Intersections on the Road to Self-Employment: Gender, Family and Occupational Class

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Abstract

Are gender differences in the effects of family structure on self-employment participation robust across different forms of self-employment? Using event history analyses of competing risks and data spanning 20 years, I find that women enter non-professional and non-managerial self-employment to balance work and family demands. In contrast, family factors do little to explain women's entrance into professional and managerial self-employment; these women are more similar to their male peers and appear to follow a careerist model of self-employment.

Between 1975 and 1995, women's self-employment participation grew by 60 percent, compared with 20 percent for men (Blau 1998).[1] Among American workers ages 25 and older in 2003, 9.2 percent of women and 15.5 percent of men were self-employed (Hipple 2004). Past research on gender and self-employment consistently finds that family characteristics, notably marital status and children, more strongly predict women's self-employment participation than men's (Arum 1997; Boden 1996; Carr 1996; Renzulli, Aldrich and Moody 2000; Taniguchi 2002). However, the nature of the relationship between family structure and women's self-employment participation is unclear. Some studies find that marriage and children increase women's likelihood of self-employment (Carr 1996; Taniguchi 2002), while others show that kin-laden social networks reduce business opportunities for nascent entrepreneurs (Renzulli et al. 2000). These contradictory findings point to a complex relationship between family structure and self-employment: differences among women, in addition to differences between women and men, may interact with family structure to affect self-employment participation.

One source of heterogeneity among self-employed women is the growing polarity of self-employment activities. Recent studies show that self-employment is growing in both the most and the least rewarded occupations, with little in between (Arum 1997; McManus 2000). However, research has not examined this heterogeneity in estimating the effect of family structure on women's self-employment. Instead, studies tend to either pool all of women's self-employment activities together (Boden 1996; Carr 1996; Taniguchi 2002), or focus on small business owners alone (Loscocco and Robinson 1991; Renzulli et al. 2000). These two sampling approaches generate contradictory findings regarding the effect of family responsibilities on women's self-employment activities. On the one hand, studies that include all of women's self-employment activities find that marriage and children encourage women's self-employment. This research has led to conclusions that women use self-employment primarily as a strategy to balance work and family commitments, while men use

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self-employment to advance their careers (Carr 1996). On the other hand, studies limited to small business owners finds that, compared to male entrepreneurs, women's businesses are less supported, and even disadvantaged, by their families (Goffee and Scase 1985). Despite these contradictions, no studies examine the effect of family structure by different occupational classes of the self-employed. Inattention to stratification among the self-employed renders past findings about gender, family and self-employment participation uncertain. Is the finding that family structure encourages women's, and not men's, self-employment consistent across professional and non-professional occupations? To answer this, I disaggregate self-employment by professional and managerial status and examine whether the gendered family story of self-employment varies by occupational class.

In addition to illuminating the role of family characteristics on women's self-employment, this paper makes several improvements on past research. First, I examine the full range of self-employment activities with a nationally representative longitudinal sample. The self-employment literature has focused on incorporated business owners and entrepreneurs (Clark and James 1992; Kalleberg and Leicht 1991; Loscocco and Robinson 1991) and neglected less profitable self-employed nonprofessionals and unincorporated small businesses. This obscures sources of inequality among the self-employed and omits many self-employment activities that women and other less advantaged workers undertake (Arum 1997). The analyses in this paper allow respondents to define whether they are self-employed. Thus, the data reflect the full diversity of self-employment and enable examination of family characteristics across different forms of self-employment. Second, this study explores a rich set of family characteristics including number of children, marital status, family income and spousal self-employment. It uses an extensive array of human capital and job characteristics, and estimates competing hazards for two occupational classes of self-employment. While I combine managers and professionals in one category, for brevity's sake I refer to this category as "professionals" and all other occupations as "nonprofessionals."

Theoretical Background

In contrast to the well-developed body of research that documents how predictors of self-employment vary by immigration status, ethnicity and race, differential effects by gender remain under-analyzed. Some early research simply excluded women when testing theories of self-employment participation (Brock, Evans and Phillips 1986; Fuchs 1982). Other studies included women but did not examine differences by gender (Blau 1987; Form 1982). This research produced two major individual-level theories of self-employment participation: the disadvantaged worker and the class mobility hypothesis. The disadvantaged worker argument posits that workers without an attractive mix of human capital become self-employed when they are unable to obtain a job in the wage labor market. The class mobility hypothesis argues that workers in undesirable jobs turn to self-employment to improve their economic situation. Markers of undesirable jobs may include low pay, irregular hours or lack of employer-provided benefits. Skilled workers in bad jobs who have sufficient human capital, social networks and financial resources to pursue a business venture may become self-employed to improve both their immediate and longer-term economic position.

Carr (1996) argued that these theories explain men's self-employment, but not women's. Carr's analysis identified a bimodal pattern for men, wherein the most ambitious workers and the workers facing the greatest disadvantages in the labor market turn to self-employment to improve their economic situations. However, among women, the self-employed were more educated than the wage-employed and thus, did not fit the disadvantaged worker model. Moreover, self-employed women, with higher rates of marriage and preschool children and

lower rates of working hours, also did not fit the careerist model. Instead, Carr argued that self-employment offered women a flexible work strategy to combine competing responsibilities from employment and families. She argued that this work and family balance model of women's self-employment was consistent across occupations and business incorporation statuses.

