Do Husbands Matter?

Married Women Entering Self-Employment

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September 1998

Revised for presentation at the OECD/CILN/CERF International Conference on Self-Employment, September 24-26, 1998, Burlington, Ontario. I thank Richard Burkhauser, Thomas Dunn, James Follain, Douglas Holtz-Eakin, and Bob Weathers for invaluable comments on earlier versions of this paper.

ABSTRACT

This paper investigates the effect of a husband's self-employment experience on the probability that his wife will enter self-employment. In particular, I examine the extent to which his experience eases his wife's transition into self-employment by creating opportunities for some form of human capital transfer. Results suggest that having a husband with some exposure to self-employment nearly doubles the probability that a woman will become self-employed. Further, the effect is found to be strongest if the husband is actually self-employed at the time his wife is contemplating a transition.

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1. Introduction

Self-employed women make up an ever-increasing segment of the American labor force, reflecting both increased labor force participation as well as greater entry to self-employment. Recent research by Devine (1994a and 1994b) shows that the self-employment rate among women increased from 4.1 percent in 1975 to 6.7 percent in 1990. Devine's results suggest that one of the primary causes of this increase is the presence of a self-employed spouse; a working wife is nearly four times as likely to be self-employed if her husband is also self-employed.

What causes higher self-employment rates for married women with self-employed husbands? The most plausible explanations have received relatively little attention in recent research.[1] First, marriage could be a sorting mechanism with respect to self-employment potential. That is, those who are likely to become self-employed are likely to marry a similarly inclined person. Second, self-employed couples might just be operating family businesses. While these first two possibilities are addressed to a limited extent in this paper, I focus on a third possibility, that the presence of a self-employed spouse might enable intra-family flows of financial or human capital, thereby easing a woman's transition into self-employment.

2. Data and Empirical Specification

I use data from the 1970 through 1991 waves of the Panel Study of Income Dynamics (PSID) in this study. Self-employment status can be determined in all years of the panel for husbands but only in 1976 and from 1979 to 1991 for wives, leaving fourteen years of data over

which the self-employment status of both husbands and wives can be observed. In order to capture all self-employment experience and to maximize sample sizes, an individual is considered to be self-employed if she reports working for herself or for herself and someone else. Observations for married women are kept in years when they are between the ages of 25 and 54, not in the Survey of Economic Opportunity oversample of lower-income households, and no longer in school.

The result is a sample of 3,330 married couples with labor market experience during the period. Table 1 presents a first look at their self-employment experiences. Note first that about one-fourth of the wives and one-third of the husbands were self-employed at least once during their time in the panel. Next, of the women with self-employment experience, about half have husbands who were ever self-employed. A closer look at the table reveals the more interesting result: married women are nearly twice as likely to have some self-employment experience if their husbands have ever been self-employed (34 versus 19 percent). If a husband's self-employment experience increases the probability that his wife will become self-employed, higher self-employment rates should exist for women whose husbands were self-employed in any *previous* year. The data support this assertion, as Figure 1 shows that women are consistently more likely to be self-employed if their husbands have been self-employed in some prior year.

The longitudinal nature of the PSID data permit a wide array of estimation strategies to investigate this question in a multivariate context. In order to focus on the dynamics of the self-employment process, I examine transitions into self-employment in the spirit of Dunn and Holtz-Eakin (1996) rather than simply whether or not women are self-employed at a given point in time. For each year, I create an indicator for transitions into self-employment, where unity

represents a move from not working or working in a wage-and-salary job in year *t* to self-employment in year *t+1*. A zero represents transitions from not working or wage-and-salary employment to wage-and-salary employment.[2] Women contribute as many observations as the number of years they are observed in the panel, minus one.[3] Data availability and the pooling procedure result in a sample of 11,700 person-years of transition data.

