothesis). These theories imply that, starting at a certain threshold value (e.g., $40 \%$ in the equal dependency hypothesis and $50 \%$ in the status competition hypothesis), when a higher share of the household income comes from the wife's earnings, the divorce risk increases.

The theories predicting that a wife's earnings will have a stabilizing effect on marriage generally assume that the relative earnings of the spouses do not affect divorce risks, because what matters is the economic standing of the family, regardless of which spouse contributes more to the family's earnings.

Table 1 summarizes the predicted effects of the three salary measures discussed above, for husbands and wives, according to each theoretical perspective.

Table 1. Predicted effects on divorce of salary measures, for husbands and wives, according to different theoretical perspectives.


Note: In the boxes with a diagonal, the sign above the diagonal relates to the expected effect for wives, and the sign below the diagonal relates to the expected effect for husbands.

As was discussed above, all the theoretical perspectives are mainly operationalized based on different salary measures. These theories ignore other economic characteristics of the spouses-such as the number of hours invested in the labor force, employment stability, sector of employment, and occupational typewhich might affect both the transition to divorce and the salary of the spouses (Jalovaara 2001; Poortman \& Kalmijn 2002). Nock (2001), for example, has found that the effect of being equally dependent spouses (i.e., the effect of relative earnings), becomes insignificant after the number of hours invested in the labor force is controlled for. This finding suggests that there might be other economic determinants of divorce apart from salary, and that these economic determinants might affect the relationship between salary and divorce, as predicted by these theories.

Previous studies have found that the intensity of the wife's work has a positive effect on divorce (Poortman and Kalmijn 2002; Spitze and South 1985). Nonetheless, when these studies analyzed the effect of working hours only among working women, Poortman and Kalmijn (2002) reported that the effect remained positive, while Spitze and South (1985) showed that the positive effect disappeared. Regarding employment stability, Jensen and Smith (1990) found that only unemployment of the husband affects marriage dissolution, but most updated previous studies have found that the unemployment of either spouse can increase divorce risks (Jalovaara 2001; Charles and Stephens 2004; Hansen 2005; Nilsson 2008).

According to previous studies (e.g., Castles 2003; Okun et al. 2007), public sector employment provides conditions that are conducive to the combining of paid work and family life for women. Due to the family-friendly working conditions in the public sector relative to the private sector, it may be expected that public sector employment will reduce the risk of divorce among dual-earner couples.

## Data and Sample

This research is based on a unique longitudinal database, created by Statistics Israel, which links a 20-percent sample of the Israeli 1995 census, annual register data from the National Insurance Institute of Israel (NIII) for the years 1983-1995, and the registration of divorces from the Ministry of Religious Services and from the formal population registry of Israel for the years 1985-2007. Because our unit of analysis is the couple rather than the individual, and since we can only identify couples using census data, our analytic sample includes only couples who were still together at the time of the census (November 1995). Among these couples, we selected only those who married for the first time in the years 1990-1995, up to age 45 ; and we used the
registrations of divorce to analyze the transition to first divorce within three years; i.e., between November 1995 and December 1998. The census data provide information on marital status in 1995, and the exact year of the first and last marriages. In addition, the data contain information on the current (highest) educational levels and certificates, and a list of variables which describe the employment characteristics of the respondent in 1995. The registered data from the NIII contain high quality data on annual salary and months of employment. Salary measures, which are based on register data, are much more reliable than salary measures, which are based on the self-reports of respondents, especially if these are based on retrospective life histories. The information from the NIII is based on Israel's tax authority reports on salaried employees. Thus, salary and employment data from the NIII for a particular year or month are not available for people who were not salaried employees or did not participate in the civilian labor force during this time. This means that, for couples in which one of the spouses does not have reports on salary for the whole marriage duration, we cannot know whether this spouse was unemployed, self-employed, or serving in the army. Therefore, our analysis is restricted to couples in which both spouses worked as salaried employees for at least $20 \%$ of the marriage duration, but we cannot identify single-earner couples in which one spouse was not working at all as a salaried employee. Although the NIII's data are longitudinal, we cannot conduct a longitudinal analysis. We can, however, use this data to average the spouses' economic characteristics over the duration of the marriage (i.e., since the time of marriage and until 1995). This computation is less sensitive to year-to-year fluctuations in salary, and is therefore a better indicator than a measure that is based on one point in time. Moreover, averaging the couples' characteristics for the whole marriage duration gives a partial solution to the
possibility of reverse causality, according to which individuals might increase economic activity prior to divorce in anticipation of the dissolution of the marriage. Overall, for $70 \%$ of the couples, we have full information on the salary for the whole marriage duration, and for the remaining $30 \%$, we average the salary based on salary reports for the available years. Therefore, our results can be generalized for salaried employees, who are the great majority of working men and women in Israel (in 1995, for example, $84 \%$ of Jewish employed men and $90 \%$ of Jewish employed women were salaried employees (Central Bureau of Statistics 1996)). Our sample might be subjected to a selection bias due to the exclusion of those couples in which at least one spouse was not working as a salaried employee over the whole marriage period.