But Carr's descriptive analysis left un-theorized a bifurcation among self-employed women – two distinct groups working less than 15 hours per week and more than 41 hours. This indicates that women may enter self-employment with different goals – one group to reduce working hours and increase the time spent in other activities, and another group to increase their hours and potential career success. Those seeking reduced working hours might include women with greater family commitments. A second group of women may enter self-employment with career ambitions similar to men's or possibly to escape the "glass ceiling" of discrimination they face in wage employment. To illuminate this bifurcation in women's self-employment participation and to examine whether the work and family balance explanation is consistent across different forms of women's self-employment, I propose two theories to explain women's self-employment: a work and family conflict theory and a careerist theory.

Self-Employment, Gender and Work-Family Conflict

Parent-friendly jobs are not institutionalized despite increases in women's employment. The nonprofessional wage work is least likely to be family-friendly. Thus, this perspective predicts (1) more mothers than non-mothers enter self-employment due to the institutional constraints mothers face in wage work, and (2) the proportion of mothers in nonprofessional self-employment should be greater than within professional self-employment. In addition to motherhood, other family factors such as marital status, family income and self-employment status of one's spouse should affect women's self-employment more than men's and, among women, nonprofessional self-employment more than professional self-employment.

Compared with professional occupations, nonprofessional wage work is more likely to lack employer-sponsored childcare, pay wages too low to fund quality private daycare, and entail closely supervised and inflexible schedules. Recent research demonstrates that workers with lower wages and occupational status are less likely to have access to family-friendly benefits (Shore 1998). In addition, women in nonprofessional jobs are less likely to have control over the pace and timing of their work which are positively associated with reduced work and family conflict (Thomas and Ganster 1995). Self-employment may offer female nonprofessional wage workers more autonomy and greater flexibility in setting the time and place of work. Past research offers some support for this argument (Connelly 1992; Presser 1995). Given this, I expect that motherhood should more strongly predict engagement in nonprofessional, than in professional, self-employment.

There are several reasons why marriage should affect women's self-employment participation more than men's. First, Carr (1996) argues that because women's self-employment is often low-earning and does not provide paid leave for caregiving, self-employed women require a financial safety cushion provided by a husband's earnings. If so, family earnings should positively affect women's likelihood of self-employment and this effect should be stronger for women in lower-paying nonprofessional self-employment. Second, marriage might positively affect women's self-employment if women are more likely to join their husband's businesses than vice versa. Recent research finds having a self-employed husband dramatically increases the likelihood that a woman will become self-employed (Greene 2000; Taniguchi 2002). It seems more likely that a woman's reason for joining her husband's self-

employment activity would be to support her husband's career rather than to advance her own career.[2] Thus, I predict that having a self-employed spouse will most strongly affect the likelihood of nonprofessional self-employment. Finally, marriage may positively affect women's self-employment participation more than men's if marriage increases women's family responsibilities, and thus work and family conflict, more than it does men's.[3]

Self-Employment, Gender and Career Mobility

Not all women may become self-employed to balance work and family demands. Some women may not experience work and family conflict, for example, single and childless women. Some women, like some men, may become self-employed to advance their careers or socioeconomic class positions. Conceptually, two distinct groups with these careerist ambitions could enter self-employment. One group might be disadvantaged workers fleeing bad jobs. Because nonprofessional occupations are more likely to have poor job characteristics (low pay, lack of employer-provided health or life insurance benefits, or nonstandard hours), I expect bad job characteristics to explain transitions between waged and self-employed nonprofessional work.

A second group of workers may have relatively good jobs in terms of pay, benefits and prestige, but desire the increased autonomy, earnings and/or satisfaction of being one's own boss. Because professional occupations are more likely to have good job characteristics, workers transitioning between wage and self-employed professional work may be more pulled by the attractiveness of self-employment than pushed by the unattractiveness of wage employment. This second group of workers should be more likely to be professionals than nonprofessionals prior to entering professional self-employment; they should be more likely to enter self-employment from wage employment, rather than after a labor force absence; and measures of work skill, education and experience should positively affect professional self-employment.

There also may be gender differences among those entering professional self-employment. Self-employment may attract career-oriented women who encounter gender discrimination in the workplace. Some qualitative research demonstrates the lack of advancement opportunity in wage employment encourages women to become entrepreneurs (Moore and Buttner 1997). If the source of discrimination is the employer, then a work situation where a woman is her own boss would eliminate this type of discrimination.[4] While self-employment may provide career-oriented women a way to break the glass ceiling, research supporting this argument rarely uses national samples (Cromie 1987). Because women are likely to encounter the glass ceiling when they are occupational tokens (Kanter 1977), I predict that women in male-dominated professional occupations will be more likely than women in feminized occupations to enter professional self-employment.