The empirical estimation involves a probit of this transition indicator on a number of independent variables including age (in quadratic form), indicators for educational attainment, part-time work, the husband's race and labor earnings, and the number of children under age 18 in the household. Most importantly, the husband's self-employment is captured in three distinct indicators which are entered separately in the probits: whether he was ever self-employed up to and including the initial period of the transition, whether he is actually self-employed in the initial period, and whether he is ever self-employed at all in the panel. Finally, other authors have explained the importance of financial constraints and the access to capital in the self-employment decision.[4] I control for the effect of financial capital availability by also controlling for the family's wealth as measured by household non-business capital income. Definitions and means for all independent variables are found in Table 2.[5]

3. Estimation Results

Table 2 also presents the resulting probit and marginal effects coefficients for four probits that differ in the way the husband's self-employment status is measured. The marginal effects coefficients reflect the change in the mean predicted probability of becoming self-employed given a small change in that particular variable (from 0 to 1 in the case of dummy variables). For

all specifications, age is found to affect the probability of entering self-employment in a u-shaped manner, reaching a minimum at about age 40. College graduates (with no further education), women with black husbands, and those working part-time are less likely to enter self-employment, while having more children in the household increases the probability of entry. The husband's labor earnings play a small yet significant role; a $33,000 increase would raise the transition probability by only one percent.

As noted above, one common finding in the self-employment literature is the importance of financial capital in the transition to self-employment. It is interesting to note in Table 2, however, that household income from capital plays an insignificant role when the husband's self-employment variables are added, indicating that having a self-employed husband primarily affects a woman's transition probability in non-financial ways. Specifically, if the husband is self-employed at time *t*, the wife's probability of entry at time *t+1* increases by 6.5 percentage points. This effect is especially large in comparison to the transition probability of 5.5 percent in the sample.

Comparing the results in column 2 to those in columns 3 and 4 shows that the effect of a husband's self-employment is largest if he is actually self-employed when the wife is contemplating the transition. Having a husband that was self-employed at any time *before t+1* increases a woman's transition probability by about 3.4 percent, while having a husband with any self-employment experience *at all* during the panel increases her probability of entry by about 3.6 percentage points. Further, the introduction of controls for the husband's self-employment has virtually no effect on the other independent variables.

4. Robustness Checks

While it is tempting to interpret the insignificance of capital income as evidence that a liquidity constraint does not exist, such a conclusion contradicts much of the previous literature. Perhaps it is the case that asset income at time *t* is lower than usual as a woman prepares to enter self-employment. To investigate this possibility, I performed a parallel analysis using a lagged capital income variable. Column 1 of Table 3 presents partial results from three separate probits using this lagged variable. Capital income (from period *t-1*) becomes statistically significant, but coefficients on the husband's self-employment variables are essentially unchanged.[6]

It should be noted that the baseline results in Table 2 allow re-entry into self-employment. However, having a husband with self-employment experience might be of greatest importance in a woman's first observable transition into self-employment. Column 2 of Table 3 contains results from three probits in which only first transitions into self-employment are included. While the magnitudes of these coefficients are smaller than the baseline results, the effects are still large compared to the 3.7 percent transition probability in this sample. A woman is still almost two times as likely to become self-employed if her husband is also self-employed.

Recall that a possible explanation for significant coefficients on the husband's self-employment indicators is that husbands and wives who report being self-employed are simply operating a family business together. The definition of self-employment in this study allows this to occur, as a respondent can be working for someone else and herself and still be considered self-employed. The discussion thus far has not considered this possibility. While no consistent indicator for family businesses exists in the PSID, the data allow the investigation of this possibility to a limited extent. Specifically, if one believes that a husband and wife who run a

family business are likely to report identical occupations or industries in year *t+1*, these pairs can be identified and eliminated from the analysis. Also, to the extent that identical occupations or industries reflect similar tastes, this exercise indirectly addresses the issue of assortive marriage--that a woman who is likely to enter self-employment is likely to marry a similarly-inclined man. Columns 3 and 4 of Table 3 report the results from this exercise.[7]

These final two columns eliminate observations for married pairs with identical post-transition occupation or industry codes, respectively. While the effects of having a husband with self-employment experience are somewhat smaller, they remain large relative to the sample probabilities. The smaller coefficients indicate the possibility that family businesses are conduits for entry to self-employment, but the continued significance suggests that some human capital transfer may be occurring from husband to wife beyond this effect. A woman is still substantially more likely to enter self-employment if her husband has had some self-employment experience in some other occupation or industry.