Overall, there are 13,041 married couples in the sample, 403 (3\%) of whom had divorced by the year 1998. This analysis does not refer to separation and does not include cohabitors, because in Israel cohabitation is mostly a precursor to-and not a substitute for-marriage; and this living arrangement is found mostly among a relatively small group of young, secular Jews (only 3.7\% of all couples lived in cohabitation in 2003), and usually last for only a short period of time (BlushKlienman and Sherlin, 1999; Fogel 2005).

The sample is restricted to first marriages because it was found that remarriages are not as affected by economic dependence as first marriages (Heckert et al. 1998). In addition, as in previous studies, this study is not able to distinguish between the positive effect of the economic activity of women on divorce that is due to growing economic independence of the wife, and the positive effect that is due to the increase in economic activity in anticipation of divorce. However, as was mentioned above, because this study does not merely look at levels of economic
activity immediately before divorce, but instead summarizes economic activity over a period of about five years prior to divorce, this problem of causality is reduced.

Logistics regression is used to estimate the transition to the first divorce within three years.

## Variables

The dependent variable is the log-odds of a first divorce in the years 1995-1998; i.e., the log odds of divorce between November 1995 and December 1998. It is coded one if the first divorce occurred in those years, and zero otherwise.

## Salary and employment measurements

This study employs a variety of salary and employment characteristics of the spouses in analyzing the economic determinants of divorce:

The log of the average monthly salary. The logs of the wife's and husband's average monthly salaries are computed separately by taking the log of the sum of the employed annual real salary of each over the course of the marriage (until the year 1995), divided by the number of months in which they were working as salaried employees over the course of the marriage. This computation is less sensitive to erratic year-to-year fluctuations in months employed due to, for example, unemployment, temporary illness, student status, etc. As will be shown below, employment stability is captured by the variable of the percentage of employed months during marriage. The annual real salary (in 1,000 Israeli shekels) is computed from nominal salaries with the consumer price index of the year 2006.

Log of total household salary. The log of the sum of the average monthly salary of the spouses over the course of marriage.

Share of the wife's salary. This measure of relative earnings is constructed by computing the ratio between the wife's average monthly salary and the sum of the spouses' average monthly salaries over the course of marriage. Four dummy variables describe this ratio: the wife's share is less than $25 \%$, the wife's share is $25 \%-50 \%$, the wife's share is $50 \%-75 \%$ (the reference category), and the wife's share is $75 \%-100 \%$.

Number of work hours per week. Information regarding the number of hours each of the spouses invested in the labor market is available only from the census; therefore, this continuous variable describes the spouses' investment only in the year 1995.

Public vs. private sector. Information regarding the sector of employment was derived from the occupational status of the respondent in the 1995 census; therefore, this variable describes the spouses' employment sector only in the year 1995.

Employment stability. In order to measure employment stability, the percentage of employed months out of all marriage months is computed.

## Educational measures

Highest educational degree of the wife. This variable is measured by five dummy variables, one for each degree: less than secondary, secondary education without a matriculation certificate, secondary education with a matriculation certificate (reference category), a post-secondary certificate, and an academic degree (BA, MA or PhD ). For $1 \%$ of the women, the educational level is defined as "other." This category is also included as a dummy.

