Refined by Fire: The Great Depression and Entrepreneurship

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Abstract

This paper investigates the long-lived consequences of the Great Depression on entrepreneurship. First, we show that metropolitan areas that experienced larger declines in retail sales growth from 1929 to 1933 exhibit greater entrepreneurship rates today. Second, to understand the mechanism behind these results, we use inter-generational data to investigate how parental investments affect children's future financial behavior as a function of the parents' exposure to the Great Depression. Our results suggest that the Great Depression increased habits associated with frugality and savings among parents, which they transmitted to their children who were more likely to become entrepreneurs in the future.

JEL: O4, E71, N12, E21.

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1. Introduction

> "My early life was relatively comfortable given that I grew up in the midst of the Great Depression and then World War II. By good fortune, my hometown of Teaneck, New Jersey was growing rapidly. I was too young to serve in the war. But, as I look back, there is no doubt that my father's prominent position in local government had a huge impact on the way I view life and the world." – Paul Volcker (2018).

Entrepreneurship is an important determinant of economic growth (Schmitz, 1989; Decker et al., 2016) and serves as the foundation for modern macroeconomic models of creative destruction (Aghion and Howitt, 1992). While there is a large literature studying the cyclical determinants of entrepreneurship and its effect on output (Bernanke and Gertler, 1989; Carlstrom and Fuerst, 1997; Rampini, 2004), there is a much smaller recognition of the long-term effects of historical shocks on entrepreneurship despite a general consensus that they matter for economic outcomes.[1] Particularly as the COVID-19 pandemic continues to unfold, understanding the effect of history on current economic outcomes will be important for quantifying the persistent effects of the pandemic.

Motivated by an emerging empirical literature about the importance of personal experience on beliefs about inflation (Malmendier and Nagel, 2016), housing prices (Kuchler and Zafar, 2019), and macroeconomic activity (Malmendier and Nagel, 2011; Makridis, 2018), this paper exploits geographic variation in the severity of the Great Depression to understand how large-scale financial shocks affect the prospects for future entrepreneurship. On one hand, a more severe experience could generate geographic scarring that limits future productivity. On the other hand, the Great Depression could alter beliefs about future economic fluctuations and the trustworthiness of tra-

[1] See Hall and Jones (1999); Acemoglu et al. (2001, 2002); Glaeser and Shleifer (2002); Nunn (2008).

ditional capital/labor markets. The altered beliefs from childhood experiences during the Great Depression may have prompted individuals to teach their children pursue employment that is less reliant on the traditional labor markets and to retain more money in liquid assets. Understanding the mechanisms behind entry into entrepreneurship is particularly important in light of the decline in labor market dynamism over the past few decades (Davis and Haltiwanger, 2015) and the role of firm entry as a source of innovation and new ideas (Aghion et al., 2009).[2]

Using cross-sectional variation in retail sales growth and unemployment rates as primary measures of economic shocks, together with state and core business statistical area (CBSA) data on entrepreneurship rates from the Business Dynamics Statistics (BDS), we estimate the causal effect of historical Great Depression shocks on contemporaneous entrepreneurship. Our baseline identification strategy semi-parametrically controls for a wide array of demographic characteristics at the time of the Great Depression and more recently to address concerns about omitted variables bias. We find that a one percentage point rise in retail sales growth during the Great Depression is associated with a 0.04pp decline in establishment entry and reallocation rates. Moreover, these effects on entrepreneurship are concentrated in years that are most likely to contain individuals who grew up with parents who experienced the Great Depression.

To assess whether our elasticities reflect genuinely causal estimates, we employ an instrumental variables strategy. We exploit plausibly exogenous variation in the timing of weather fluctuations, specifically changes in drought conditions leading up to the Great Depression across locations. By generating variation in agricultural productivity through these random fluctuations in weather leading up to the Depression, we compare areas that were more susceptible to declines in economic

[2]Incumbent firms are less likely to invent radical inventions that push the technological frontier forward (Tushman and Anderson, 1986; Henderson, 1993). Both Lerner and Kortum (2000) and Shane (2001) find that new entrepreneurial ventures are a source of highly innovative ideas.

activity. Whereas demand for manufacturing goods and services were highly elastic, demand for agriculture was less so, meaning that areas that experienced declines in agricultural productivity in the run-up of the Depression were more exposed to the subsequent economic decline.

To investigate a potential mechanism behind these effects, we turn to microdata from the Panel Study of Income Dynamics (PSID). The hypothesized mechanism is that the experience of economic shocks is transmitted from parents to children, influencing children's decisions regarding career and finances in adulthood. Parents who experienced a deeper economic recession when young develop a preference for self-sufficiency, holding more of their wealth in assets such as savings accounts, rather than investing in equities,[3] and are more likely to enter entrepreneurship. The parents then pass these beliefs and preferences along to their children, increasing the likelihood that children become entrepreneurs, as well as their holdings in liquid assets. The Panel Study of Income Dynamics enables us to match parental experiences with child's decisions in adulthood. Thus, we are able to identify whether experienced economic shocks are transmitted across generations in the form of changes in financial decision-making and career choices.

Our findings in the PSID are consistent with this hypothesis. First, in our contribution to the behavioral macroeconomic literature, we find the experience of economic shocks is passed down from parents to children. A parent who grew up in a state hit worse during the Great Depression passes this experience down to his children, increasing the likelihood the children start businesses and increasing the children's liquidity. Second, along with altering their children's decision-making in adulthood, we find that individuals who grew up in areas that were harder hit by the Great Depression put a greater proportion of liquid assets in savings and leave larger inheritances to their children. As wealth endowments are correlated with entrepreneurial success,

[3]This is consistent with Graham and Narasimhan (2004); Schoar (2007), and Malmendier and Nagel (2011).

these larger inheritances may make their children more successful in their entrepreneurial ventures. This result is also consistent with previous evidence in behavioral finance showing that experiences during the Great Depression decreased investment in stocks and increased investment in savings throughout one's life (Malmendier and Nagel, 2011). Together, these effects will increase the value placed on independence from the labor market and increase the amount of capital available for starting a business, increasing local entrepreneurship rates. These differences are not driven by demographic factors at either an individual or geographic level, but rather the transmission of human capital across generations through the role of personal experience.

Our paper contributes to at least two areas at the intersection of macroeconomics and finance. The first is a literature on entry into entrepreneurship and its effects on economic growth. While Evans and Jovanovic (1989) was one of the first to identify the factors affecting occupational choice and decision to become an entrepreneur, Hurst and Lusardi (2004b) later showed that wealth only influenced entry into entrepreneurship among the very wealthy. Our paper builds on this literature about entry into entrepreneurship by highlighting the role of personal experience and the transmission of human capital across generations. For example, Graham and Narasimhan (2004) find that CEOs who experienced the Great Depression choose lower leverage than CEOs who did not experience the Great Depression. Malmendier et al. (2011) find that CEOs who experienced the Great Depression are more likely to use internal finance and exhibit aversion to exchanging debt for equity financing, consistent with a preference to avoid public markets.[4] Moreover, our results are consistent with Iyigun and Owen (1999) who find that individuals are

[4]These results hold outside of the Great Depression context; Schoar (2007) finds that CEOs who started their career in a recession are more conservative with capital choices, again choosing lower leverage and favoring internal over external growth. All of these results are consistent with Donaldson (1990)'s observation that corporate leaders who were young adults at the time of the Depression defaulted to a strategy of self sufficiency after living through the collapse of capital markets.

more likely to allocate time towards entrepreneurship in an intermediate stage of development, like the aftermath of the Great Depression when the returns to professional training were low.

