

The Determinants of Women's Employment Dynamics: The Case of Israeli Women

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The dynamic of Israeli women's labour market experiences is analysed, with the focus on three main determinants of their attachment to the labour market: (i) family events, particularly the effect and timing of childbirth on women's market involvement, (ii) human capital, and (iii) structural determinants, including occupation, and sector of employment. Utilizing data from the 2001 mobility study in Israel, which is a retrospective longitudinal survey, we employed event history techniques to examine women's likelihood to leave and re-enter the labour market. As expected, childbirth proved to increase the likelihood of work withdrawal, and human capital reinforced women's attachment to paid employment. Structural characteristics of the labour market, especially employment in the public sector, provided women with the necessary conditions to maintain continuous employment, even when family responsibilities were high, and to resume working sooner than women employed in a less supportive environment. Implications are discussed, and several avenues for further research suggested.

Introduction

Women's economic activity has increased dramatically since WWII in all industrialized societies (cf. Kraus, 2002; Van der Lippe and van Dijk, 2002; Yaish and Kraus, 2003). A dramatic increase in women's labour force participation has also occurred among mothers with young children (Hofferth and Curtin, 2006). Despite this trend, working women continue to assume the primary responsibility for familial tasks (e.g. childcare), and most scholarship on women's labour force participation shows that with the birth of a child, many women still drop out of the labour market, while some return to employment at a later stage (Felmlee, 1984; Wenk and Garrett, 1992; Uunk *et al.*, 2005). The detrimental effect of children on their mothers' work career varies across countries and is related, as several studies show, to the existence of policies that encourage and support mothers'

involvement in paid employment (Gornick *et al.*, 1998; Blossfeld and Drobnic, 2001; Stier *et al.*, 2001; Gornick and Meyers, 2003). Nonetheless, even in countries that have achieved greater compatibility between work and family (e.g. the Scandinavian countries) women assume the major responsibility for their families, so the pattern of employment along their life course is affected by family demands (Blossfeld and Drobnic, 2001; Stier *et al.*, 2001). In fact, it is often argued that combining employment and family responsibility is one of the principal determinants of women's inferior position in the labour market (cf. Reskin and Padavic, 1994; Drobnic *et al.*, 1999). The main objective of this study is to explore how familial responsibilities affect women's attachment to the labour market in Israel.

The standard explanation for women's attachment to the labour force emphasizes two related sources: low level of human capital and low commitment to the

labour market (cf. Becker, 1964/1975). The former might be the result of socialization processes that channel women to specific skills and occupations (Marini and Brinton, 1984); it could also result from discrimination practices against girls' education in their family of origin (cf. Shavit and Blossfeld, 1996). The latter is affected by marital status, motherhood, and other familial responsibilities, which on the one hand constrain women's involvement in the labour force and lower their economic aspirations, and on the other hand may result in an inclination to discriminate against women in the labour market.

Although this approach is attractive, largely due to its very simplistic and plausible explanation, it has drawn a good deal of criticism. First, students of labour market processes consistently show that even when differences in human resources between men and women are held constant, and after compositional differences between the genders are controlled for, ample differences between men's and women's measurable returns to labour force participation remain unexplained (cf. Kraus, 2002; Yaish and Kraus, 2003). Secondly, and perhaps more importantly, this approach rests on the assumption that the labour market is made of one homogeneous entity, and that the same 'rule of the market' applies across it. That is, contextual aspects of women's employment are simply not relevant, hence not expected to play a part in shaping women's employment choices or to affect their employment returns.

Against this background, institutional economics (Piore, 1975) emphasizes the economic structure as a significant determinant of social inequalities. A common view held by proponents of this approach argues that remuneration from employment, for example, is tied to jobs rather than to individuals (cf. Williamson *et al.*, 1975). According to this view, women's position in the economic structure has consequences for their labour market attachment. Buchmann *et al.* (2004), in a recent study of the German-speaking part of Switzerland, showed the significant importance of work context for women's labour force attachment. These authors found that women employed in jobs carrying high authority or status were less likely to exit the labour force than their less fortunate counterparts, and when they did exit the labour force they returned much sooner than the latter. Furthermore, employment in the public sector or in medium-size firms (50–99 employees) benefited women who wished to return to employment after a period of interruption.

In the structural approach, some emphasis had been placed on the state as employer and on predominantly

female occupations as providing a context that alleviates the tension between market and family work. We deal with each of these in turn. To begin with, state employment (the public sector) growth has been associated with increased demand for women's employment (OECD, 1982), and is thus seen as an important force propelling women into the labour market (Gornick and Jacobs, 1998; Mandel and Semyonov, 2006; Okun *et al.*, 2007). The importance of the public sector for women's employment is far greater than merely providing employment opportunities. Public sector employment is claimed to provide women with the opportunity to hold 'good jobs' mainly in professional occupations. This, in turn, allows women to improve their strategic position in society (cf. Kolberg, 1991). These jobs may offer benefits and protection, flexible, often shorter, working hours, and good opportunities for promotion and authority (Wright *et al.*, 1995; Gornick and Jacobs, 1998). Public sector employment provides a 'family-friendly' environment, which allows women to maintain their attachment to the labour force even when their family demands are high (Esping-Andersen, 1990; Kolberg and Esping-Andersen, 1991; Gornick and Meyers, 2003; Okun *et al.*, 2007). Taniguchi and Rosenfeld (2002), for example, found a negative and statistically significant effect of the public sector on employment withdrawal among white women in the US.

