Managerial Performance of a Female-Owned and Home-based Firm

Oluwasheyi Oladipo* Kasia Platt† Hyoung Suk Shim‡

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Abstract

This paper empirically examines the managerial performance of a business based on the owner's gender and whether the firm is home or office based. In our preliminary analysis, we find that a female-owned firm performs better when the business is home-based. Using the data from the 2007 Survey of Business Owners (SBO) and the difference-in-difference approach, we estimate the average treatment effect for owner's gender, home-based status and the interaction between them. The proxy for firm performance, ROA, is the ratio of each firm's operating profit to start-up capital. We find that businesses that are female owned and home-based achieve 6.91% higher return on assets (ROA). In addition, there is a variation of the effect across different age and education groups. In most working age groups between 25 and 64, the home-based female owned firms outperform other female-owned firms. Also, home-based female owners with at least some college education outperform other female owners.

Keywords: Firm Performance, Female Owners

*Department of Politics, Economics & Law, State University of New York at Old Westbury, Long Island, New York, email: OladipoS@oldwestbury.edu.

†School of Business, State University of New York at Old Westbury, Long Island, New York, email: plattk@oldwestbury.edu.

‡School of Business, College of Staten Island, The City University of New York, New York, email: Hyoungsuk.Shim@csi.cuny.edu.

1 Introduction

This paper empirically examines the performance of a business based on the owner's gender and whether the firm is home or office-based. In our preliminary analysis, we find that a female-owned firm performs better when the business is home-based. Analyzing data from the 2007 Survey of Business Owners (SBO) using the difference-in-differences (DiD) approach, we estimate the average treatment effect for the owner's gender, the firm's home or office-based status and the interaction between them. The proxy for firm performance is return on assets (ROA). ROA is the ratio of each firm's operating profit to its start-up capital. We find that businesses that are female owned and home-based achieve 6.91% higher ROA.. In addition, there is a variation of the effect across different age and education groups. In most working age groups between 25 and 64, the home-based female owned firms outperform other female-owned firms. Also, home-based female owners with at least some college education outperform other female owners.

The SBO data consists of the results of a survey of operating firms and companies in the United States, conducted by The Census Bureau. The survey is conducted every five years. Surveyed firms are randomly selected from the list of all firms' tax returns filed with the Internal Revenue Service (IRS). The Census Bureau obtains the selected firms' employment and payroll data, and receipts from their IRS tax returns. Other information related to the firm owners' demographics and their business operations is obtained by the Census Bureau via mail. Of the 2,165,680 firms represented in the 2007 SBO dataset there are 663,385 single owner firms. In our dataset, about 33% of the firms are female-owned, 44.2% of firms are home-based, and 17.9% of the sample is both female-owned and home-based.

Our work is related to the recent studies by Hoisl and Mariani (2016), Newton and Simutin (2014), Amore et al. (2014), Price (2012), and Adams and Funk (2012). Hoisl and Mariani (2016) is one of the most recent papers on business related gender discrimination. The paper, evaluates the wages and employment by gender of inventors in the United States, Israel, Japan and 20 European countries and concludes that female inventors hold fewer jobs

and earn less than their male counterparts. Newton and Simutin (2014) empirically examine executive officers' gender pay gap in U.S. public companies. They find that older and male CEOs are more likely to pay female executive officers less than males. Price (2012) studies compensation differences by gender by using an experiment. He find that managers are more likely to offer a tournament payment scheme to male employees. However, this difference is eliminated if the managers do not know the employee's gender. Amore et al. (2014) is a recent empirical study on managerial differences based on gender that focuses on family businesses. They find that female-led companies perform better among family-controlled firms in Italy. Adams and Funk (2012) is another paper that empirically examine managerial difference by gender. They find that female and male exhibit differences in core values and risk attitudes.

Our work is also related to Goldin and Katz (2011) showing that female workers in high-powered professions are disadvantaged in their careers if they demand workplace flexibility due to family related issues. Another closely related work is Fairlie and Robb (2009) who empirically examine gender differences in business performance and find that the female owned businesses are less successful than male owned businesses due to less startup capital, lower initial experience and varying business priorities. Also, recent work by Faccio et al. (2016) examines female CEOs' financial managing behavior and finds that female CEOs are more risk averse than male CEOs. Goldin and Katz (2008) and Bertrand et al. (2010) research workplace flexibility costs in high paying job occupations and find a variation of earnings penalty due to family accommodations across different industries. Gayle et al. (2012) studies gender differences and the executive pay gap and finds that women are paid more controlling for executive rank and background, but have much higher probability of exiting than men.

2 Data

We created a firm level dataset of business owners' demographic information using the 2007 Survey of Business Owners and Self-Employed Persons (SBO), provided by the U.S. Census Bureau. The SBO is a firm-level economic survey conducted every five years. The firms in the SBO are randomly selected from all nonfarm businesses filing Internal Revenue Service tax forms with total receipts of $1,000 more than in the survey year. Business information about the firms such as receipts, payroll, employment, industry, location come from IRS tax filing records. The other information, such as owners' demographics, ownership and capital structure are collected using a survey questionnaire.

We use the SBO's public use microdata sample (PUMS) from 2007. The original dataset contains information about 2,165,683 firms. There are both single and multi-owner firms. The SBO provides owners' demographic information for up to four owners per firm. To evaluate gender differences in managerial performance, we limit our dataset to single owner firms. There are 663,385 single owner firms in the sample.

Table 1 presents descriptive statistics for the SBO's single owner firms. Note that the variables with 663,385 firms, such as receipts, payroll and employment are IRS filing records. Approximately 36.3% firms are owned by women and 57.6% of the firms are homebased, as shown in 5th and 6th rows of table 1, respectively.The other variables that have lower amount of observations come from the survey questionnaires. There are some non-response or not-applicable observations in the variables. The descriptive statistics in table 1 are weighted by the SBO tabulation weight.

The first three variables in Table 1 are from IRS filing records. Receipts and Payroll are presented in thousands and Employment is represented by the number of employees. The variable Capital is the amount of start-up capital in 8 categories. Each category indicates the range of start-up capital, such that this value is 1 if start-up capital is less than $5,000, 2 if start-up capital is between $5,000 and 10,000, etc. We calculate the mid-range value for each category. Female and Home are indicator (dummy) variables for female owner and

Table 1: Descriptive Statistics: SBO

	# of Firms	Mean	Std	Percentile	
				5^{th}	95^{th}
Receipts	663,385	286	4,611	0	810
Payroll	663,385	52.4	738	0	200
Employment	663,385	1.67	26.7	0	7
Capital	397,236	39.7	122	2.5	175
Female	663,385	0.363	0.481	0	1
Home	652,389	0.576	0.494	0	1
Hours $\geq$40	663,385	0.475	0.499	0	1
Education	646,818	4.5	1.99	1	7
Age	650,172	3.92	1.28	2	6
Yrs of ops	618,206	4.43	2.65	0	8
Nonwhite	663,385	0.115	0.319	0	1
Founder	645,008	0.883	0.322	0	1
Purchase	645,008	0.0934	0.291	0	1
Inherit	645,008	0.0103	0.101	0	0
Manage	649,536	0.469	0.499	0	1
F control	649,536	0.37	0.483	0	1

The reported statistics are calculated from annual statistics. All the variables are first order log-differenced, and hence they are annual growth rates.

home based firm respectively. The remaining ten variables are control variables reflecting the owners' demographics, firm's managerial information, their two digit NAICS industry code, and state.