Educational homogamy. Three groups of couples are represented by dummy variables: the wife's education is lower than the husband's (reference category), the wife's and husband's educational levels are equal, and the wife's education is higher
than the husband's. If at least one of the spouses has an "other" educational degree, the degree of educational homogamy is defined as "unknown."

## Other Control variables

In this study we control for other independent variables, which were shown in the literature to be related to divorce. These variables include home ownership (Ono 1998; South and Spitze 1986), the number of children aged 0-5 (Becker et al. 1977; Lillard and Waite 1993; Andersson 1997), religiosity (Peres and Katz 1991), ethnic origin and generation in the country (Peres \& Katz 1991; Kraus 2002; Dovrin 2005), age difference of nine years or more between the spouses (Kalmijn et al. 2007), and marriage duration as of 1995. The age at marriage is included with both its linear and quadratic forms for each spouse. Moreover, as described above, the highest educational degree achieved by the wife (Martin \& Bumpass 1989; Härkönen \& Dronkers 2006) is included in the analysis, as are a set of dummy variables describing the educational homogamy of the spouses (Tzeng 1992; Jalovaara 2003). A full description of the control variables is available from the author upon request. The descriptive statistics of the control variables appear in Appendix A. Results for these variables can be found in Appendix B.

## Method

Six logistic regression models are performed in order to analyze the economic determinants of divorce, Models 1-6. First, in order to examine the overall effect of economic activity, which is also due to educational characteristics, we will include all the control variables in the analysis, apart from the educational variables. Later, in
order to take into account the effect of education, we will also include the educational characteristics of the spouses in the analysis.

Each of the first three models includes a different salary measure of the couples, without controlling for their other employment characteristics. The first model includes the sum of the couples' earnings. the second includes the average monthly earnings of each of the couples, and the third includes the share of the wife's earnings with the sum of the couples' earnings. Models 4-6 add to the salary variables in Models 1-3 the other employment characteristics of the spouses: sector of employment, number of hours invested in the labor force, and employment stability. Given that the salary might have a strong relationship with the other employment characteristics of the spouses, these models allow us to examine the effect of the salary with and without controlling for the other characteristics.

## Results

Table 2 presents the means or percentages, and the standard deviations of the economic variables in this analysis. Means and standard deviations of the educational variables are presented in Appendix A.

The odds ratios of the effects of the economic characteristics of the spouses on the risk of divorce, not controlling for the educational variable but including all the other control variables, are presented in Table 3. In line with the theories that assert that the wife's employment has a stabilizing effect on marriage, Model 1 shows a negative effect of the spouses' joint earnings on divorce. Nonetheless, contrary to these theories, Model 2 shows that, because the effect of the spouses' contribution to the family's earnings is not symmetric among dual-earner couples, the effect of the husband's salary on divorce is negative and significant, while the effect of the wife's salary on divorce is negative but not significant.

Table 2. Means and Standard Deviations of the Economic Variables ( $N=13,041$ )

| Variable | Mean / Percentage | SD |
| :--- | :---: | :---: |
| Log of the sum of couple's salary | 27.645 | .492 |
| Log of wife's salary | 15.013 | .725 |
| Log of husband's salary | 15.632 | .686 |
| Wife's share in household income |  | .230 |
| Less than 25\% | .597 | .421 |
| $25 \%-50 \%$ | .154 | .390 |
| $50 \%-75 \%$ | .018 | .133 |
| $75 \%-100 \%$ |  | .500 |
| Sector of Employment - Wife | .486 | .472 |
| Private | .335 | .383 |
| Public | .178 | .474 |
| Unknown |  | .410 |
| Sector of Employment - Husband | .660 | .332 |
| Private | .213 |  |
| Public | .126 | 12.899 |
| Unknown |  | 14.468 |
| Labor Market Investment (per week) | 34.749 |  |
| Number of hours wife works | 47.678 | 24.416 |
| Number of hours husband works |  | 20.248 |
| Employment Stability | 75.102 | 86.055 |
| $\%$ of marriage months wife worked |  |  |
| $\%$ of marriage months husband worked |  |  |

Note: For binary variables the mean represents the percentage of individuals receiving the value one

These results also suggest that, contrary to Becker's theory, an increase in a wife's earnings do not increase the risk of divorce. Model 3 presents the results for the effect of the relative salary of the spouses (i.e., the effect of the wife's share in the household income), also controlling for the total earnings of the spouses. The results suggest that, in line with the status competition, gender display, bargaining model, and equal dependency theories, couples in which the wife contributes less than half of the family's income have lower odds of divorce than couples in which the wife earns as much as or more than her husband, and contributes $50 \%$ to $75 \%$ of the family's income. The effect for the highest share group ( $75 \%-100 \%$ ) is negative but not significant compared to the share group of $50 \%-75 \%$.

