



Research Brief,

Short Paper

Vol. 3, No. 6

(2021, April 6)

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Covid-19 Pandemic: Effects on Minority-Owned Businesses in Illinois

ISSN 2687-8844

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Abstract

This research explores minority economic development in Illinois, using self-employment numbers for the minorities during the Covid-19 pandemic. During all four phases of Covid-19 mitigation, African-American self-employment took the turn for the worse, the monthly growth in self-employment numbers during January 2020 to February 2021 was a dismal -7%. Overall, Hispanics have fared well, the growth in self-employment for Hispanics during the pandemic was 11%. Insights into demographics of the typical minority self-employed are provided.

Introduction

On December 31, 2019, a new variant of Coronavirus, severe acute respiratory syndrome (SARS-2), was reported in Wuhan, China. Since then, the virus, labeled Covid-19, has spread around the world infecting 128 million and killing 2.81 million, as at March 30, 2021².

In the US, Covid-19 was first reported on January 21, 2020, in the state of Washington³. As at date, the virus has infected 30.4mil people; the case-to-fatality ratio is 1.8%⁴. In an effort to contain the spread of the virus, governments have imposed restrictions such as

¹ Professor, Illinois Institute for Rural Affairs, Western Illinois University.

² <https://www.nytimes.com/interactive/2020/world/coronavirus-maps.html>.

³ See Athiyaman, A. and Boulay, D (2021). Some empirical aspects of the manufacturing sector during the Covid-19 pandemic. Rural Research Report, 31(1), 1-12. Available online:

http://www.iira.org/wp-content/uploads/2021/02/RRR_Jan2021_Feb12.pdf

⁴ Same as footnote 2.

social distancing and shuttering nonessential businesses⁵. The economic cost of these actions is estimated at around \$10 trillion⁶. While business confidence, in general, has rebound from its lows from the early days of the pandemic⁷, there is evidence that minority owned businesses have been impacted the most⁸.

In Illinois, there were about 5.06million self-employed persons or businesses, as at January, 2020. The state declared a stay-at-place order on March 21, 2020. This impacted 20% of the self-employed, 970,000 self-employed persons failed to work at least 15 hours a week during April 2020⁹. The impact of the pandemic was more severe among the African-American, self-employed; of the 53,743 self-employed African-Americans as at January, 2020, only 29,754 (55%) reported working for 15 hours or more per week during April, 2020; put another way, 45% of the African-American businesses were shuttered during the peak of the pandemic.

What are the changes to self-employment numbers among minorities (African-Americans, Hispanics, and Asians), during

⁵ See, for example, <https://coronavirus.illinois.gov/s/>.

⁶ <https://www.economist.com/finance-and-economics/2021/01/09/what-is-the-economic-cost-of-covid-19>.

⁷ Small business health index, measured by the US Chamber of Commerce, posted double-digit increases, from 39.5 in Q2, 2020 to 55.9 in Q1, 2021; see <https://www.uschamber.com/sbindex/summary>.

⁸ See Ong et al (2020). Covid-19 impacts on small business and systemic inequality, October 30, 2020. UCLA: Center for Neighborhood Knowledge. The definition of minority

⁹ The 15-hours work week is considered “active”; for self-employed it means that their “business” is functioning normally.

phases 1 to 4 of “restore Illinois” initiative¹⁰? Which industries have been impacted by Covid-19 the most? What are the demographic correlates of business survival, or for being self-employed for at least 15 hours per week? This paper addresses these and other similar questions.

Conceptual Framework

Ethnic entrepreneurialism is often thought of as blocked opportunities in the labor market¹¹; lack of opportunity to work for others has been stated as the primary motive for starting a business¹².

However, a principle in macroeconomics suggests that *supply creates its own demand*¹³. In other words, the total quantity of all goods supplied in an economy equals the total quantity of all goods demanded. Translated to the problem of inactive businesses, the principle suggests that the inactive businesses are holding the prices of their goods or services above the equilibrium price, hence there is little or no demand for their products. The principle would go on to predict that such inactivity is short lived, not permanent, and eventually supply would equal demand.

¹⁰ Restore Illinois is a five-phased plan to reopen the state; see <https://coronavirus.illinois.gov/s/restore-illinois-introduction>. The state is on Phase 4, as at March 31, 2021.