The public sector is also the context in which social policies and arrangements are adhered to closely (Bihagen and Ohls, 2006; Okun *et al.*, 2007). Employment-supportive policies offer special arrangements for combining work and family demands, such as paid and unpaid maternity leave, reduced working hours, and other benefits especially designed for parents (Gornick and Meyers, 2003). A growing body of literature emphasizes the role of social policies in affecting women's decision to participate in paid employment, and in particular their work continuity (Glass and Riley, 1998; Gornick *et al.*, 1998; Stier *et al.*, 2001; Gornick and Meyers, 2003; Uunk *et al.*, 2005; Hofferth and Curtin, 2006). In a comparative study of 12 industrialized countries, Stier *et al.* (2001) found that women's employment interruptions, especially when children were young, were significantly affected by policies aimed to mitigate women's roles as providers and carers.

The public sector is but one salient characteristic of female employment in most industrial countries. Another is women's concentration in a relatively small number of highly sex-segregated occupations. While the sex segregation of occupation is related

to women's lower achievements in the labour market (low pay, limited opportunities for advancement, and in some cases lower quality of employment conditions), these occupations are assumed to offer a friendly environment for women in general and mothers in particular (Mandel and Semyonov, 2005, 2006). For example, female-dominated occupations tend to offer shorter working hours, part-time employment, and flexible time, which increase the compatibility of work and family demands (Stier, 1996, 1998; Spain and Bianchi, 1996; Charles *et al.*, 2001; Mandel and Semyonov, 2006). Previous research shows that a higher percentage of women in an occupation is associated with a slower rate of employment exit (Taniguchi and Rosenfeld, 2002). Stier (1996) found that female-dominated occupations allow women to interrupt their employment when family demands are high, and to return more quickly to paid work.

Research Questions and Hypotheses

We follow primarily the structural approach in an attempt to assess the significance of employment context for women's work attachment in the Israeli labour market (i.e. labour market interruptions and re-entries). Buchmann and her associates (2004) conducted a similar examination for Switzerland in their study noted earlier. We expand this examination in two ways: first, we provide results on the importance of employment context for women's attachment to the labour force from another case study, namely Israeli Jewish women. Secondly, and perhaps more importantly, we focus on the interplay between childbirth and employment context in studying women's attachment to the labour force. Having made these preliminary, but necessary, clarifications we can spell out more clearly the questions that motivate our subsequent analyses and our expectations:

(1) Exiting employment

(1.1) Since women's familial responsibilities are often perceived as one of the primary determinants of their attachment to the labour force, we probe the extent that work interruptions are affected by family events (e.g. childbirth) or other familial responsibilities (e.g. childcare, marital status, etc.). Previous research would lead us to expect that childbearing and caring are positively associated with job exits (Felmlee, 1984; 1993; Taniguchi and Rosenfeld, 2002; Buchmann *et al.*, 2004).

(1.2) Since human capital is also an important determinant of women's attachment to the labour force, we trace the extent that women's human capital affects their labour market interruptions. In line with results from previous research (Taniguchi and Rosenfeld, 2002; Buchmann *et al.*, 2004), we expect that women who have accumulated more labour force experience and those with higher job authority and occupational prestige will maintain more continuous employment than those with lower levels of human capital.

(1.3) Following our discussion of employment contexts, we examine whether employment in the public sector and employment in occupations that differ in the prevalence of women (i.e. in their gender type) have consequences for women's decisions to exit employment. The theoretical contentions and findings of previous studies (Taniguchi and Rosenfeld, 2002) lead us to expect that women in the public sector and those employed in female-dominated occupations will be less likely to interrupt their employment because these contexts are less demanding and allow women to combine work and family duties.

(1.4) Lastly, does employment context, such as public employment or female-type occupations, protect women against labour market interruptions due to childbirth? We expect an interaction between employment settings and childbirth. Since family friendly employment settings are expected to provide better conditions for combining work and family, our expectation is that family events will not affect women's decision to leave these types of employment as this might affect women who work in less compatible employment.

(2) Re-entering employment

(2.1) As we hypothesized earlier, women's work decisions are affected by their familial responsibilities. Accordingly, we expect that the presence of pre-school children at home will affect negatively the likelihood that their mothers will resume employment.

(2.2) Human capital works as a driving force for women's participation in paid employment. So of those who left employment, those with better opportunities (and presumably higher opportunity costs) will return to the labour force sooner than their counterparts with lower levels of human

capital (Stier, 1996).

(2.3) How may the context of women's employment prior to their exiting the labour force affect the likelihood of their going back to work? There is no clear answer to whether women who left employment in the public sector or in female-dominated occupations will re-enter slower or faster. On the one hand this is because work interruptions in these places are less costly, and thus are expected to be longer (Polacheck, 1981). On the other hand, re-entry is relatively easy because these settings accommodate women with familial obligations and have regulations (especially in the public sector) that allow women to re-enter, especially after a long unpaid maternity leave (Buchmann *et al.*, 2004; Stier, 1996).

(2.4.) As we hypothesized earlier (1.4), we expect an interaction between employment settings and the presence of pre-school children at home. Again, family friendly settings are expected to mitigate the negative effect of family demands on the decision to resume work.

The Social Context

Israel provides a good case study for several reasons. First, Israel's economy has grown rapidly in recent decades. For example, Israel's GDP per capita increased 5-fold from 1950 to 1999 (Israel, 1999: Table 6.1; 2000: Table 6.1). Israel's economic growth, moreover, has been accompanied by marked structural changes in its various economic segments. The proportion of the population actively engaged in agriculture declined, industrial growth slowed down in the late 1970s, and the services expanded substantially, especially the public sector (Aharoni, 1991; Kraus, 1992).

