The Occupations of Free Women and Substitution with Enslaved Workers in the Antebellum United States

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Abstract:

This paper analyzes the occupational status and distribution of free women in the antebellum United States. It considers both their reported and unreported (imputed) occupations, using the 1/100 IPUMS files from the 1860 Census of Population, the only Census that asked free women's occupations while slavery was legal. After developing and testing the model based on economic and demographic variables used to explain whether a free woman has an occupation, analyses are conducted comparing their occupational distribution to free men, along with analyses among women by nativity, literacy, urbanization, and region of the country. While foreign-born and illiterate women were more likely to report having an occupation compared to their native-born and literate counterparts, they were equally likely to be working when unreported family workers are included. In the analysis limited to the slave-holding states, it is shown that the greater the slave-intensity of the county, the less likely were free women to report having an occupation, particularly as private household workers, suggesting substitution across occupations in the labor market between free women and enslaved labor.

1860 Census of Population

- Completed before start of US Civil War, April 1861

- PUMS – microdata – 1/100 sample
  - Complete count sample does not include the string variables used in this analysis

- Schedule 1 – Free Inhabitants

  Schedule 2 – Enslaved Inhabitants

- Inferences as to relationships among household members, based on gender, age, surnames, order (University of Minnesota, Minnesota Population Center)

- Occupation: First asked for men – 1850 Census

  First asked for women – 1860 Census
  - 1860 Census: Only Census with data on female occupations and enslaved people (no data on their occupations or work activities)

- Reported and Unreported (Family Workers) occupations analyzed

- First econometric analysis of female labor markets using 1860 Census microdata

Unreported Family Workers [1]:

- Persons age 16 and older

- No gainful occupation was reported in the Census or ACS

- Currently living in a household in which a relative (typically a parent or spouse) is self-employed – farm, merchant, craft, or boarding house business.

- Not disabled.

[1] Concept developed in Chiswick and Robinson, "Women at Work in the United States since 1860: An Analysis of Unreported Family Workers," *Explorations in Economic History*, 2021

Table 1

Occupational Distribution of Free Persons by Gender and Urban/Rural Residence,
Age 16 and Older, 1860, in Percents

Occupation Category	Males	Females	Males in Urban Areas	Females in Urban Areas	Males in Rural Areas	Females in Rural Areas
All Reported Occupations	87.6	15.7	90.9	23.0	86.6	13.2
PTK	2.8	1.0	3.8	1.0	2.5	1.0
Farmers	31.5	1.3	2.0	0.0	40.1	1.8
Managers	4.9	0.3	10.9	0.6	3.2	0.2
Clerical	0.5	0.0	1.7	0.1	0.2	0.0
Sales	2.4	0.1	7.0	0.3	1.0	0.0
Craft	15.1	0.6	29.2	1.6	11.0	0.3
Operatives	8.2	3.4	15.7	7.0	6.0	2.2
Service	1.3	8.4	3.3	12.3	0.7	7.1
Farm Workers	10.4	0.2	1.3	0.0	13.0	0.3
Laborers (non-farm)	10.5	0.3	15.9	0.3	8.9	5.5
All Family Workers	5.6	40.6	1.2	11.3	6.9	50.6
Craft Family Worker	0.1	0.8	0.1	1.3	0.0	0.6
Merchant Family Worker	0.3	3.1	0.6	6.2	0.2	2.1
Farm Family Worker	5.1	35.9	0.2	2.0	6.6	47.5
Boardinghouse Family Worker	0.1	0.5	0.2	1.5	0.0	0.2
Multiple-Job Family Worker	0.1	0.3	0.1	0.4	0.0	0.3
No Occupation	6.8	43.7	7.9	65.7	6.5	36.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Sample Size	81,810	76,746	18,539	19,511	63,271	57,235

Note: PTK is Professional, Technical and Kindred occupations; Farmers includes farm owners, farm tenants, and farm managers; Managers is limited to non-farm managers; Farm Workers includes farm laborers; Laborers is limited to non-farm laborers; "No Occupation" includes housekeeping at home/housewife, imputed keeping house, helping at home, current student, retired, and other non-occupations. Urban/Rural defined by place of residence. Detail may not add to total due to rounding.

Source: 1860 Census of Population, one-in-a-hundred sample, IPUMS, Minnesota Population Center, University of Minnesota, microdata initially released in 1998, current version 2021.