Second, our paper contributes to a large macroeconomic literature on the long-lasting effects of institutions and historical shocks on economic development (Hall and Jones, 1999; Acemoglu et al., 2001, 2002; Glaeser and Shleifer, 2002; Nunn, 2008; Fatas, 2000). However, fewer papers have explored how historical shocks can affect worker habits and attitudes. Galor and Michalopoulos (2012) model the returns to entrepreneurial traits over the course of history, finding that these traits have an advantage during earlier stages of economic development. Moreover, Galor and Moav (2002) find that the struggle for survival led to the development of skills that were complementary to the growth process. Our paper builds on this by showing that large historical economic shocks alter the returns to (entrepreneurial) traits and encourage the transmission of some traits over others, feeding into future entrepreneurship.[5] This is also consistent with Maseland (2013) that cultural attitudes impact the quality of institutions and predict future economic performance.[6]

More broadly, other results in this literature show that culture and personal experiences have a lasting impact on individual preferences and beliefs. Studies have highlighted the role of personal experience in forming beliefs about future returns (Cogley and Sargent, 2008), inflation (Malmendier and Nagel, 2016), housing prices (Kuchler and Zafar, 2019), macroeconomic activity (Malmendier and Nagel, 2011; Makridis, 2018), asset prices (Malmendier et al., 2018), and consumption (Malmendier and Shen, 2018). Changes in beliefs due to personal experience have had a significant influence on financial investment decisions (Malmendier and Nagel, 2011), consumption

[5]See Lindquist et al. (2015),Mishkin (2019), and Fairlie and Robb (2007) for evidence about how parents transmit human capital to children. Moreover, Dunn and Holtz-Eakin (2000) specifically finds that the level of parental financial capital is correlated with their children's entry into entrepreneurship.

[6]See Ashraf and Michalopoulos (2015) for evidence on effects of historical shocks of climate on the timing of agricultural transitions, Michalopoulos and Papaioannou (2013) for evidence on the effects of pre-colonial institutions on contemporary African development, among many other notable examples.

(Malmendier and Shen, 2018), and political preferences (Giuliano and Spilimbergo, 2014).[7]

Third, our paper contributes to a literature in economic history, specifically the Great Depression and its long-lived effects. Perhaps most notably, Fishback et al. (2005) examines how relief and public works spending and payments to farmers affected retail consumption between 1933 and 1939 across counties. While public works and relief spending was associated with an increase in 1939 retail sales, the payments to farmers had a negative effect. Moreover, Fishback and Kachanovskaya (2015) find that the effects on state per capita income as a result of an additional dollar of federal spending were only between 40 and 96 centers on average-potentially negative in the case of payments to farmers. Rosenbloom and Sundstrom (1999) show that industrial composition was an important moderating factor for understanding the effects of the Great Depression on employment growth. Romer (1992) finds that the expansion of the money stock may have stimulated investment and durable consumption expenditures. Our results are consistent with Hornbeck and Keniston (2017) who show that adverse shocks sometimes have a silver lining, as in the case of the Great Boston Fire of 1872, which led to subsequent urban investments.

The structure of the paper is as follows. Section 2 discusses the data and measurement strategy. Section 3 presents the empirical strategy, main results, and robustness. Section 4 investigates the role of personal experience as a candidate mechanism. Section 5 concludes.

[7]Another set of papers in this literature find that cultural superstitions passed down over generations play a significant role in financial decision-making. Authors have found that cultural beliefs play a role in stock investing behavior (Bhattacharya et al., 2017), IPO investment (Hirshleifer et al., 2016), and home buying decisions (He et al., 2019).

2. Data and Measurement

Determination of the Focus Group Age.—One of the most important aspects of studying generational effects of over time is determining the age group in which to analyze at both the beginning and the end of the spectrum. The target group of individuals during the Great Depression will be adolescents ages 13-19. This age range was chosen due to a large body of research in psychology defining the adolescent years as the most important years of self-development (Steinberg and Morris, 2011) and follows recent behavioral finance work (Malmendier and Nagel, 2011).[8]

The years of 1930 – 1940 will be used to define the period of the Great Depression, and therefore, we will focus our attention on adolescents during this time period. Using research from the National Center for Health Statistics on average childbearing age for that period puts our target adolescents starting families at the age of 21 (NCHS Data Brief, 2011). Mapping together the Great Depression year range and the average starting family age gives us an approximate date range where we would expect the Great Depression adolescents to start becoming parents. This year range is 1932 - 1949. Individuals born during 1932-1949 will be our main focus group, as these individuals are being raised by parents who were shaped the most dramatically by the Great depression. Using 42 as the average age of an entrepreneur in the century, the children of these parents will most likely become entrepreneurs in the year range of 1974 – 1991.

Geographic Proxy for the Severity of the Great Depression.—Our baseline proxy for the severity of the Great Depression draws on retail sales data constructed by Fishback et al. (2005) to study

[8] Steinberg and Morris (2011) state that "[a]dolescence has long been characterized as a time when individuals begin to explore and examine psychological characteristics of the self in order to discover who they really are, and how they fit in the social world in which they live... We also know that adolescents evaluate themselves both globally and along several distinct dimensions—academics, athletics, appearance, social relations, and moral conduct."

the effects of the New Deal during the Great Depression. We specifically use their measure of county retail sales growth between 1933 and 1929, which marks the two extremes during the Great Depression. Retail sales growth is viewed as a strong proxy for consumption expenditures on durable and non-durable goods — a key variable in understanding the Depression among economic historians (Temin, 1976). Figure 1 documents significant variation in the severity of the decline in retail sales per-capita. We crosswalk these to CBSAs, limiting our sample to 47 geographies. We conduct robustness using the change in the unemployment rate from the Census.

[INSERT FIGURE 1 HERE]

While our retail sales help us understand the severity of the Great Depression in these geographies, data during these years is limited at an annual frequency. We, therefore, supplement the sample of core business statistical areas (CBSAs) with state and county data from the Decennial Census. Here, we use the percent change in the unemployment rate between 1940 and 1950. While these years are not ideal, the share of individuals looking for work in 1940 and 1950 was 10.1% and 4.8%, respectively, providing sufficient cross-sectional variation to identify the parameters of interest. Moreover, we also experiment with the growth in manufacturing establishments and agricultural crop value (deflated using the consumer price index with a 1982 – 1984 base year), which were important sources of local economic growth. According to the Bureau of Labor Statistics (BLS), the manufacturing and agricultural employment shares in 1910 were 32.4% and 31.5% (versus 8.7% and 1.5% in 2015), respectively.[9]

For the latter half of the paper where we examine the mechanism, we turn towards state-level data because it is the most detailed geographic information observed about the location of

[9]https://www.bls.gov/opub/ted/2016/employment-by-industry-1910-and-2015.htm
https://sites.google.com/site/asgerwingender/home/structural-transformation-data-set

residence for survey responses. Using a combination of Fishback and Thomasson (2014) for years prior to 1970 and the Bureau of Economic Analysis (BEA) for years following 1970, we measure per-capita personal income for each state in real 1967 dollars using the national consumer price index (CPI). The data suggests that there is substantial variation in income across both states and time. Figure 5 shows regional trends in personal income between 1918 and 1950—the most volatile time period in the sample. States in the South consistently have lower income than in other regions. There were substantial differences in the size of the income drop during the Great Contraction between 1929 and 1933. The average drop in state income during this time period was 37%, with a minimum drop of 16% in South Dakota and a maximum drop of 65% in Maryland.