The expansion of the service industries, particularly in the public sector, enlarged employment opportunities for Israeli women. Studies have shown that women's participation rates in the paid economy in Israel are similar to those found in other Western societies (Ben-Porath and Gronau, 1985; Haberfeld and Cohen, 1998). About 50 per cent of Israeli women aged 16 and above (and more among Jewish women) are active in the paid economy, and a majority of them (>60 per cent) are employed in full-time jobs (Israel, 2006). Among the primary working age groups (25–55) the rate of female labour force participation amounts to 70 per cent (80 per cent among Jewish women, compared with 84 per cent among Jewish men)

(Israel, 2006). As in most Western societies, gender segregation in the Israeli labour force is high and hardly decreased between 1972 and 1995 (Israeli, 1979; Cohen *et al.*, 1987; Kraus, 2002). Most Israeli women work in white-collar occupations (Semyonov and Kraus, 1983), and about half of all employed women work in the public sector (Yaish and Kraus, 2003; Haberfeld and Cohen, 1998). Despite the equal payment law Israeli women earn less than men for working in the same occupation (cf. Efroni, 1980), industry or economic sector (Yaish and Kraus, 2003), even when human capital differences between the genders are held constant (Semyonov and Kraus, 1983; Haberfeld, 1996; Haberfeld and Cohen, 1998; Yaish and Kraus, 2003).

Secondly, institutional arrangements in Israel, particularly regarding women's employment, are also apparent in legislation. The principle of equal rights for men and women is enshrined in Israel's Declaration of Independence. In line with this, over the years Israeli lawmakers have introduced the Women Equal Rights Law (1951), the Equal Payment Law (1964), and the Equal Opportunity Law (1981, amended in 1988).

Finally, Israel's social policy exemplifies the complex and multidimensional perception of women's roles in Israeli society. Israel is still a patriarchal society, placing high value on familism and expecting women to take care of family and children. On the other hand, Israel's social policy supports the incorporation of women into the labour market (Stier *et al.*, 2001; Okun *et al.*, 2007). For example, like other European countries (e.g. Germany, Austria, the Netherlands), Israel provides a 14-week fully paid maternity leave to all working mothers (part of which can be taken by fathers). In addition, many mothers of young children (up to the age of eight in the case of an only child, and up to age 12 in the case of two or more children under this age) are entitled to work one hour less a day without any pay penalty.¹ More important, however, is government support in the provision of subsidized day care facilities for young children and the treatment of part-time employment (dominated by women) as full-time employment, in terms of employment rights and benefits (Stier, 1998; Stier *et al.*, 2001). Accordingly, the participation level of children in day care facilities in Israel is relatively high: amounts to 20 per cent of 0–2-year-old, 80 per cent of 3–5-year-old, and 95 per cent of the 5-year-old (Israel, 2006). While about 40 per cent of working women hold part-time or reduced-hour jobs, they are not trapped in this mode of employment and their mobility rates, as well as their hourly wage, are relatively high (Stier, 1998).

Data and Methodology

Data for this study are based on the 2001 mobility study in Israel (see Kraus *et al.*, 2002 for details), which is comprised of a representative sample of 1200 households in Israel. The data include basic sociodemographic information on all adults (18+) who reside in each of the 1200 households ($N \sim 3600$), while a complete retrospective life history (e.g. employment career, family formation, etc.) was gathered from one adult person in each household.

The main advantage of this dataset is that the life-history information for the 1200 individuals lends itself to the event-history technique. Utilizing this technique would allow us to determine more accurately how certain events in women's life histories may cause them to leave and re-enter the labour market. We assessed these determinants by applying the Cox proportional hazard model to these data. The advantage of the Cox model is that it does not make any assumption about the probability distribution of survival times (Allison, 1995) though for each model we applied a test of the proportionality assumptions.

The analyses are based on Jewish Israeli women who reported being ever employed in Israel ($N = 503$, 97.5 per cent of the total female sample). Women were asked to report dates of entering and leaving each of their jobs. Based on these reports we constructed two spell files: the first considered the time elapsed from when a woman entered a job until she exited it, or until the survey date. We treat women's report on job termination as exit.² Since, we were interested in the effect of family events on the employment dynamic, we included only spells in which women were younger than 45 at the *beginning* of the spell, although at the time of the survey their age ranged from 18 to 90. This yielded 825 employment spells at risk of job exit. The second file was based on employment interruptions, and measured the interval from when a woman exited an employment spell until she re-entered the labour force, or until she was censored by the date of the survey ($N = 574$ spells at risk of re-entry).³ Thus, two dependent variables were used in this study: the hazard of exiting a job for women who worked, and the hazard of entering employment for women who had exited at least one job.

We introduced two types of independent variables: those measured at the beginning of the spell (fixed covariates) and those that vary with time. Among the fixed covariates we had three groups of variables, each of which tapped a different aspect that

bore on women's employment career, as discussed in the introduction. The first group of independent variables tapped women familial responsibilities, and included two dummy variables: whether our female respondent was married⁴ and whether she had children younger than age six at the beginning of the spell. The second group of independent variables consisted of indicators that could be derived from the human capital approach: an occupational socioeconomic index (Semyonov *et al.*, 2000) that we also used as a proxy for education,⁵ job authority, and years of work experience accumulated prior to the beginning of the spell.⁶ The third group of independent variables measured job characteristics and corresponded to the structural approach. This group included two dummy variables: whether the woman worked in the public sector, and whether she worked in a female-type or a male-type occupation, with a mixed-type occupation as the reference category. The public sector includes public administration, education, health, welfare, and social work services. The gendered occupations are defined by the percentage of women in an occupation. Accordingly, male-type occupation include those occupations in which women composed up to 27 per cent, mixed-typed occupations are those with 27.1 to 72 per cent women, and female-type occupations include 73 per cent women or more.⁷ In addition to these three theoretically derived groups of variables, we controlled in our models for a number of individual characteristics that are known to affect women's employment in Israel: religiosity (whether the respondent defines herself as religious), a dummy for immigration status, a dummy for the youngest age group *at the time of survey* (ages 18 to 44 = 1, 45 and higher = 0), and a dummy for full-time employment. The means of all time-fixed covariates are presented in Appendix Table A1 (for the re-entry analysis all variables refer to last job).

