

How relaxation in SNAP eligibility impacts self-employment

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Abstract

I intend to find the impact of a change in policy on self-employment levels within the U.S. over the years 1996-2020. SNAP eligibility criteria was relaxed in 2000 and individuals 200% below the Federal Poverty Line (FPL) were now eligible for SNAP as compared to those 130% below FPL before 2000. Difference-in-difference estimation is used to estimate this impact. The data for SNAP and self-employment is taken from IPUMS CPS database. I expect to find an increase in self-employment once there is an increase in the eligibility of SNAP participants. I also intend to study how an increase in SNAP eligibility impacts necessity-driven and opportunity-driven entrepreneurship separately. This could have important implications.

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Introduction

SNAP (Supplemental Nutrition Assistance Program) has been found to be quite beneficial for participants. There is significant amount of research that has been done on studying the impact of SNAP on the health and incomes of the recipients (Tiehen et al., 2012a; Hoynes et al., 2017; Bartfeld et al., 2015), however, not much research has been done that details how the take-up of SNAP impacts the poor households in terms of their entrepreneurial attributes.

Although there is some research that studies the impact that increasing eligibility of SNAP recipients has on the number of firms started and the number of listed companies formed (Olds, 2016), to my knowledge no paper specifically studies how opportunity-driven entrepreneurship increases if more individuals are enrolled in SNAP.

Poorer households are focused on working so that they can just earn enough to live another day and their utmost priority is only to put food on the table while their incomes are more often than not irregular and highly unpredictable (Collins et al., 2009). I believe that once their need of food is satisfied, they would be able and willing to think and come up with new and innovative ideas. Thus, this would cause them to transition from necessity-driven entrepreneurship towards opportunity-driven entrepreneurship.

The reason why I want to differentiate between necessity and opportunity-driven entrepreneurship is the following. Kautonen and Palmroos, 2010 find that necessity-driven entrepreneurship negatively impacts the desire of the individual to remain self-employed, compared to returning to paid employment.

Opportunity-driven entrepreneurship is not just beneficial for the individuals in the long-run but it can also have trickle down effects on the development of the economy in terms of higher earnings for that sector and more jobs being created in the long run. There are a lot of studies that find opportunity-driven entrepreneurship to have a significant positive impact on the economic growth of the countries (Rodrigues, 2018; Stoica et al., 2020). Opportunity-driven entrepreneurship is also considered to structurally transform both traditional and modern sectors through innovation and by increasing productivity and employment (Gries and Naudé, 2010).

Olds, 2016 is closest to the topic of this paper. That paper studies the effect of SNAP eligibility on business ownership. It particularly focuses on the expansion of SNAP threshold levels beginning in mid-2000s and how that affects self-employment rates as well as inception of incorporated firms. I plan to extend that paper by including more recent years trying to gauge whether such a policy change has a long-term impact. Furthermore, Olds, 2016 studies how increased SNAP eligibility impacts creation of new firms but does not specifically study the impact on opportunity-driven entrepreneurship. This is something that I plan to study.

I intend to study how a change in SNAP eligibility through relaxing credit constraints impacts the participants in terms of their entrepreneurial ventures. The idea is simple. Households that are very poor are vulnerable and suffer from food insecurity. They have to provide food to their families and even earning just enough in order to take home sufficient food is an uphill battle. The primary target each day as they set out to work (in most cases) is to earn just enough to feed themselves and their families. This is, therefore, their sole concern and the only thing that their mind is occupied with. They may, thus, be “forced” to work and employ themselves for the purposes of providing something to the table. This gives rise to necessity-driven entrepreneurship (as defined by the Global Entrepreneurship Monitor (GEM)). The poor are only driven by their need to survive and therefore start ventures that are neither novel nor creative (in most cases).

I believe, and this is the hypothesis that I want to test, that if they are relieved of these duties, then that would enable them to think independently and creatively. It would help them explore various ways in which they can earn themselves a living rather than focusing on the food; something they are already provided with, by the government. This may enable them to start ventures based on opportunity - to tap onto an opportunity that they see in the market. This is defined as opportunity-driven entrepreneurship by GEM.

Thus, what I propose is the following. An increase in the individuals eligible for SNAP is likely to increase the self-employment (and probably opportunity-driven entrepreneurship in the U.S.)

The rest of the paper is organized as follows. I start with the literature review which is followed by the section on Opportunity Entrepreneurship and SNAP take-up trends. This is followed by a section that describes the data. I then present the proposed model and move on to sharing some initial results from the estimation carried out. That is followed by conclusion which talks about some of the limitations of this paper and scope for future research.

Literature Review

A brief explanation of public assistance programs and their types as defined by the U.S. census website is provided below:

“Public assistance refers to assistance programs that provide either cash assistance or in-kind benefits to individuals and families from any governmental entity. There are two major types of public assistance programs; social welfare programs and social insurance programs. Benefits received from social welfare programs are usually based on a low income means-tested eligibility criteria.