Other Factors Affecting Self-Employment

I control for other factors known to affect self-employment participation. Industrial sector contributes to gender differences in self-employment participation (Greene 2000). Employed women are more likely to be in non-technical fields such as personnel, public relations and service industries which do not prepare them for self-employment (Loscocco and Robinson 1991). To control for the effects of industry, I include dummy variables for the industrial sector.

Given the costs of new business ventures, parental assets may influence self-employment participation of young workers (Aldrich, Renzulli and Langton 1998). Socioeconomic class is

measured by parental education and occupational prestige. I also control for number of siblings because family size may affect parents' ability to assist self-employment activities of their children.

Finally, I include demographic controls for the respondent's age, race/ethnicity, local population density, local unemployment rate and region of residence. These variables also affect self-employment participation (Arum, Budig and Grant 2001; Boden 1996; Taniguchi 2002).

Data and Measures

The panel data for these analyses are drawn from the 1979-1998 years of the National Longitudinal Survey of Youth (NLSY), which is a multi-stage stratified national probability sample of 12,686 persons ages 14 to 21 in 1979. Annual survey waves continued through 1994 and biannually thereafter. The NLSY over-sampled various populations (i.e., minority racial groups). Descriptive analyses use sample weights, but due to the spell structure of the event history data, sample weights are not used in regressions. I exclude farmers, full-time students and active military personnel from the risk sets. This creates a sample size of 12,315 for all analyses.

I calculate the percentage female in each detailed occupation/industry cell from 1990 U.S. Census data (U.S. Bureau of the Census 1993). NLSY data are coded into 1970 occupation and industry codes each year. Using the descriptive occupational and industrial titles for 1970 and 1980, I recoded the 1970 three-digit occupation and industry codes into 1980 codes. I then matched the 1980 codes to 1990 occupation and industry codes.

Principal Variables

The dependent variable is self-employment status. I define the respondent as self-employed if she or he answered yes to the survey question: "Are you self-employed in this job?" Analyses distinguish between two subgroups of self-employment based on the three-digit census codes for professional and managerial occupations. Professional and managerial occupations (coded 1-199) are classified as "professional" occupations, while all other occupations are classified as "nonprofessional" occupations. For respondents who enter self-employment, time-varying variables are measured at the interview immediately preceding self-employment entrance. All job-related variables pertain to the occupation held immediately prior to entering self-employment. Respondents who never become self-employed are treated as right-censored observations.

Time-varying family characteristics include marital status (currently married = 1), number of children,[5] net family income and a dummy variable indicating spousal self-employment. To examine gender differences in the effects of family characteristics I interact gender with all family variables. Only significant interactions are reported.

Time-varying measures of human capital and individual labor supply are usual weekly hours worked, usual hours squared, years of seniority, years of work experience, education (highest grade completed), current school enrolment, number of jobs ever held, and employment status prior to self-employment. Non-employed respondents' values for prior job characteristics are set at zero, and I control for non-employment to eliminate the distorting effect of these zeroes on coefficients. I also include the Armed Forces Qualifying Test to measure work-related cognitive skill.[6]

Job characteristics include dummy variables indicating irregular hours (night or evening shifts, rotating shifts or on-call work), employer-provided health and life insurance benefits, and small firm size (fewer than 20 workers). The gender composition of one's occupation is measured by the percentage female in the cell formed by cross-tabulation Census detailed

(three-digit) occupation with detailed industry. I include 12 dummies for industry of occupation. For this set of dummies, agriculture, forestry, fishing and mining serve as the reference category.

Social class of the respondent's family of origin is measured as parental occupational prestige and parental educational attainment. I created these items by averaging father's and mother's Duncan SEI scores and highest grades completed, or if a respondent grew up with a single parent, using the present parent's value for each measure. Time-varying demographic characteristics include respondent's age and age squared, whether the respondent lived in a rural, suburban or urban area (rural is the reference category), and region of residence. I also include a control variable for county unemployment rate to capture the effects of local labor market changes and strength of the economy on self-employment.

Methodology

I use a discrete time-event history model (Cox's proportional hazards regression) to analyze the transition rates into self-employment. Only the first transition into self-employment is modeled. The competing-risks model takes the form of a multinomial logistic regression model with three competing outcomes. (For elaboration, see Allison 1984.) One model predicts any form of self-employment and a competing hazards model predicts self-employment in professional vs. non-professional occupations. In results not shown, I ran all models separately for those who reported that their self-employment activity was their "main job" vs. those who reported moonlighting in self-employment (working in self-employment in addition to a regular wage job). Results did not differ between models.[7]

Results

Descriptive Findings

What are the pathways into professional and into nonprofessional self-employment? Figure 1 presents respondents' employment status prior to entering self-employment by gender and occupational class of self-employment.

The majority of women (54 percent) who enter non-professional self-employment were not employed prior to entrance. This compares with only 27 percent of women in professional self-employment and roughly one-third of men in either form of self-employment. Thus, the counterfactual for female self-employed nonprofessionals is more likely to be non-employment than wage employment, and they are unique in this respect. In contrast, the majority of male self-employed non-professionals left waged jobs and typically made lateral occupational moves.