Models 4 to 6 add to Models 1 to 3 other employment characteristics of the spouses: sector of employment, labor market investment, and employment stability.

The effects of the different salary measures do not change in these models following the inclusion of the other economic characteristics, apart from the effect of the highest share category in the wife's share of household income, which becomes more negative and significant. This negative effect on divorce might be due to the very small size of this group or because this group is different from the other groups in the

Table 3. Logistic Regression for the Effect of Economic Characteristics on Divorce, Not Controlling for the Educational Levels of the Spouses.

|  | $\begin{gathered} \text { Model } \\ 1 \end{gathered}$ | Model <br> 2 | $\begin{gathered} \text { Model } \\ 3 \end{gathered}$ | Model $4$ | Model 5 | $\begin{gathered} \hline \text { Model } \\ 6 \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Variable | $\exp (b)$ | $\exp (b)$ | $\exp (b)$ | $\exp (b)$ | $\exp (b)$ | $\exp (b)$ |
| Salary |  |  |  |  |  |  |
| Log of the sum of couple's salary | .676*** |  | .675*** | .724** |  | .724** |
| Log of wife's salary |  | . 962 |  |  | . 998 |  |
| Log of husband's salary |  | .818*** |  |  | .851* |  |
| Wife's share in household income |  |  |  |  |  |  |
| Less than 25\% |  |  | .715* |  |  | .680* |
| 25\%-50\% |  |  | .688** |  |  | .679** |
| 50\%-75\% | - | - | - | - | - | - |
| 75\%-100\% |  |  | . 422 |  |  | .391* |
| Sector of Employment - Wife |  |  |  |  |  |  |
| Private |  |  |  | - | - |  |
| Public |  |  |  | .768* | .769* | .757* |
| Sector of Employment - Husband |  |  |  |  |  |  |
| Private |  |  |  | - |  |  |
| Public |  |  |  | 1.121 | 1.117 | 1.126 |
| Labor Market Investment (per week) |  |  |  |  |  |  |
| Number of hours wife works |  |  |  | 1.018*** | 1.016*** | 1.016*** |
| Number of hours husband works |  |  |  | 1.007 | 1.006 | 1.007 |
| Employment Stability |  |  |  |  |  |  |
| \% of marriage months wife worked |  |  |  | . $992^{* * *}$ | . 991 *** | . 991 *** |
| \% of marriage months husband worked |  |  |  | . 993 ** | .993** | .995* |
|  |  |  |  |  |  |  |
| Constant | 16.730 | 10.211 | 11.068 | 13.251 | 7.403 | 13.642 |
| -2Loglikelihood | 3457.7 | 3461.5 | 3406.0 | 3406.1 | 3408.7 | 3395.8 |
| $d f$ | 28 | 29 | 41 | 38 | 39 | 41 |
| Number of Couples | 13,041 | 13,041 | 13,041 | 13,041 | 13,041 | 13,041 |
| Number of Divorces | 403 | 403 | 403 | 403 | 403 | 403 |

Note: All the control variables are included in this model, including dummies for cases that do not have information on working hours and sector in the 1995 census (not presented).
$* \mathrm{p}<.05, * * \mathrm{p}<.01, * * * \mathrm{p}<.001$
characteristics of the husband. It may be that the husbands in this group are mostly students, temporarily unemployed, or temporarily disabled due to illness. A comparison of the percentage of people who are enrolled in education in each of the relative salary groups showed that this group, in which the wife contributes most of the family income, has the highest percentage of husbands who are enrolled in education ( $33 \%$; compared to $11 \%, 14 \%$, and $21 \%$ in the $0-25,25-50$, and $50-75$ groups, respectively). The characteristics of the highest relative earnings group of $75 \%-100 \%$ may be in line with Heckert's et al. (1998) findings, which showed that, in reverse traditional couples, the husbands are economically vulnerable, and the percentage of disabled or physically or mentally injured men in this group is higher than among the other couples.