Highlights from Table 1 – Occupational Distribution

- Reported LFPR:
  - For women: 16 percent
  - For men: 88 percent
  - Higher in urban than rural areas, especially for women (23 percent vs. 13 percent)
- Most common reported occupation for those in labor force:
  - For women: half in Service occupations
  - For men: half in agriculture (32 percentage points owners, 10 percentage points farm laborers)
- Unreported Family Workers:
  - Large for women: 41 percent (36 percentage points in farming)
  - Small for men: 5.6 percent (5.1 percentage points in farming)
- Augmented LFPR:
  - For women: 57 percent
  - For men: 93 percent
- Compared to today: about the same for women, lower today for men

Table 3

Logit Analysis of Free Women's Likelihood of Working, by Type of Work, 1860 [a]

	Occupation Reported	Farm Family Worker	Non-Farm Family Worker	All Workers
Age	0.00273***	-0.00445***	0.0000794	0.00273**
	(7.27)	(-9.28)	(0.97)	(3.08)
Age Squared	-0.0000523***	0.0000507***	-0.000000747	-0.0000768***
	(-11.67)	(9.33)	(-0.78)	(-7.42)
Married	-0.218***	0.197***	0.00894***	-0.187***
	(-84.90)	(28.81)	(11.77)	(-33.72)
Number of Children	-0.00119	-0.00120	0.0000392	-0.00195
	(-1.60)	(-1.51)	(0.32)	(-1.34)
Non-White	0.0820***	-0.104***	-0.0241***	0.0685***
	(15.02)	(-8.62)	(-6.94)	(5.04)
Hispanic	-0.0439***	0.0282	-0.00440	-0.110***
	(-3.30)	(1.33)	(-1.41)	(-3.78)
Foreign Born	0.0542***	-0.0470***	-0.00942***	-0.000612
	(21.76)	(-11.48)	(-11.81)	(-0.11)
Student	-0.0731***	0.0548***	0.00774***	-0.105***
	(-16.28)	(10.52)	(6.49)	(-7.90)
Illiterate	0.0344***	-0.0238***	-0.0134***	-0.00945
	(9.73)	(-5.07)	(-8.99)	(-1.12)
Rural Farm HH	-0.0123***	0.480***	-0.0532***	0.847***
	(-4.69)	(32.93)	(-25.80)	(132.29)
Rural Non-Farm HH	-0.0252***	-0.189***	-0.00693***	-0.136***
	(-9.52)	(-24.22)	(-11.14)	(-24.77)
South	-0.0133***	0.00784*	0.00130*	-0.0187**
	(-5.39)	(2.51)	(2.50)	(-3.13)
West	-0.0485***	0.0600***	0.00289*	-0.00181
	(-6.85)	(6.73)	(2.39)	(-0.12)
Midwest	-0.0280***	0.0244***	0.00150**	-0.0165**
	(-10.69)	(7.46)	(2.93)	(-2.74)
Sample Size	76,746	76,746	76,746	76,746
Correctly Classified	85.7%	91.5%	95.5%	82.5%

Note: Logit regression model; coefficients are marginal effects at the mean (MEM); t-statistics in parentheses. ***, **, and * represent statistical significance at the 0.1 percent, 1 percent, and 5 percent levels, respectively.
[a] Dependent variable equals 1 if the individual has the indicated occupational status, otherwise equals 0. Benchmark region is Northeast

Highlights from Table 3 – Regression Results

- Probability of a <u>reported</u> occupation for free women increases with: age, not being married, being non-white, foreign born, illiterate, and living in the Northeast; lower if Hispanic or a student.

- Augmented labor force (includes unreported family workers) similar pattern, except no effect of being foreign born or illiterate.

- Signs of significant variables are generally opposite for reported occupations and unreported family workers.

Slave Intensity

- Number of enslaved people per capita of the free population by county in the southern states

- Constructed variable using population counts for the southern states, by county, for the 1860 Census microdata for free people (Schedule 1) and enslaved people (Schedule 2)

- Slave intensity by state:
  - Lowest: Delaware, 0.013
  - Highest: South Carolina, 1.31

Table 4

Logit Analysis of Free Women's Likelihood of Working, by Type of Work, With Slave Intensity, Southern States, 1860 [a]

	Occupation Reported	Farm Family Worker	Non-Farm Family Worker	All Workers
Age	0.00573***	-0.0120***	-0.0000682	0.00212
	(7.10)	(-8.33)	(-1.15)	(1.42)
Age Squared	-0.0000640***	0.000112***	0.000000669	-0.0000444*
	(-6.84)	(6.86)	(0.95)	(-2.54)
Married	-0.197***	0.325***	0.00359***	-0.0358***
	(-37.74)	(24.21)	(3.85)	(-3.86)
Number of Children	0.00573***	-0.00663**	0.0000335	0.00645**
	(4.40)	(-3.05)	(0.42)	(2.81)
Non-White	0.120***	-0.254***	-0.00878**	0.102***
	(12.93)	(-8.14)	(-3.25)	(6.11)
Hispanic	-0.117**	0.0353	0.0000953	-0.129*
	(-2.99)	(0.42)	(0.05)	(-2.32)
Foreign Born	0.0625***	-0.0646**	-0.00220***	0.00940
	(7.76)	(-2.88)	(-3.31)	(0.75)
Student	-0.0780***	0.101***	0.00304**	0.00250
	(-6.11)	(5.35)	(2.95)	(0.11)
Illiterate	0.0390***	-0.0380***	-0.00437***	0.00425
	(6.51)	(-3.52)	(-3.55)	(0.37)
Rural Farm HH	-0.00454	0.913***	-0.0211***	0.667***
	(-0.65)	(32.00)	(-5.70)	(60.00)
Rural Non-Farm HH	-0.0392***	-0.147***	-0.00317***	-0.135***
	(-5.39)	(-4.64)	(-3.80)	(-12.57)
Slave Intensity [b]	-0.0107**	0.0288***	0.000178	0.00834
	(-3.12)	(5.23)	(1.01)	(1.54)
Sample Size	21,097	21,097	21,097	21,097
Correctly Classified	84.6%	89.4%	96.5%	85.3%

Note: Logit regression model; coefficients are marginal effects at the mean (MEM); t-statistics in parentheses. ***, **, and * represent statistical significance at the 0.1 percent, 1 percent, and 5 percent levels, respectively.