In addition to these fixed covariates, we included in the analysis two time-varying covariates: in the job-exit analysis this variable indicates, for each year, whether the woman gave birth, while in the re-entry analysis this variable indicates, for each year, whether the woman had a child younger than age six. Having made these preliminary qualifications we can embark on the analysis.

Results

Job Exit

We begin the analysis with an examination of job exits. Figure 1 presents a number of survival functions of

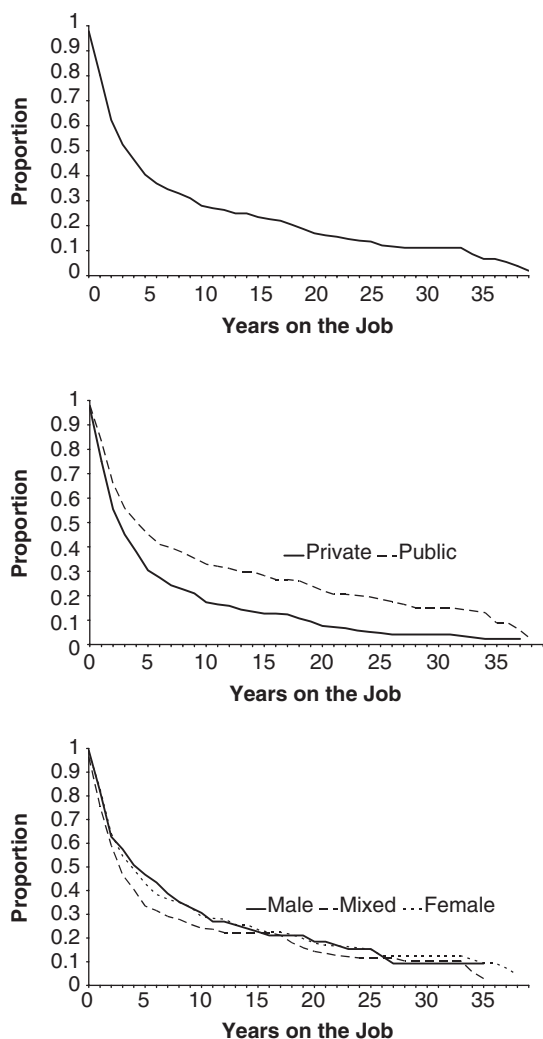


Figure 1 Survival function of job exits (proportion still at work), Jewish women aged 45 or younger in the Israeli work force (all – top; by economic sectors – middle; by sex type occupation – bottom)

job exits: for the total population; for each sector; and for each sex type occupation. These survival functions are then presented in Table 1 at 5-year intervals. The first column in Table 1, referring to the entire population, indicates that 80 per cent of the women at risk of job exit are still at their jobs 2 years after starting it. However, by the fifth year less than half of them are still at their jobs, while after 20 years only about a fifth remained at their jobs.

The second and the third columns in Table 1 provide the background for a comparison of the public and the private sector for women's job exits. This comparison reveals, as expected, that Israeli women enjoy significantly more stable employment in the public sector than in the private sector. Whereas more than 80 per cent of women in the public sector are still at work 2 years after starting it, only three quarters of women in the private sector remain at their jobs after 2 years of employment. Likewise, by the fifth year about a half of those in the public sector remain at their job, compared with less than two fifths in the private sector. The stability of employment in the public sector, moreover, becomes even more pronounced as we move farther away in time. Thus, for example, 15 years after starting their jobs, women in the public sector are twice as likely as those from the private sector to remain in their jobs, while after 20 years this gap becomes even wider (24 per cent and only 9 per cent in the public and the private sectors, respectively).

In the last three columns of Table 1, we shift the focus of our analysis to a comparison of the three sex-type occupations for job exits. This comparison reveals that both female-type and male-type occupations provide Israeli women with greater job stability than gender-mixed occupations. As may be expected, female-type occupations provide a more convenient context to maintain a continuous employment. At the same time, male-type occupations may also encourage job continuity because they offer higher rewards

Table 1 Survival function of job exits (proportion still at work), Jewish women aged 45 or younger in the Israeli work force

Years since beginning work	Entire population	Public sector	Private sector	Male occupation	Female occupation	Mixed occupation
2	0.80	0.83	0.75	0.96	0.98	0.91
5	0.46	0.50	0.38	0.76	0.79	0.65
10	0.31	0.35	0.21	0.57	0.64	0.49
15	0.25	0.30	0.14	0.41	0.52	0.43
20	0.19	0.24	0.09	0.37	0.42	0.30

Table 2 Coefficients for predicting the hazard rate of job exits, Jewish women aged 45 or younger in the Israeli work force