In all three of the models, the employment of the wife in the public sector significantly reduces divorce risks. The husband's sector of employment is not found to affect divorce risks. Regarding labor market investment, the findings indicate that each additional hour the wife invests in the labor market increases the odds of divorce by $1.6 \%-1.8 \%$. The effect of the husband's labor market investment does not significantly affect divorce risk. The positive effect on divorce found for the wife's labor market investment, controlling for her salary, can also be interpreted as the effect of the amount of time she is absent from home on divorce (Greenstein 1990).

Regarding the employment stability of the spouses, Models 4 to 6 suggest that the employment stability of both the wife and the husband significantly decreases divorce risk ${ }^{1}$.

[^0]Table 4 presents the same models as Table 3, this time controlling for the educational levels of the spouses. The results for the educational measures are also presented. After controlling for education, the effects of the different salary measures in Models 1-3 resemble those in Table 3. The results for education across all models suggest that the higher the level of education of the wife, the lower the couple's divorce risks, controlling for economic characteristics ${ }^{2}$. Nonetheless, in line with the status competition theory, couples in which the wife's educational level exceeds the husband's educational level are more prone to divorce than couples in which the educational level of the wife is lower than her husband's.

In Models 4-6, when we control both for education and for the other employment characteristics of the spouses, the significant negative effect of the sum of couple's salary on divorce becomes insignificant, and does the negative effect of the husband's salary in Model 5. Moreover, in Model 6, the effect of the highest wife's share category becomes insignificant, as does the effect of public sector employment of the wife in Models 4-6. This means that, in Models 4-6, these effects remain negative-as they do in Table 3, where we do not control for the educational level of the spouses-but they become insignificant. This suggests that part of the effect of the salary may be an effect of education, which relates to social, cultural, cognitive and communication skills; as well as values and perceptions (Härkönen \& Dronkers 2006).

[^1]Table 4. Logistic Regression for the Effect of Economic Characteristics on Divorce, Controlling for Educational Level of the Spouses.

|  | Model 1 | Model 2 | Model 3 | Model <br> 4 | Model 5 | Model 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Variable | $\exp (b)$ | $\exp (b)$ | $\exp (b)$ | $\exp (b)$ | $\exp (b)$ | $\exp (b)$ |
| Salary |  |  |  |  |  |  |
| Log of the sum of couple's salary | .752** |  | .761* | . 815 |  | . 828 |
| Log of wife's salary |  | 1.007 |  |  | 1.057 |  |
| Log of husband's salary |  | .845** |  |  | . 879 |  |
| Wife's share in household income |  |  |  |  |  |  |
| Less than $25 \%$ |  |  | .691* |  |  | .651* |
| 25\%-50\% |  |  | .654** |  |  | .644** |
| 50\%-75\% | - | - | - | - | - | - |
| 75\%-100\% |  |  | . 470 |  |  | . 435 |
| Wife's educational level |  |  |  |  |  |  |
| Less than secondary | 1.929** | 2.002** | 1.933** | 1.835** | 1.889** | 1.836** |
| Secondary without matriculation certificate | 1.358* | 1.382* | 1.377* | 1.313* | 1.332* | 1.326* |
| Secondary with matriculation examination | - | - | - | - | - | - |
| Post-secondary certificate | .614** | .605** | . 606 ** | .638* | .629* | .629* |
| Academic degree | . $564 * * *$ | . 556 *** | . 558 *** | .585** | . $572 * * *$ | .575*** |
| Educational Homogamy |  |  |  |  |  |  |
| Wife's education lower than husband's | - | - | - | - | - | - |
| Wife's education equal to husband's | 1.227 | 1.234 | 1.224 | 1.203 | 1.206 | 1.201 |
| Wife's education higher than husband's | 1.697*** | 1.713*** | 1.671*** | 1.664*** | 1.677*** | 1.641** |
| Sector of Employment - Wife |  |  |  |  |  |  |
| Private |  |  |  | - | - | - |
| Public |  |  |  | . 850 | . 855 | . 843 |
| Sector of Employment - Husband |  |  |  |  |  |  |
| Private |  |  |  | - |  |  |
| Public |  |  |  | 1.151 | 1.151 | 1.156 |
| Labor Market Investment (per week) |  |  |  |  |  |  |
| Number of hours wife works |  |  |  | 1.017*** | 1.015** | 1.015*** |
| Number of hours husband works |  |  |  | 1.005 | 1.005 | 1.006 |
| Employment Stability |  |  |  |  |  |  |
| \% of marriage months wife worked |  |  |  | .991*** | . 990 *** | . 990 *** |
| \% of marriage months husband worked |  |  |  | .993** | . $993 * *$ | .995* |
|  |  |  |  |  |  |  |
| Constant | 10.924 | 5.917 | 11.080 | 7.598 | 3.399 | 7.563 |
| -2Loglikelihood | 3417.4 | 3418.0 | 3406.7 | 3373.0 | 3372.7 | 3361.9 |
| Df | 35 | 36 | 38 | 45 | 46 | 48 |
| Number of Couples | 13,041 | 13,041 | 13,041 | 13,041 | 13,041 | 13,041 |
| Number of Divorces | 403 | 403 | 403 | 403 | 403 | 403 |