¹¹ See for example, Aldrich, H., and Waldinger, R. (1990). Ethnicity and entrepreneurship, *American Review of Sociology*, 16, 111-135.

¹² See for example, Cox Jr, W. E., & Trombetta, W. (2011). *Structural dynamics of the ghetto marketplace*. Marketing Classics Press.

¹³ The principle or law is “Say’s law”; see *A Treatise on Political Economy*, Book 1, 6th Edition, Chapter 15.

This kind of thinking leads to the argument that during the course of the pandemic, restore Illinois phases 1 to 4, we should see business numbers to rebound over time and get closer to or above the January 2020 numbers, the base period or the pre-Covid-19 normal; the entrepreneur's race should make no difference to the numbers rebounding back to the pre-Covid-19 normal.

Methodology

Microdata from the Current Population Survey (CPS) were used¹⁴. The CPS is fielded monthly by the US Census Bureau and the Bureau of Labor Statistics. Sixty thousand households spread across the 50 states and the District of Columbia are polled. Data are collected during the calendar week that includes the 19th of the month. Table 1 lists the variables that were extracted from the CPS, monthly, for 2020 and January-February 2021.

Table 1: Variables Sourced from CPS

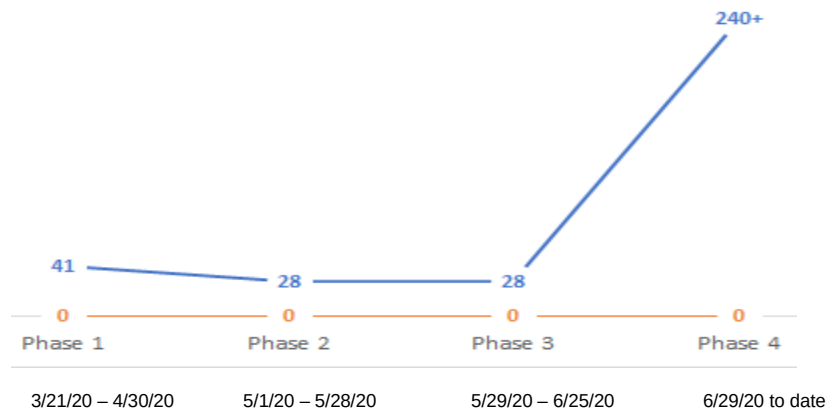
| Variable Label, CPS Definition | Variable Name |
|--------------------------------|----------------------------------|
| PRTAGE | Age |
| PESEX | Gender |
| PTDTRACE | Race |
| PEEEDUCA | Educational attainment |
| PEHRACT1 | Actual hours worked |
| PE101COW | Class of worker |
| PRMJIND1 | Major industry, 14 categories |
| PRTIND1 | Industry, 51 discrete categories |
| GTCBSASZ | Metro area size |

Data analysis involved computation of changes in business numbers during each of the phases of the restore-Illinois initiative (Figure 1), five-number summary

of those changes, and demographic analysis of self-employed who survived the pandemic.

¹⁴ <https://www.census.gov/programs-surveys/cps.html>.

Figure 1: Time Length of Restore-Illinois Phases



Results

Table 2 presents summary statistics for business activity during each of the four phases of restore-Illinois initiative. As shown in the Table, the median number of active businesses was negative during phase 1, compared to the pre-Covid-19

period; on average, the number of active businesses during phases 2 and 3 were higher than the normal, and now, during phase 4, the average number of active businesses has declined; it is less than that of the reference period, the pre-Covid-19 normal.

Table 2: Active Number of Businesses Compared to Pre-Covid-19 Normal, Classified by Restore-Illinois Phases

| | Phase 1 | Phase 2 | Phase 3 | Phase 4 |
|---|----------------|----------------|---------|---------|
| Median Change in No. of Businesses | -3,662 | 1,644 | 3,445 | -3,587 |
| Hinge Spread or Variability | 15,594 | 34,856 | 18,139 | 16,743 |
| Sectoral Impacts: | | | | |
| NAICS 11: Agriculture | -2446 | 3173 | 3595 | -6096 |
| NAICS 61-62: Education & Health | -5094 | 19933 | -4469 | 11808 |
| NAICS 71-72: Leisure & Hospitality | Not an Outlier | 21928 | 10265 | 8248 |
| NAICS 81: Other Services | -24344 | -16089 | 8407 | -20608 |
| NAICS 23: Construction | -27873 | -17553 | 8758 | -23611 |
| NAICS 31-33: Manufacturing | -3662 | -14644 | -14644 | -3587 |
| NAICS 42, 44-45: Wholesale & Retail | -30579 | -5409 | -24076 | -9701 |
| NAICS 48 and 22: Transportation & Utilities | 4196 | 21530 | 3445 | 4674 |
| NAICS 51: Information | -3303 | 1644 | 1060 | 8892 |
| NAICS 52: Financial Activities | Not an Outlier | Not an Outlier | 28720 | 25783 |
| NAICS 54: Prof. & Bus. Serv. | -4968 | -13606 | -33710 | -6646 |