3 Empirical Framework

The goal of our analysis to identify and estimate the effect of both firm location (whether the firm is home-based or not) and owner's gender on firm performance. We use a difference-in-differences (DiD) method to estimate the average treatment effect (ATE) of female-owned home-based firm. We estimate the following model:

$$y_i = \beta_0 + \delta_1 \cdot T_{1i} + \delta_2 \cdot T_{2i} + \delta_3 \cdot (T_{1i} \cdot T_{2i}) + \mathbf{x}_i \boldsymbol{\beta} + \epsilon_i, \tag{3.1}$$

Table 2: Descriptive Statistics by Gender and Homebase

	Homebased Establishment									
	Female Owner					Male Owner				
	# of Firms	Mean	Std	5^{th}	95^{th}	# of Firms	Mean	Std	5^{th}	95^{th}
ROA	64,427	9.95	48.5	0	36	112,191	18	103	0	64
Receipts	64,427	43.8	236	0	150	112,191	101	490	0	360
Payroll	64,427	4.77	49.9	0	20	112,191	11.3	72.6	0	60
Employment	64,427	0.198	1.91	0	1	112,191	0.393	2.66	0	3
Start-up Capital	64,427	10.8	49.4	2.5	37.5	112,191	18.6	66.1	2.5	77.5
	Non-homebased Establishment									
ROA	56,711	20.5	223	0	60	163,907	50	887	0	140
Receipts	56,711	248	1,686	0	850	163,907	746	7,648	0	2,300
Payroll	56,711	57.6	622	0	230	163,907	143	1,047	0	560
Employment	56,711	2.44	27.9	0	10	163,907	4.42	37.9	0	14
Start-up Capital	56,711	50.6	132	2.5	175	163,907	82.7	181	2.5	625

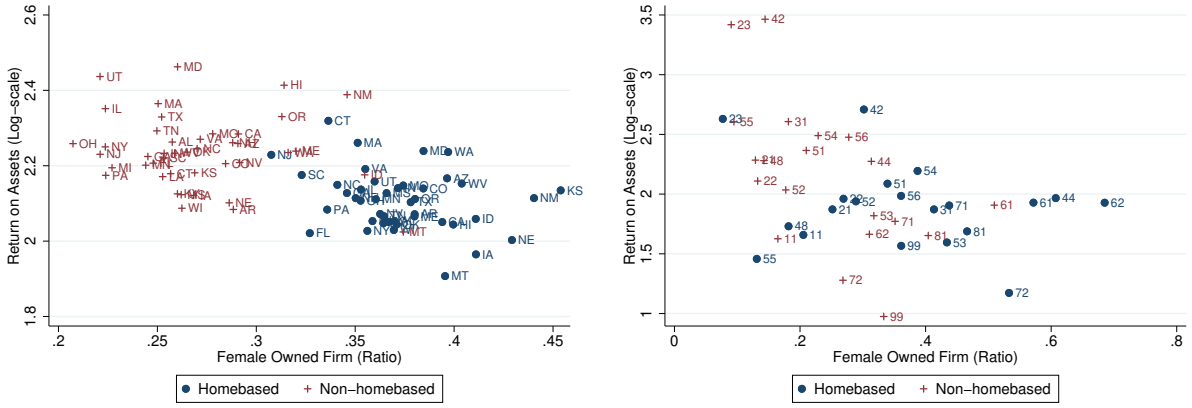
[#] The reported statistics are calculated from annual statistics. All the variables are first order log-differenced, and hence they are annual growth rates.

where y_i is return on assets for firm i, the term T_{1i} indicates whether the owner is female, the term T_{2i} indicates whether the firm i is home-based, and $\mathbf{x}_i$ is a vector of control variables. Our estimate of interest in this specification is δ_3 i.e., the coefficient for the interaction of $T_{1i} \cdot T_{2i}$ which estimates the profitability effect of of the firm owner's gender depending on whether the firm is home-based or not.

The dependent variable y_i is firm i's return on assets (ROA) calculated as (receipt-payroll)/start-up capital.

Table 2 reports descriptive statistics for the main variables by gender and home-base status. Because of missing observations for certain variables, we are able to utilize data on 397,236 firm of of the 663,385 single owner firms in the SBO. By looking at Table 2, it seems unlikely that female owners can perform better at a home-based firm vs. office based setting. The top-left panel shows that female-owned home-based firms obtain the the average ROA of 9.95. This is lower than ROA for any other category. This ROA is about half of the ROA of a male owned home-based firm. Other variables, i.e. Employment, Start-up Capital, Payroll and Receipts are also the lowest of all four categories.

Although the female-owned and home-based firm has lower averages of all variables in



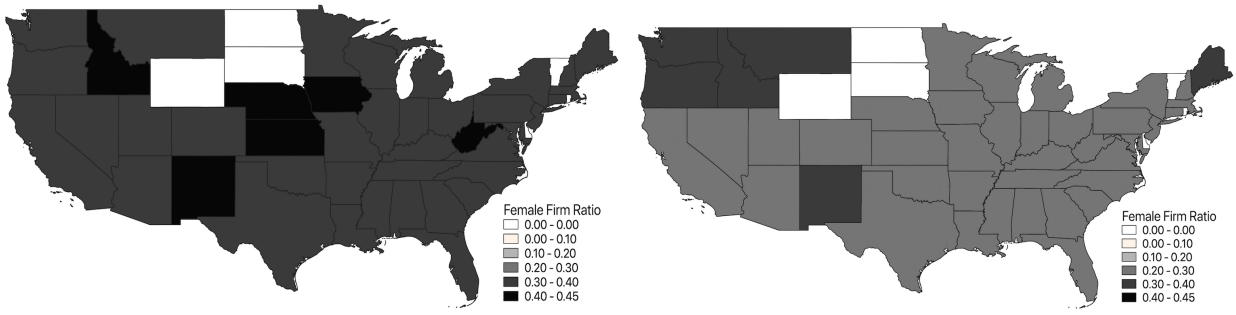
(a) Scatter Plot for State

(b) Scatter Plot for Industry

Figure 1: Scatter Plots: ROA vs Female Firm Ratio

Table 2 then any other type of firm, the sizes of these averages present several interesting patterns. First, a male-owned firm has an ROA about twice as big as a female-owned firm for both homebased and non-homebased establishments. This pattern is const consistent for all the other variables. Second, the ROA difference between home-based and non-home-based firms is much smaller than that of the other variables. A non-home-based firm has about 5 times greater start-up capital, 7 times greater receipts, and 10 times greater employment and payroll when compared to a home-based firm. These imply that non-home based firms are relatively bigger than home-based firms in terms of revenue, capital and employment.

Plotting the ratio of female-owned firms against ROA reveals data clustering by home-based status. Figure 1 presents the scatter plots, where panel 1(a) shows average ROA by state and panel 1(b) presents the average ROA by NAICS 2-digit industry. The plot of panel 1(a) clearly shows two big clusters, one is at the upper left and the other is at the lower right corner. We can easily identify that the lower right cluster comprises mostly of home-based firm averages by state, meaning that more female-owned firms operated as home-based, but their overall performance is worse than that of non-home based firms. In addition, we can see that the overall trend of ROA is negative iin female-owned firm ratio, but this trend disappears within each cluster. The scatter plot for industry variation in panel 1(b) shows



(a) Homebased Firm (b) Non-homebased Firm

Figure 2: Female Owner Firm Ratio by State

very similar pattern of the relationship between ROA and female-owned firm ratio but it is not as strong as in panel 1(a).

