Mothers' Self-Employment and Behavioral Outcomes Among Young Children

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Background

Over the past two decades, the number of women who are self-employed has increased significantly, in both absolute terms and relative to men. For example, between 1979 and 2003, the number of self-employed women more than doubled, from 1.7 million to 3.8 million (Fairlie, 2004). In contrast, the number of men who were self-employed increased from 6.0 million to 8.3 million, or by 38%. In addition, women's share of total self-employment increased from 22.5% in 1979 to 31.5% in 2003.

Research evidence suggests that, in contrast to men, women may enter self-employment largely to balance work and family responsibilities (Taniguchi, 2002; Carr, 1996; Boden, 1996; Boden, 1999). For example, Boden (1999) finds a highly significant effect of having young children on women's likelihood of being self-employed, but no statistically significant effect on men's likelihood. Also, Taniguchi (2002) finds that the number of children in the household older than six--though not the number under six--increases women's rate of transition from non-employment to self-employment.

In addition, Budig (2006a) finds that different factors explain women's entry into professional versus nonprofessional self-employment. For example, her analysis shows that while marriage encourages women's entry into both types of self-employment, children only encourage entry into non-professional self-employment. In addition, working in a job with an irregular shift increases the likelihood of non-professional employment, while working in a job with health or life insurance reduces it; however, neither of these variables is related to the likelihood of professional self-employment. These findings suggest that women enter non-professional self-employment both to escape "bad" jobs and to balance work and family responsibilities.

However, there is evidence that while women may gain flexibility in balancing work and family through self-employment, they may also lose income. For example, Ferber and Waldfogel (2000) and Budig (2006b) find that while men earn more in self-employment than in wage and salary employment, women earn less on average. In addition, Budig (2006b) finds that the negative association between women's self-employment and earnings appears to occur solely among women in nonprofessional occupations, and especially childcare. Williams (2000) similarly finds that, for women, the return to self-employment experience is less than the return to wage and salary sector experience; among men, however, the returns to experience in the two sectors are similar. In contrast, Bruce and Schuetze (2004) find some evidence of negative returns to self-employment experience for men, but little evidence of negative returns for women.

Finally, the self-employed, both men and women, are less likely to have health insurance and other benefits (Ferber and Waldfogel, 2000).

These findings have contrasting implications for the well-being and development of children whose mothers are self-employed, relative to those whose mothers are employed in the wage and salary sector. On the one hand, an increase in a mother's ability to balance work and family responsibilities should have positive impacts on her children, stemming for example from the ability to spend more time in direct engagement and positive activities with her children. On the other hand, decreased income and lower likelihood of health and other benefits may result in the reduced availability of resources that contribute to children's development.

To the author's knowledge, no existing research has examined the impact of mothers' self-employment on their children. In addition, little of existing research has

focused on self-employment among low-income women. At the same time, the increased focus of U.S. anti-poverty policies on the encouragement of work among poor and low-income mothers, and on employment-based remedies such as the Earned Income Tax Credit, heightens the need for the development of strategies to assist such mothers in both achieving self-sufficiency and successfully balancing work and care giving responsibilities. Self-employment represents one such potential strategy and, indeed, microenterprise programs to encourage self-employment among low-income individuals have proliferated (Sherraden et al., 2004). These developments suggest a need to better understand the determinants and consequences of self-employment for low-income women and their children.

As a beginning step towards understanding these issues, this paper addresses the following questions: 1) What proportion of urban, primarily unmarried, mothers identify themselves as self-employed, either as a primary or secondary job? 2) What proportion of those self-employed work in their own formal businesses vs. work informally? How do these two groups of mothers differ from each other? 3) How are various factors--such as marital or relationship status, number of children, household income, children's health, and mother's level of education—related to the likelihood that mothers are self-employed? and 4) How do the behavioral outcomes of children whose mothers are self-employed (formally or informally) compare to those of children whose mothers are employed in the wage/salary sector or not at all?

The next two sections of the paper discuss the data employed to address these questions, and present a description of the sample and measures used. The following two sections describe the analytical methods and present the results of the analysis. The final

section presents a summary, discusses some of the limitations of the analysis and discusses a path for future research.