The greatest state income variation occurs during the Great Depression and World War II era beginning in 1929 and lasting until 1945. At first, the Great Depression hit heavily industrialized areas like Pennsylvania (steel), Indiana (steel), and Michigan (automobiles). Areas that supported railroads and coal mining also suffered. At the same time as the Great Depression, large droughts happened in the West, meaning devastation in Oklahoma, Texas, Kansas, Colorado, and parts of New Mexico. This led to widespread unemployment and poverty in these states. Recovery was rapid until the United States entered World War II in December 1941, when income growth returned to its long run path. The resulting variation in not only the cross-section, but also the time series arising from cohorts who were heterogeneously exposed to their state's business cycle—that is, differences in the age distribution within a state generate differences in the economic conditions that individuals' parents were exposed to in their state during their formative ages.

Panel of Individuals and Household Finances.—We investigate the link between parental severity of Great Depression experience and children's decisions in adulthood using data from the Panel Study of Income Dynamics merged with state income data for the majority of the 20th century.

The PSID is a longitudinal panel survey of American families measuring economic, social, and health factors over multiple generations (see Blundell et al. (2008) for details).

In the PSID, we observe the state parents grew up in and their birth year, as well as the state and year the child was born in and their current state of residence. This enables us to control for migration of families between the time the parent was growing up and the year the child was born. We then merge in state income data based on the parent's year of birth/state they grew up in to observe the exposure of the parent to the Great Depression. Separately, we merge in the state income based on the year the child was born and the state they grew up in to add additional controls for the child's own experience of economic fluctuations.

We drop the oversample of low-income families to ensure we estimate nationally representative average treatment effects and restrict the sample to individuals between ages 30 and 65. The final dataset contains observations of household asset holdings for 1984, 1989, 1994, and biennially between 1999 and 2017. In addition to standard demographics, we also observe family income and the value of liquid assets, defined as the sum of an individual's savings account balances, stock holdings, bond holdings, and real estate. Table 2 contains summary statistics for our sample of individuals from the PSID. The average individual is married, 47 years old with a few years of college, with a household income of $73,505 in 2019 dollars. 10% of the sample is self-employed.

Geographic Entrepreneurship Rates.—Our baseline measure of entrepreneurship is the establishment entry rate at a core business statistical area (CBSA) from the Business Dynamics Statistics (BDS). We crosswalk counties into core statistical business areas (CBSAs) using the Missouri Geocorr crosswalk with 2010 Census populations as weights. While there are various ways to measure entrepreneurship, there is a general agreement that the most reliable definition is based on the entry rate of new businesses—that is, entry by age (not size) (Decker et al., 2014), since

most job creation is by young (not necessarily small) establishments (Haltiwanger et al., 2013).[10]

Figure 2 plots establishment entry rates across the 366 CBSAs available in the BDS data. Although there is a negative decline in establishment entry, consistent with the decline in labor market fluidity documented by Davis and Haltiwanger (2015), we observe noticeable spatial heterogeneity over time. For example, we see a particularly striking concentration of establishment entry in the West in the 1990s, but it subsides in the 2000s, potentially a result of increasing land-use regulation that has affected the cost of living (Herkenhoff et al., 2018; Makridis, 2019).

[INSERT FIGURE 2 HERE]

Geographic Drought Conditions.—Since part of our identification strategy relies upon exploiting plausibly exogenous weather conditions across locations leading up to the Great Depression, we draw on the monthly Standardized Precipitation Evapotranspiration Index (SPEI) across counties.[11] Although the Palmer Drought Severity Index (PDSI) and the Standardized Precipitation Index (SPI) are alternative drought indices, we converged on the SPEI for three reasons.[12] First, it is multi-temporal and can be compared across different time intervals to understand different types of drought, unlike the PDSI. Second, SPEI is more comparable across geography and different hydrological systems. Third, unlike the SPI, the SPEI also includes information on evapotranspiration, which allows the index to capture climatic conditions that may affect water demand through evapotranspiration. The SPEI values ranged from -2.8 to +2.8 where the more negative the value corresponded to a greater period of dryness or drought.

[10]We nonetheless correlate our measure of entrepreneurship with the Kauffman Foundation index of startup entry, which produces a correlation of 0.30 at a state-level. We also use a measure of self-employment in more innovative industries when we turn towards individual-level data from the PSID.

[11]http://spei.csic.es/index.html

[12]https://climatedataguide.ucar.edu/climate-data/standardized-precipitation-evapotranspiration-index-spei

3. The Great Depression and Entrepreneurship

This section explores the relationship between the severity of the decline in economic activity during the Great Depression and contemporaneous entrepreneurship rates. We find that areas that were more adversely affected exhibit greater establishment entry today.

3.1. Identification Strategy

Our baseline empirical specification relates measures of contemporaneous entrepreneurship with measures of the severity of the Great Depression, conditional on controls:

$$ENTREP_{lt} = \gamma \Delta y_l^0 + \beta X_{it} + \xi D_l^0 + \epsilon_{lt} \tag{1}$$

where $ENTREP$ denotes the entrepreneurship rate in location l and year t, Δy^0 denotes the productivity shock in a location in the initial state t (i.e., the Great Depression), X denotes time-varying controlling covariates, such as the age and education distribution, and D^0 denotes fixed time-invariant characteristics at the time of the Great Depression.[13] Standard errors are clustered at the location-level to allow for arbitrary degrees of autocorrelation (Bertrand et al., 2004).

Our identifying assumption in Equation 1 is that unobserved shocks to contemporaneous entrepreneurship rates in a metropolitan area are uncorrelated with the severity of the Great Depression. If, for example, areas with a more severe decline in productivity also exhibit greater manufacturing employment shares, then contemporaneous entrepreneurship could be affected by

[13] Our introduction of D_l^0 controls for (observed) heterogeneity in the cross-section. Of course, we run the risk of multi-collinearity with y_l^0 if we introduce too many controls. Our inclusion of X_{it} captures relevant contemporaneous and time-varying characteristics.

the composition of industries dating back to the Great Depression. We address these types of concerns by controlling for a combination of time-varying and time-invariant demographic factors, focusing heavily on the characteristics of an area at the time of the Great Depression.

Given the limitations of our least squares estimator, we introduce an instrumental variables strategy that exploits geographic environmental conditions leading up to the Great Depression. Specifically, we exploit year-to-year growth in annual and monthly drought conditions (using the SPEI index) between 1924 and 1926, isolating plausibly exogenous variation in agricultural productivity leading up to the Great Depression. The first-stage effect is driven by the close link between weather and agricultural, particularly during these years (Bleakley and Hong, 2017), meaning that areas that experienced better growing conditions were in a better position to cushion against the Great Depression (Rosenbloom and Sundstrom, 1999).

Importantly, we are not exploiting variation in areas that tend to have greater droughts, relative to others. If we were, then one violation to our exclusion restriction could come from the persistent effects of drought on economic development. However, a concern that nonetheless remains is that areas with greater fluctuations in droughts leading up to the Great Recession are also less likely to be prepared to deal with the Great Depression. Because of the importance of agriculture, we examine this assumption by exploring the the correlation between these changes in the severity of drought leading up to the Depression with the logged value of crops in an area as of 1930. Figure 3 shows that the correlation is effectively zero.