The level difference of female firm ratio by home-base status shown in panel 1(a) of figure 1 can be also presented as spatial distribution of the female-owned firm ratio. Figure 2 present state maps showing the ratio of female-owned firms for both home and non home-based firms. The ratio does not seem to vary much by state. However, there seem to be a clear level difference between home-based and non-home-based firm. The female firm ratio among home based firms, presented in panel 2(a), varies around 0.3–0.4, whereas the ratio in non-home based firms, presented in panel 2(b), varies around 0.2–0.3. These two intervals contain each groups' average female firm ratios that 36.5% for home based and 25.7% for non-homebased.

4 Empirical Results

Table 3 reports the main model estimates for (3.1). The DiD coefficients in the first row are the target parameter δ_3 estimates. The coefficients in the second and the third rows are δ_1 and δ_2 estimates respectively. Each column in table 3 report parameter estimates with different model specification for a different combination of state and industry fixed effects. Note that the dependent variable is the natural logarithm of ROA, and thus the estimated coefficients are log of ROA differences between the treatment and control groups. Percentage

Table 3: Main Model Estimates

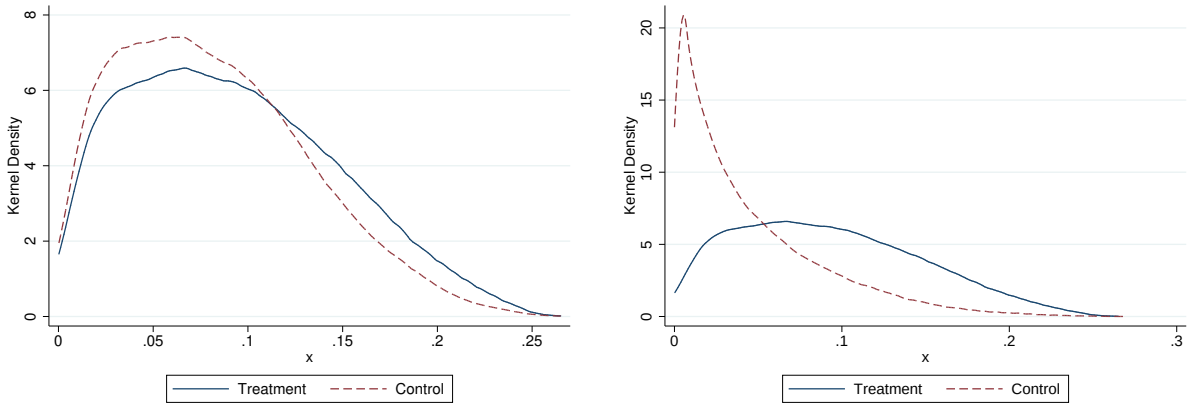
	Model Specification			
	(1)	(2)	(3)	(4)
DID	0.2869***	0.2890***	0.3319***	0.3331***
	[0.014]	[0.013]	[0.014]	[0.014]
Female	-0.5831***	-0.5850***	-0.4632***	-0.4652***
	[0.017]	[0.017]	[0.015]	[0.015]
Homebase	-0.8219***	-0.8241***	-0.9448***	-0.9461***
	[0.012]	[0.012]	[0.014]	[0.014]
State Fixed	No	No	Yes	Yes
Industry Fixed	No	Yes	No	Yes
# of Obs	355,346	355,346	355,346	355,346
R^2	0.4292	0.4304	0.4790	0.4800

Notes: Heteroskedasticity robust standard errors clustered by state are reported in square brackets. The symbols, *, **, and *** indicate respectively that the estimated coefficient is statistically significant under 10%, 5%, and 1% significance levels.

differences can be calculated as $exp(\delta_j) - 1$, $i = 1, 2, 3$.

From the main result, we find that female-owned, home-based firms achieve about 35% more ROA than the other types of firms. The DiD estimates in the first rows are 0.2869 and 0.289 with no fixed effects and with industry fixed effects, respectively. The DiD coefficients 0.3319 and 0.3331 in the third and fourth columns are the estimates with state fixed effects and both state and industry fixed effects, respectively. The DiD coefficient 0.3331 from the full model having both state and industry fixed effects implies that the female-owned home-based firms perform better than the other types of firms. The female-owned home-based firms' ROA is about 39.5% greater than the other types of firms, on average.

Unlike the DID coefficients, the coefficients on both Female and Homebase dummy variables are consistently negative and strongly statistically significant at 1% confidence level. By looking at the full model estimate in the fourth column, female owners perform worse than male owners by about 37.2% and the home based firms perform worse than non-home based firms by about 61.2%. The female treatment effect and home-based firm treatment



(a) Matched Sample

(b) Unmatched Sample

Figure 3: Propensity Scores: Distribution

effect estimates are evidence that female-owned firms are disadvantaged or more inefficient than male owned firms, and so are the home-based firms relative to non-home based firms.

4.1 Propensity Score Matching

Propensity score matching ensures that firms that are female-owned and home-based and their controls are are as similar as possible with respect to an several characteristics. Specifically, we match a treatment dummy variable that is 1 if the firm is home based and its owner is female, and 0 otherwise. We then estimate a probit regression of the dummy variable on log of receipt, log of payroll, log of start-up capital, employment, and owner's age, race, and educational attainment. The propensity to be in treatment is the predicted probability from the probit regression model, and is used to select matched sample from the control group. The propensity score matching estimator of the ATE is then the mean difference of the treatment and the control group from the matched sample.

Figure 3 presents the nonparametric distribution estimates for the matched and non matched samples by treatment group status. The common support, a range of the predicted propensity that both treatment and control group can share is between 0.00025 to 0.26510. The number of observations for the treatment group in the common support is 9,275. The

Table 4: Propensity Score Matching Estimation

Sample Type	# of Obs		Mean		Difference	Std Error (Difference)	T-stat
	Treated	Controls	Treated	Controls			
Unmatched	9,275	187,774	2.4740	2.5469	-0.0729	0.0219	-3.33***
Matched (ATT)	9,275	7,711	2.4740	2.4110	0.0630	0.0288	2.18**

The symbols, *, **, and *** indicate respectively that the estimated coefficient is statistically significant under 10%, 5%, and 1% significance levels.

number of observations in the control group is 187,774, and the propensity score matching algorithm selected 7,711 as a matched control group. As we can see in panel 3(a), the distribution of the coin trot group in the matched sample is quite similar to the treatment group distribution in terms of overall shape.

The propensity score matching estimate is consistent with the DiD estimate in a way that it is positive and statistically significant. Table 4 report the ATE estimates using the matched and unmatched sample. The ATE (mean difference) for the matched sample is 0.063 that implies that female owned home based firms perform better than others by 6.5% of ROA. The negative ATE estimate for the unmatched sample (-0.0729) is an empirical evidence that negative effect of female owned home based firm is biased estimation due to sample selection.

The DID estimates using the propensity score matched sample are also consistent with the DiD estimates using the entire sample. Table 5 reports the OLS estimation output for the DID with the propensity score matched sample. The model specification is identical with the main model estimates in Table 4. As we can see, the model estimation results in Table 5 are consistent with the results of Table 4 in terms of sign and statistical significance. The notable difference is that the absolute values of Female and Homebase coefficients in Table 3 are much smaller than that of in table 4. As a result, the DiD estimates in tablets are greater than that of in table 4. The DiD estimates using the matched sample of firms predict about 47.9% greater ROA than the DiD using the full sample of firms.

