What role did the Equal Credit Opportunity Act play in reducing credit constraints for female entrepreneurs, and how did this vary between married and unmarried women?

Thato Montsho

December 2024

Abstract

This paper analysis the impact of the Equal Credit Opportunity Act (ECOA) of 1974 on the rate of self-employment among women. Marital status can greatly affect the ecomomic prospects for women, especially those looking to join the labour force through self-employment. In this paper, we used IPUMS-CPS data covering 1960 to after 1988 when the Women's Business Ownership Act (WBOA) of 1988 was implemented by congress using a Diff n Diff approach to analyse the removal of credit discerimination on the entrepreneurial opportunities for women. The results showed that the ECOA created a 2.8 – 3.0 percentage point increase in the women's self-employment rate, along with heterogeneity effects by their marital status. The ECOA was particularly beneficially to married women as they are the individuals that capitalised on the self-employment industry. Prior to the year 1988, women faced an ever growing gender gap in the self-employment rate. These results imply that although marriage has historically been a means of obtaining credit, the ECOA's formalization of equal credit rights contributed to a decrease in gender differences in entrepreneurship, especially for married women who had previously faced major obstacles to obtaining credit on their own. The findings advance our knowledge of how women's economic potential were impacted by discriminatory credit practices and how legislative actions can aid in removing these obstacles.

Introduction

The Equal Credit Opportunity act (ECOA), was founded on the basis of women and minority groups unable to have open lines of credit without a male counterpart's assistance. This effectively made marriage the only option for women to have any sense of independence and financial autonomy from their families. When taking the perspective of lets say an African American woman, even if they got married, it doesn't ensure financial stability as they still faced systemic discrimination in both the credit and labour markets. The Equal Employment Opportunity Act was implemented just 10 years after Jim Crow laws were abolished, so from an economic stand point, we could argue that this came too late, as the the population still needed an income to sustain themselves as well as their families. In this research, I sought out to understand the role marriage plays and evaluate the effects of this act on women's credit and labour opportunities, especially when some of those individuals choose to become self-employed.

In this paper I'm looking to use IV regressions and Diff n Diff Linear Models (LM) in order to understand the full effects of marriage on the labour and credit opportunities for women in the United States of America. My hypothesis will be whether marriage plays an intergral part in aiding the rate of female entrepreneurs before and after the implementation of the ECOA. The empirical aspect to this topic is that marriage represents a gateway into withholding women from reaching their lifetime utility. Essentially, what I want to understand is whether marriage is truly beenficial for women as it is beneficial to men. When we discuss marriage when the EEOA was implemented, it's a stark difference to more recent times. Now this is expected as society and the market has drastically evolved from 70 years ago.

Female economic outcomes and marriage have been discussed before in previous papers. Notbaly Bartscher (2020), illustrated that marriage historically played an intergral role in aiding women to access credit. Bartschwer found that through marriage, a household's borrowing power is increased as there are two incomes you can borrow against. They researched showed that marriage was often the only path to credit acces for women. Angrist (2002), focused on the sex ratios affect woman's marriage market. Angrist found that sex ratios and the influx of immigrants benefitted woman's marriage prospects but had a negetive effect on their labour participartion

Model & Estimation Technique

$$A = \beta_0 + \beta_1 female_{it} + \beta_2 after 1988_{it} + \beta_3 female * after 1988_{it} + \varepsilon_{it}$$

With this model, I wanted to create a base to see the effect of EEOA in addition to the Women's Business Ownership Act (WBOA), which came into effect in 1988. So I wanted to interact female and the years *after 1988*, to see what the affect is. My expectation of the results is for the estimation to be positive but still weak as 1988 was the year of implemention. For my second model, I wanted to add in control variables like education attainment as well as their age, and I also added in the squared age variable. I'm squaring age to accurately capture the effect of age on the quantity of self-employed women. Age is a defining factor when looing into opening your own business, and women who are married with kids are socially known to prioritise their families well being over their carret. This ties in with the empirical side of my paper and understanding if marriage is economically beneficial to women or just hold them back. Understandaly, it's hard to quantify the needs and wants of individuals, we can only estimate and rationalise from the results we get.