Women's predominant pathway to professional self-employment is from professional wage employment. Close to half of women entering professional self-employment left a professional wage occupation. In contrast, male self-employed professionals are fairly evenly divided across the three pre-self-employment origin states. Professionally self-employed women are most likely to have made lateral occupational moves into self-employment while their male peers are more likely to have made upward moves from non-professional wage employment or non-employment.

To examine change in employment and family situations before and after self-employment, Table 1 presents descriptive statistics on these variables prior to and after self-employment. Means, standard deviations and t-tests are reported separately by gender, occupational class of self-employment and prior employment status.

Figure 1. Employment Status Prior to Entering Self-Employment, by Gender and Occupational Class of Self-Employment

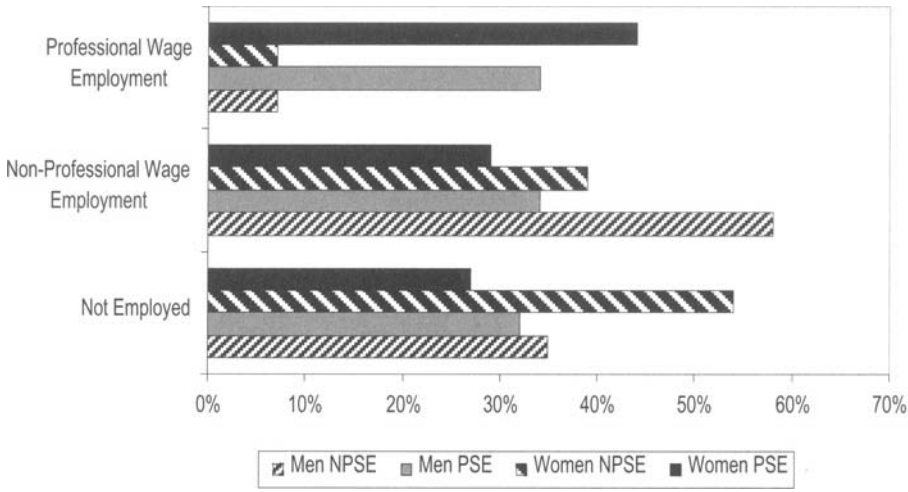

Table 1 shows that women entering non-professional self-employment from non-employment average the most children and highest marital rates. Non-professional self-employment also appears to attract non-employed women, non-employed mothers in particular. Women's higher marital rates may indicate that their self-employment participation needs a financial "safety cushion" consisting of a husband's earnings and benefits such as health insurance.

For those employed prior to self-employment entrance, hourly earnings are higher after self-employment, and this increase is largest among female professionals. Self-employed female professionals have higher hourly earnings than their male peers. This reverses the male earnings advantage found in wage work. However, women in non-professional self-employment suffer the lowest earnings. Self-employed female nonprofessionals who were previously not employed average a paltry $4.08 per hour.

Women are more likely than men to have a self-employed spouse. The rates of spousal self-employment are highest for women who were previously not employed. Unfortunately, there is no measure of whether spouses co-own a business or if one is an employee of the other. In additional analyses, I examined self-employed spouses' occupational pairings. Results show that self-employed women with self-employed husbands tend to be nonprofessionals in clerical and service occupations.

While the industrial sectors of self-employed professionals are fairly similar across gender, self-employed nonprofessionals are highly segregated by gender. Among nonprofessionals, the majority (54 percent) of women is in personal services, but their male peers are concentrated in construction and business and repair industries. The occupations of self-employed professionals – restaurant, bar or other business manager/owner – are the same for men and women. However, in the non-professional self-employment category, men cluster into trades and crafts occupations (e.g., auto mechanic and carpenter), while women most often are childcare providers. Given that non-professional self-employment has a high proportion of previously non-employed mothers, providing paid childcare may offer a route to combining full-time motherhood with income generating activities.

Table 1: Descriptive Statistics for Selected Pre- and Post-Self-Employment Family and Job Characteristics