[a] Dependent variable equals 1 if the individual has the indicated occupational status, otherwise equals 0.
[b] Slave Intensity is the number of slaves per capita of the free population in the county of residence.

Source: 1860 Census of Population, one-in-a-hundred sample, IPUMS, Minnesota Population Center, University of Minnesota, microdata initially released in 1998, current version 2021.

Highlights from Table 4 - Slave Intensity in Southern States

- Signs of significant variables largely the same for the South and US as a whole

- Greater slave intensity, lower rate of reported occupation for free women and higher rate of farm family workers. No significant effect for all workers.

Table 5

Logit Analysis of Free Women's Likelihood of Working in a Given Occupation among Those who Reported an Occupation, With Slave Intensity, Southern States, 1860

	Private Household Worker [a]	Textile Worker [b]	Farmer [c]
Age	-0.0177***	0.00516*	0.00502***
	(-5.19)	(2.01)	(4.87)
Age Squared	0.000141***	-0.0000803*	-0.0000395***
	(3.55)	(-2.56)	(-4.30)
Married	0.282***	-0.0267	-0.0691***
	(11.55)	(-1.59)	(-5.36)
Number of Children	-0.0232***	-0.00988*	0.00742***
	(-4.06)	(-2.41)	(4.70)
Non-White	0.203***	-0.179***	-0.0262**
	(6.00)	(-7.00)	(-2.61)
Hispanic	-0.216	0.0533	-0.000230
	(-1.26)	(0.50)	(-0.00)
Foreign Born	0.190***	-0.151***	0.0119
	(5.54)	(-6.72)	(1.06)
Student	0.0355	0.0135	0.00794
	(0.64)	(0.35)	(0.73)
Illiterate	0.0728**	0.00979	-0.00265
	(2.97)	(0.57)	(-0.61)
Rural Farm HH	0.0854**	-0.220***	0.155***
	(2.79)	(-11.64)	(8.70)
Rural Non-Farm HH	0.0793*	-0.0929***	0.0258
	(2.53)	(-4.92)	(1.24)
Slave Intensity [d]	-0.137***	0.0434***	0.00643*
	(-7.32)	(4.83)	(2.20)
Sample Size	3,302	3,302	3,302
Correctly Classified	65.1%	82.1%	90.9%

Note: Logit regression model; coefficients are marginal effects at the mean (MEM); t-statistics in parentheses. ***, **, and * represent statistical significance at the 0.1 percent, 1 percent, and 5 percent levels, respectively.

[a] Dependent Variable: Private Household Worker; Equal to 1 if the individual has a reported occupation as a private household worker (including housekeepers, laundresses, other), 0 otherwise.
[b] Dependent Variable: Textile Worker; Equal to 1 if the individual has a reported occupation in textiles (Tailoresses, Dressmakers, Seamstresses, Milliners, Spinners, and Weavers), 0 otherwise.
[c] Dependent Variable: Farmer; Equal to 1 if the has a reported occupation as a Farmer (owner, tenant, or farm manager), 0 otherwise.
[d] Slave Intensity is the number of slaves per capita of the free population in the county of residence.

Highlights from Table 5 – Specific Occupations

- Reported private household work decreases with age and number of children, but is higher if married, non-white, foreign born, illiterate, and rural resident. Mostly opposite sign for reported textile workers.

- Greater slave intensity: lower probability of reporting private household work and higher probability of reporting textile work.

Summary and Conclusions

- First econometric analysis of the occupational distribution of free females in the antebellum US
    - Free females' occupational status compared with free men, and analyzed by differences in urban/rural residence, literacy, nativity, marital status, and, for the Southern States, the "slave intensity" of the county of residence.

- Most of the variation in women's occupational status and type of occupation explained by location of household (urban/rural, farm/non-farm)

- Demographic variable with the greatest effect on free women's occupational status is marital status

- Most common woman's reported occupation: Domestic Service

- Most common woman's unreported occupation: Farm Family Workers

Summary and Conclusions cont.

- Illiterate, foreign born, and free non-white women more likely to report an occupation, but less likely to be unreported family workers. Husbands and fathers less likely to be self-employed. Considering both types of work, free non-white women were more likely to work, but no significant effect for being illiterate and foreign born.

- Higher prevalence of slavery -- significantly lower likelihood of free females reporting an occupation, especially as private household workers
  - Enslaved people provided substitute labor for free women, particularly as domestic servants

- Important to consider **both** reported and unreported occupations, especially for women

- Implications for understanding female LFP in US economic history and in today's less developed economies.