Note: All the control variables and the educational level variables are included in this model, including dummies for cases that do not have information on working hours and sector in the 1995 census (not presented).

$$
* \mathrm{p}<.05, \quad * * \mathrm{p}<.01, \quad * * * \mathrm{p}<.001
$$

## Discussion

The increase in dual-earner families in most Western developed countries, and the parallel decline in single-earner families, in which the husband is the sole breadwinner, raise questions concerning the economic determinants of divorce among families in which the wife participates in the labor force to different degrees. The analysis of dual-earner couples challenges some of the traditional theoretical perspectives, which were molded in the male breadwinner form. In this paper, we investigate the validity of two main groups of theories: one which asserts that women's work has a destabilizing effect on marriage, and assumes asymmetry between the spouses; and another which claims that women's employment has a stabilizing effect, and assumes that relations between the spouses are symmetric. Most of these theoretical perspectives tend to operationalize economic standing by the earnings of the spouses, and neglect to consider the possible effect of other economic characteristics of the spouses, such as the number of hours invested in the labor force or employment stability, which might be relevant to the work-family conflict and affect the spouses' propensity to divorce. The inclusion of other employment characteristics of the spouses in this study does not affect the explanatory power of the different salary measures, but it contributes to the understanding of the complicated work-family conflict among dual-earner couples.

Overall, the results of our examination of dual-earner couples in Israel do not appear to support theories that assert the presence of symmetry between the spouses. Our results fail to confirm the women's economic independence hypothesis of Becker, as higher earnings for the wife are not found to increase marriage dissolution risk. In addition, in line with the theories emphasizing income pooling or economic partnership, we found that, among dual-earner couples, the higher the shared salaries
of the spouses, the lower the risk of divorce. Nonetheless, the results demonstrate that the basic assumption of symmetry between the spouses in the theories of income pooling does not hold, and that the wife's earnings do not equal her husband's earnings. This is apparent in the non-significant effect of the salary of the wife, in comparison to the negative and significant effect of the husband's salary on divorce. Moreover, the results for the effect of the wife's share in the family's earnings also demonstrate that there is an asymmetry in the household, because couples in which the wife earns as much as or more than her husband were found to have higher divorce risks than couples in which the husband is the main breadwinner and the wife is a secondary breadwinner. These findings regarding the relative salary are in line with the status competition and gender display theories, which claim that couples in which the wife has higher economic status than her husband will be more vulnerable to divorce, due to the competition that these status differences evoke. Regarding the effect of the educational homogamy of the spouses, our results show that couples in which the wife has a higher educational level than her husband have the highest divorce risk, thus providing further support for the status competition theory.

Our results for the effect of the wife's relative share in earnings also tend to support the equal dependency theory, and could suggest that dual-earner couples who contribute nearly the same percentage of the household income might have the lowest degree of commitment to each other, and therefore experience the highest divorce risks. These findings regarding relative salaries are also in line with the bargaining models, which claim that the fraction of resources controlled by the wife reflect the bargaining power she has, and might increase the divorce threat-point; i.e., the utility she will receive in the event of divorce (Pollak, 1994).