Table 5: Main Model Estimates for Matched Sample

	Model Specification			
	(1)	(2)	(3)	(4)
DID	0.5557***	0.5508***	0.6347***	0.6282***
	[0.046]	[0.045]	[0.046]	[0.044]
Female	-0.3528***	-0.3521***	-0.2844***	-0.2833***
	[0.039]	[0.039]	[0.038]	[0.038]
Homebase	-0.4341***	-0.4300***	-0.5999***	-0.5958***
	[0.030]	[0.030]	[0.036]	[0.037]
State Fixed	No	No	Yes	Yes
Industry Fixed	No	Yes	No	Yes
# of Obs	16,986	16,986	16,986	16,986
R^2	0.5283	0.5310	0.5743	0.5769

Notes: Heteroskedasticity robust standard errors clustered by state are reported in square brackets. The symbols, *, **, and *** indicate respectively that the estimated coefficient is statistically significant under 10%, 5%, and 1% significance levels.

Table 6: Main Model Estimates by Age Group

	Age Group					
	Under 25	25 to 34	35-44	45 to 54	55 to 64	65 or over
DID	-0.0260	0.1071***	0.2428***	0.3445***	0.4048***	0.2884***
	[0.084]	[0.031]	[0.018]	[0.024]	[0.019]	[0.037]
Female	-0.1998***	-0.3611***	-0.4119***	-0.4720***	-0.5236***	-0.4824***
	[0.071]	[0.032]	[0.022]	[0.019]	[0.017]	[0.031]
Homebase	-0.1568***	-0.4851***	-0.7839***	-0.9864***	-1.0669***	-1.1820***
	[0.057]	[0.033]	[0.016]	[0.021]	[0.022]	[0.030]
State Fixed	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed	Yes	Yes	Yes	Yes	Yes	Yes
# of Obs	3,505	31,358	78,465	114,420	91,377	36,221
R^2	0.4517	0.4931	0.4939	0.4966	0.4695	0.4926

Notes: Heteroskedasticity robust standard errors clustered by state are reported in square brackets. The symbols, *, **, and *** indicate respectively that the estimated coefficient is statistically significant under 10%, 5%, and 1% significance levels.

Table 7: Main Model Estimates by Educational Attainment

	Educational Attainment					
	Less than High School	High School	Some College	Associate	Bachelor	Master or more
DID	0.2388***	0.3290***	0.3951***	0.3325***	0.3415***	0.1791***
	[0.053]	[0.032]	[0.030]	[0.034]	[0.022]	[0.022]
Female	-0.3857***	-0.4838***	-0.5093***	-0.4294***	-0.4446***	-0.3691***
	[0.041]	[0.026]	[0.023]	[0.036]	[0.023]	[0.010]
Homebase	-0.6832***	-0.9973***	-0.9547***	-0.9179***	-1.0675***	-0.7250***
	[0.050]	[0.034]	[0.027]	[0.034]	[0.018]	[0.020]
State Fixed	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed	Yes	Yes	Yes	Yes	Yes	Yes
# of Obs	14,774	61,322	60,252	18,978	97,852	81,241
R^2	0.4692	0.4842	0.5054	0.4834	0.4674	0.5341

Notes: Heteroskedasticity robust standard errors clustered by state are reported in square brackets. The symbols, *, **, and *** indicate respectively that the estimated coefficient is statistically significant under 10%, 5%, and 1% significance levels.

Table 8: Main Model Estimates by Industry

	2-Digit NAICS Industry					
	Wholesale Trade	Retail Trade	Educational Services	Health Care	Arts and Entertainment	Other Services
DID	0.0687	0.3056***	0.0776	-0.0158	0.2879***	0.3382***
	[0.069]	[0.036]	[0.067]	[0.037]	[0.055]	[0.042]
Female	-0.3665***	-0.7373***	-0.3604***	-0.3903***	-0.5097***	-0.6390***
	[0.060]	[0.029]	[0.060]	[0.015]	[0.057]	[0.032]
Homebase	-1.2105***	-1.0124***	-0.5526***	-0.6123***	-0.8428***	-0.6410***
	[0.046]	[0.041]	[0.068]	[0.028]	[0.084]	[0.044]
State Fixed	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed	Yes	Yes	Yes	Yes	Yes	Yes
# of Obs	17,593	40,470	4,884	32,109	9,933	28,032
R^2	0.4876	0.4514	0.5171	0.5985	0.4815	0.5584

Notes: Heteroskedasticity robust standard errors clustered by state are reported in square brackets. The symbols, *, **, and *** indicate respectively that the estimated coefficient is statistically significant under 10%, 5%, and 1% significance levels.

Table 9: Main Model Estimates by Industry

	2-Digit NAICS Industry					
	Information	Finance and Insurance	Real Estate	Professional and Scientific	Management	Accommodation and Food Services
DID	0.2243***	0.0787	0.2940***	0.0423**	0.5605	-0.0454
	[0.078]	[0.051]	[0.034]	[0.018]	[1.406]	[0.080]
Female	-0.3169***	-0.1807***	-0.3736***	-0.1164***	-0.1838	-0.4342***
	[0.063]	[0.032]	[0.026]	[0.017]	[0.322]	[0.032]
Homebase	-0.9285***	-0.6114***	-0.6851***	-0.6164***	-1.9404***	-1.0158***
	[0.069]	[0.031]	[0.025]	[0.021]	[0.393]	[0.063]
State Fixed	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed	Yes	Yes	Yes	Yes	Yes	Yes
# of Obs	6,749	18,010	21,693	66,197	278	10,980
R^2	0.5630	0.5211	0.5858	0.4964	0.6664	0.5901

Notes: Heteroskedasticity robust standard errors clustered by state are reported in square brackets. The symbols, *, **, and *** indicate respectively that the estimated coefficient is statistically significant under 10%, 5%, and 1% significance levels.

4.2 Robustness Check

We estimate the DID of the female-owned, home-based firm effect by industry, and find a notable heterogeneity of the DID estimate among other industries. Table 8 shows the model estimates for six NAICS 2-digit industries: wholesale trade, retail trade, educational service, health care, art and entertainment, and other services. The DID estimates are statistically significant and positive in retail, art and other service industries, and its size is about 30% difference in ROA between female owned home based firm and the other types of firms. The DID estimates for wholesale trade and educational service are not statistically significant. Health care has a negative but insignificant DID estimate.