The variables that I wanted to include in my regressions are: age, gender, education and credit access. Age is an important variable and very determinant of whether an individual has a "shelf-life" on their labour market capabilities. The ECOA has race, gender, national origin, religion, marital status, age; as long as they're able to entering into a binding contract. In the context of this research, we can say that as long as the applicant is able to enter into contract negotiations, and run their business. It's important to put it into context of this research, and help understand the results.

For my second model, I included control variables like age, marital status, while holding self-employed as a dependent variable. I included two *age* variables, one being squared and the other not being squared. I included two *age* variables as with age, there is a non-linear relationship with the labour force as individuals aren't always working, so need to account for the "drop" in effciency. For this research, I

wanted to focus on women between the ages of 25 and 45 as I feel this encompases and good age range for women. I also created 4 sub-groups for *age* to separate the data into 4 sub-groups. This way when taking a closer look at the data, were able to understand which age group has a higher chance of being self-employed.

$$Self-Employed = \beta_0 + \beta_1 Female_{it} + \chi_1 female * after 1988 + \beta_2 Educ_{it} + \beta age_{it} + \beta age_{it}^2 +$$

In the second model, I also included the variable *MARST*, which stands for marriage status. It was important to include this variable, but because there can be different circumstances such as widows, 2nd marriage, or couples who are in long standing partnerships but never got married. We could also include same sex marriages, however, if we were to comb through each sub-group we would end with quite a puzzle to sift through. I ended up creating a binary variable for MARST, so it's either thery're married or not to keep things simple and easy to interpret the resutls.

For the *EDUC* variable, which represents education attainment level. For this research I had generate dummy variables to represent the 4 different groups of education attainment. The sub-groups are: less than high school, high school, littlebit of college and college+. I found that organising the data into theses groups, allowed for better resutls and better interpretation of the research and what it could mean at the different education levels. (Bartscher 2020) research paper brought to light how married couples that are college educated, tend to make a lot of money together in the long-run, wheras combinations with one spouse college educated and the other not, their lifetime utility is significantly lower. From conversations with peers and researching articles, I've found that and educated women will thrive the best when they are intellectually compatible. If I had more time and decide to take this research further, I could look at how structures of relationships might negatively impact women in the long-run. If I were to take this route, I would have to rely on empirical models to achieve significant results.

```
Self-Employed \\ = \beta_0 + \beta_1 Female_{it} + \chi_1 female * after 1988 * educ_{it} + \beta_3 Marst_{it} + \beta_4 age_{it} \\ + \beta_5 age_{it}^2 + \varepsilon_{it}
```

For my third model, it's similar to my second model, however I added an new interaction for *female*after1988*educ_level*. This is to compare to the times before 1988 when congress signed the *Women's Business Ownership Act of 1988*. In order to understand the role that education plays in the rate of self-employed women.

In terms of ethnicity, the data I gathered was pretty well documented, however I wanted to create dummy variables to separate them data into ethnic group categories. One of the main aims for the ECOA is to stop discrimination among credit lenders. Now, it's a well known fact that the USA survives off of credit. It's credit based society and with that comes the credit score system, which in my opinion seems very archaic for the times we are living in. I fear the system is corrupt and not in the way of political corruptness, but in the fact that it is a highly flawed system that made it easy to discriminate against marginaliserd groups. Separating the ethnic groups into numerical variables helps us understand how each group is affected by the circumstances.

For my model, I chose to do a Diff – Diff model as it would be the best estimation method to get me the results I wanted. I wanted to compare the time periods of before and after 1988. My main research question ulitmately compares married and unmarried women, so a Diff-Diff was the most logical estimation method. I didn't choose Panel data as I felt the IPUMs data set was better suited to a Diff-Diff model. I was important for me to focus on the differences between the different groups of women.

Data

For my data, I was initially going use PSID data, however I found that the website wasn't up to date and there were a lot of missing observations in certain variables. Initally, when reading (Bartscher, 2002) papeer, they used PSID data, however I decided to go with IPUMS using CPS samples, as it had great documentation and up to data information. My analysis uses data from 1960- 1988

and 1988 onwards. I also considered webscrapping data from Census beureu, but on recommendation by my professors, they suggested I look at IPUMS.