The degree of asymmetry between the partners is also apparent in the significantly positive effect that wives' labor force investments have on divorce, compared to the non-significant effect of the husbands' investments; and also in the significant negative effect of public sector employment of the wife, but not of the husband (in the models which do not control for education).

Regarding the effect of the husband's economic characteristics on divorce, our results tend to support the basic, underlying assumption found in all of the theories discussed: i.e., that the husband's earnings have a stabilizing effect on marriage. The negative and significant effect of the husband's employment stability on divorce further suggests that employment instability or unemployment of the husband increases divorce risks, as was found in previous literature (Jalovaara 2003; Charles \& Stephens 2004). These findings might point to the unchanging role of husbands as the main breadwinners, even among dual-earner families.

It appears that there is a dualism among dual-earner couples. On the one hand, the stable employment of both partners and high shared earnings increase marriage stability, and therefore reduce divorce risk. On the other hand, if the wife earns the same as or more than her husband, the risk of divorce increases. A similar effect is found if the wife invests many hours in the labor market, and is therefore absent from home more often. This dualism is most probably affected by the need to combine work and family life among dual-earner couples, in an era in which dual incomes are both a necessity and means of increasing the family's standards of living. That is why demanding jobs, such as those in the private sector, which require the investment of many working hours and absenteeism from the second shift, increase the work-family conflict, and thus the marital instability. In a country such as Israel, where the family is very central in individuals' lives, and where women are expected to take on the
main responsibilities for the household chores and for raising the children, regardless of their level of labor market activity (Izraeli 1997; Glickman et al. 2003), this dualism might be stronger than in other countries.

The findings of this study are in line with studies which have found that gender inequality is apparent not only at the societal level or in the labor market, but also within households (Stier and Lewin-Epstein 2000 ; Aharon 2006; Stier and Mandel 2009). This study on divorce among dual-earner couples demonstrates that, after relaxing the assumption of full specialization, certain degrees of specialization still remain among couples, which might affect the economic characteristics of the spouses and maintain women's dual role as both the secondary breadwinner and the primary homemaker.

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## Appendix A

Means and Standard Deviations of the control Variables ( $N=13,041$ )

| Variable | Mean / Percentage | SD |
| :---: | :---: | :---: |
| Duration 0 years | . 119 | . 323 |
| Duration 1 years | . 156 | . 363 |
| Duration 2 years | . 175 | . 379 |
| Duration 3 years | . 188 | . 391 |
| Duration 4 years | . 183 | . 387 |
| Duration 5 years | . 179 | . 383 |
| Home ownership (vs. no) | . 607 | . 488 |
| Number of Children aged 0-5 |  |  |
| 0 | . 355 | . 478 |
| 1 | . 431 | . 495 |
| 2 | . 192 | . 394 |
| 3 or more | . 022 | . 146 |
| Very religious (vs. not) | . 031 | . 173 |
| Age difference is nine or more years | . 049 | . 215 |
| Husband's age at marriage | 27.291 | 3.88 |
| Wife's age at marriage | 24.565 | 3.503 |
| Wife's education |  |  |
| Less than secondary | . 043 | . 202 |
| Secondary without matriculation certificate | . 246 | . 431 |
| Secondary with matriculation certificate | . 266 | . 442 |
| Post-secondary certificate | . 156 | . 363 |
| Academic degree | . 280 | . 449 |
| Other | . 009 | . 097 |
| Educational Homogamy |  |  |
| Wife's education lower than husband's | . 204 | . 403 |
| Wife's education equal to husband's | . 425 | . 494 |
| Wife's education higher than husband's | . 353 | . 478 |
| Unknown | . 018 | . 131 |
| Ethnic Origin and Generation in the Country - Wife |  |  |
| Former Soviet Union immigrants who immigrated starting 1990 | . 051 | . 221 |
| First-generation Western Jews | . 075 | . 264 |
| Second-generation Western Jews | . 105 | . 306 |
| First-generation Oriental Jews | . 034 | . 181 |
| Second-generation Oriental Jews | . 383 | . 486 |
| Mixed ethnicity | . 046 | . 210 |
| Third-generation Israelis | . 306 | . 461 |
| Ethnic Origin and Generation in the Country - Husband |  |  |
| Former Soviet Union immigrants who immigrated starting 1990 | . 039 | . 193 |
| First-generation Western Jews | . 083 | . 276 |
| Second-generation Western Jews | . 125 | . 331 |
| First-generation Oriental Jews | . 055 | . 228 |
| Second-generation Oriental Jews | . 400 | . 490 |
| Mixed ethnicity | . 039 | . 193 |
| Third-generation Israelis | . 258 | . 438 |