Table 9 reports the DID estimates of another six industries, information, finance, real estate, professional and scientific services, management and accommodation, and food services. The DID estimates are positive and statistically significant in information, real estate, and professional and scientific services. A notable difference shown in Table 9 is the DID estimate for the professional and scientific services industry. It is about 4.32% difference

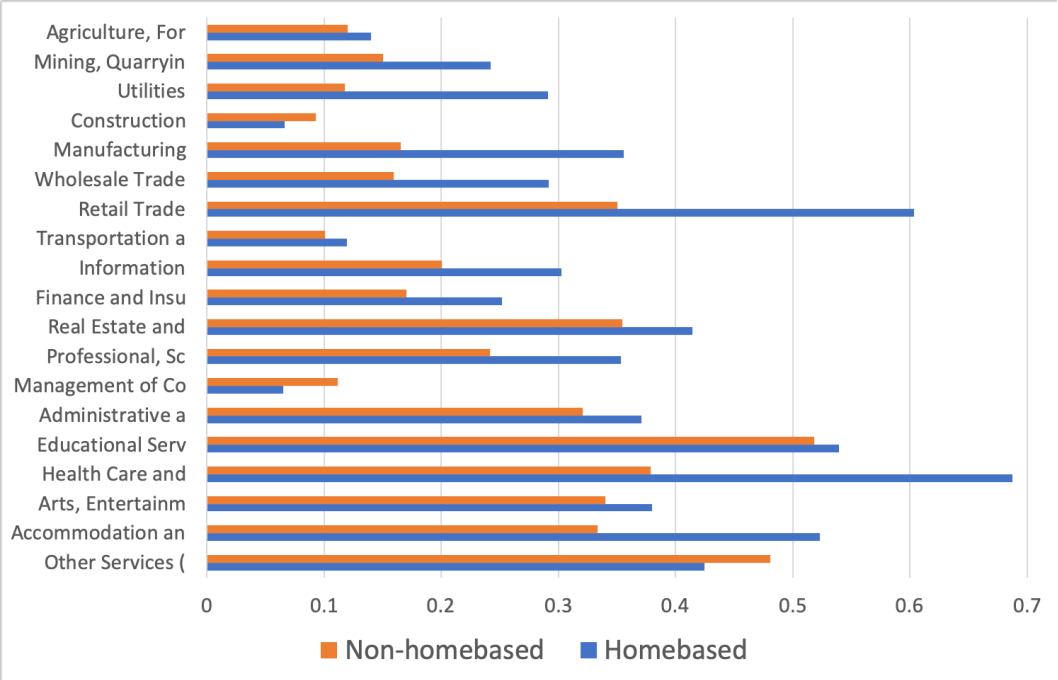


Figure 4: Female Owner Firm Ratio by Industry

between the ROA for female-owned home-based firms and others, which is smaller than the the differences for other industries (about 30% difference). This small but significant female-owned home-based firm effect seems to come from the smallest female owner effect that the industry has. The female owner effect estimates of the other industries are about -30% and some of them went down to -70%. The professional and scientific service industry has, however, only -11% of the female owner effect estimate.

This heterogeneous DID estimate among the industries do not seem to be explained by industry differences. In other words, differences in female firm ratio and home-based ratio by industry are not consistent with difference in DID estimates by industry. Figure 4 present female-owned and home-based firm ratios by industry. Both retail trade and healthcare industries have, for example, more than 50% of female owner for home based firms but their DID estimates are slightly different that the DiD for retail industry is about 35.7% while the DiD for health care is even negative and statistically insignificant.

5 Conclusion

This paper empirically examines the managerial performance of a business based on the owner's gender depending on whether the firm is home or office based. Using the data from the 2007 Survey of Business Owners (SBO) find that a female-owned firm performs better when the business is home-based. Specifically, businesses that are female owned and home-based achieve 6.91% higher return on assets (ROA). The results are confirms by an array of robustness checks. We find that there is a variation of the effect across different age and education groups.

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Appendices

Table A1: Descriptive Statistics by Gender and Homebase

	Homebased Firm									
	Female Owner					Male Owner				
	# of Firms	Mean	Std	5^{th}	95^{th}	# of Firms	Mean	Std	5^{th}	95^{th}
ROA	64,427	9.95	48.5	0	36	112,191	18	103	0	64
Receipts	64,427	43.8	236	0	150	112,191	101	490	0	360
Payroll	64,427	4.77	49.9	0	20	112,191	11.3	72.6	0	60
Employment	64,427	0.198	1.91	0	1	112,191	0.393	2.66	0	3
Start-up Capital	64,427	10.8	49.4	2.5	37.5	112,191	18.6	66.1	2.5	77.5
Hours≥40	64,427	0.319	0.47	0	1	112,191	0.500	0.50	0	1
Education	64,427	4.800	1.80	2	7	112,191	4.440	1.95	1	7
Age	64,427	3.810	1.21	2	6	112,191	3.930	1.27	2	6
Yrs of ops	64,427	3.860	2.55	0	7	112,191	4.330	2.58	0	8
Nonwhite	64,427	0.116	0.32	0	1	112,191	0.083	0.28	0	1
	Non-homebased Firm									
ROA	56,711	20.5	223	0	60	163,907	50	887	0	140
Receipts	56,711	248	1,686	0	850	163,907	746	7,648	0	2,300
Payroll	56,711	57.6	622	0	230	163,907	143	1,047	0	560
Employment	56,711	2.44	27.9	0	10	163,907	4.42	37.9	0	14
Start-up Capital	56,711	50.6	132	2.5	175	163,907	82.7	181	2.5	625
Hours≥40	56,711	0.576	0.49	0	1	163,907	0.719	0.45	0	1
Education	56,711	4.620	1.93	2	7	163,907	4.830	2.02	1	7
Age	56,711	3.880	1.19	2	6	163,907	4.080	1.18	2	6
Yrs of ops	56,711	4.490	2.51	0	8	163,907	5.180	2.46	0	8
Nonwhite	56,711	0.162	0.37	0	1	163,907	0.125	0.33	0	1

The reported statistics are calculated from annual statistics. All the variables are first order log-differenced, and hence they are annual growth rates.

Table A2: Main Model Estimates

	(Log of) Receipt				Return on Assets			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
DID	0.2654***	0.2674***	0.3119***	0.3129***	86.0052***	85.5436***	83.9205***	83.5900***
(Interaction)	[0.014]	[0.014]	[0.013]	[0.013]	[9.544]	[9.498]	[9.523]	[9.490]
Female	-0.6093***	-0.6106***	-0.4892***	-0.4907***	-111.1664***	-110.3553***	-89.2874***	-88.5441***
(Dummy)	[0.017]	[0.017]	[0.015]	[0.015]	[9.623]	[9.578]	[8.364]	[8.336]
Homebase	-0.9211***	-0.9242***	-1.0543***	-1.0562***	-170.6571***	-170.3002***	-182.8308***	-182.5798***
(Dummy)	[0.013]	[0.013]	[0.015]	[0.015]	[13.058]	[12.842]	[14.851]	[14.665]
Employment	0.0034***	0.0034***	0.0033***	0.0033***	1.8801**	1.8790**	1.8790**	1.8774**
	[0.001]	[0.001]	[0.001]	[0.001]	[0.813]	[0.813]	[0.815]	[0.815]
Start-up Capital	0.3005***	0.2995***	0.2829***	0.2821***	-68.2176***	-68.1985***	-73.5865***	-73.5909***
(Log-scale)	[0.005]	[0.005]	[0.004]	[0.004]	[3.472]	[3.485]	[3.696]	[3.707]
Education	0.0274***	0.0266***	0.0600***	0.0591***	-1.3230	-1.5967	7.0520***	6.8857***
	[0.003]	[0.003]	[0.003]	[0.003]	[1.403]	[1.433]	[2.008]	[2.039]
Age	-0.0092	-0.0098*	-0.0090*	-0.0098**	12.4314***	12.5190***	10.4968***	10.6133***
	[0.006]	[0.006]	[0.005]	[0.005]	[1.920]	[1.947]	[1.733]	[1.741]
Yrs of ops	0.1604***	0.1607***	0.1520***	0.1525***	13.5579***	13.6089***	12.3127***	12.3579***
	[0.003]	[0.003]	[0.003]	[0.003]	[1.120]	[1.166]	[1.123]	[1.167]
Nonwhite	-0.2988***	-0.3043***	-0.2753***	-0.2822***	-22.7290***	-25.2493***	-23.1651***	-25.7060***
(Dummy)	[0.016]	[0.016]	[0.016]	[0.014]	[3.370]	[3.481]	[3.855]	[4.113]
Founder	-0.1484***	-0.1490***	-0.0963***	-0.0973***	-67.4087**	-67.9905**	-50.9617	-51.5436
(Dummy)	[0.033]	[0.034]	[0.030]	[0.030]	[32.872]	[33.229]	[32.495]	[32.844]
Purchased	-0.2350***	-0.2331***	-0.1709***	-0.1691***	-72.3084**	-71.8626**	-62.7527*	-62.4347*
(Dummy)	[0.030]	[0.030]	[0.027]	[0.027]	[33.993]	[34.656]	[33.501]	[34.178]
Inherit	0.2057***	0.2054***	0.1364***	0.1368***	183.3986**	183.0442**	160.8252**	160.6791**
(Dummy)	[0.052]	[0.051]	[0.047]	[0.046]	[68.299]	[68.272]	[69.315]	[69.318]
Manage	0.0273**	0.0261**	-0.0203*	-0.0209*	-9.7739	-9.8183	-21.8412***	-21.8190***
(Dummy)	[0.013]	[0.012]	[0.011]	[0.011]	[6.233]	[6.260]	[6.772]	[6.796]
Financial Control	0.3104***	0.3078***	0.2946***	0.2929***	51.8181***	52.3874***	52.4020***	53.0724***
(Dummy)	[0.015]	[0.015]	[0.014]	[0.014]	[7.465]	[7.457]	[7.651]	[7.691]
Constant	1.2782***	1.3533***	1.0397***	1.0997***	726.7912***	735.7636***	746.6067***	760.0560***
	[0.081]	[0.072]	[0.086]	[0.081]	[52.059]	[49.984]	[56.049]	[54.388]
State Fixed	No	No	Yes	Yes	No	No	Yes	Yes
Industry Fixed	No	Yes	No	Yes	No	Yes	No	Yes
# of Obs	358,228	358,228	358,228	358,228	397,236	397,236	397,236	397,236
R^2	0.4096	0.4111	0.4533	0.4545	0.0142	0.0144	0.0188	0.0189