Data

Data for this study are drawn from the Fragile Families and Child Well-Being Study, which has been following new mothers (3,712 unmarried and 1,186 married), their partners and a target child in 20 U.S. cities, with populations of at least 200,000, since 1998-2000. In this study, mothers were first interviewed in the hospital, shortly after the focal child was born. Follow-up interviews were conducted when the focal child was one, three and five years old. In each year, between 85-89% of the mothers interviewed at baseline were reinterviewed. Each of the follow-up surveys contains information on mothers' current and past year employment, earnings, household structure, and background characteristics. In addition, mothers were asked about the focal child's behavior when the child was one and five years old.[1]

Sample and Measures

The primary sample for the analysis in this paper consists of all mothers who were interviewed when the focal child was five years old (N=4,139). However, some comparison data on employment status is also presented for mothers who were interviewed when the focal child was one and three years old. Once cases with missing data for the variables used in the analyses are excluded, the final sample sizes range from 3,193 to 3,217.

[1] In addition, a separate in-home survey that included assessments of children's behavior and cognitive development was conducted with a subsample of mothers and children when the children were aged 3 and 5. Approximately 79 percent of the mothers who participated in the age 3 core survey also participated in the in-home survey. Also, approximately 72% of the respondents to the age 5 survey participated in the in-home survey. These data will be utilized in future analyses.

Child behavior at age five was measured with an abbreviated version of the Child Behavior Checklist (CBCL) (Achenbach, 1991; Achenbach, 1992). The CBCL asks mothers to report if it is *not true, somewhat or sometimes true, or very true or often true* that her child behaves in certain ways. Three subscales were derived from the answers to these items: anxious/depressive, withdrawn and aggressive behavior. To compute scores on each subscale, responses to each item were summed. The anxious/depressive score ranged from 0 to 16, the withdrawn score ranged from 0 to 10, and the aggressive score ranged from 0 to 6. Higher scores indicated greater behavioral problems.

The primary independent variable of interest is mother's self-employment status, both formal and informal.

In each round of the Fragile Families survey, mothers were asked whether they were employed in the week prior to the survey, and whether they worked for themselves or someone else. Mothers who said they worked for themselves will be referred to as being formally self-employed, while those who worked for someone else will be referred to as wage employed. Mothers who did not work in the week prior to the survey were asked when they last worked at a job lasting two weeks or more, and whether that job involved working for themselves or someone else. Answers to these questions were used to create a variable indicating whether each mother was engaged in formal self-employment or wage employment in the year prior to each survey.[2]

[2] The question that is used to categorize mothers as self- or wage employed references the current or most recent job. Thus, it is possible that some mothers who report, for example, working for themselves in their current or most recent job may have also held a previous job in the same year in which they worked for someone else. However, because the data do not contain information on previous jobs held during the same year, mothers are categorized according to their current or most recent job only.

In a separate section of the Fragile Families survey, mothers were also asked about ways, other than "regular, paid work", in which they earned income. As part of this, they were asked whether, in the past 12 months, they had worked "in their own business". Answers to these questions were used to create a variable indicating whether a mother was informally self-employed in the year prior to each survey.[3]

Finally, some mothers indicated that they had worked for someone else in the first section of the survey (i.e. that covering regular, paid employment), but also indicated informal employment in the second section. These mothers were coded as having engaged in both wage and informal self-employment.

Additional explanatory variables employed in the analysis included race/ethnicity, place of birth (U.S. vs. other), relationship status (married, cohabiting, or other), number of children, household income, educational level, enrollment status, focal child's health, and mother's health.

Analysis

The analysis begins with a descriptive summary of the distribution of mothers across wage employment, wage and informal self-employment, formal self-employment only, informal self-employment only, or non-employment in each survey year. I then examine the extent to which these five groups of mothers differ from one another with respect to race/ethnicity, place of birth, relationship status, number of children, household

[3] The survey also asked mothers whether they worked off the books or under the table. In addition, mothers who indicated working either in their own business or under the table were also asked to specify the nature of their work. In many cases, these open-ended responses were similar across women who reported work in their own business or work under the table; for example, a large number of mothers reported doing hair or childcare. Consequently, the decision was made to code mothers with similar responses as informally self-employed, whether they reported this work under as "own business" or "under the table". However, mothers who reported professional employment or work for an employer were not coded as being informally self-employed.

income, educational level, enrollment status, focal child's health, and mother's health. Finally, I compute descriptive statistics in order to examine the extent to which the focal child's behavior at age five, as reported by the mother, differs with the mother's employment status in the year prior to the age five survey.