[INSERT FIGURE 3 HERE]

We now turn towards our first-stage relationship between fluctuations in drought and retail sales growth between 1933 and 1929 in Figure 4, which displays an economically and statistically

meaningful 1920 population-weighted correlation of -0.61. This negative correlation—that is, CBSAs that experienced year-to-year growth in wetness have a larger decline in retail sales growth over the Depression—may appear counter-intuitive, particularly given historical thinking among policymakers.[14] However, the first-stage effect is consistent with at least two theories. First, scientific evidence suggests that greater variability, and sometimes wetness, is associated with lower agricultural productivity. Second, areas with increased drought severity may have had to diversify their economic activity as a way of coping, providing greater flexibility when the Depression hit. Indeed, macroeconomic evidence from Hausman et al. (2019) suggests that areas with higher shares of farmers in debt exhibited a larger consumption response.[15]

[INSERT FIGURE 4 HERE]

3.2. Main Results

We begin by describing the results associated with Equation 1 in Table 1. Starting with column 1, we see a strong negative association between retail sales growth and establishment entry rates: a 1pp rise in the growth rate of retail sales is associated with a 0.04pp decline in establishment entry. Once we add on contemporaneous demographic controls in columns 2 and 3, however, the estimated coefficient becomes statistically insignificant, though economically meaningful.

Do these reflect causal elasticities between the intensity of a location's shock during the Great Depression and contemporaneous entrepreneurship? As we discuss later, one mechanism consis-

[14]For example, Franklin D. Roosevelt remarked in a campaign speech in Atlanta, Georgia on 24 October 1932 that "[T]he depression in the manufacturing industry of the country is due chiefly to the fact that agricultural products generally have been selling below the cost of production, and thereby destroyed the purchasing power in the domestic market of nearly half of all our people. We are going to restore the purchasing power of the farmer."

[15]We are not saying that drought has a positive effect on retail sales growth; we are, instead, looking at variability based on year-to-year growth in the SPEI. Indeed, the correlation between the SPEI and retail sales growth is 0.14 over this period, consistent with the view that wet climates are generally better for economic performance.

tent with these results is the presence of personal experience whereby individuals growing up during the Depression cultivate greater liquidity preferences and frugality, which they endow to their children. If true, then, as we discussed in the data and measurement section, we should observe a concentration of these effects between 1974 and 1991. When we interact an indicator for those years with retails sales growth during the Depression, we find a robust economically and statistically significant effect on establishment entry (column 4). Moreover, the fact that the statistical significance increases, relative to columns 2 and 3, suggests that pooling all the years together raises the noise-to-signal ratio as more recent years add an additional intergenerational layer to the transmission mechanism.

Turning towards another measure of entrepreneurship, we now look at the reallocation rate. Unlike establishment entry, reallocation refers to the sum of job creation and job destruction net of the absolute value of net job creation, which is the difference between the job creation and destruction rates. Its correlation with establishment entry is only 0.57, illustrating how it captures different patterns in the data. We find that a 1pp rise in retail sales growth during the Depression is associated with a 0.06pp decline in the reallocation rate, controlling for historical demographic factors (column 6). The statistical and economic significance decline only marginally after adding modern demographic controls and controlling for aggregate shocks (columns 7 and 8). However, we do not find the effect on the reallocation rate concentrated between the years 1974 and 1991, which could reflect the fact that reallocation is simply distinct from establishment entry.

[INSERT TABLE 1 HERE]

We now turn towards our instrumental variables results in case there are unobserved factors correlated with a location's modern entrepreneurship rates and their historical decline during the

Great Depression. Returning to Table 1, columns 5 and 10 show that a 1pp rise in retail sales growth from 1933-1929 is associated with a 0.04pp decline in contemporaneous establishment entry and reallocation rates. Our identifying assumption is that the timing of these drought conditions is random, generating variation in the vulnerability of different locations to the Great Depression based on their agricultural productivity leading up to it. We again find results almost indistinguishable from our least squares estimate.[16]

One potential limitation of our results, as data on entrepreneurship rates is limited to the CBSA level, is that our sample is not externally valid. However, our estimates will underestimate the effect of the Great Depression on entrepreneurship if personal experience is more important for individuals growing up in rural communities. This may be true given the greater role of social capital and community ties in rural areas. To gauge whether this is the case, we partition our sample into two groups: those above the median 1990 population of 332,441 individuals and those below the median. We estimate our baseline specification with controls over the initial conditions, obtaining a gradient of -0.015 (p-value = 0.15) for the high population CBSAs and a gradient of -0.028 (p-value = 0.054) for the low population CBSAs. These results are consistent with our intuition that our statistical strategy provides a lower bound.

How do our results compare with Malmendier and Nagel (2011) who find that risky asset returns experienced over an individual's life reduces their willingness to take financial risks? Indeed, as in Malmendier and Nagel (2011), individuals directly exposed to the Great Depression (e.g., someone who is laid off) may be less inclined to take risks. However, it is possible that individuals who experienced the Depression gained a distrust of traditional capital and labor markets, which drove

[16]Our instrumental variables specification does not include contemporaneous economic controls on top of the existing historical controls. In particular, a drought leading up to the Great Depression may have influenced future population growth and demographics through its effects on entrepreneurship, making these a "bad control" (Angrist and Pischke, 2009).

them to put more in savings rather than stocks. They may have endowed their children with the same preference to avoid traditional capital and labor markets, increasing the likelihood they start their own businesses and hold a greater amount of assets in savings.

One alternative concern about these results is that they reflect the persistent effects of harmful New Deal policies. While some herald the New Deal as a solution to the economic malaise of the Great Depression, the consensus among both macroeconomists and economic historians tells a different story. For example, Cole and Ohanian (2004) show that the policies of the National Industrial Recovery Act, which were designed to raise prices and wages and to weaken antitrust enforcement, unintentionally raised unemployment and prolonged the Great Depression because they prevented the market from clearing. Moreover, Higgs (1997) finds that the introduction of New Deal policies led to greater uncertainty and lower private investment than would otherwise have occurred. Fishback et al. (2005) find that the Agricultural Adjustment Administration (AAA) policies to farmers did not stimulate retail sales and may have even had an adverse effect by crowding out lower end non-landowners.

4. Understanding the Mechanisms

This section investigates the potential causal sources behind the association between the Great Depression and entrepreneurship. We draw on longitudinal records of parents and their children, together with detailed accounts of financial investments of the children and their parents' location at the time of the Great Depression. Our results are consistent with the view that, because parental endowments shape financial behavior, parents who were exposed to worse economic conditions during the Great Depression endowed their children with a larger amount of wealth and preferences

for self-sufficiency and liquidity (conditional on initial income levels).[17] The greater wealth and changed preferences increases their propensity to enter entrepreneurship.

4.1. Parental Endowments and the Transmission of Habits

While there is already a well-known literature about the importance of parental investments for childhood development (Cunha et al., 2010) and the role of time allocated to childcare (Guryan et al., 2008), there is not yet much empirical evidence on the association between parental investments and children's financial literacy.[18] Using biannual waves from the PSID Child Development Supplement (CDS) from 2003 to 2017, we show that exposure to different shocks moderates the effect of parental investments, particularly time with children, on childhood development.[19]

To understand the relationship between parental investments and financial habits (e.g., preferences for liquidity), we estimate regressions of the form:

$$FS_{ist} = \gamma PINV_{ist} + \phi SINC_s + \xi(PINV_{ist} \times SINC_s) + \beta X_{ist} + \epsilon_{ist} \tag{2}$$

where FS denotes the degree of liquidity of the child's wealth (i.e., the percent of liquid assets in savings), $PINV$ denotes our proxy for parental investment in the child's human capital (i.e., time allocated towards reading with the child), $SINC$ denotes state per capita income during

[17] Controlling for initial income levels is important since the results could otherwise reflect differences in parental ability (as proxied by income).