5. Conclusions

This study investigates the possibility that a husband's self-employment experience creates opportunities for some type of human capital transfer that might ease a wife's entry into self-employment. Pooled transitional probit analysis indicates that husbands play a large role in this transition. A non-working or wage-and-salary wife is nearly twice as likely to enter self-employment in any year if her husband was self-employed in the previous year, all else equal. The effect of having a husband with self-employment experience prior to the initial period or at any time during the panel is slightly smaller but highly significant.

The most obvious direction for future research would be to investigate the effects of a married *woman's* self-employment experience on the probability that her *husband* will enter self-employment. It would also be interesting to eliminate the one-sided structure of the decision making process by estimating some form of a joint model. Allowing for simultaneous transitions presents a new set of empirical issues, but it could provide more interesting results. An equally interesting undertaking would be to examine similar spouse effects on measures of success in self-employment, such as earnings or duration in self-employment.

Notes

1. MacPherson (1988), Blank (1989), and Silver, Goldscheider, and Raghupathy (1994) are among the studies that have examined female self-employment. None of these consider the effects of having a self-employed husband, however.

2. Approximately 57 percent of the transitions into self-employment in this analysis are made by women who are not working in the year prior to their transition. Empirical results are not affected by including these transitions, however, so they are kept in the interest of increasing regression sample sizes.

3. Since individuals may have more than one observation in each probit, standard errors are corrected for heteroscedasticity using Huber's (1967) formula.

4. Research by Evans and Leighton (1989), Evans and Jovanovich (1989), and Meyer (1990) reveals the presence of liquidity constraints in the transition to self-employment. Blanchflower and Oswald (1990) and Holtz-Eakin, Joulfaian, and Rosen (1994a and 1994b) have also shown the importance of the availability of financial capital in the transition to self-employment.

5. The capital income variable represents the total taxable income of the head and spouse less their labor income. Income from non-incorporated business assets is excluded from this variable, while other family members' asset income is included. All reported statistics are unweighted. The PSID provides annual individual weights, but it is not clear how they could be used to render this reduced sample of married women more nationally representative.

6. Marginal effects coefficients for the lagged capital income variable in these probits indicate that a windfall gain of approximately $15,000 would be necessary in order to increase a woman's transition probability by one percent. Patterns of significance for all other variables are unchanged from baseline results. A full set of results for this and all other robustness checks reported in Table 3 is available from the author.

7. Of all transitions to self-employment in this study, about 8.8 (18.9) percent involve wives who enter the same three-digit occupation (industry) as their husbands.

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Figure 1: Self-Employment Rates for Working Married Women in the PSID