Some of the major federal, state, and local social welfare programs are:

- Supplemental Security Income (SSI)
- Supplemental Nutrition Assistance Program (SNAP)
- Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)
- Temporary Assistance for Needy Families (TANF), including Pass through Child Support
- General Assistance (GA)

Benefits received from social insurance programs are usually based on eligibility criteria such as age, employment status, or being a veteran.”¹

Although public assistance programs in the past have been termed as the most controversial social welfare problems within the USA (Young et al., 1987), recently there has been a significant increase in the uptake of such programs. Schayek and Dvir, 2011 find that a greater amount of public assistance in both qualitative as well as quantitative terms is likely to have a positive impact on performance of small businesses. Thus, if we account for the improved quality of the assistance, that does translate into improved performance.

One program in particular that has been growing and improving the lives of the participants is the food stamps program called SNAP (Bartfeld et al., 2015). In fact, “SNAP is the cornerstone of food assistance in the United States, serving one in seven Americans in FY2015 at a cost of \$74 billion” (Ziliak, 2016). SNAP is proven to have a positive impact on the macroeconomic variables; Canning and Stacy, 2019 find that if SNAP benefits are increased by \$1 billion, then that is expected to increase GDP by around \$1.5 billion (a multiplier of 1.5) - however, their model is most appropriate for a slowing economy.

How SNAP benefits the poor and whether it actually benefits them, then, is the next question. Daponte et al., 1999 do a good job in explaining this phenomena in detail. They find that many of the eligible households that do not participate in the food stamp program would only receive modest monthly benefits even if they did enroll. They find that median monthly benefit was only around \$39 for eligible non-participants as compared to \$150 for the sample of households already enrolled and receiving the benefits. Thus, SNAP actually does improve the well-being of the participants.

The impact of food insecurity on the entrepreneurial aspects of the individuals is less studied, however, it is found to reduce education levels among adolescents due to sickness, high absenteeism, poor academic performance and social functioning, as well as behavioral issues

¹Source: <https://www.census.gov/topics/income-poverty/public-assistance/about.html>

(Frongillo et al., 2006 ; Jyoti et al., 2005; Rose-Jacobs et al., 2008). Tiehen et al., 2012b find that the effectiveness of SNAP in improving the lives of the low-income households is impacted by the state policy choices. Belachew et al., 2011 find that adolescents who are food insecure complete lesser years of schooling compared to those who are not.

Food insecurity may impact the health behavior of college students beyond the college years and therefore the impact may not be limited to the individual and may carry over to state or even national level (in the long-run) (El Zein et al., 2019). Since food insecurity has such negative impacts on the health, social interactions, and education of the individuals, I believe food insecurity is bound to hamper the innovativeness and critical thinking abilities of the individuals as well.

Although Olds, 2016 studies how increasing SNAP eligibility increases the likelihood of individuals to own a business, the results are driven completely by non-enrollees who became newly eligible. Thus, there exists a gap in literature that studies the effects of food stamps on the entrepreneurial abilities of the recipients of SNAP.

Opportunity Entrepreneurship Trend

Figure 1 shows the trend for opportunity share of entrepreneurs for the U.S. over the years 1996-2019. It can be observed that the opportunity share of entrepreneurs generally has an upward trend apart from the blips that it experienced around 2002 and 2009. We can also observe that this share has increased over the years from a value of around 0.8 in 1996 to a value of around 0.86 in 2019.

Data

In this paper I intend to study how relaxation in SNAP eligibility affects self-employment levels within the U.S. IPUMS CPS basic monthly data from 1996-2020 has been used. CPS matching has been performed to link the data for individuals across periods in order to provide panel data for estimation. The individuals surveyed in CPS are rotated across periods therefore it was important to match the data of individuals across different months.

For opportunity-driven entrepreneurship and necessity-driven entrepreneurship new variables have been constructed using this very IPUMS CPS data. Opportunity-driven entrepreneurs are individuals who were employed in a prior period but then switched to self-employment later. Necessity-driven entrepreneurs are those who were unemployed in a prior period but then switched to self=employment later on. These distinctions are important because it is likely that those who are unemployed just need to get started and are driven by necessity to

earn a living in order to start a venture. However, those who are already employed do not have a reason to leave the job market for self-employment unless they see an “opportunity” that they expect to take the benefit of.

One of the main reasons why panel data is preferred to national-level time series data is that at a national level, the local level variability is ignored (Levitt, 2001).