Next, in order to examine the relationship between mothers' employment status and the focal child's behavior at age five, I conduct OLS regression analyses of the focal child's age five scores on the anxious/depressed, withdrawn and aggressive behavior scales. I estimate two sets of models. The first set of models excludes characteristics of the mother and child, and provides a set of baseline estimates of the relationship between mothers' employment status and the focal child's behavioral scores. The second set of models contains controls for race/ethnicity, place of birth, relationship status, number of children, household income, educational level, enrollment status, focal child's health, and mother's health. With the exception of the race/ethnicity, place of birth, and educational level variables, which are measured at baseline, all of the control variables are taken from the survey that was conducted when the child was age three.

Results

Table 1 shows that, in the first year following the birth of the focal child, almost two-thirds of the mothers were employed in the wage sector only. In addition, five percent of mothers reported that they had worked for someone else in their current or most recent job, but had also worked for themselves in the past 12 months, either in their own business or under the table. Another six percent reported working only for

Table 1

Mothers' Regular/Informal Employment Status in the Year Prior to the Survey

	FOCAL CHILD'S AGE AT TIME OF SURVEY		
	ONE	**THREE**	**FIVE**
Mothers' Employment Status:			
Wage Employed Only	.65	.70	.71
Wage and Self-Employed (Informal)	.05	.07	.04
Self-Employed (Formal) Only	.03	.04	.05
Self-Employed (Informal) Only	.03	.02	.01
Not Employed	.25	.17	.18
N	4301	4112	4030

themselves, about half in formal self-employment and half in informal self-employment. Overall, 75 percent of the mothers were employed in some capacity.

Table 1 also shows that, over time, the proportion of mothers employed in the wage sector only increases somewhat by the time the focal child is age five, as does the proportion engaged in formal self-employment only. However, the proportion engaged in informal self-employment only declines.

Table 2 compares the background characteristics of mothers engaged in wage employment only, wage and informal self-employment, formal self-employment only, and informal self-employment only, as well as those who were not employed at all. Employment status in this table was measured in the year prior to when the focal child was aged five.

The results in Table 2 show that the relationship status of mothers differed across the five employment categories. In particular, mothers who were self-employed—

Table 2

Mother's Characteristics, by Regular/Informal Employment Status (Focal Child Aged Five)

	WAGE EMPLOYED ONLY	WAGE & SELF-EMPLOYED (INFORMAL)	SELF-EMPLOYED (FORMAL) ONLY	SELF-EMPLOYED (INFORMAL) ONLY	NOT EMPLOYED	TOTAL
Race/Ethnicity:[a]						
Black	.52	.69	.38	.47	.38	.49
White/Oth	.23	.17	.41	.33	.28	.25
Hispanic	.26	.14	.21	.19	.34	.26
Born Outside U.S.[a]	.13	.08	.17	.19	.22	.15
Relationship Status:[a]						
Married	.32	.37	.50	.61	.43	.35
Cohabiting	.27	.19	.26	.21	.26	.26
Other	.42	.44	.24	.18	.31	.38
Number of Children:[a]						
One	.21	.20	.12	.16	.08	.18
Two	.35	.38	.39	.35	.30	.34
Three	.23	.23	.30	.21	.29	.24
Four+	.22	.19	.20	.28	.33	.24
Household Income	$36,888	$37,711	$55,017	$48,968	$29,970	$36,781
Education:[a]						
<HS	.30	.27	.28	.26	.48	.33
HS	.33	.27	.25	.26	.26	.31
Some college	.27	.32	.28	.25	.15	.25
College grad	.10	.14	.20	.23	.11	.11
Currently enrolled	.20	.30	.18	.19	.13	.19
Focal child-fair/poor health	.02	.02	.03	.00	.04	.02
Mother-health problem	.07	.14	.08	.16	.20	.10

[a]Chi-square significant at 5% or less.

whether formally or informally—were more likely to be married. For example, 61 percent of mothers who reported that they were informally self-employed only were married, compared to 35 percent of the sample as a whole. On the other hand, mothers who were formally or informally self-employed were about as likely as other mothers to be cohabiting, but less likely to be single or in a non-cohabiting relationship.