Notes: Heteroskedasticity robust standard errors clustered by state are reported in square brackets. The symbols, *, **, and *** indicate respectively that the estimated coefficient is statistically significant under 10%, 5%, and 1% significance levels.

Table A3: Main Model Estimates

	Model Specification			
	(1)	(2)	(3)	(4)
DID	0.2869***	0.2890***	0.3319***	0.3331***
	[0.014]	[0.013]	[0.014]	[0.014]
Female	-0.5831***	-0.5850***	-0.4632***	-0.4652***
(Dummy)	[0.017]	[0.017]	[0.015]	[0.015]
Homebase	-0.8219***	-0.8241***	-0.9448***	-0.9461***
(Dummy)	[0.012]	[0.012]	[0.014]	[0.014]
Employment	0.0030**	0.0030**	0.0030**	0.0030**
	[0.001]	[0.001]	[0.001]	[0.001]
Start-up Capital	-0.7078***	-0.7086***	-0.7298***	-0.7305***
(Log-scale)	[0.005]	[0.004]	[0.004]	[0.004]
Education	0.0092***	0.0084**	0.0528***	0.0519***
	[0.003]	[0.003]	[0.003]	[0.003]
Age	-0.0144***	-0.0152***	-0.0172***	-0.0182***
	[0.005]	[0.005]	[0.004]	[0.004]
Years of Operation	0.1506***	0.1511***	0.1427***	0.1434***
	[0.003]	[0.003]	[0.003]	[0.002]
Nonwhite	-0.2604***	-0.2695***	-0.2405***	-0.2507***
(Dummy)	[0.016]	[0.016]	[0.016]	[0.014]
Founder	-0.1394***	-0.1397***	-0.0696**	-0.0705**
(Dummy)	[0.031]	[0.032]	[0.027]	[0.027]
Purchased	-0.2049***	-0.2017***	-0.1437***	-0.1407***
(Dummy)	[0.028]	[0.028]	[0.024]	[0.024]
Inherit	0.2340***	0.2338***	0.1479***	0.1487***
(Dummy)	[0.049]	[0.048]	[0.043]	[0.043]
Manage	0.0350***	0.0342***	-0.0258**	-0.0259**
(Dummy)	[0.012]	[0.012]	[0.010]	[0.010]
Financial Control	0.2708***	0.2696***	0.2585***	0.2582***
(Dummy)	[0.014]	[0.015]	[0.013]	[0.013]
Constant	8.2067***	8.2941***	8.0524***	8.1210***
	[0.073]	[0.067]	[0.078]	[0.075]
State Fixed	No	No	Yes	Yes
Industry Fixed	No	Yes	No	Yes
# of Obs	355,346	355,346	355,346	355,346
R^2	0.4292	0.4304	0.4790	0.4800

Notes: Heteroskedasticity robust standard errors clustered by state are reported in square brackets. The symbols, *, **, and *** indicate respectively that the estimated coefficient is statistically significant under 10%, 5%, and 1% significance levels.

Table A4: Main Model Estimates by Age Group

	Age Group					
	Under 25	25 to 34	35-44	45 to 54	55 to 64	65 or over
DID	-0.0260	0.1071***	0.2428***	0.3445***	0.4048***	0.2884***
	[0.084]	[0.031]	[0.018]	[0.024]	[0.019]	[0.037]
Female	-0.1998***	-0.3611***	-0.4119***	-0.4720***	-0.5236***	-0.4824***
(Dummy)	[0.071]	[0.032]	[0.022]	[0.019]	[0.017]	[0.031]
Homebase	-0.1568***	-0.4851***	-0.7839***	-0.9864***	-1.0669***	-1.1820***
(Dummy)	[0.057]	[0.033]	[0.016]	[0.021]	[0.022]	[0.030]
Employment	0.0759***	0.0138***	0.0036***	0.0039***	0.0018	0.0059***
	[0.011]	[0.004]	[0.001]	[0.001]	[0.001]	[0.001]
Start-up Capital	-0.7466***	-0.7547***	-0.7480***	-0.7374***	-0.7274***	-0.7361***
	[0.021]	[0.005]	[0.004]	[0.005]	[0.007]	[0.008]
Education	0.0114	0.0344***	0.0584***	0.0659***	0.0490***	0.0212***
	[0.012]	[0.005]	[0.004]	[0.003]	[0.005]	[0.005]
Years of Operation	0.1429***	0.1472***	0.1519***	0.1438***	0.1309***	0.1032***
	[0.011]	[0.004]	[0.003]	[0.003]	[0.003]	[0.005]
Nonwhite	-0.0415	-0.1036***	-0.2086***	-0.2918***	-0.3019***	-0.3295***
(Dummy)	[0.062]	[0.028]	[0.018]	[0.016]	[0.022]	[0.038]
Founder	0.3046**	-0.0811	-0.0049	-0.0863**	-0.0946*	-0.2549***
(Dummy)	[0.145]	[0.067]	[0.055]	[0.042]	[0.054]	[0.070]
Purchased	0.0562	-0.2151***	-0.1061*	-0.1358***	-0.1344**	-0.3367***
(Dummy)	[0.164]	[0.071]	[0.057]	[0.042]	[0.056]	[0.076]
Inherit	0.1968	-0.3324**	-0.0698	0.0672	0.1512*	0.2485**
(Dummy)	[0.221]	[0.147]	[0.083]	[0.079]	[0.084]	[0.098]
Manage	0.0498	0.0623***	0.0631***	0.0332**	-0.0533***	-0.2372***
(Dummy)	[0.058]	[0.020]	[0.015]	[0.013]	[0.015]	[0.020]
Financial Control	0.0724	0.1241***	0.1786***	0.2029***	0.3034***	0.4048***
(Dummy)	[0.048]	[0.016]	[0.011]	[0.016]	[0.017]	[0.024]
Constant	6.9998***	7.8247***	7.9345***	8.2193***	8.3253***	8.6233***
	[0.209]	[0.090]	[0.137]	[0.103]	[0.112]	[0.167]
State Fixed	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed	Yes	Yes	Yes	Yes	Yes	Yes
# of Obs	3,505	31,358	78,465	114,420	91,377	36,221
R^2	0.4517	0.4931	0.4939	0.4966	0.4695	0.4926