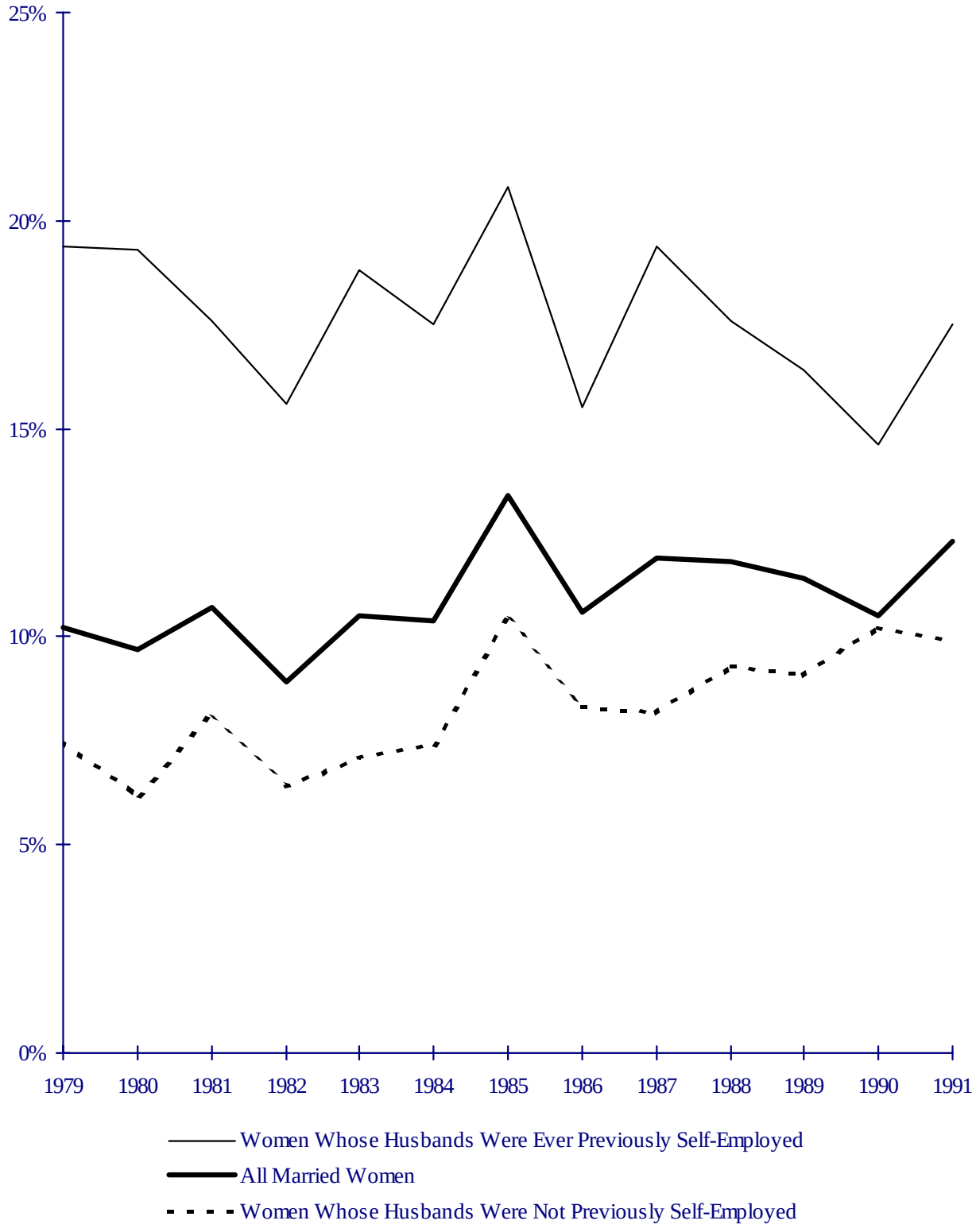

Table 1: Self-Employment Experience Among Married Couples

	Husband Never Self-Employed	Husband Ever Self-Employed	Totals
Wife Never Self-Employed			
N	1832	709	2541
Row %	72%	28%	100%
Column %	81%	66%	76%
Table %	55%	21%	
Wife Ever Self-Employed			
N	426	363	789
Row %	54%	46%	100%
Column %	19%	34%	24%
Table %	13%	11%	
Totals			
N	2258	1072	3330
Row %	68%	32%	
Column %	100%	100%	

Notes: Husbands and wives who are never self-employed in this table do, however, exhibit some form of labor market experience in the panel.

Source: Author's calculations using the Panel Study of Income Dynamics.