The data set is large and I wanted to keep it a large dataset as I wanted the results to be significant. This resulted in N=7828979 observations. In addition, I didn't want to drop values from the 60's as I needed that data to show the difference between the time periods. My research focuses on women who are working-age women who have completed their education cycle. What I mean by 'education cycle' is the period in which one completes their academic career, whether that be high school educated or college educated. This also takes into account potential marriage and children, so by the time 1988 rolls around they would be in a bettter financial position to consider being self-employed. It took longer to manipulate the data which was a trade off I was willing to accept.

For the data manipulation, I had to create dummy variables for ethnic groups as I mentioned above. The Data set from IPUMS has a variety of groups, however I wanted to base it off of whether they had any hispanic origin. So when you're overlooking the code, you will see I have created the dummy variables for the non-hispanic white, non-hispanic black, non hispanie native american and non-hispanic asian/ pacific islands. The dependent variable, self-employment status is coded as a binary indicator equal to 1 if a woman reports being self-employed in their primary occupation. For my independent variables, I've inleuded education attainment which is measured in years, binary indicator for marital status, along with the ethnic group indicators. What is missing from the dataset and the research is the mention of children, as I find it would be appropriate to include chilren if I were looking at this on a state level. States don't have the same laws and often children have an impact on the finances and career trajetory of women.

Table 1 shows the descriptive statistics of the full sample by decade. The mean self-employment rate among women is 46%, with significant variation across the education levels we established. College+ has a mean of 40.6% which maes sense as college educated women have more knowledge for the field they're venturing into. When we look at it on a gender level, men have and a mean of 10% whilst women have a mean of 6.8% with the average age being 39 years old for both men and women. We could say that ages 39 are the 'sweet spot' in terms of their utility in the

labour market. In terms of before and after the year 1988, women were standing at aorund 43% on the self-employment rate and after 1988 when the Women's Business Ownership Act was passed, we see an in up to 47%. Interestingly enough, women who has less than high school education saw a jumpof 50.9% in the pre-1988 era, which is the largest share compared to college+ which stands at 30.1%. This is truly fascinating as when we look at our regressions results, married women tend to have the higher rate in self-employment.

[Insert Table 1 here] : is malfunctioning on computer so I was unable to export the table.

While the IPUMS data offers several advantages, there were still disadvantages I had to account for. The cross-sectional nature of the data limits our ability to track similar individuals over time, something the PSID data was favorable in. there is also the issue of rotation bias with the data, and this essentially means that households are only included in the sample for 4 months, out of 8 months, then back in again. The data also excluded the amount ot taxes inidivuals pay, whereas the PSID offers this information, altohough with a lot of mnissing values.

The limitations that I faced in this research stem mainly from not having enough time to really delve deep into the data and how I coded it. Since this is such a large dataset, it became increasingly difficult to run code efficiently. There were often times when took over 5 minutes for the results to load. That is a trade off I had to acdept since it was important to examine key details within the subgroups of women.

Working with a dataset of over 7 million obersvations posed several computational and methodological challenges. Although the large sample size provoided this research with statistically significant results, forced me to consider optimizing the important data I needed for this research. Particularly with omitting children from this research. I believet that including children and potentially the

financial aspects of having children like daycare costs, would have made interpreting the results more nuanced.

On the other hand, this allowed more precise estimation of effects for the smaller subgroups of women. This also provided this research with sufficient power for mutliple robustness check. In addition, working with such a full dataset, rather than a small sample, helped to avoid selection bias that may have arisen due to arbitrary sample restriction. Ultimately this provided this research with the validity of the results.

Results

In table 2, you will find the regression results table. The overall resounding answer is that the ECOA had a positive impact on the rate of self-employed women. The coefficients on the interaction term *female*after1988* which represents women after the year 1988 when the Women's Business Ownership Act was passed by congress, range from 0.015 to 0.030. this tells us that after the implementation of the ECOA, the female self-employment rate increased by 1.5 to 3.0 percentagepoints relative to their male counter parts. It is also important to point out that the results are all statistically signinificant, which is what we want to see when looking at this type of research.

The *female* variable represents the gender gap between men and women and shows us that women were 5.4 to 7.2 percentage points less likely to be self-employed than men before the implementation of the ECOA. This illuminated the barriers that women faced during that time period, where they faced push back and more than likely told their husband would provide for them. There isn't anything inherently wrong with depending on a husband to provide, however the main inspiration for this research is to highlight that opportunities for women, instead of relying on their male partners to provide for them. This reliance is ultimately what leads to women suffering if the relationship doesn't work out, not to mention if there are children involved.