Methods

The difference-in-difference method that I propose is as follows:

$$Y_{ist} = \beta_0 + \beta_1 \text{ Treat}_{it} + \beta_2 \text{ Post}_{st} + \beta_3 \text{ Treat}_{it} \text{ Post}_{st} + \xi X_{it} + \nu_s + \eta_t + (a_i + \epsilon_{it}) \quad (1)$$

for individual i in state s at time t , where Y_{ist} is self-employment (or necessity-driven entrepreneurship or opportunity-driven entrepreneurship).

“Treatment status $\text{Treat}_{it} = 1[\text{Inc}_{it} \leq \text{Thresh}_{st}]$ and uses a household’s combined income to determine eligibility; this variable is only defined for households above the previous cut-off of 130% FPL. The variable $\text{Post}_{st} = 1[t \geq \text{PolicyYear}_s]$, indicating whether an observation is before or after the policy’s enacting. The parameters ν_s and η_t are state and year fixed effects, and X_{it} is a vector of covariates. The difference-in-difference estimator of the effect of the expansion is β_3 .” Olds, 2016

Findings

I propose that increased SNAP eligibility is likely to have a positive impact on the self-employment levels and may be even opportunity share of entrepreneurship. Those who are eligible for SNAP benefits are more likely to think independently and creatively and start ventures that exploit some opportunity in the market.

The regression results in figure 2 show that an the treatment group post the policy change is more likely to increase opportunity-driven entrepreneurship.

Conclusion

Some of the limitations of this study are that due to the unavailability of state-wise data on opportunity-driven entrepreneurship provided by GEM, we use the IPUMS CPS data to construct opportunity-driven entrepreneurship variables which may not be quite accurate.

Future research could study the long-term impacts with respect to entrepreneurship on the recipients of SNAP and compare the different groups (age-wise, gender-wise) to find which subgroup of the recipients contributes the most to opportunity-driven entrepreneurship.

Appendix

FIGURES

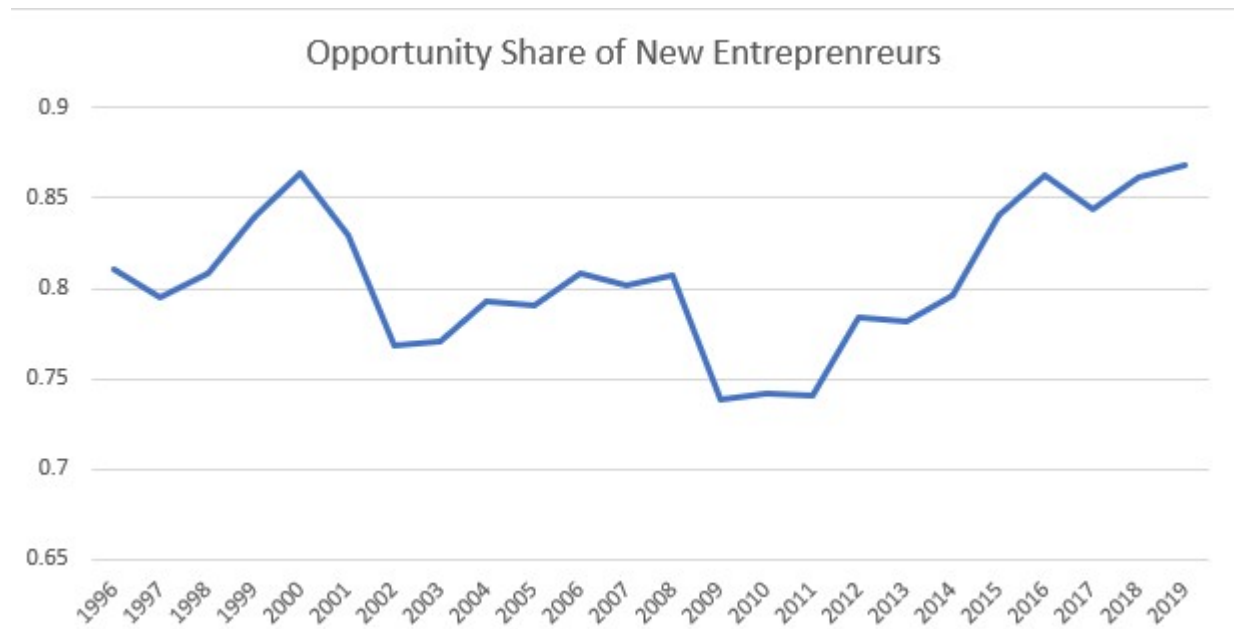


Figure 1: Opportunity share of new entrepreneurs (1996-2019)