[18] There is an applied psychology literature that has provided cross-sectional evidence on the relationship between parental influences and savings and other financial behaviors (Jorgensen and Savla, 2010; Koposko and Hershey, 2014).

[19] While data are not available on parenting investments during the Great Depression, our sample nonetheless includes the Great Recession, which had heterogeneous effects on regional economies. Given that our results come through with a less severe shock, we anticipate that they would come through the even more severe Great Depression if we had the intergenerational data.

the child's formative years, and X denotes our usual vector of demographic controls, namely a quadratic in age and education, marital status, gender, number of children, and race.

Our measure of state per capita income during the child's formative years proxies for the return to working that the head of household faces. Our identifying assumption is that cross-sectional differences in the economic vibrancy of a state lead to different trade offs among parents as to how much time they are willing to invest in their children. For example, using variation during the Great Recession from the American Time Use Survey, Aguiar et al. (2013) find that time allocated to child care is fairly cyclical. In this sense, as the return to working rises, the head of household may allocate less time to child care and more time to the labor market, reducing their investment in the child's human capital. Unfortunately, we cannot control for the quality of time invested with children, but assume it is time invariant for each parent.

Table 3 documents our results. We find a positive association between liquidity in adulthood and parental investment in the child's human capital: a 10% rise in time allocated to reading to the child is associated with a 4.02 percent increase in the child's liquid assets in savings (column 1). The result is statistically significant at a 10% level, largely because of the small sample size. As we add additional controls, such as marital status, children, education, and income, the economic significance declines slightly in magnitude, but remains statistically significant.

Turning towards state per capita income during the child's impressionable years (13-19), we find a positive association with savings. This may reflect the fact that better economic conditions as a child grows up improves the odds that the child finds a better job after graduation, raising income and potential savings. Finally, we find that the interaction of state per capita income and parental investment has a robust negative association with the percent of liquid assets in savings. Although the interaction between two continuous variables does not have a straightforward interpretation,

these results are consistent with the view that, while greater parental investment in children raises their financial literacy, improvements in economic conditions encourage parents to allocate more time to the labor market. Thus, parental investment in child human capital and financial literacy declines as market conditions improve.

4.2. Parental Endowments of Wealth

Another potential channel through which parents may influence their offspring's career and financial decision-making is by directly increasing the child's wealth through gifts or inheritances. A parent who lived through the Great Depression, having saved more throughout life, may have more savings upon death and thus leave larger inheritances to offspring. This increased wealth may reduce the liquidity constraint faced by their children when deciding to start a business. Both Holtz-Eakin et al. (1994) and Hurst and Lusardi (2004a) find that financial endowments have a slight positive influence on entrepreneurship. In this sense, the receipt of larger inheritances may increase the likelihood that children become entrepreneurs.

We leverage the inheritance data in the PSID to investigate whether children of parents who faced worse conditions in their impressionable years leave larger financial endowments to their children. We model the value of inheritance left to children using the following equation:

$$INH_{ist} = \gamma FINC_{is} + \beta X_{ist} + \lambda_s + \epsilon_{ist} \tag{3}$$

where INH denotes the total inheritance received by individual i in state s and year t. $FINC$ is the log of the per capita personal income in the father's state during his impressionable years (13-19). We are interested in the father's experience during his impressionable years rather than

the child's as this is what will drive the father's wealth accumulation throughout his life and thus the inheritance the child receives. X contains demographic information about the child (sex, race, marital status, number of children). Since the majority of individuals reporting inheritance do so in the later years of the PSID (2000 and above), and thus we do not have sufficient coverage, we are unable to include extra controls for parental experience during the Great Depression.

The identifying variation for γ in Equation 3 comes from variation in state economic conditions during the father's impressionable years. Although father's education and income are unobserved, it is unclear whether these intermediate outcomes should be included in the regression. For example, parental education level and income may have been influenced by the state economic conditions they experienced during their impressionable years, making them "bad controls."

The results in Table 4 suggest that parents who experienced lower levels of state income during their impressionable years leave larger sums of money to their children. A 10% increase in state income during the father's impressionable years reduces the inheritance that he leaves to his children by 3%. This is logical, as earlier results in the literature show that individuals who experience worse economic conditions save more throughout their lives, so they are more likely to accumulate greater wealth by the time they pass away.

As inheritances have a positive influence on entrepreneurship (Holtz-Eakin et al., 1994), our results present an additional interpretation to our proposed mechanism about the relationship between poor economic conditions during the Great Depression and higher levels of entrepreneurship in the long run. Worse economic conditions during the Depression may have led individuals to save more and leave more money to their children, endowing children with enough initial capital to become entrepreneurs.

4.3. Inter-generational Transmission of Experience during the Great Depression

We now explore whether the state-level severity of the Great Depression for an individual's parent is associated with career and investment decisions the child makes in adulthood. Specifically, do individuals whose parents endured worse conditions during the Depression behave similarly to CEOs who experienced the Depression? Our hypothesis is that individuals whose parents experienced a more severe Depression will make investment decisions emphasize independence from traditional capital and labor market. Namely, they will be more likely to be self-employed and hold a greater amount of assets in savings rather than betting on the stock market. This is much like the Depression-survivor CEOs who favor internal growth (Schoar, 2007), internal financing (Malmendier et al., 2011), and lower leverage (Graham and Narasimhan, 2004).[20]

Unlike in the main analysis, we exploit heterogeneity across both geography and the age distribution using longitudinal information on individuals. These data enable us to compare individuals whose parents were exposed to the Great Depression during their formative years (ages 13-19), when financial literacy skills are still under development, to individuals whose parents experienced more favorable economic conditions during their formative years. Arguably, parents who spent their formative years in a deeper Depression will be more impacted and thus more likely to pass these learned habits down to their children.

The effects of economic experiences on financial behavior and entry into entrepreneurship are theoretically ambiguous. On one hand, experiencing a recession may make one more risk averse

[20] Although self-employment is admittedly an imperfect proxy for entrepreneurship, we are constrained by the data. However, Quadrini (2009) suggests that "a manager involved with the creation of new business projects or firms can be considered an entrepreneur even if he or she does not share the ownership of the project or firm."

and therefore less likely to start a business or invest in risky assets. Malmendier and Nagel (2011) find that individuals who have experienced lower stock returns over their lifetimes are persistently less likely to invest in stocks. If the mechanism through which experience influences investment decisions is through an increase in risk aversion, this would imply that individuals would be less likely to choose a profession with a high risk of failure, such as entrepreneurship. However, Malmendier and Nagel (2011) do not investigate whether experiences change the propensity to start one's own business. They also cannot directly estimate whether the mechanism for changed behavior is through changes in risk aversion or through beliefs about future market fluctuations.

On the other hand, consistent Donaldson (1990)'s anecdote that Depression survivors pursue a strategy of self sufficiency, experiencing a capital market collapse may lead one to desire more autonomy over one's livelihood and finances. This would increase entry into entrepreneurship and asset holdings in savings. First, individuals who experience the Depression may be wary of trusting employers to provide their livelihood. They would likely prefer to start their own business where they have more control over their income. Asset holdings in savings accounts would also increase in this case because individuals, valuing self sufficiency, wouldn't want to rely on the stock market. This is consistent with findings in Graham and Narasimhan (2004), Schoar (2007), and Malmendier and Nagel (2011) that Depression experience decreases reliance on external capital markets. Thus increases in holdings in savings accounts may go hand in hand with increased entry into entrepreneurship if individuals are taught to avoid external capital and labor markets.