For the educational effects, the results show heterogeneous effects across all eduction levels. The interaction female*after1988*educ_level portrays the positive impact of the ECOA for the more educated women, which isn't surprising. Women

with some college education, saw and increase of 0.7 percentage points in self-employment. We mist remember that this value is an estimation and not that women without a college education can be self-employed. Women with college degrees or higher saw the largest estimation with an increase of 1.2 percentage point at the 1% levelBart. The the high school level, there was a positive effect, although not as large as college educated women. So this backs up the claim I made about women not needing to be college educated to be self-employed.

For my control variables, there were key variables in my second model to show significant results. For my *Age* variable, there is a parabolic positive linear relation to self-employment and a negative squared term. This could suggest that with age increasing, the likihood of self-employment is much higher but it is at a decreasing rate. For marital status (*MARST*), shows a small negative relation to self-employment. This effectively tells us that married women are -0.3 percentage points less likely to be self-employed. Now this can be explained by a number of reasons like child care, their partners salary might be sufficient enough not to warrant women into self-employment. They could be military spouses and may be based outside of the country. The ethnic groups showed that groups 2 to 6 have lower self-employment rates compared to the other groups, which isn't surpising as minority groups have a much harder time navigating the business world and being entrepreneurs.

The robustness checks, the results stayed within the same estimations, specifically model 1-5, and this tells us that the results are robust enough. The R-squared term is realtively low with 0.005 to 0.014. this seems to be in the ball park of binary variables.

Compared to other research, Bartscher (2020) found that when more women join the labour force, there was an increase in their ability for homeownership as "households cam borrow against a higher share of what the wife would've earned." What this tells me in addition to my research is that women benefit from working, whether it being self-employment or not, there is still an element of mutual benefit.

Models 4 and 5 represent separate analysis for married and unmarried women and it demonstrates the heterogeneous effects of the ECOA with married N=5,479,797 and unmarried N=2,349,182 observations. Both models have the same control variables as models 1-3. The gender gap shows a clear difference between

married and unmarried groups with unmarried women having a 4.6 percentage point deficit in self-employment compared to unmarried men. Married women details an even lower percentage point of 7.2 probability in self-employment, compared to married men and both of these results are statistically significant at the 1% level. What this tells us is that married women are less likely than ummarried women to become self-employed. This backs my hypothesis that unmarried women are more likely to pursue the entrepreneurial route.

The interaction female*after1988 illustrate positive effects for boths groups of women with unmarried women experiencing a 2.8 percentage point increase in their likihood to be self-employed. Interestingly enough, married women actually faced a 3.0 percentage point increase in self-employment at the 1% level. This indicates that the ECOA helped reduce the gender gaps regardless of their marital status. This could also be due to the state of the economy and having a market that isn't as saturated as it is now.

For my control variables, the results revealed and interesting revelation with differences between offer variables that may affect self-employment. For instance, in education for unmarried women there was positive but small effet with 0.1 percentage points. For married women, education actually shows and negative impact on self-employment with -0.9 percentage points. This essentially tells us that married educated women dom't particularly favor self-employment, which is understanding.

The Age effect shows that it's stronger effect for married women than unmarried women with 1.2 percentage point compared to 0.8 percentage point per year. Both married and unmarried women showcased a decreasing effect on the squared Age coefficient.

The ethnic groups effects were all negative, however non-hispanic white women had a higher effect -5.8 percentage point compared to unmarried which was -4.0. compared to other ethnic groups, non-hispanic white women had the highest significance compared to other non-hispanic ethnic groups like non-hispanic black women which is represented in group 3.

The R-squared values are similar to our model 1-3 values, however the married group has a higher R-squared of 0.014 in comparison to 0.008. This could suggest

that our models have more variation of self-employment in married women than it does with unmarried women. Although the R-squared values are small, it is to be expected with binary level data.

In terms of policy implications, these results could convey that the ECOA has a more significant effect on married womens' access to self-employment than it did with unmarried women. This in conjection with our results from models 1-3, convey a high effect of dicrimination this group of married women. Now this could be due to the connotation that married women are 'amatuers' when it comes to dealing with money, hence they just have their husbands handle the finances. These were and still are the assumptions with women who are housewives. This large effect also indicates to us that married women's motivations to access credit for themselves to retain some sort of autonomy is higher than that of unmarried women. Back then, women's 'worthiness' really depended on their husbands' social standing rather than their own, so being self-employed could've been seen as an outlet to regain their independence.