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. reg opentry Treat Post Treat.Post i.year i.statefip
note: 2021.year omitted because of collinearity.
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Source	SS	df	MS	Number of obs	=	75,155
Model	139.106585	77	1.80657903	F(77, 75077)	=	12.56
Residual	10796.2374	75,077	.143802195	Prob > F	=	0.0000
Total	10935.344	75,154	.145505814	R-squared	=	0.0127
				Adj R-squared	=	0.0117
				Root MSE	=	.37921

opentry	Coefficient	Std. err.	t	P> t	[95% conf. interval]	
Treat	-.0021659	.015174	-0.14	0.886	-.0319069	.0275751
Post	-.0780338	.0253962	-3.07	0.002	-.1278103	-.0282573
Treat.Post	.0270847	.0170819	1.59	0.113	-.0063958	.0605651

Figure 2: Basic Regression Results

TABLE

Persons in family	FPL Rate
1	\$12880
2	\$17420
3	\$21960
4	\$26500
5	\$31040
6	\$35580
6	\$40120
7	\$44660

Table 1: 2021 FPL Values

Bibliography

- Young, J. T., Shapiro, R. Y., Patterson, K. D., & Russell, J. (1987). Public Assistance. *The Public Opinion Quarterly*, 51(1), 120–130. <http://www.jstor.org/stable/2749064>
- Daponte, B. O., Sanders, S., & Taylor, L. (1999). Why do low-income households not use food stamps? evidence from an experiment. *Journal of Human resources*, 612–628.
- Levitt, S. D. (2001). Alternative strategies for identifying the link between unemployment and crime. *Journal of quantitative criminology*, 17(4), 377–390.
- Jyoti, D. F., Frongillo, E. A., & Jones, S. J. (2005). Food insecurity affects school children's academic performance, weight gain, and social skills. *The Journal of nutrition*, 135(12), 2831–2839.
- Frongillo, E. A., Jyoti, D. F., & Jones, S. J. (2006). Food stamp program participation is associated with better academic learning among school children. *The Journal of nutrition*, 136(4), 1077–1080.
- Rose-Jacobs, R., Black, M. M., Casey, P. H., Cook, J. T., Cutts, D. B., Chilton, M., Heeren, T., Levenson, S. M., Meyers, A. F., & Frank, D. A. (2008). Household food insecurity: Associations with at-risk infant and toddler development. *Pediatrics*, 121(1), 65–72.
- Collins, D., Morduch, J., Rutherford, S., & Ruthven, O. (2009). *Portfolios of the poor: How the world's poor live on \$2 a day*. Princeton University Press.
- Gries, T., & Naudé, W. (2010). Entrepreneurship and structural economic transformation. *Small Business Economics*, 34(1), 13–29.
- Kautonen, T., & Palmroos, J. (2010). The impact of a necessity-based start-up on subsequent entrepreneurial satisfaction. *International Entrepreneurship and Management Journal*, 6(3), 285–300.
- Belachew, T., Hadley, C., Lindstrom, D., Gebremariam, A., Lachat, C., & Kolsteren, P. (2011). Food insecurity, school absenteeism and educational attainment of adolescents in jimma zone southwest ethiopia: A longitudinal study. *Nutrition journal*, 10(1), 29.
- Schayek, R., & Dvir, D. (2011). The impact of public assistance programs on small businesses: Strategic planning, entrepreneurship resources usage, and market orientation as mediating variables. *Journal of Small Business Strategy*, 22(1), 67–98.
- Tiehen, L., Jolliffe, D., & Gundersen, C. (2012a). *Alleviating poverty in the united states: The critical role of snap benefits* (tech. rep.).
- Tiehen, L., Jolliffe, D., & Gundersen, C. (2012b). *How state policies influence the efficacy of the supplemental nutrition assistance program in reducing poverty* (tech. rep.).
- Bartfeld, J., Gundersen, C., Smeeding, T., & Ziliak, J. P. (2015). *Snap matters: How food stamps affect health and well-being*. Stanford University Press.
- Olds, G. (2016). *Food stamp entrepreneurs*. Harvard Business School.
- Ziliak, J. P. (2016). Modernizing snap benefits. *Policy Proposal*, 6.
- Hoynes, H. W., Bronchetti, E., & Christensen, G. (2017). The real value of snap benefits and health outcomes.
- Rodrigues, D. R. (2018). The impact of (opportunity and necessity) entrepreneurship on economic growth: Does human capital matter?

- Canning, P., & Stacy, B. (2019). *The supplemental nutrition assistance program (snap) and the economy: New estimates of the snap multiplier* (tech. rep.).
- El Zein, A., Shelnutt, K. P., Colby, S., Vilaro, M. J., Zhou, W., Greene, G., Olfert, M. D., Riggsbee, K., Morrell, J. S., & Mathews, A. E. (2019). Prevalence and correlates of food insecurity among us college students: A multi-institutional study. *BMC public health*, 19(1), 660.
- Stoica, O., Roman, A., & Rusu, V. D. (2020). The nexus between entrepreneurship and economic growth: A comparative analysis on groups of countries. *Sustainability*, 12(3), 1186.