	Women								Men							
	Self-Employed Nonprofessionals				Self-Employed Professionals				Self-Employed Nonprofessionals				Self-Employed Professionals			
	Previously Not Employed N = 659		Previously Wage-Employed N = 551		Previously Not Employed N = 45		Previously Wage Employed N = 122		Previously Not Employed N = 550		Previously Wage Employed N = 1018		Not Emp Prior to Self-Emp N = 77		Wage Emp Prior to Self-Emp N = 160	
	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-
Family Variables																
#Children	1.55	1.63	1.10	1.20[a,b]	1.00	1.07	.84	.93[a]	.70	.80	.84	.95[a,b]	.27	.35	.56	.69[a]
	(1.27)	(1.28)	(1.14)	(1.18)	(1.15)	(1.21)	(1.18)	(1.19)	1.08	(1.13)	(1.15)	(1.22)	(.57)	(.65)	(.92)	(1.00)
Married	.60	.65	.56	.60[b]	.56	.59	.50	.59	.21	.29	.43	.46	.23	.27[b]	.51	.53
	(.49)	(.48)	(.50)	(.49)	(.50)	(.47)	(.50)	(.49)	.41	(.45)	(.50)	(.50)	(.42)	(.45)	(.50)	(.50)
Self-Emp Spouse	.09	.12	.06	.09[b]	.04	.11	.08	.08	.00	.01	.01	.03[b]	.00	.00	.02	.04
	.28	(.32)	(.23)	(.29)	(.21)	(.32)	(.28)	(.28)	.06	(.12)	(.11)	(.16)	(.00)	(.00)	(.14)	(.19)
Family Income	20.51	24.92	31.73	37.20[a]	29.32	32.80	49.41	55.97[a]	11.83	18.07	30.29	34.39[a]	17.28	35.26	43.11	48.89[a]
	(28.80)	(31.99)	(30.76)	(40.34)	(36.30)	(36.81)	(59.75)	(54.45)	17.29	(24.65)	(29.73)	(37.47)	(22.84)	(56.15)	(44.31)	(42.00)
Job Variables																
Hourly Wage		4.08	8.00	8.83[a,b]		14.92	14.28	18.49[a]		8.11	9.45	11.21[a,b]		10.41	15.94	17.01[a]
		(7.02)	(8.08)	(13.37)		(37.70)	(27.13)	(27.88)		(14.56)	(7.89)	(11.06)		(13.18)	(29.79)	(14.98)
Usual Hours		32.21	35.97	33.88[b]		21.33	36.23	30.96[b]		36.47	42.93	39.17[b]		30.82	40.42	36.71[b]
		(19.62)	(11.30)	(16.78)		(16.71)	(13.04)	(15.13)		(8.11)	(12.61)	(17.83)		(17.75)	(14.56)	(17.17)
Profess. or Manager		.00	.15	.00[a,b]		1.00	.60	1.00[a]		.00	.10	.00[a,b]		1.00	.50	1.00[a]
		(.00)	(.36)	(.00)		(.00)	(.49)	(.00)		(.00)	(.30)	(.00)		(.00)	(.50)	(.00)

Irregular Shift	.28	.17	.22	.31	.16	.20	.28	.18	.22	.53	.18	.28
	(.45)	(.37)	(.42)	(.47)	(.37)	(.41)	(.45)	(.38)	(.41)	(.50)	(.39)	(.45)
Percent Female	57.55	66.13	69.13[a,b]	57.22	60.97	60.76[a,b]	36.28	25.70	24.70[a,b]	42.56	38.97	37.96[a,b]
	(21.05)	(25.30)	(25.86)	(25.28)	(24.97)	(24.62)	(21.11)	(23.42)	(24.35)	(18.44)	(25.66)	(24.96)
Constr.	.02	.02	.02[b]	.00	.01	.00	.25	.18	.24[a,b]	.01	.06	.03[a]
	(.15)	(.13)	(.13)	(.00)	(.09)	(.00)	(.44)	(.38)	(.43)	(.11)	(.23)	(.16)
Manufact.	.03	.11	.07	.02	.07	.08	.05	.16	.09	.08	.12	.07
	(.18)	(.31)	(.25)	(.15)	(.25)	(.28)	(.23)	(.37)	(.29)	(.27)	(.33)	(.25)
Utilities	.01	.03	.02[b]	.02	.02	.01	.06	.06	.07[b]	.03	.04	.04
	(.09)	(.18)	(.15)	(.15)	(.16)	(.09)	(.23)	(.24)	(.25)	(.16)	(.21)	(.19)
Trade	.17	.23	.16[a]	.02	.11	.04[a]	.14	.19	.14[a]	.03	.11	.02[a]
	(.38)	(.42)	(.37)	(.15)	(.32)	(.20)	(.35)	(.39)	(.35)	(.16)	(.31)	(.14)
Financial Services	.02	.07	.05	.02	.02	.02	.02	.04	.03	.01	.05	.06
	(.13)	(.25)	(.21)	(.15)	(.13)	(.16)	(.13)	(.18)	(.18)	(.11)	(.22)	(.24)
Business & Repair Services	.09	.14	.10[a,b]	.09	.08	.20	.18	.12	.17[b]	.09	.09	.13
	(.29)	(.35)	(.30)	(.29)	(.28)	(.41)	(.39)	(.32)	(.38)	(.29)	(.29)	(.33)
Personal Services	.54	.07	.38[a,b]	.11	.02	.03	.12	.02	.05[b]	.10	.00	.04
	(.50)	(.26)	(.49)	(.32)	(.13)	(.18)	(.32)	(.15)	(.22)	(.31)	(.00)	(.19)
Entertain.	.01	.02	.00[a]	.18	.04	.07[a,b]	.00	.01	.01[a]	.22	.09	.20[a,b]
	(.10)	(.14)	(.06)	(.39)	(.20)	(.25)	(.04)	(.11)	(.10)	(.42)	(.29)	(.40)
Profess. Services	.07	.16	.08[a,b]	.53	.44	.49[a,b]	.01	.05	.02[a,b]	.42	.30	.37[a,b]
	(.25)	(.36)	(.27)	(.50)	(.50)	(.50)	(.09)	(.22)	(.15)	(.50)	(.46)	(.48)
Public Admin.	.00	.04	.02[b]	.00	.07	.02	.00	.02	.01[a,b]	.00	.04	.03[a]
	(.06)	(.18)	(.14)	(.00)	(.25)	(.16)	(.04)	(.15)	(.08)	(.00)	(.21)	(.17)

Notes: [a] denotes significant cross-occupational class difference within sex; [b] denotes significant sex difference within occupational-class category.