These results were very eye opening, as my initial hypothesis was that unmarried women would fair a lot better than married women when it came to capitalizing on the ECOA. We could explain this by married women having more security to take risks. When deciding to be self-empoyed, you're either freelancing your skills or you're starting your own business. The trade off of choosing to be selfenployed is the lack of job security. In Mazlow's hierarchy of needs puts inidividualas need for safety and financial security is paramount to an efficient lifetsyle. Most people working, aren't working their jobs because they love it, they need to fulfill their need for financial stability along with their well-being. It's not always garuateed that you'll make a profit being self-employed as you give up the access to better private health care which is becoming more of an issue inrecent times. With that being said, ECOA has had a positive impact on the rate of self-employed women since its implementation. With the rise in content creation and social apps like 'TikTok', we have seen an immense rise in small businesses. This was exacerbated with Covid-19 and the mass layoffs that followed, even in out present time.

Table 1: Descriptive Statistics

Table 2: Regression Results

I(AGE2) MARST factor(ethgroup)2 factor(ethgroup)3 factor(ethgroup)4 factor(ethgroup)5 factor(ethgroup)5	I(AGE2) MARST factor(ett factor(ett factor(ett factor(ett) factor(ett)		I(AGE2) MARST factor(et) factor(et) factor(et) factor(et)	I(AGE2) MARST factor(etl factor(etl factor(etl	I(AGE2) MARST factor(etl factor(etl factor(etl	I(AGE2) MARST factor(etf factor(etf	I(AGE2) MARST factor(et) factor(et)	I(AGE2) MARST factor(et)	I(AGE2) MARST factor(etl	I(AGE2) MARST	I(AGE2) MARST factor(et)	I(AGE2) MARST	I(AGE2)	I(AGE2)	I(AGE2)			AGE		factor(ed		factor(ed	ruotor (od	factor(ed	education_level		411611300	afta=1000		female				
	211700	ar1988		group)6		;roup)5		;roup)4		;roup)3		;roup)2								factor(education_level)4		factor(education_level)3	rustor (seasonnon-re-re-re-re-	ortion level)?	_level	•								
	(0.001)	000***																								(0.0004)	-0.038) ****	(0.0005)	-0.054***	(1)			
	(0.001)	0008***	(0.001)	-0.010***	(0.0003)	-0.026***	(0.0005)	-0.019***	(0.001)	-0.014***	(0.0003)	-0.051***	(0.0001)	-0.003***	(0.00001)	-0.0001***	(0.001)	0.009***						(1000.0)	-0.006	(0.0004)	-0.033)) ***	(0.0005)	-0.053***	(2)			To Con ampure on a comme
	(0.001)	0014***	(0.001)	-0.011***	(0.0003)	-0.027***	(0.0005)	-0.018***	(0.001)	-0.015***	(0.0003)	-0.051***	(0.0001)	-0.003***	(0.00001)	-0.0001***	(0.001)	0.009***	(0.001)	-0.009***	(0.001)	-0.006***	(0.002)	0 0005		(100.0)	-0.014) 1 1 1 1 1 1	(0.001)	-0.059***	(3)	self_employed	Dependent variable:	ac Sen zamproj mem
	(0.001)	0020***	(0.001)	-0.008***	(0.0004)	-0.027***	(0.001)	-0.018***	(0.002)	-0.013***	(0.0004)	-0.058***			(0.00001)	-0.0001***	(0.001)	0.008***						(100000)	-0.009	(0.0000)	-0.033)) ***	(0.001)	-0.046***	(4)			
	(0.001)	0 020***	(0.001)	-0.013***	(0.001)	-0.019***	(0.001)	-0.022***	(0.002)	-0.012***	(0.0004)	-0.040***			(0.00002)	-0.0001***	(0.001)	0.012***						(0.0002)	0.001	(0.001)	-0.031) ****	(0.001)	-0.072***	(5)			