The Panel Study of Income Dynamics provides us with measures of self-employment as well as household investment allocations. We now relate measures of self employment and financial behavior, denoted y_{it}, with an individual's father was between ages 13 and 19 during the Great Depression, denoted $\mathbb{1}[GD_i]$, real state personal income per capita during the years the individual's

father's age is between ages 13 and 19, denoted $FINC_{is}$, and their interaction, conditional on controls. Since the PSID asks about the state where the father grew up, we measure the father's state income based on his state of residence during his childhood. The regression is defined below:

$$y_{ist} = \gamma FINC_{is} + \phi \mathbb{1}[GD]_i + \xi(FINC_{is} \times \mathbb{1}[GD]_i) + \beta X_{ist} + \alpha_s + \epsilon_{ist} \tag{4}$$

where X denotes a vector of individual controls, α denotes state fixed effects, and the variables of interest are as defined above.

In addition to standard demographic individual controls, including current family income, race, education, marital status, and number of children in the year that the outcome is measured, we also include fixed effects on the individual's birth state. These fixed effects isolate variation from individuals living in the same state.[21] Moreover, we include a quadratic in age to remove life cycle effects, thereby exploiting sharp differences in exposure between individuals who happened to be born into one cohort over another. Our inclusion of historical real state personal income helps mitigate concerns about unobserved time-invariant heterogeneity that could be correlated with current financial behavior (e.g., access to better education).

Table 3 documents the results associated with Equation 4. The outcome variable and vector of controls used varies across columns. In the first and second columns, the probability of self employment is investigated. In the third and fourth columns, we explore whether individuals whose fathers experienced a deeper Great Depression are less likely to bet on the market and put

[21] The childhood state dummies are not collinear with the state income averages because we have variation in birth cohorts, thus all individuals who grew up in the same state do not have the same $FINC_{is}$. If we were to include interactions of childhood state with birth cohort dummies, then these would be collinear with $FINC_{is}$.

more of their liquid assets into stocks. Finally, in the fifth and sixth columns, the outcome variable is the proportion of liquid assets held in savings. The row of central interest in all regressions is the third row, which is the estimate of the differential effect of conditions during the Great Depression that are passed down to children.

In columns (1) and (2), we find that children whose parents experienced worse conditions during the Great Depression are more likely to choose self-employment. Although we estimate in the second row that having a father born during the Great Depression reduces the likelihood of self-employment by 6 percentage points, the interaction term with severity is negative and statistically significant. This means that parents from states that were hit worse by the Depression have children who are more likely to choose self-employment. From the second column, third row of table 3, we estimate that a decrease of 10% in state income during the father's impressionable years increases the likelihood that his children become self-employed by 0.6 percentage points.

We also estimate that fathers who experience a deeper Depression endow their children with a preference for liquidity. From the fourth and sixth columns, a father whose state income was 10% lower during the Depression will have children who invest 0.9 percentage points less in stocks and 1.1 percentage points more in savings. This contrasts with the results in the first row that show that children of parents who did not experience the Depression have the opposite effect. The contrast in these results highlights the fact that experience during the Depression was a unique, "belief-twisting" event that had striking effects on individuals who experienced it.

The savings investment results suggest that paternal experiences during the impressionable years significantly influence the adulthood investment decisions of their children. Fathers who were exposed to worse conditions in their impressionable years during the Great Depression have children who are more likely to be self-employed. They also substitute away from stock in adult-

hood towards savings. This implies that in adulthood, children with Great Depression parents have a larger amount of liquid assets that can easily be accessed to ease liquidity-related barriers to entrepreneurship. These results are consistent with evidence in empirical finance that entrepreneurs hold much higher wealth (Gentry and Hubbard, 2004) and invest more in housing/equity (Schmalz et al., 2017). Another possibility is that entrepreneurial children move most of their investment into their company (perhaps because of their personal experience with it), which would be consistent with findings in Moskowitz and Vissing-Jorgensen (2002).

One concern with these results is that individuals exposed to the Great Depression were adversely selected in some way. For example, they may have been less likely to go to school because they had to find work to help their parents pay the bills. Columns 2,4, and 6 subsequently add household income and education as controls for each outcome variable of interest. Not surprisingly, wealthier and more educated individuals are more likely to invest in stocks and hold less liquid assets in savings, but the inclusion of these variables does not alter the interaction effect.

If individuals shift their assets away from stocks and towards savings, do they have a higher risk aversion than individuals whose parents grew up in more mild times? This would be at odds with our findings that these individuals are more likely to enter entrepreneurship, as entrepreneurship is an inherently risky endeavor. However, this is not necessarily the case. First, this is in line with Graham and Narasimhan (2004), Schoar (2007), and Malmendier et al. (2011) that state that CEOs who grew up in the Depression prefer to use internal sources of financing, eschewing external capital markets. Children of Depression survivors may be taught to behave similarly—that is, to avoid external markets and prefer holding assets in savings accounts. Second, since starting a business requires a substantial amount of liquid assets (Cagetti and De Nardi, 2006), these individuals may balance their assets in a way that helps them to succeed in entrepreneurship.

5. Conclusion

There is a large literature about the effects of historical shocks on economic development and growth. However, the bulk of the literature has focused on the role of institutions in shaping future economic activity. Building on recent contributions in behavioral macroeconomics, we exploit variation in the severity of the Great Depression and identify its effects on contemporary entrepreneurship rates. We subsequently investigate the role that personal experience plays by showing that individuals with parents growing up in states with lower per capita income are more likely to be self-employed and hold higher liquid saving, which are proxies for entrepreneurship.

Our results have important implications for understanding how large-scale events, whether personal or societal, affect real economic outcomes in the long-run, particularly selection into entrepreneurship and local dynamism. Our paper provides several areas for fruitful analysis. First, what are the specific parental investments that affect a child's long-run entrepreneurial outcomes? For example, Laudenbach et al. (2019) show that individuals growing up under communism in Germany are less likely to invest in the stock market because of the association between stocks and the West. Second, how do historical experiences interact with contemporaneous conditions and what are the potential implications for optimal policy intervention? For example, Bernheim et al. (2001) show that educational campaigns can be effective for raising awareness, but these interventions struggle to change individual habits unless they become part of the routine. We leave these avenues, among others, open for future inquiry.