Note: Outliers are computed using the inner fence and outer fence formulations in EDA¹⁵. Only sectors that fall outside the “fences” are listed.

Table 2 reveals that during phase 1, businesses functioning in NAICS 42 and 44-45 (wholesale and retail sectors) were the most impacted; during phase 2, it was businesses in the construction sector, and during phase 3, it was firms offering professional and business services that were most affected. Currently, during phase 4, both construction firms and businesses providing services are being impacted by the pandemic.

Table 3 shows changes in number of minority-owned businesses during the four phases of the pandemic; in general, African-American businesses exhibit a downward sloping trend and Hispanic businesses an increasing, upward trend in active business numbers.

¹⁵ See, for example, Tukey, J. W. (1977). *Exploratory Data Analysis*. Reading, MA: Addison-Wesley.

Table 3: Active Number of Minority-Owned Businesses Compared to Pre-Covid-19 Normal, Classified by Restore-Illinois Phases

| No. of Active Businesses, Pre-Covid-19 Baseline: | | | | |
|--|---------|---------|---------|---------|
| African-American Businesses (AA) | 53, 743 | | | |
| Hispanic Businesses | 14,699 | | | |
| Restore Illinois | | | | |
| | Phase 1 | Phase 2 | Phase 3 | Phase 4 |
| Change in Active Businesses, AA | -23989 | 8528 | -1891 | -33236 |
| Change in Active Businesses, Hispanic | 23477 | 38960 | 36652 | 43827 |

During phase 1 of the pandemic, the number of African-American businesses in the professional and business services sector (NAICS 54) fell by 70%, from 22,334 firms in January 2020, to 7,148 in April 2020; this decline in professional services firms continues to date with a mere 5,061 firms active in business as at end February, 2021. Overall, the number of African-American owned businesses declined at the rate of 7% per month during the pandemic (Table 4).

In contrast to African-Americans, Hispanics have adapted their self-employment or business practices to the pandemic situation and have grown their business numbers at the rate of 11% per month, during January 2020 to February 2021. They did this by shifting their efforts from providing leisure & hospitality services to managing construction businesses, transportation, and financial services (Table 4).

Table 4: Number of Active, Minority-Owned Businesses: For all Pandemic Phases, Sector-wise Details. Base = Pre-Covid-19, January 2020

African-American Owned Businesses

| | Baseline Numbers. | Phase 1 | Phase 2 | Phase 3 | Phase 4 |
|------------------------|------------------------------|----------------|----------------|----------------|----------------|
| Educational & Health | 4,596 | 13,255 | 24,475 | 10,942 | |
| Leisure & hospitality | | | | 9,799 | 6,026 |
| Other Services | 9,901 | | | | |
| Construction | 9,436 | | | 5,622 | |
| Manufacturing | | | | | |
| Wholesale & Retail | 6,475 | | 10,248 | | |
| Transportation & Util. | | 9,350 | 3,804 | 4,889 | |
| Information Services | | | | | 4,243 |
| Financial Services | | | 23,744 | 14,324 | 5,176 |
| Prof.& Bus. Services | 23,334 | 7,148 | | 6,276 | 5,061 |
| All | 53,743 | 29,754 | 62,270 | 51,852 | 20,507 |

Note: Blank spaces denote missing observations, unavailable data.