Table 2 also shows that mothers who were self-employed, both formally and informally, were more likely to be college graduates. For example, 23 percent of mothers who said they were informally self-employed only were college graduates, compared to 11 percent of the sample as a whole. This result is also partially reflected in the differences in household income across the five employment categories, with the highest incomes reported among mothers who were formally self-employed, followed by those who were informally self-employed.

Finally, Table 2 shows differences in demographic characteristics and health status among mothers in the five employment categories. In particular, mothers who reported themselves to be formally self-employed were more likely to be white or other, and less likely to be black or Hispanic. In addition, mothers who reported that they were combining wage and informal self-employment were more likely to be black, and less likely to be white/other or Hispanic. Also, those who were informally self-employed were somewhat less likely to be Hispanic. Finally, mothers who were informally self-employed, as well as those who were not employed at all, were more likely to report having a health problem that limited their work activity.

Table 3

Child Behavior Scores at Age Five, by Mother's Employment Status in Prior Year

	Anxious/Depressed	Withdrawn	Aggressive
Mother's Employment Status:			
Wage Employed Only	2.82 (2.30)	1.40 (1.48)	1.54 (1.40)
Wage and Self-Employed (Informal)	3.03 (1.94)	1.48 (1.46)	1.60 (1.32)
Self-Employed (Formal)	2.39 (2.07)	1.39 (1.48)	1.33 (1.31)
Self-Employed (Informal)	3.33 (2.73)	1.59 (1.39)	1.59 (1.51)
Not Employed	3.05 (2.63)	1.66 (1.79)	1.68 (1.56)

Table 3 shows the average behavior scores of the focal children at age five, according to the mother's employment status in the year preceding the age five survey. For each behavioral category, higher scores indicate greater behavioral difficulties. In all three categories, the table shows that the scores were lowest for the children of mothers who reported that they formally self-employed only, followed by the children of mothers who were wage employed only. Also, in all three categories, the highest scores were obtained for those children whose mothers were not employed in the year prior to the survey.

Table 4 presents the results of an OLS regression analysis of the focal child's behavior scores at age five, excluding any controls for mother or child characteristics. Consistent with the results in Table 3, the coefficient estimates in Table 4 show that, in all three categories, mother's formal self-employment is negatively and significantly related to the focal child's behavior score. In addition, the same is true for mother's wage

Table 4

Regression Analysis of Child Behavior at Age 5: Baseline Results

	ANXIOUS/ DEPRESSED	WITHDRAWN	AGGRESSIVE
Mother's Employment Status in Prior Year:			
Wage Employed	-.22* (.11)	-.26** (.07)	-.14* (.06)
Wage & Informally Self- Employed	-.02 (.21)	-.18 (.14)	-.08 (.13)
Self-Employed (Formal)	-.65** (.21)	-.27* (.14)	-.35** (.13)
Self-Employed (Informal)	.28 (.34)	-.07 (.22)	-.09 (.21)
Not Employed (omitted)	--	--	--
N	3398	3406	3425
R^2	.004	.004	.003

∧ $p < .10$, * $p < .05$, ** $p < .01$.

employment, although the coefficients on mother's formal self-employment are larger (i.e. more negative), particularly for the anxious/depressed and aggressive scores.

Table 5 provides estimates of the relationship between mothers' employment status and the focal child's behavior scores, controlling for mother's race/ethnicity, place of birth, relationship status, number of children, household income, educational level, enrollment status, and health, as well as the focal child's health.

The results show that, after taking account of differences in mother and child characteristics, the coefficient on mother's formal self-employment is reduced (i.e. becomes less negative), but remains statistically significant in the case of the focal child's anxious/depressed and aggressive scores.