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Tables and Figures

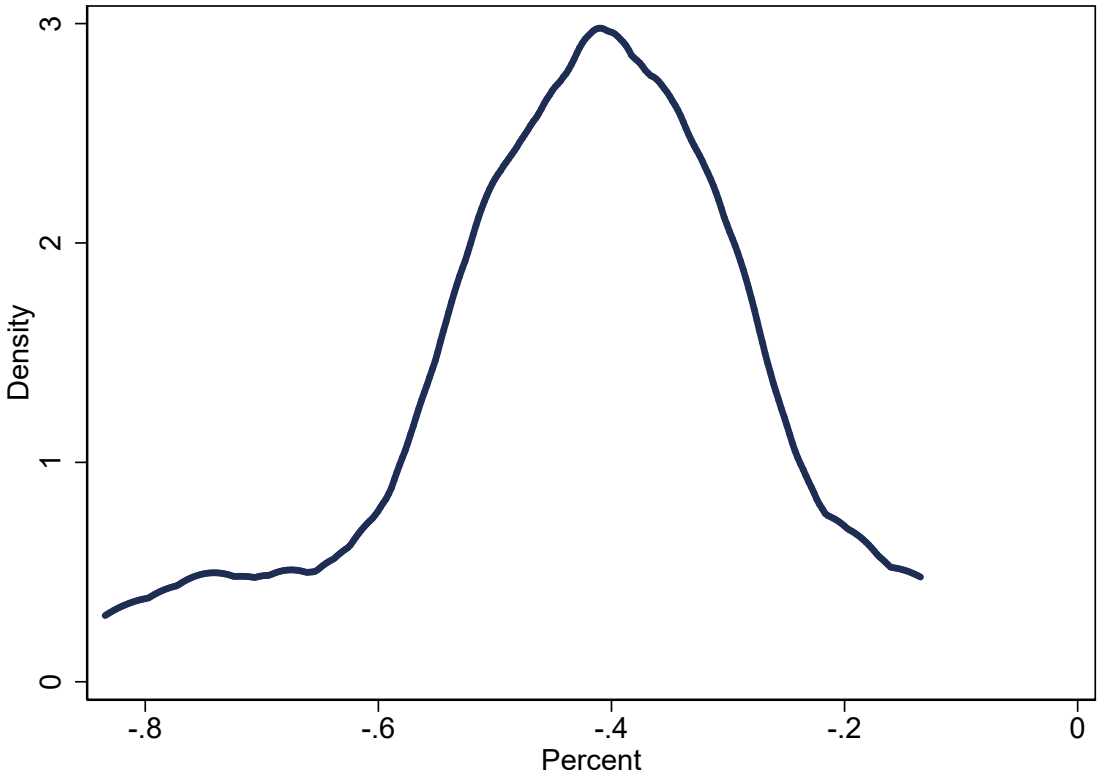
Table 1: The Effect of Historical Great Depression Shocks on Current Entrepreneurship

Dep. var. =	establishment entry rate					reallocation rate				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
retail sales growth, 1933-1929	-.04**	-.02	-.02	-.01	-.04**	-.06**	-.04**	-.04**	-.04*	-.04**
	[.02]	[.01]	[.01]	[.01]	[.02]	[.03]	[.02]	[.02]	[.02]	[.02]
× 1[1974 < t < 1991]				-.02***					-.01	
				[.01]					[.02]	
R-squared	.29	.38	.81	.81	.74	.16	.28	.68	.68	.74
Sample Size	1634	1634	1634	1634	1292	1634	1634	1634	1634	1292
F-statistic					8.64					8.64
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous Controls	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
Year FE	No	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Instrument	No	No	No	No	Yes	No	No	No	No	Yes

Notes.—Source: Fishback et al. (2005), Business Dynamics Statistics, Census Bureau, 1977-2014. The table reports the coefficients associated with regressions of the establishment entry and reallocation rates between 1977 and 2014 on the growth rate of retail sales between 1933 and 1929 (and in certain specifications its interaction with an indicator for whether the year is between 1974-1991), conditional on controls. Historical controls include the population of a CBSA in 1940, share of males, the age distribution (under 20, 20-34, 35-49, 50-64, 65+), and the education distribution (none, some elementary, some high school, some college). Contemporaneous controls include the population in 1990, share of males, age distribution (under 18, 18-24, 25-34, 35-44, 45-64, and 65+), share of whites and blacks, share of married individuals, and the education distribution (less than high school, high school, and some college). The establishment entry rate is measured as the ratio of establishment entry in year t and the average of establishment entry in year t and t-1. The reallocation rate is the sum of job creation and job destruction net of the absolute value of the net job creation rate. The "drought IV" instrumental variables in columns 5 and 10 are the year-to-year average growth in the Standardised Precipitation-Evapotranspiration Index (SPEI) drought index between 1924 and 1926. The instruments include a quadratic in average annual SPEI growth, as well as the average SPEI growth for each month within the year. All county data (e.g., retail sales growth and drought) is crosswalked into CBSAs using the 2000 Census delineation. Standard errors are clustered at the CBSA-level.

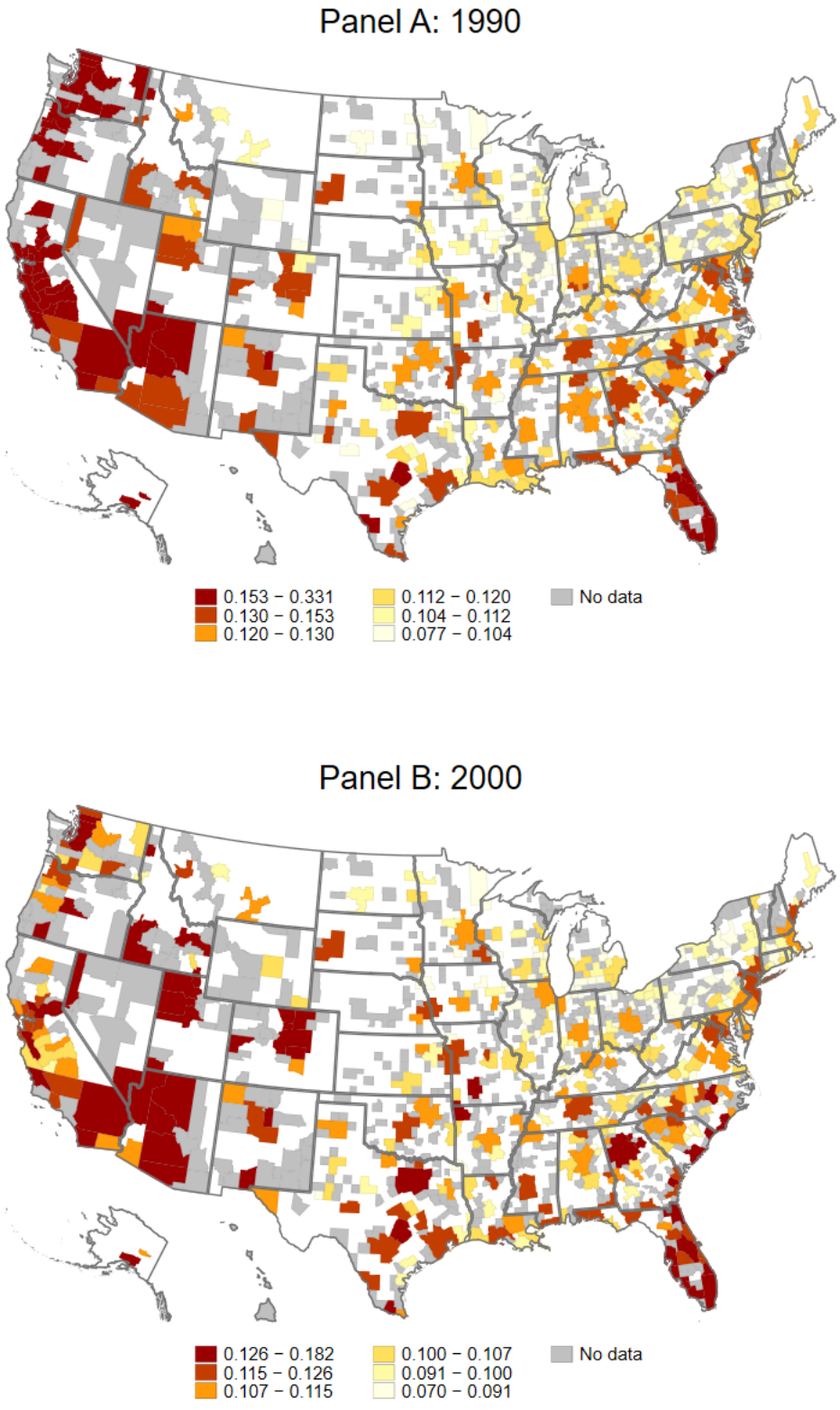
Distribution of Growth Rates in Retail Sales per Capita, 1933-1929

Figure 1: Notes.—Source: Fishback et al. (2005). The figure plots the distribution of growth rates in retail sales per capita using real 1967 dollars across core business statistical areas (CBSAs), which were obtained by using a crosswalk between counties and CBSAs from Missouri Geocorr on the county data from Fishback et al. (2005).