(Table 4, Continued)

Hispanic Businesses

| | Baseline Numbers. | Phase 1 | Phase 2 | Phase 3 | Phase 4 |
|------------------------|----------------------|---------|---------|---------|---------|
| Educational & Health | 6,951 | 4,937 | 4,304 | 17,080 | 9,315 |
| Leisure & hospitality | | 11,024 | 9,474 | 4,655 | 5,080 |
| Other Services | | | | | 7,705 |
| Construction | 4,080 | 4,497 | 8,682 | 8,785 | 13,222 |
| Manufacturing | 3,668 | | | | |
| Wholesale & Retail | | | 7,031 | 6,492 | |
| Transportation & Util. | | | 6,866 | 6,817 | 9,053 |
| Information Services | | | | | |
| Financial Services | | 8,697 | 8,314 | 7,521 | 9,396 |
| Prof. & Bus. Services | | 9,022 | 8,987 | | 4,755 |
| All | 14,699 | 38,176 | 53,658 | 51,350 | 58,526 |

Note: Blank spaces denote missing observations, unavailable data.

Impact of Gender, Race, Age, and Education on Business Survival and Growth

During phase 1, minorities and females shuttered their businesses; only self-employed Caucasians with an associate degree or more survived phase 1. The survivors were mostly young people, 58% were less than 30 years of age (Table 5).

During phase 2, Caucasians started businesses in the information sector (NAICS 51). These new entrepreneurs

were college-educated male, with a master's degree, in their early 50s, average age was 53.

Phase 3 witnessed more self-employed in the transportation sector. Most of these new businessmen were Hispanics and African-Americans, with a master's degree. Finally, during phase 4, the number of self-employed declined, manufacturing sector is a typical example where businesses were shuttered (Table 5).

Table 5: Demographics and Business Survival During the Four Phases of the Covid-19 Pandemic

Pre-Pandemic Demographics, Typical Values

| Race | Age | Gender | Education | Percent |
|-----------------|-----|--------|-------------------|---------|
| White | 45 | Male | Assoc. Degree | 32% |
| Hispanic | 68 | Male | High School | 25% |
| White | 71 | Male | Grade 11 | 20% |
| White | 61 | Female | Bachelor's Degree | 23% |
| Number of Cases | | | 14,643 | |

Pandemic Phase 1: Demographics, Typical Values

| Race | Age | Gender | Education | Percent |
|-----------------|-----|--------|-------------------|---------|
| White | 29 | Male | Bachelor's Degree | 58% |
| White | 45 | Male | Assoc. Degree | 42% |
| Number of Cases | | | 10,981 | |

Pandemic Phase 2: Demographics, Typical Values

| Race | Age | Gender | Education | Percent |
|-----------------|-----|--------|-----------------|---------|
| White | 53 | Male | Master's Degree | ~100% |
| Number of Cases | | | 4,948 | |

Pandemic Phase 3: Demographics, Typical Values

| Race | Age | Gender | Education | Percent |
|-----------------|-----|--------|-------------|---------|
| White | 57 | Male | Bachelor's | 27% |
| White | 34 | Male | High School | 22% |
| Hispanic | 32 | Female | Master's | 30% |
| Black | 67 | Male | Master's | 21% |
| Number of Cases | | | 23,060 | |

(Table 5, Continued)

Pandemic Phase 4: Demographics, Typical Values

| Race | Age | Gender | Education | Percent |
|-----------------|-----|--------|---------------|---------|
| white | 46 | Female | Assoc. Degree | 38% |
| white | 64 | Male | High School | 30% |
| white | 58 | Male | High School | 32% |
| Number of Cases | | | 11,055 | |

Summary and Conclusion

This paper explored Covid-19 impacts on minority businesses. Specifically, based on Say's law, the proposition that an entrepreneur's race should make no difference to the failure of a business during the pandemic was tested. Data from CPS were used for data analysis.

Empirical analysis was confined to self-employed who were active in their businesses during phases 1 to 4 of restore-Illinois, Covid-19 mitigation plan. Results of data analysis suggest that the median number of active businesses was negative during phase 1, positive during phases 2 and 3, and negative during phase 4, as at February 28, 2021. During all four phases of Covid-19 mitigation, African-American self-employment took the turn for the worse, the monthly growth in self-employment

numbers during January 2020 to February 2021 was a dismal -7%. Overall, Hispanics have fared well, the growth in self-employment for Hispanics during the pandemic was 11%.

In conclusion, Say's law seems to hold, albeit for certain segments of the population. Caucasians and Hispanics continue to pursue business ownership. African-Americans seem to be in a weak competitive position, in terms of entrepreneurial motivation. Future research should explore this gap in African-American self-employment, using, for example, individual level, socio-psychological concepts such as attitudes and social norms.