Table 5

Regression Analysis of Child Behavior at Age 5: Full Model

	ANXIOUS/ DEPRESSED	WITHDRAWN	AGGRESSIVE
Mother's Employment Status in Prior Year:			
Wage Employed	-.07 (.11)	-.13^ (.07)	-.07 (.07)
Wage & Self-Employed (Informal)	.21 (.22)	-.01 (.14)	.04 (.13)
Self-Employed (Formal)	-.44* (.22)	-.23 (.14)	-.30* (.13)
Self-Employed (Informal)	.49 (.37)	.08 (.24)	.13 (.22)
Not Employed (omitted)	--	--	--
Race/Ethnicity:			
Black	-.14 (.11)	-.24** (.08)	-.27** (.07)
Hispanic	-.05 (.14)	-.21* (.09)	-.26** (.07)
Other	-.26 (.25)	-.21 (.16)	-.15 (.15)
White (omitted)	--	--	--
Born Outside U.S.	.36** (.14)	.33** (.09)	.12 (.09)
Relationship Status:			
Married	-.45** (.11)	-.25** (.08)	-.25** (.07)
Cohabiting	-.03 (.10)	-.03 (.07)	-.05 (.06)
Other (omitted)	--	--	
Number of Children	.01 (.03)	.06** (.02)	.02 (.02)
Household Income ($000)	-.002^ (-.001)	-.001^ (.000)	-.001^ (.000)
Education:			
<High School (omitted)	--	--	--
High School grad	-.19^ (.11)	-.03 (.07)	-.08 (.06)
Some college	-.53** (.12)	-.28** (.08)	-.21** (.07)
College grad	-.35* (.17)	-.17 (.11)	-.26* (.11)
Currently enrolled	.03 (.10)	-.00 (.07)	-.01 (.06)
Focal child-- fair/poor health	1.41** (.29)	.89** (.19)	.51** (.18)
Mother--health problem limits work	.59** (.15)	.18^ (.10)	.25** (.09)
N	3193	3201	3217
R^2	.04	.04	.03

In addition, the results also show that the children of married mothers, mothers with higher incomes, and mothers with more education have fewer behavioral difficulties; all of these results are consistent with previous research on the correlates of behavioral problems among young children.

Finally, the results show that both the focal child's health and the mother's health are positively and significantly related to the child's behavior scores, suggesting that poorer health on the part of mother and/or child increases behavioral difficulties.

Summary and Future Research

The analyses in this paper suggest that mothers' formal self-employment is associated with fewer behavioral difficulties among young children, even after controlling for differences between mothers engaged in different types of employment. This result is consistent with the hypothesis that mothers enter into self-employment in order to better balance work and family responsibilities, and that the ability to do so leads to benefits for children. However, it is possible that there remain unobserved differences between mothers who engage in formal self-employment and those who engage in other types of employment, and that it is these differences that account for better outcomes among their children.

Accordingly, future analyses will further explore differences between formally self-employed and other mothers. In particular, it will be important to consider whether there are differences across mothers with respect to mothers' involvement with their children, *prior* to entry into formal self-employment.[4] For example, it may be that mothers who are inclined to be more involved are also more inclined to pursue formal

[4] A measure of this variable is available in the Fragile Families data.

self-employment. Thus, if greater maternal involvement results in better behavioral outcomes for children, the relationship between formal self-employment and child behavior would be due to this underlying mechanism, and not to an independent effect of formal self-employment.

It will also be important to consider whether there are differences in the circumstances of formally self-employed versus other mothers, particularly with respect to self-reported work flexibility and parenting stress.[5] If, for example, mothers do enter self-employment to balance work and family responsibilities, one might expect to find differences between formally self-employed and other mothers with respect to their perceptions of their current work flexibility. The same may hold true with respect to differences in perceptions of parenting stress. Finally, it might also be fruitful to consider the relationship between work flexibility, parenting stress and maternal involvement following entry into formal self-employment.

Finally, it is not clear, at this juncture, why formal self-employment might have positive benefits for children, while informal self-employment does not. Delving further into this question, by looking at differences in the reported occupations and working conditions of mothers engaged in formal and informal self-employment, might shed some additional light on the nature of the estimated relationship between mothers' formal self-employment and children's behavioral outcomes.

[5] Measures of these variables are also available in the Fragile Families data.

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