Table 2: Determinants of Self-Employment from Event History Models, by Self-Employment Type

	Any Self-Employment			Professional Self-Employment			Non-Professional Self-Employment		
	Coeff. (SE)		Risk Ratio	Coeff. (SE)		Risk Ratio	Coeff. (SE)		Risk Ratio
Family Variables									
# Children	.01		1.01	.01		1.01	.01		1.01
	(.02)			(.06)			(.02)		
Female * # Children	.09	***	1.10	NS			.10	***	1.10
	(.03)						(.03)		
Married	.05		1.05	.02		1.02	.04		1.04
	(.05)			(.14)			(.06)		
Female * Married	.39	***	1.48	.45	**	1.56	.40	***	1.49
	(.08)			(.20)			(.08)		
Self-Employed Spouse	1.06	***	2.89	.68	***	1.98	1.10	***	3.02
	(.08)			(.23)			(.08)		
Family Income (in $10,000s)	.00	***	1.00	.00		1.00	.00	**	1.00
	(.00)			(.00)			(.00)		
Human Capital & Labor Supply									
AFQT	-.00		.99	.01	***	1.01	-.00		.99
	(.00)			(.00)			(.00)		
Education	.02	*	1.02	.25	***	1.28	-.04	***	.97
	(.01)			(.03)			(.01)		
Part-time School Enrollment	-.32	***	.72	-.04		.96	-.39	***	.68
	(.07)			(.14)			(.08)		
Experience	.02	*	1.02	.02		1.02	.02	*	1.02
	(.01)			(.02)			(.01)		
Seniority	.02	*	1.02	-.01		.99	.02	**	1.02
	(.01)			(.02)			(.01)		
Weekly Hours	-.01	***	.99	-.00		.99	-.01	***	.99
	(.00)			(.01)			(.00)		
Weekly Hours Squared	.00	***	1.00	.00		1.00	.00	***	1.00
	(.00)			(.00)			(.00)		
# of Jobs Ever Held	.07	***	1.07	.09	***	1.10	.06	***	1.06
	(.01)			(.01)			(.01)		

Female * # of Jobs Ever Held	.02	***	1.02	NS			.02	***	1.02
	(.01)						(.01)		
Not Previously Employed	.28	***	1.33	.17		1.19	.27	***	1.31
	(.06)			(.15)			(.07)		
Female * Not Previously Employed	.20	***	1.22	NS			.29	***	1.33
	(.08)						(.08)		
Previous Job Characteristics									
Hourly Wage	.00		1.00	.00	*	1.00	-.00		.99
	(.00)			(.00)			(.00)		
Irregular Shift	.23	***	1.26	.13		1.14	.25	***	1.28
	(.05)			(.13)			(.05)		
Percent Female in Occupation by Industry	-.00	***	.99	.00		1.00	-.00	***	.99
	(.00)			(.00)			(.00)		
Female * % Female	NS			-.01	***	.99	.01	***	1.01
				(.00)			(.00)		
Life Insurance	-.18	***	.84	-.01		.99	-.19	***	.83
	(.06)			(.16)			(.06)		
Health Insurance	-.25	***	.78	-.26		.77	-.25	***	.78
	(.06)			(.18)			(.06)		
Small Firm	.59	***	1.81	.42	***	1.53	.61	***	1.85
	(.04)			(.11)			(.05)		
Demographic Variables & SES									
Female	-.46	**	.63	-.08		.92	-1.09	***	.34
	(.22)			(.25)			(.12)		
Latino/a	-.08		.92	-.13		.88	-.07		.93
	(.06)			(.17)			(.06)		
African-American	-.25	***	.78	-.24		.79	-.22	***	.80
	(.05)			(.16)			(.06)		
Parents' Occupational Prestige	.01	***	1.01	.01	**	1.01	.00	**	1.00
	(.00)			(.00)			(.00)		
Parents' Educational Attainment	.021	***	1.02	-.00		.99	.02	***	1.03
	(.01)			(.02)			(.01)		
# of Siblings	-.02	**	.98	-.09	***	.91	-.01		.99
	(.01)			(.03)			(.01)		

Notes: *** $p \leq .001$ ** $p \leq .01$ * $p \leq .05$, two-tailed tests. All models control for age, industry, region, urban/rural residence and unemployment rate.

Findings from Event History Analyses

While the patterns found in the descriptive statistics are intriguing, they do not control for the effects of other variables. Event history analyses presented in Table 2 give the partial effects of these variables on the hazard of becoming self-employed and on the competing hazards of entering professional vs. non-professional self-employment. The following discussion uses risk ratios to describe the percent change in the likelihood of becoming self-employed given a one-unit increase in the independent variable. This percentage is computed by subtracting 1.0 from the risk ratio and multiplying the result by 100. Model Chi-Squares for all models are significant at $p \leq .001$.