	Job exit	
	(1)	(2)
Familial responsibility variables		
Married	−0.146* (0.083)	−0.149* (0.083)
Child <6 years at start of spell	−0.139 (0.090)	−0.145 (0.090)
Child was born during spell (TVC)	0.035* (0.021)	0.049 (0.042)
Human capital variables		
Occupational SES	−0.005** (0.002)	−0.005** (0.002)
Authority	−0.293** (0.108)	−0.301** (0.109)
Previous experience	−0.035** (0.007)	−0.035** (0.007)
Work characteristic variables		
Public sector	−0.316** (0.096)	−0.272** (0.097)
Female-type occupation	−0.121 (0.082)	−0.145* (0.085)
Male-type occupation	−0.295** (0.112)	−0.266** (0.121)
Interaction terms for child birth and:		
Public sector		−0.091** (0.044)
Female-type occupation		0.053 (0.048)
Male-type occupation		−0.086 (0.124)
Control variables		
Immigrant	−0.275** (0.088)	−0.278** (0.089)
Religiosity	−0.199 (0.119)	−0.193 (0.118)
Younger cohort	0.214** (0.088)	0.209** (0.088)
Full-time employment	−0.000 (0.092)	−0.001 (0.092)
Fit statistics		
Wald chi square	150.38	162.71
Df	13	16
Number of spells	805	805

* $P < 0.1$; ** $P < 0.05$.

for women (Spain and Bianchi 1996; Stier 1996; Charles *et al.* 2001).

To answer the research questions we laid out at the outset, we turned to multivariate analyses of job exits and re-entry. We used Cox proportional hazard models to predict the hazard rates of job exits.⁸ The first column in Table 2 presents the coefficients obtained from a model that predicts the hazard rate of job exits as a function of family, human capital, work characteristic, and our control variables. As can be seen in this model, all four groups of variables exert significant effects on job exit hazard rates. Next, we deal with each group of variables in turn. First, women who are married at the beginning of their job spell are less likely to leave their job than non-married women. In their study of labour market experience in Chicago, Tienda and Stier (1996) found similar results, for both mothers and fathers. Also Taniguchi and Rosenfeld (2002), in their study of women's employment exit and re-entry in the US, report such an effect, though in their study it was not

statistically significant. The negative effect of marital status may indicate a possible selection of women into paid employment. Net of marital status, our results indicate that having young children before entering the job does not have a statistically significant effect on job withdrawal. However, and as expected (Stier, 1996; Uunk *et al.*, 2005), women who give birth to a child during the job interval have higher hazard rates of exiting their job: model 1 predicts that childbirth increases women's probability to exit their job by about 4 per cent [$(e^{0.035} - 1) \times 100 = 3.6$].

Second, our results appear to support the standard human capital assertion: in line with findings from previous research (cf. Buchmann *et al.*, 2004; Taniguchi and Rosenfeld, 2002) women in occupations that offer higher rewards (higher SEI and job authority) and those with longer work experience are less likely to experience employment interruptions. Third, the effects of the work characteristic variables support our expectations as well, where it is shown that the public sector provides women with a more

stable work environment (than the private sector), and thus can offer them the necessary conditions for combining work and familial responsibility. These findings are in line with Taniguchi and Rosenfeld's (2002) results for the US. Among the group of employment characteristics, however, we can also see that employment in male-type occupations provides women with a more stable work environment. That is, employment in less rather than more women-friendly occupations is more beneficial for women in Israel. This finding can be seen to provide support to the human capital assertion that employment in more rewarding, yet also more demanding, occupations (in male-type rather than in mixed-type occupations) is less likely to be interrupted. However, women employed in female-type occupations are as likely to exit their job as women in male-type occupations.⁹ This suggests that the association between sex-type occupations and labour force exit is curvilinear. A somewhat different result is reported by Taniguchi and Rosenfeld (2002), who found that for white women in the US, a higher percentage of women in an occupation led to a slower rate of employment exit. Finally, our results show that a higher likelihood to leave a job is also evident for women who belong to more recent cohorts and those who were born in Israel.

The last question we raised at the outset was whether a family friendly work environment, as is expected to exist in the public sector and in female-type occupations, would provide women with the necessary conditions for combining work and familial responsibilities. This question receives an answer in the model presented in column 2 of Table 2, where we test for interactions between employment sector and gender-type of occupation and childbirth during the work spell. The results shown in this column confirm our earlier expectations regarding the sector effect, and indicate that women in the public sector are less likely than those in the private sector to experience job interruptions following childbirth. However, our results reveal no significant differences in the effect of childbirth according to the occupations' sex-type. It is also worth noting that the inclusion of the interaction effects in the model did not change significantly any of the effects discussed earlier.

Figure 2 portrays our results graphically by showing mean adjusted job exit probabilities, based on model 2 in Table 2, for four groups: women employed in the private as against the public sector, and within each sector for women who gave birth to a child during their employment spell as against those who

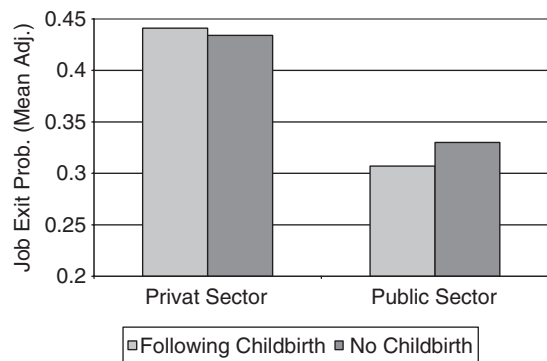


Figure 2 Mean adjusted job exit probabilities, by employment sector and childbirth (based on Model 2 in Table 2)

did not. The advantage of the public sector for women's employment is very clear in this figure: women in the private sector are about 12 per cent more likely to exit employment than women in the public sector; and following childbirth women in the public sector are still less likely to exit their job (note that the coefficient in model 2 for the interaction term for childbirth and public employment is statistically significant).