## Appendix B

Baseline Logistic Regression Model of Divorce within 3 Years.

| Variable | $b$ | $p$ | $\exp (b)$ |
| :---: | :---: | :---: | :---: |
| Duration Dependence |  |  |  |
| Duration 0 years | -. 422 | . 068 | . 655 |
| Duration 1 years | -. 209 | . 300 | . 811 |
| Duration 2 years | -. 287 | . 136 | . 751 |
| Duration 3 years | -. 067 | 708 | . 936 |
| Duration 4 years | -. 229 | 215 | . 795 |
| Duration 5 years | - | - | - |
| Home ownership (vs. no) | -. 424 | . 000 | . 655 |
| Number of Children aged 0-5 |  |  |  |
| 0 | - | - | - |
| 1 | -. 390 | . 003 | . 677 |
| 2 | -. 946 | . 000 | . 388 |
| 3 or more | -. 972 | 042 | . 378 |
| Very religious (vs. not) | -. 663 | . 090 | . 515 |
| Age difference is 9 or more years | . 479 | . 060 | 1.615 |
| Husband's age at marriage | -. 299 | . 013 | 742 |
| (Husband's age at marriage) ${ }^{2}$ | . 005 | . 018 | 1.005 |
| Wife's age at marriage | -. 340 | . 008 | . 712 |
| (Wife's age at marriage) ${ }^{2}$ | . 005 | . 026 | 1.005 |
| Wife's ethnic origin |  |  |  |
| Former Soviet Union immigrants who immigrated starting 1990 | - | - |  |
| First-generation Western Jews | -. 666 | . 029 | . 514 |
| Second-generation Western Jews | -1.214 | . 000 | . 297 |
| First generation Eastern Jews | -. 808 | . 051 | . 446 |
| Second-generation Eastern Jews | -. 827 | . 003 | . 437 |
| Mixed ethnicity | -. 943 | . 008 | . 389 |
| Third-generation Israelis | -. 951 | . 001 | . 386 |
| Husband's ethnic origin |  |  |  |
| Former Soviet Union immigrants who immigrated starting 1990 | - | - | - |
| First-generation Western Jews | -. 060 | . 856 | . 942 |
| Second-generation Western Jews | . 444 | 191 | 1.559 |
| First-generation Eastern Jews | . 007 | . 986 | 1.007 |
| Second-generation Eastern Jews | . 351 | 279 | 1.420 |
| Mixed ethnicity | . 749 | . 049 | 2.115 |
| Third generation Israelis | . 394 | 229 | 1.483 |
| Constant | 7.246 | . 000 | 1402.6 |
| -2Loglikelihood |  | 3472.0 |  |
| df |  | 27 |  |
| Number of Couples |  | 13,041 |  |
| Number of Divorces |  | 403 |  |

Note: The effects of the control variables do not change following the inclusion of the economic variables. "Other" categories of educational level are controlled for but not presented, as is an "unknown" category of educational homogamy.


[^0]:    ${ }^{1}$ A tolerance test, to check for possible multi-collinearity between all the economic explanatory variables, showed that there is no apparent problem with multi-collinearity.

[^1]:    ${ }^{2}$ The negative effect of the wife's educational level on divorce, controlling for her economic characteristics, are in line with Becker's et al. (1977) assertion that highly educated individuals will have higher gains from marriage, and therefore lower gains from divorce (ibid., 1146). Moreover, these results are in line with Oppenheimer's search theory (1988), according to which highly educated individuals will search longer for the right spouse, which will lead to a better marital match. For more possible theoretical explanations as for the negative educational gradient of divorce, see Härkönen \& Dronkers (2006).