Effects of Family Variables on the Likelihood of Self-Employment

In the model predicting self-employment in any occupation, children have a significant impact on women's, but not men's, likelihood of self-employment. Each additional child increases women's likelihood of self-employment by 11 percent. Likewise, marriage has no effect on men's participation in self-employment, but significantly increases women's by 53 percent. What kind of self-employment does marriage and children encourage for women? The competing hazards analysis shows that children encourage women's non-professional self-employment, but not professional self-employment. Marriage, however, increases women's likelihood of both kinds self-employment.

Why don't children affect women's propensity for professional self-employment? Perhaps women in professional wage employment, whose jobs allow relatively more control over work schedules, encounter less work and family conflict. If so, children would not push women from professional wage occupations into self-employment. On the other hand, women professionals may have less work and family conflict because they limit their family responsibilities. For example, Table 1 shows that despite similar marital rates, women in professional occupations typically have fewer children than women in non-professional work.

Table 2 also shows that family income has a small, but positive effect on the likelihood of self-employment. However, when self-employment is disaggregated, this effect holds only for non-professional self-employment. Having a spouse who is self-employed significantly increases the respondent's hazard of self-employment by 189 percent. Although "self-employed spouse" did not significantly interact with gender, this may simply be a problem of statistical power. As Table 1 shows, self-employed women are far more likely to have a self-employed spouse than are men.

The competing hazards analysis shows that self-employed spouses have a greater effect on non-professional self-employment (202 percent) than for professional self-employment (98 percent). Taken together, family factors more strongly affect women's likelihood of self-employment than men's. Moreover, these factors encourage self-employment in non-professional occupations more strongly than in professional occupations. These findings concur with the work and family conflict model of women's self-employment, especially for women entering non-professional self-employment.[8]

Effects of Human Capital and Labor Supply on the Likelihood of Self-Employment

In general, human capital measures performed as expected. Education had a positive effect on entering professional self-employment and, as predicted by the careerist model, this effect did not vary by gender. Similarly, job skills (measured by AFQT) positively affect the likelihood of self-employment in professional occupations. Being non-employed has a significantly positive effect on the entrance to non-professional self-employment, and this effect is much stronger for women (64 percent) than for men (31 percent). Non-employment did not predict professional self-employment.

Effects of Prior Job Characteristics on the Likelihood of Self-Employment

Overall, the effects of prior job characteristics support the "undesirable wage jobs" theory of self-employment. Working in a job with irregular shifts increases the likelihood of non-professional self-employment, while having health or life insurance reduces this likelihood, but none of these variables affect professional self-employment. In addition, working for a small firm greatly increases the likelihood of becoming self-employed.

The gender composition of prior occupation has varying effects on the hazards of non-professional and professional self-employment by gender. Consistent with the discrimination explanation of women's participation in professional self-employment, the percentage female of one's occupation negatively affects the likelihood of entering professional self-employment for women, but has no net effect on women's likelihood of entering non-professional self-employment. Thus, the more masculinized their occupations, the more likely female professionals are to turn to self-employment.

Strikingly, the coefficient for being female is non-significant in the model predicting professional self-employment. This variable, however, is interacted with other variables in the model and requires careful interpretation. Where female is interacted with marriage, this increases the likelihood that women will enter professional self-employment. However, being in a feminized occupation reduces women's propensity for entering professional self-employment. Thus, women who are in feminized occupations are less likely, compared to men, to enter professional self-employment. But wage-employed women in male-dominated occupations are more similar to men in their likelihood of becoming self-employed in a professional occupation.

Conclusions

While past research found that family factors have different effects on women's self-employment compared to men's, the effects of family on women's self-employment conflicted across studies. This paper examined whether the heterogeneity of self-employment activities might explain these contradictory findings. Results show that the effects of family structure on women's propensity for self-employment significantly differ by occupational class. Family factors positively affect the likelihood that women will enter non-professional self-employment. However, women's entrance into professional self-employment follows a careerist model of self-employment. Importantly, women entering self-employment in professional occupations are more similar to their male peers in self-employment than they are to women entering non-professional self-employment.

The evidence that women with greater family responsibilities are more likely to become self-employed is clear for women entering non-professional self-employment. Married women and mothers have much greater likelihoods of entering non-professional self-employment. In contrast, marriage and children have little or no effect on men's propensity to become self-employed. The positive effect of marriage is net of family income. This indicates that it is not simply the financial resources conferred by marriage that enable women to become self-employed (although spousal health benefits may play a role). The additional family responsibilities women gain when married may lie behind the marriage effect. Despite the low earnings of women in non-professional self-employment, these reduced earnings may be offset by the greater potential this form of employment offers to combine work and family responsibilities. A surprising factor that highlights the role of family in self-employment activity is the large positive effect of having a self-employed spouse on one's hazard of self-employment in a non-professional occupation. Women are much more likely to have a self-employed spouse than are men. The opportunity to join a husband's self-employment venture encourages women's self-employment in non-professional occupations. Whether the woman

is best considered a partner in the family business or a sort of employee of her spouse, certainly her ability to take time off work for childcare or other family responsibilities would be more supported by her husband than by a disinterested business partner or employer.