Notes: Heteroskedasticity robust standard errors clustered by state are reported in square brackets. The symbols, *, **, and *** indicate respectively that the estimated coefficient is statistically significant under 10%, 5%, and 1% significance levels.

Table A5: Main Model Estimates by Educational Attainment

	Educational Attainment					
	Less than High School	High School	Some College	Associate	Bachelor	Master or more
DID	0.2388***	0.3290***	0.3951***	0.3325***	0.3415***	0.1791***
	[0.053]	[0.032]	[0.030]	[0.034]	[0.022]	[0.022]
Female	-0.3857***	-0.4838***	-0.5093***	-0.4294***	-0.4446***	-0.3691***
(Dummy)	[0.041]	[0.026]	[0.023]	[0.036]	[0.023]	[0.010]
Homebase	-0.6832***	-0.9973***	-0.9547***	-0.9179***	-1.0675***	-0.7250***
(Dummy)	[0.050]	[0.034]	[0.027]	[0.034]	[0.018]	[0.020]
Employment	0.0037*	0.0052*	0.0106***	0.0033**	0.0016**	0.0067***
	[0.002]	[0.003]	[0.002]	[0.001]	[0.001]	[0.001]
Start-up Capital	-0.7013***	-0.7143***	-0.7467***	-0.7259***	-0.7341***	-0.7722***
	[0.013]	[0.008]	[0.006]	[0.010]	[0.004]	[0.005]
Age Group	-0.0377***	0.0004	-0.0247***	0.0108	-0.0178***	-0.0466***
	[0.010]	[0.007]	[0.008]	[0.010]	[0.006]	[0.005]
Years of Operation	0.1428***	0.1435***	0.1416***	0.1267***	0.1548***	0.1236***
	[0.004]	[0.004]	[0.004]	[0.005]	[0.003]	[0.002]
Nonwhite	-0.3734***	-0.4085***	-0.2977***	-0.2416***	-0.2679***	-0.0557**
(Dummy)	[0.048]	[0.019]	[0.023]	[0.036]	[0.017]	[0.021]
Founder	0.1739*	-0.0136	-0.0589	-0.0714	-0.0663	-0.1780**
(Dummy)	[0.087]	[0.036]	[0.070]	[0.109]	[0.045]	[0.075]
Purchased	-0.0145	-0.2081***	-0.1483**	-0.1907*	-0.0905*	-0.0893
(Dummy)	[0.084]	[0.039]	[0.071]	[0.105]	[0.046]	[0.078]
Inherit	0.0271	0.0884	0.1939**	0.0359	0.2305***	0.0388
(Dummy)	[0.153]	[0.059]	[0.092]	[0.133]	[0.075]	[0.104]
Manage	0.0332	0.0326**	0.0273	0.0548	-0.0654***	-0.1009***
(Dummy)	[0.031]	[0.016]	[0.018]	[0.035]	[0.016]	[0.014]
Financial Control	0.4301***	0.3244***	0.2335***	0.1727***	0.2376***	0.1885***
(Dummy)	[0.035]	[0.020]	[0.018]	[0.035]	[0.015]	[0.011]
Constant	7.6833***	8.1569***	8.4365***	8.0388***	8.3360***	8.8750***
	[0.250]	[0.123]	[0.112]	[0.201]	[0.103]	[0.147]
State Fixed	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed	Yes	Yes	Yes	Yes	Yes	Yes
# of Obs	14,774	61,322	60,252	18,978	97,852	81,241
R^2	0.4692	0.4842	0.5054	0.4834	0.4674	0.5341

Notes: Heteroskedasticity robust standard errors clustered by state are reported in square brackets. The symbols, *, **, and *** indicate respectively that the estimated coefficient is statistically significant under 10%, 5%, and 1% significance levels.

Table A6: Main Model Estimates by Industry

	2-Digit NAICS Industry					
	Wholesale Trade	Retail Trade	Educational Services	Health Care	Arts and Entertainment	Other Services
DID	0.0687	0.3056***	0.0776	-0.0158	0.2879***	0.3382***
	[0.069]	[0.036]	[0.067]	[0.037]	[0.055]	[0.042]
Female	-0.3665***	-0.7373***	-0.3604***	-0.3903***	-0.5097***	-0.6390***
(Dummy)	[0.060]	[0.029]	[0.060]	[0.015]	[0.057]	[0.032]
Homebase	-1.2105***	-1.0124***	-0.5526***	-0.6123***	-0.8428***	-0.6410***
(Dummy)	[0.046]	[0.041]	[0.068]	[0.028]	[0.084]	[0.044]
Employment	0.0202***	0.0189***	0.0156***	0.0057***	0.0106***	0.0225***
	[0.004]	[0.002]	[0.005]	[0.002]	[0.002]	[0.007]
Start-up Capital	-0.7700***	-0.6659***	-0.7948***	-0.7641***	-0.7928***	-0.7620***
	[0.014]	[0.009]	[0.018]	[0.006]	[0.022]	[0.013]
Education	0.0861***	0.0329***	0.0476***	0.1161***	-0.0174**	0.0263***
	[0.007]	[0.006]	[0.012]	[0.007]	[0.008]	[0.005]
Age Group	-0.0412***	-0.0465***	0.0332**	-0.0069	0.0019	-0.0366***
	[0.012]	[0.008]	[0.016]	[0.007]	[0.019]	[0.006]
Years of Operation	0.2184***	0.1672***	0.1133***	0.1212***	0.0901***	0.1005***
	[0.009]	[0.003]	[0.008]	[0.003]	[0.009]	[0.005]
Nonwhite	-0.3007***	-0.2927***	-0.1046**	0.0219	-0.1208**	-0.3231***
(Dummy)	[0.050]	[0.016]	[0.043]	[0.022]	[0.052]	[0.021]
Founder	0.0671	-0.0967	-0.1130	0.0081	-0.0327	-0.0945*
(Dummy)	[0.099]	[0.073]	[0.176]	[0.108]	[0.157]	[0.056]
Purchased	-0.1986*	-0.0944	-0.0990	0.0275	-0.2050	-0.2070***
(Dummy)	[0.105]	[0.070]	[0.196]	[0.109]	[0.181]	[0.058]
Inherit	0.0693	0.0965	0.3012	0.2727	0.2333	0.1332
(Dummy)	[0.111]	[0.086]	[0.281]	[0.216]	[0.211]	[0.090]
Manage	-0.0700**	-0.0564***	-0.0408	-0.1789***	-0.1653***	0.0824***
(Dummy)	[0.033]	[0.020]	[0.061]	[0.019]	[0.050]	[0.016]
Financial Control	0.2621***	0.2232***	0.1856***	0.2199***	0.2605***	0.1776***
(Dummy)	[0.024]	[0.018]	[0.064]	[0.017]	[0.038]	[0.021]
Constant	9.2421***	8.1653***	8.2932***	7.9867***	8.7613***	8.2693***
	[0.125]	[0.150]	[0.250]	[0.114]	[0.325]	[0.113]
State Fixed	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed	Yes	Yes	Yes	Yes	Yes	Yes
# of Obs	17,593	40,470	4,884	32,109	9,933	28,032
R^2	0.4876	0.4514	0.5171	0.5985	0.4815	0.5584

Notes: Heteroskedasticity robust standard errors clustered by state are reported in square brackets. The symbols, *, **, and *** indicate respectively that the estimated coefficient is statistically significant under 10%, 5%, and 1% significance levels.