Job Re-entry

We repeated the analysis presented above for job re-entry, starting with survival rates as presented in Figure 3 and Table 3. The first column in Table 3, referring to the entire population, indicates that about 35 per cent of women who left their jobs returned to employment within 2 years, while after 5 years almost 80 per cent of them had returned to the labour force. By the end of the spell, after almost 20 years, only 5 per cent of those women were still out of the labour force. The second and the third columns in Table 3 also indicate that re-entry was somewhat faster in the public than in the private sector (29 per cent and 38 per cent, respectively). The last three columns indicate that re-entry rates during the first 2 years were only slightly higher in male-type and mixed-type occupations than in female-type occupations, although the rates balanced thereafter.

We now turn to multivariate analyses of job re-entry, to examine the determinants of job re-entry for women who had already left their job. The results are shown in Table 4, where we present the coefficients obtained from a series of models that predict the hazard rate of returning to paid employment

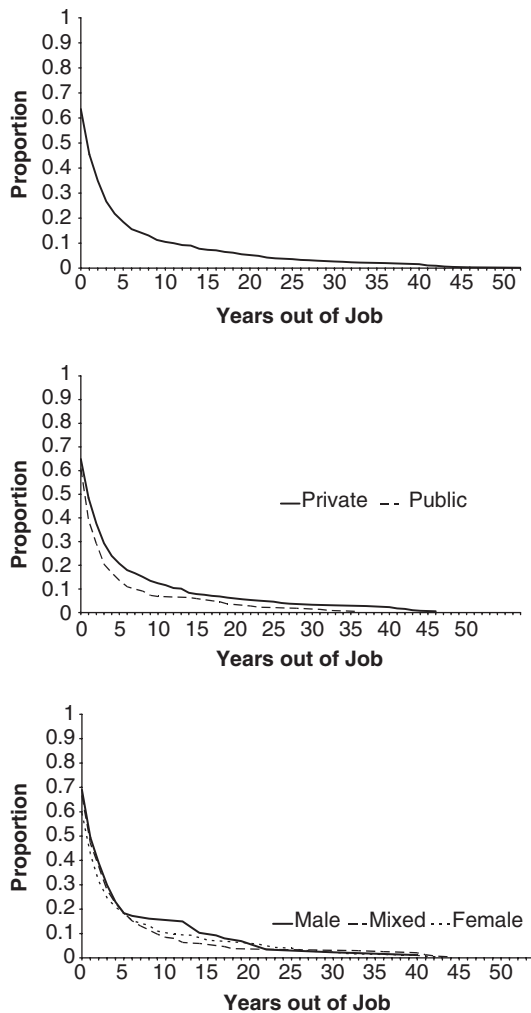


Figure 3 Survival function of job re-entry (proportion still out of the work force), Jewish women aged 45 or younger in the Israeli work force (all – top; by economic sectors – middle; by sex type occupation – bottom)

as a function of familial, human capital, work characteristic, and our control variables. By definition, women who returned to paid employment had experienced job exit in their employment career; and as we have already seen, job exit is affected by the same set of factors that are expected to affect job re-entry. Accordingly, our results might be biased due to selection processes. To obviate this potential bias, we introduced in the analysis of job re-entry the previously estimated predicted hazard rate of job exit for each woman, as a control variable. Thus, models 1 and 2 in Table 4 estimate job re-entry hazard rates without selection, while models 3 and 4 introduce the selection control.¹⁰

As can be seen in the first column, then, relatively few variables affected the likelihood of re-entry. Most important, family constraints exerted only minor effects on women's decision to re-enter the labour force. Thus, although married women were somewhat less likely to re-enter, the presence of young children did not affect mothers' re-entry rates. Contrary to this, Taniguchi and Rosenfeld (2002) found positive effects for marital status and for the number of children younger than six at home. However, their analysis of re-entry did not control for occupations and employment sectors, which proved important in our analysis. Secondly, our results support the human capital assertions by showing that women in more prestigious occupations (higher SEI) were more likely to return to work. This indicates that women's employment choices are also affected by cost-benefit calculus, such that high opportunity costs are associated with a relatively short separation from paid employment. Third, women whose last job was in the public sector were more likely to re-enter the labour force, while women whose last job was full-time were less likely to do so. These finding provides further support to our contention that a family friendly environment, such as part-time employment and employment in the public sector, encourages women's labour force participation.

Table 3 Survival function of job re-entry (proportion still out of the labour force), Jewish women aged 45 or younger in the Israeli work force

Years since exiting work	Entire population	Public sector	Private sector	Male occupation	Female occupation	Mixed occupation
2	0.35	0.29	0.38	0.39	0.32	0.38
5	0.18	0.14	0.21	0.18	0.18	0.19
10	0.10	0.07	0.12	0.15	0.10	0.08
15	0.07	0.06	0.08	0.09	0.07	0.05
20	0.05	0.04	0.06	0.05	0.06	0.04

Table 4 Coefficients for predicting the hazard rate of job re-entry, ever worked women aged 45 or younger out of the labour force