Table 2: Pooled Transition Probit Results

Variable	Mean (Std. Dev.)	1	2	3	4
Age	35.641	-0.068*	-0.078**	-0.083**	-0.083**
	(7.889)	[-0.007]	[-0.008]	[-0.009]	[-0.009]
Age Squared	1332.528	0.000867*	0.000957*	0.001022**	0.001033**
	(594.617)	[0.000092]	[0.000095]	[0.000105]	[0.000106]
Less Than High School †	0.085	-0.023	0.005	-0.003	-0.009
	(0.278)	[-0.002]	[0.001]	[-0.000]	[-0.001]
Some College †	0.242	-0.095	-0.079	-0.094	-0.091
	(0.428)	[-0.010]	[-0.008]	[-0.009]	[-0.009]
College Graduate †	0.174	-0.193*	-0.197*	-0.192*	-0.196*
	(0.379)	[-0.018]	[-0.018]	[-0.018]	[-0.018]
Post-College Education †	0.136	-0.010	-0.024	-0.019	-0.023
	(0.343)	[-0.001]	[-0.002]	[-0.002]	[-0.002]
Husband is Black †	0.058	-0.428**	-0.522**	-0.403**	-0.386**
	(0.233)	[-0.033]	[-0.354]	[-0.031]	[-0.030]
Husband's Earnings	26.480	0.0029**	0.0023*	0.0028**	0.0028**
($1,000s)	(21.206)	[0.0003]	[0.0002]	[0.0003]	[0.0003]
Capital Income	1.306	0.0053*	0.0031	0.0041	0.0041
($1,000s)	(7.239)	[0.0006]	[0.0003]	[0.0004]	[0.0004]
Part-Time †	0.482	-0.147**	-0.169**	-0.148**	-0.147**
(52 to 1,820 hours)	(0.500)	[-0.016]	[-0.017]	[-0.015]	[-0.015]
Number of Children	1.315	0.099**	0.110**	0.095**	0.097**
Under 18 in Household	(1.152)	[0.010]	[0.011]	[0.010]	[0.010]
Husband Self-Employed	0.163		0.493**		
in Year t †	(0.370)		[0.065]		
Husband Self-Employed	0.311			0.299**	
Before Year t+1 †	(0.463)			[0.034]	
Husband Self-Employed	0.382				0.330**
in Any Panel Year †	(0.486)				[0.036]
N		11,700	11,143	11,700	11,700
Sample Transition Probability		0.055	0.055	0.055	0.055

Notes: Entries are probit coefficients with marginal effects coefficients in brackets. Marginal effects for dummy variables are calculated as the change in predicted probability when that variable is increased from 0 to 1 with all other variables at their mean values. Regressions also include indicators for the year of the observation and a constant term.

† = Dummy Variable.

* = Statistically significant at the 5% level

** = Statistically significant at the 1% level.

Table 3: Robustness Checks

Variable	1 Replace capital income in year t with capital income in year t-1	2 Include first transitions into self-employment only	3 Eliminate transitions into self-employment for pairs with identical occupation codes in year t+1	4 Eliminate transitions into self-employment for pairs with identical industry codes in year t+1
Husband Self-Employed in Year t	0.501** [0.066]	0.356** [0.031]	0.404** [0.048]	0.194** [0.019]
Husband Self-Employed Before Year t+1	0.298** [0.034]	0.179** [0.014]	0.245** [0.026]	0.108* [0.010]
Husband Self-Employed in Any Panel Year	0.331** [0.036]	0.230** [0.017]	0.257** [0.026]	0.137** [0.013]
Sample Probability	0.055	0.037	0.051	0.045

Notes: Each column in this table contains results from three separate probits. Entries are probit coefficients with marginal effects coefficients in brackets. Marginal effects for dummy variables are calculated as the change in predicted probability when that variable is increased from 0 to 1 with all other variables at their mean values. Regressions also include indicators for the year of the observation and a constant term, as well as the full set of control variables in Table 2.

* = Statistically significant at the 5% level

** = Statistically significant at the 1% level.