ECOA Impact on Female Self-Employment

Table 2: Regression Results continued

*p<0.1; **p<0.05; ***p<0.01	3,024.109 (at = 11, 34/9/05)	3,321.923 (til = 23, 1828933)	0,301.402 ($ul = 12, /828900$)	13,010.000 (ut = 3, 7020973)	
	$0.288 (df = 5479785)$ $2.824 \cdot 100^{***} (4f - 11.5470785)$	0.279 (df = 7828975) 0.278 (df = 7828966) 0.278 (df = 7828955) 0.288 (df = 5479785) 0.254 (df = 2349170) 0.278 (df = 7828975) 0.288 (df = 5479785) 0.288 (df = 5479785) 0.278 (df = 7828975) 0.278 (df = 7828975) 0.288 (df = 5479785) 0.288 (df	0.278 (df = 7828966)	0.279 (df = 7828975)	Residual Std. Error F Statistic
	0.008	0.010	0.010	0.005	Adjusted R ²
	0.008	0.010	0.010	0.005	\mathbb{R}^2
	5,479,797	7,828,979	7,828,979	7,828,979	Observations
	(0.022)	(0.018)	(0.018)	(0.0004)	
	-0.020	-0.062***	-0.046**	0.132***	Constant
		(0.001)			
		0.012***			female:after1988:factor(education_level)4
		(0.002)			
		0.007***			female:after1988:factor(education_level)3
		(0.003)			
		0.003			female:after1988:factor(education_level)2
		(0.001)			
		-0.032***			after1988:factor(education_level)4
		(0.001)			
		-0.015***			after1988:factor(education_level)3
		(0.002)			
		-0.018***			after1988:factor(education_level)2
		(0.001)			
		0.018***			female:factor(education_level)4
		(0.001)			
		0.011***			female:factor(education_level)3
		(0.003)			
		0.00			GIIIII CII (CIIICIII (CIIICIII LICI)

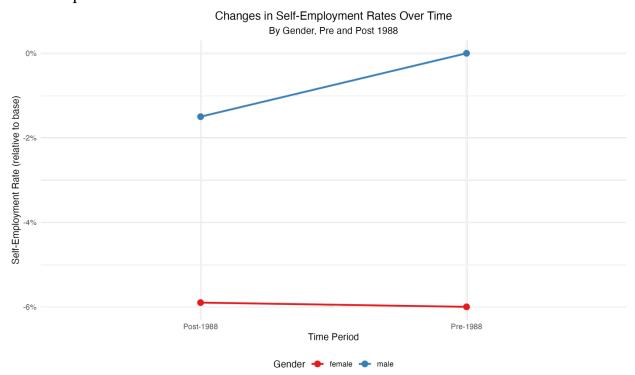
Table 3: Regression Results Married v. Unmarried

ECOA Impact by Marital Status

_	Dependent variable: self_employed						
	Married	Unmarried					
	(1)	(2)					
female	-0.046***	-0.072***					
	(0.001)	(0.001)					
after1988	-0.033***	-0.031***					
	(0.0005)	(0.001)					
education_level	-0.009***	0.001***					
	(0.0001)	(0.0002)					
AGE	0.008***	0.012***					
	(0.001)	(0.001)					
I(AGE2)	-0.0001***	-0.0001***					
	(0.00001)	(0.00002)					
factor(ethgroup)2	-0.058***	-0.040***					
	(0.0004)	(0.0004)					
factor(ethgroup)3	-0.013***	-0.012***					
	(0.002)	(0.002)					
factor(ethgroup)4	-0.018***	-0.022***					
	(0.001)	(0.001)					
factor(ethgroup)5	-0.027***	-0.019***					
	(0.0004)	(0.001)					
factor(ethgroup)6	-0.008***	-0.013***					
	(0.001)	(0.001)					
female:after1988	0.028***	0.030***					
	(0.001)	(0.001)					
Constant	-0.020	-0.144***					
	(0.022)	(0.029)					
Observations	5,479,797	2,349,182					
R^2	0.008	0.014					
Adjusted R ²	0.008	0.014					
Note:	*p<0.1; **p<0	05· ***p<0.0					

From table 3 we can gather that married women are estimated to have a higher rate in self-employment than unmarried women. We mentioned before that this could be attributed to safety and security of with being marriage and having another income to fall back on.