In addition to the direct effects of family factors on women's self-employment, the characteristics of women's job situations that create or ease the conflict between work and family are important. The women who enter non-professional self-employment are not leaving professional occupations in wage employment. Rather, it is women who are not working or are in non-professional wage occupations *and* who have family responsibilities who are most likely to enter non-professional self-employment. Non-professional wage occupations often lack the characteristics of professional occupations that ease women's struggle to balance work and family responsibilities. Non-professional occupations usually pay less, confer less authority and less control over the pace and timing of work, have more rigid schedules, and are comprised of daily tasks that are more heavily monitored than professional occupations. All of these factors reduce a woman's ability to check up on her child from work, take time from work for family-related demands, and afford quality childcare.

Findings suggest that women, like men, enter professional self-employment to advance their careers. Respondents who enter professional self-employment are older, more educated, have greater job skills, and have parents with more prestigious occupations. Women who are married and work in a male-dominated occupation have an even greater likelihood of entering professional self-employment. Taken together, these findings suggest that those women, like men, with greater fiscal and social capital choose professional self-employment to advance their careers. It is unlikely that these women become self-employed to balance work and family conflict, because children have no effect on professional self-employment entrance.

Overall, undesirable jobs appear to push men and women into non-professional self-employment. The aspects of the job that are unappealing are gendered. Both men and women are more likely to become self-employed in non-professional occupations when their job lacks regular or daytime hours, life insurance and health insurance, among other characteristics. These findings are consistent with predictions of the less desirable jobs argument. What isn't explained by the gender-neutral "bad jobs" argument is the impact of family factors on women's self-employment participation. However, to the extent that many job conditions are incompatible with women's family responsibilities, family unfriendly jobs are "bad" jobs for mothers.

Are the self-employment alternatives to less desirable wage jobs better than the original job? The extent to which self-employment moves non-professional workers into professional occupations is limited: only 29 percent to 37 percent of respondents in professional self-employment came from non-professional wage occupations. Within the non-professional category, men are much more likely to be in higher-paying crafts and trades while women are more likely to be in low-paying service or clerical work, particularly childcare. This segregation is more pronounced among the self-employed than among the wage-employed. These occupations may enable mothers to work from home and provide an alternative to non-employment, but compared to men's non-professional self-employment, women's non-professional self-employment is less promising in terms of profitability.

Self-employment appears to be an alternative to a less-than-ideal wage employment position, where conditions are family-unfriendly or worker-unfriendly. To the extent that women are pushed into self-employment due to work and family conflict or due to workplace discrimination, women's rising self-employment participation in the past 20 years may not be the positive symbol of women's progress as it has been portrayed. Moreover, given the greater gender segregation in non-professional self-employment, to the extent that self-employment growth occurs in non-professional occupations, gender inequality may be exacerbated. This inequality isn't simply gendered, however; there also appears to be growing inequality by family status because it is mothers, in particular, who are likely to enter low-paying non-professional self-employment.

Notes

1. The growth of women's self-employment is not an artifact of women's increased labor force participation, which grew only 23 percent during this period (Blau 1998).

2. This point raises a question: Are self-employed women whose husbands are also self-employed actually their husbands' employees? While possible, self-employed wives could also be co-owners of a business with their husbands. To check whether respondents with self-employed spouses significantly differed from other self-employed workers, I ran models excluding these respondents. Results did not differ.

3. The correlation between marriage and self-employment may also arise from unmeasured positive selectivity into both conditions.

4. Of course, after self-employment, women may encounter gender discrimination from creditors, contractors or consumers (Clark and James 1992; Loscocco and Robinson 1991).

5. Multiple specifications for children were tested – including presence of an infant, number of young (0-5) and older (5-18) children, and dummy variables for one, two and three or more children. Results showed a monotonic effect for number of children.

6. The AFQT comprises four subtests, one each in arithmetic reasoning, mathematical knowledge, word knowledge and paragraph comprehension.

7. About a third of self-employed men and women are concurrently working in a waged job.

8. One reviewer noted that heterogeneity within non-professional and non-managerial occupations may affect the findings of this analysis. To test whether findings are robust across subcategories of occupations within the non-professional/non-managerial category, I divided this category into four subcategories and conducted a competing hazards analysis using the fully specified model as in Table 2. The following subcategories were used: (1) technicians, sales and administrative support occupations; (2) service occupations; (3) precision, craft and repair occupations; and (4) other occupations, comprised of farming, forestry and fishing occupations and operators, fabricators and laborers. The findings of the gendered effects of marriage, children and self-employed spouse on the likelihood of self-employment are robust across the subcategories. While there is some variation, these results demonstrate that the heterogeneity of non-professional/non-managerial occupations has little, if any, impact on the central findings of the paper. These supplemental analyses are available upon request.

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