	Job re-entry without selection		Job re-entry with selection	
	(1)	(2)	(3)	(4)
Familial responsibility variables				
Married	−0.232** (0.086)	−0.227** (0.088)	−0.271** (0.092)	−0.264** (0.093)
Child <6 years during the spell (TVC)	0.013 (0.021)	0.030 (0.029)	−0.023 (0.021)	−0.002 (0.027)
Human capital variables				
Occupational SES	0.004** (0.002)	0.004** (0.002)	0.003 (0.002)	0.003* (0.002)
Authority	0.162 (0.112)	0.151 (0.113)	0.065 (0.125)	0.063 (0.123)
Previous experience	0.012 (0.008)	0.014 (0.008)	0.003 (0.009)	0.003 (0.010)
Work characteristics variables				
Public sector	0.192** (0.088)	0.157* (0.096)	0.069 (0.107)	0.043 (0.111)
Female-type occupation	0.003 (0.086)	0.052 (0.093)	−0.162 (0.092)	0.047 (0.101)
Male-type occupation	0.180 (0.116)	0.165 (0.120)	0.071 (0.137)	0.077 (0.143)
Interaction terms for young child and				
Public sector		0.044 (0.038)		0.025 (0.033)
Female-type occupation		−0.051 (0.036)		−0.056* (0.032)
Male-type occupation		0.038 (0.050)		−0.005 (0.046)
Selection				
Predicted hazard for job exit			−0.558 (0.411)	−0.550 (0.415)
Control variables				
Immigrant	−0.521** (0.095)	−0.469** (0.137)	−0.602** (0.103)	−0.624** (0.102)
Religious	−0.221** (0.113)	−0.429** (0.173)	−0.289** (0.120)	−0.304** (0.123)
Younger cohort	−0.072 (0.088)	−0.086 (0.132)	0.017 (0.102)	0.020 (0.101)
Full-time	−0.247** (0.083)	0.166 (0.136)	−0.211** (0.086)	−0.206** (0.085)
Fit statistics				
Wald chi square	88.35	94.24	96.88	104.86
Df	12	15	13	16
Number of spells	574	574	574	574

* $P < 0.1$; ** $P < 0.05$.

However, we did not find statistically significant effects of the sex type of occupations. Finally, adding the interaction terms of having a young child at home to the sector of employment and the gender type of occupation (second column) did not improve the overall fit of the model, as can be seen at the end of Table 4. This model, therefore, shows no statistically significant differences in the effect of family constraints in the various employment contexts.

When we control for selection, in columns 3 and 4, our results hardly change. Now, however, women whose last job was in the public sector do not benefit in terms of re-entry. In fact, the effect of public employment displays a sharp reduction in size between models 1 and 3 (from $e^{0.192} = 1.21$ to $e^{0.069} = 1.07$), or between models 2 and 4 (from $e^{0.157} = 1.67$ to $e^{0.043} = 1.04$).¹¹ This is not a surprising result, since we know from our previous analysis that women's hazard of job exit (which we control for in models 3

and 4 in Table 4) is strongly and negatively affected by employment in the public sector. After taking into account the hazard of job exit, women in female-type occupations who have young children at home are less likely to re-enter employment (the coefficient is significant at the 0.10 level). This finding indicates that for those less committed to the labour force, this type of occupations provides the opportunity to stay out of the labour force for a longer period, probably at lower costs, as Polachek (1981) would argue.

Summary and Conclusions

Women's labour force participation rates have nearly achieved parity with men's, but working women continue to assume primary responsibility for familial tasks. It is often argued that combining employment and family demands is one of the chief determinants

of women's inferior position in the labour market (Reskin and Padavic, 1994; Drobnić *et al.*, 1999). In this article we explored how familial responsibilities affect women's attachment to the labour market in Israel. More precisely, our purpose was to evaluate the effects of three main determinants of women's attachment to the labour market: (i) familial responsibility (ii) human capital, and (iii) structural characteristics of the labour market (i.e. occupation and sector of employment). As stated at the outset, for each of these determinants we had a prior expectation, based on previous research. Subsequently, we summarize these expectations, together with our main findings for each of them.

With regard to familial responsibilities, our primary expectation was that these were positively associated with job exits and negatively associated with re-entry into the labour force. Contrary to these expectations, we found that being married at the beginning of the spell accompanied a slower rate of job exit, while the presence of children did not exert a statistically significant effect on women's job exit. However, and as expected, we found that childbirth did increase women's hazard rates of job exit. Regarding employment re-entry the results did not support our expectation – although married women were somewhat slower to return to employment.

Next, we expected that women with higher levels of human capital would maintain a more continuous employment pattern than those with lower levels. We also expected women with higher levels of human capital, who did experience employment interruptions, to return sooner to the labour force than their counterparts whose levels of human capital were lower. Our findings largely supported these expectations.

With regard to women's employment and structural characteristics of the labour market, we expected that employment in more family- and female-friendly environments would furnish women with better conditions for combining work and familial responsibility. In line with this expectation, we showed that the public sector provided women with a more stable work environment than the private sector, and thus could offer them the necessary conditions for combining work and familial responsibility. One way in which the public sector maintains women's attachment to the labour market is by allowing them to take (relatively short-term) unpaid leave while keeping their position should they decide to return to work.

However, our expectation that a more women-friendly environment (e.g. female-type occupations) would also provide women with a more stable work

career was not supported in full. Our results suggest that stability of employment is higher in both female- and male-type occupations (than in mixed-type occupations). The fact that male-type occupations benefit women can be seen as supporting the human capital assertion that employment in more rewarding, yet also more demanding, occupations (in male-type rather than in female-type) is less likely to be interrupted. Finally, our results concerning employment re-entry did not support our initial expectations, as we found that employment contexts exerted no statistically significant effects on the likelihood of resuming employment.

More interesting to our study was the question whether family- and female-friendly environments mediate the effect of family responsibilities on women's employment patterns. Our results show that employment in the public sector did lead to a slower rate of job exit following childbirth. However, we did not find a similar effect for female-type occupations following childbirth. Similarly, neither family-friendly sectors nor female-friendly occupations had any effect on employment re-entry and the existence of young children at home.