Graph 1: Time Trends

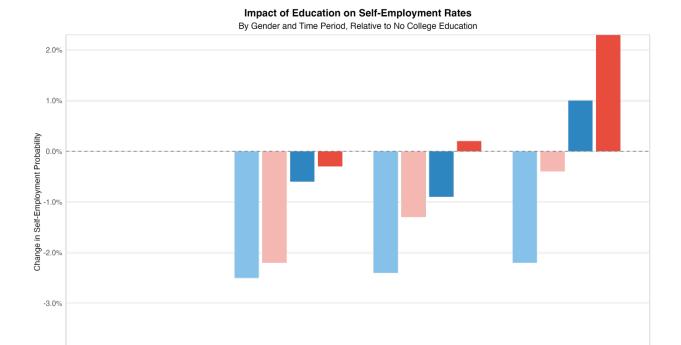


This graph illustrates the changes in self-employment for men and women before and after 1988. It is expected to see a higher trend for men than for women. We can attest this to men having a jump start in the self-employment industry.

Graph 2: Education Effects

-4.0%

No College



Education Level

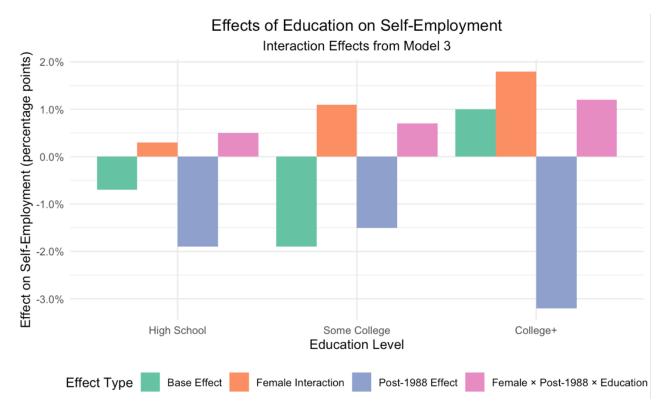
Gender and Time Period Men (Pre-1988) Men (Post-1988) Women (Pre-1988) Women (Post-1988)

Some College

College+

High School

Graph 3: Interaction Effects from Model 3



Conclusion

This research shows that women's entrepreneurship chances were significantly improved by the Equal Credit Opportunity Act (ECOA), with key benefits that differed by marital status. Several important conclusions are drawn from the empirical analysis. First, a significant increase in female self-employment rates was brought about by the introduction of the ECOA and the effect ranged from 2.8 to 3.0 percentage points. Second, married women saw a 3.0 percentage point rise in the likelihood of becoming self-employed, whereas unmarried women saw a 2.8 percentage point increase. This effect was more noticeable for married women. Given that married women originally had a greater gender gap in self-employment of -7.2 percentage points than their unmarried counterparts with -4.6 percentage points, this disparity is especially significant.

These results imply that although marriage has traditionally been a gateway for women to obtain credit, the establishment of ECOA assisted in reducing their reliance. The greater impact seen for married women suggests that the law was especially successful in combating credit discrimination against this demographic, which may have typically been assessed more on the basis of their spouses' creditworthiness than their own financial capacity.

The results adds to the conversation regarding gender discrimination in loan markets and how anti-discrimination laws might garner economic opportunity. Although the findings indicate that ECOA contributed to a reduction in the gender gap in entrepreneurship, the gender difference in self-employment rates indicates that there are still additional obstacles preventing women from pursuing business. These could include things like disparities in risk preferences, occupational segregation, or family dynamics.

From the standpoint of policy, these results emphasize how crucial equal access to finance is for encouraging economic independence and entrepreneurship among women and minority groups. The varying estimations by marital status indicate that family structure and financing availability should be taken into account in initiatives intended to encourage female entrepreneurship. Future legislative efforts may concentrate on locating and removing any remaining obstacles to female and minority entrepreneurship. With the market becoming increasingly saturated, it would be advisable for the government to look at the performance of small businesses in relation to the ECOA.

Further research could look at the ECOA's longer-term effects on wealth accumulation across generations, how the impact differs in other industries or geographical areas, or how the rates of female entrepreneurship have been impacted by later credit market reforms. We could also look at the effect children have on the self-employment rate, and maybe research into the effects of child care on women's labour force participation Furthermore, knowing how these effects combine with other significant policy changes that impact women's economic chances may help shape future policy.