Table A7: Main Model Estimates by Industry

	2-Digit NAICS Industry					
	Information	Finance and Insurance	Real Estate	Professional and Scientific	Management	Accommodation and Food Services
DID	0.2243***	0.0787	0.2940***	0.0423**	0.5605	-0.0454
	[0.078]	[0.051]	[0.034]	[0.018]	[1.406]	[0.080]
Female	-0.3169***	-0.1807***	-0.3736***	-0.1164***	-0.1838	-0.4342***
(Dummy)	[0.063]	[0.032]	[0.026]	[0.017]	[0.322]	[0.032]
Homebase	-0.9285***	-0.6114***	-0.6851***	-0.6164***	-1.9404***	-1.0158***
(Dummy)	[0.069]	[0.031]	[0.025]	[0.021]	[0.393]	[0.063]
Employment	0.0261***	0.0151**	0.0184***	0.0159***	0.0153***	0.0060***
	[0.003]	[0.007]	[0.005]	[0.002]	[0.003]	[0.001]
Start-up Capital	-0.8606***	-0.7789***	-0.7995***	-0.8164***	-0.8727***	-0.7479***
	[0.012]	[0.010]	[0.007]	[0.004]	[0.060]	[0.010]
Education	0.0308***	0.0327***	0.0129***	0.0446***	0.1628***	0.0644***
	[0.009]	[0.007]	[0.005]	[0.004]	[0.051]	[0.007]
Age Group	-0.0170	-0.0451***	-0.0203**	-0.0375***	-0.0029	-0.0221*
	[0.016]	[0.011]	[0.008]	[0.005]	[0.121]	[0.011]
Years of Operation	0.0965***	0.1304***	0.0991***	0.0923***	0.0232	0.1399***
	[0.008]	[0.007]	[0.004]	[0.003]	[0.067]	[0.006]
Nonwhite	-0.4110***	-0.3102***	-0.3521***	-0.0965***	-0.1539	-0.1419***
(Dummy)	[0.041]	[0.028]	[0.029]	[0.030]	[0.600]	[0.033]
Founder	-0.0786	0.0556	-0.1140	-0.0229	-1.7200***	0.0470
(Dummy)	[0.179]	[0.067]	[0.093]	[0.072]	[0.546]	[0.073]
Purchased	-0.2064	-0.1528*	-0.1445	-0.1482*	-1.8386***	-0.1972**
(Dummy)	[0.198]	[0.079]	[0.112]	[0.076]	[0.489]	[0.073]
Inherit	-0.1076	-0.1597	0.0691	-0.1915	-0.8115	0.0632
(Dummy)	[0.274]	[0.132]	[0.109]	[0.122]	[0.575]	[0.143]
Manage	-0.1314**	0.1153***	-0.0052	0.0114	-0.5547**	-0.0300
(Dummy)	[0.060]	[0.034]	[0.022]	[0.018]	[0.233]	[0.029]
Financial Control	0.2500***	0.0343	0.2443***	0.1289***	0.4999**	0.1485***
(Dummy)	[0.045]	[0.027]	[0.024]	[0.016]	[0.242]	[0.023]
Constant	9.6901***	8.5310***	8.9451***	8.8125***	10.8037***	8.8001***
	[0.186]	[0.158]	[0.126]	[0.083]	[1.043]	[0.143]
State Fixed	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed	Yes	Yes	Yes	Yes	Yes	Yes
# of Obs	6,749	18,010	21,693	66,197	278	10,980
R^2	0.5630	0.5211	0.5858	0.4964	0.6664	0.5901

Notes: Heteroskedasticity robust standard errors clustered by state are reported in square brackets. The symbols, *, **, and *** indicate respectively that the estimated coefficient is statistically significant under 10%, 5%, and 1% significance levels.

Table A8: Main Model Estimates for Matched Sample

	Model Specification			
	(1)	(2)	(3)	(4)
DID	0.5557***	0.5508***	0.6347***	0.6282***
	[0.046]	[0.045]	[0.046]	[0.044]
Female	-0.3528***	-0.3521***	-0.2844***	-0.2833***
(Dummy)	[0.039]	[0.039]	[0.038]	[0.038]
Homebase	-0.4341***	-0.4300***	-0.5999***	-0.5958***
(Dummy)	[0.030]	[0.030]	[0.036]	[0.037]
Employment	0.0204***	0.0203***	0.0204***	0.0203***
	[0.004]	[0.004]	[0.004]	[0.004]
Start-up Capital	-0.8301***	-0.8311***	-0.8566***	-0.8574***
(Log-scale)	[0.006]	[0.006]	[0.007]	[0.007]
Education	-0.0363***	-0.0371***	0.0168***	0.0157***
	[0.006]	[0.007]	[0.005]	[0.005]
Age	-0.0144***	-0.0152***	-0.0172***	-0.0182***
	[0.008]	[0.008]	[0.008]	[0.008]
Years of Operation	0.1052***	0.1061***	0.0995***	0.1006***
	[0.005]	[0.005]	[0.005]	[0.005]
Nonwhite	-0.1257***	-0.1370***	-0.0992***	-0.1107***
(Dummy)	[0.034]	[0.037]	[0.033]	[0.036]
Founder	-0.2149***	-0.2079**	-0.1319*	-0.1300*
(Dummy)	[0.079]	[0.080]	[0.072]	[0.073]
Purchased	-0.3498***	-0.3392***	-0.2268***	-0.2217***
(Dummy)	[0.087]	[0.086]	[0.077]	[0.076]
Inherit	-0.0493	-0.0438	-0.0895	-0.0878
(Dummy)	[0.149]	[0.147]	[0.141]	[0.139]
Manage	-0.0613**	-0.0586**	-0.0800***	-0.0769***
(Dummy)	[0.024]	[0.025]	[0.021]	[0.021]
Financial Control	0.1335***	0.1325***	0.1184***	0.1179***
(Dummy)	[0.023]	[0.025]	[0.020]	[0.022]
Constant	10.0084***	10.0534***	10.0031***	9.9919***
	[0.122]	[0.114]	[0.197]	[0.193]
State Fixed	No	No	Yes	Yes
Industry Fixed	No	Yes	No	Yes
# of Obs	16,986	16,986	16,986	16,986
R^2	0.5283	0.5310	0.5743	0.5769

Notes: Heteroskedasticity robust standard errors clustered by state are reported in square brackets. The symbols, *, **, and *** indicate respectively that the estimated coefficient is statistically significant under 10%, 5%, and 1% significance levels.