In the main, then, our findings emphasize the importance of employment contexts, specifically public employment, in providing women the necessary conditions to combine work and family demands. This finding is important, with implications for working women in Israeli society and elsewhere. For one, the public sector in most countries is not only dominated by women, but it is also the sector that has grown considerably in recent decades, and one of the main forces propelling women's labour force participation (Gornick and Jacobs, 1998; Yaish and Kraus, 2003). Our findings, therefore, suggest that increasing numbers of women in the labour force, who are highly likely to enter the public sector, or are already employed there, are able to maintain continuous attachment to the labour market, despite familial responsibility, and, therefore, can maximize their earnings along the life course. By allowing women to maintain continuous employment, as our findings suggest, this sector minimizes the cost of having children. Whether women in the public sector manage along their life course to accumulate higher earnings than women who work in the private sector, or whether women's fertility is affected by the sector of their employment, are questions for further research.

This study also brought to the fore the role of the state as a facilitator of women's dual responsibilities. As in Israel, women are highly involved in the

labour market but at the same time, the convention in Israeli society is that familial duties largely fall to the woman, it is not surprising that state employment provides women with a good opportunity to juggle family's domestic and economic responsibilities. Critics may argue that the state simply enhances the division of labour within the family, and overall gender inequality in society, by creating 'superwomen', and men who are free of familial responsibilities, and by perpetuating women's economic dependence on their spouses. It would be interesting to compare our results with those obtained in countries with different welfare regimes and norms concerning familial responsibilities.

Notes

1. The 1 hour reduction applies to public sector employees and establishments with collective agreements. Thus, most Israeli women will benefit from it since the majority of them are employed in these establishments.
2. Women on paid leave are not considered to have exited their job. While women reported the reasons for leaving the job, they did not indicate whether they quitted the job or took an unpaid leave.
3. Since the time units in this survey are measured on a yearly basis, our dependent variable considers any job change as employment interruption. Due to this limitation, we re-analysed the data also when the group of women for whom job exit and job re-entry took place in the same year is excluded. The results of such analyses and the conclusions drawn from them were similar to those reported here.
4. We entertained the hypothesis that changes in marital status within a spell may affect job exit and re-entry, so we constructed a time-varying covariate for marital status. The results of this analysis did not support this hypothesis, and we, therefore, refer to marital status as a fixed covariate.
5. Although human capital is often equated with education, in this study we used SEI as a proxy for education (the two correlates at about $r=0.6$) because the data did not provide a complete educational history while SEI was measured for each occupation along a person's career. Nevertheless, we re-analysed our models with the education variable at our disposal, and the results did not change.
6. In our preliminary analysis, not shown here, we also controlled for the number of jobs held prior to each employment spell. The inclusion of this variable (which is highly correlated with work experience) did not change the pattern of results reported here, and for parsimony it was not included in the final models.
7. This categorization was based on women's labour force participation rates and their representations in the different occupations.
8. A test of the proportionality assumption supported the use of such technique (and can be obtained from the authors on request).
9. This result was obtained from a model in which the category for mixed-type occupation served as reference category.
10. A test of the proportionality assumption supported the use of this technique (and can be obtained from the authors on request). We further explored, more directly, the possibility that a re-entry within 1 year only might produce different results as to the effects of the various determinants of job re-entry, which are our concern. We, therefore, apply logistic regression models with a dependent variable indicating whether the woman re-entered a job within one year of job intermission. The results of this analysis (reported in Table A2) are very similar to the result that we present based on the proportional hazard models. This further supports the use of such a technique.
11. Note also that the effect of public employment in models 3 and 4 does not reach the conventional level of statistical significance.

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Table A1 Descriptive statistics of fixed covariates

	Work exits	Work re-entry
Familial responsibility variables		
Married	41.0	73.0
Child <6 years at spell start	29.9	18.1 ^a
Human capital variables		
Occupational SEI	42.1 (23.7)	40.0 (23.6)
Authority	21.0	17.4
Previous experience	4.88 (5.9)	7.7 (5.9)
Work characteristics variables		
Public sector	42.1	35.9
Female-type occupation	50.2	47.6
Male-type occupation	13.8	13.5
Control variables		
Immigrant	33.7	34.8
Religious	17.2	16.0
Younger cohort	56.7	57.8
Full-time employment	71.5	75.8
Number of spells	825	574

^aChild <6 years during spell.**Table A2** Logistic regression to predict re-entry within 1 year of job intermission

	Job re-entry	
	(1)	(2)
Familial responsibility variables		
Married	−0.846** (0.218)	−0.855** (0.219)
Child <6 years at job exit	0.160 (0.206)	−0.041 (0.345)
Human capital variables		
Occupational SES	0.000 (0.004)	−0.002 (0.004)
Authority	0.324 (0.244)	0.302 (0.244)
Previous experience	0.065** (0.018)	0.065* (0.018)
Work characteristics variables		
Public sector	0.540** (0.234)	0.512* (0.270)
Female-type occupation	−0.006 (0.201)	−0.194 (0.242)
Male-type occupation	0.336 (0.269)	0.448 (0.318)
Interaction terms for young child and		
Public sector		−0.091 (0.435)
Female type		0.660 (0.457)
Male type		−0.626 (0.562)
Control variables		
Immigrant	−1.042** (0.202)	−1.061** (0.202)
Religious	−0.236 (0.234)	−0.227 (0.232)
Younger cohort	−0.016 (0.196)	0.056 (0.196)
Full-time	−0.503** (0.222)	−0.516** (0.222)
Constant	−0.210 (0.451)	−0.239 (0.468)
Fit Statistics		
wald chi square	65.62**	69.28**
Df	12	13
Pseudo R ²	0.087	0.093
Number of spells	574	574

* $P < 0.1$; ** $P < 0.05$.