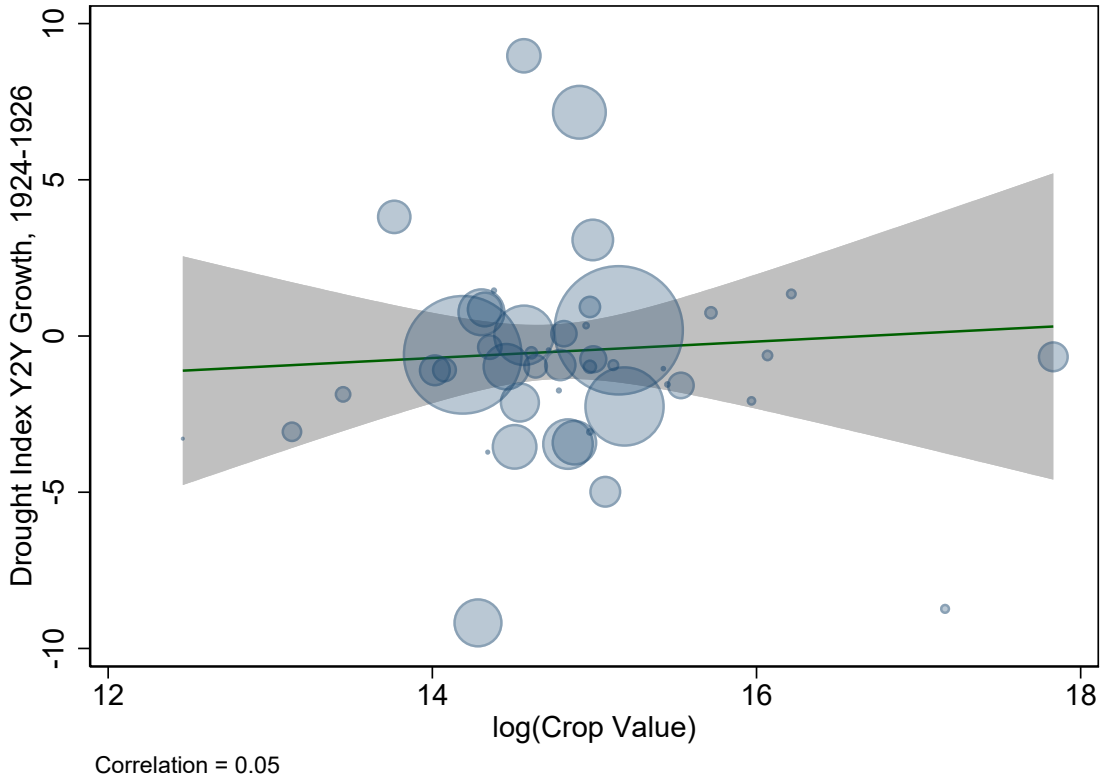
Spatial Heterogeneity in Establishment Entry Rates

Figure 2: Notes.—Source: Business Dynamics Statistics (BDS). The figure plots a spatial map of establishment entry rates in 1990 and 2000 across core business statistical areas (CBSAs).



Correlation Between 1924-6 Drought Conditions and 1930 Crop Value

Figure 3: Notes.—Source: 1930 Census Bureau and NOAA. The figure plots the correlation between the year-to-year growth in the Standardised Precipitation-Evapotranspiration Index (SPEI) drought index between 1924 and 1926 and the logged crop value in 1930 across CBSAs.



First-stage Relationship Between Growth in Wetness and Retail Sales

Figure 4: Notes.—Fishback et al. (2005), 1930 Census Bureau and NOAA. The figure plots the relationship between retail sales growth and the year-to-year annual Standardised Precipitation-Evapotranspiration Index (SPEI) drought index. County data on retail sales growth is crosswalked into CBSAs using the 2000 Census delineation. Observations are weighted by 1920 psuedo-CBSA population.

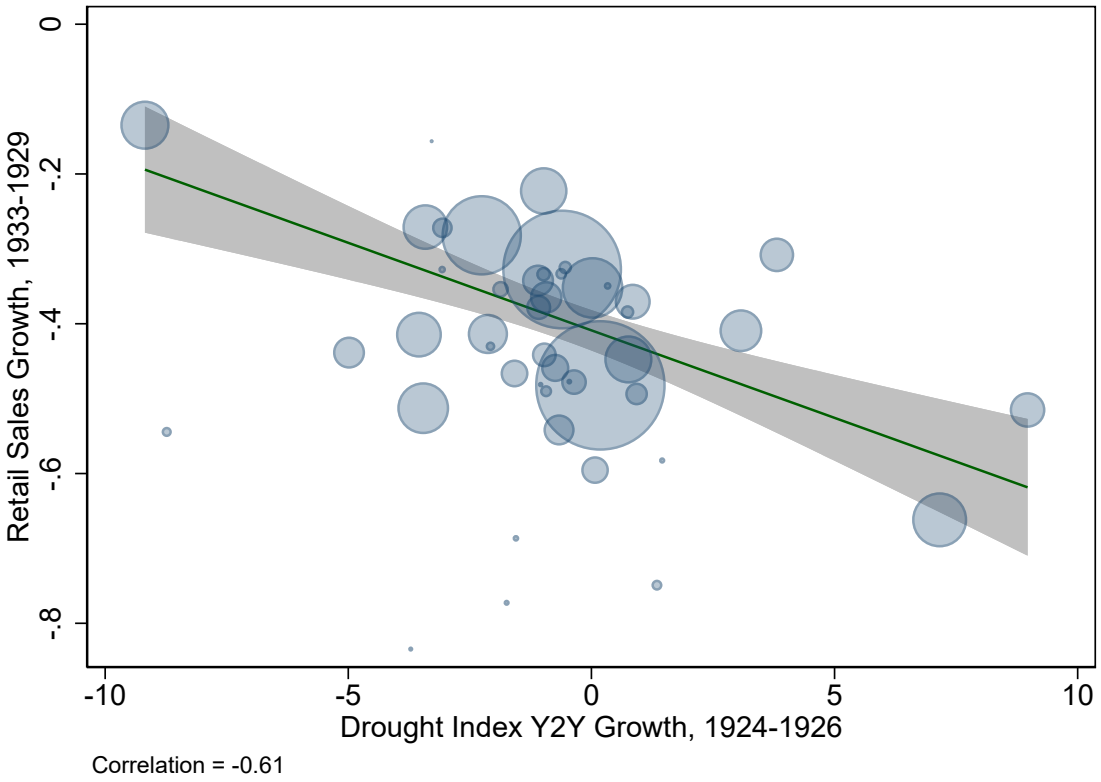


Figure 5: Income dynamics by region, 1919-1950

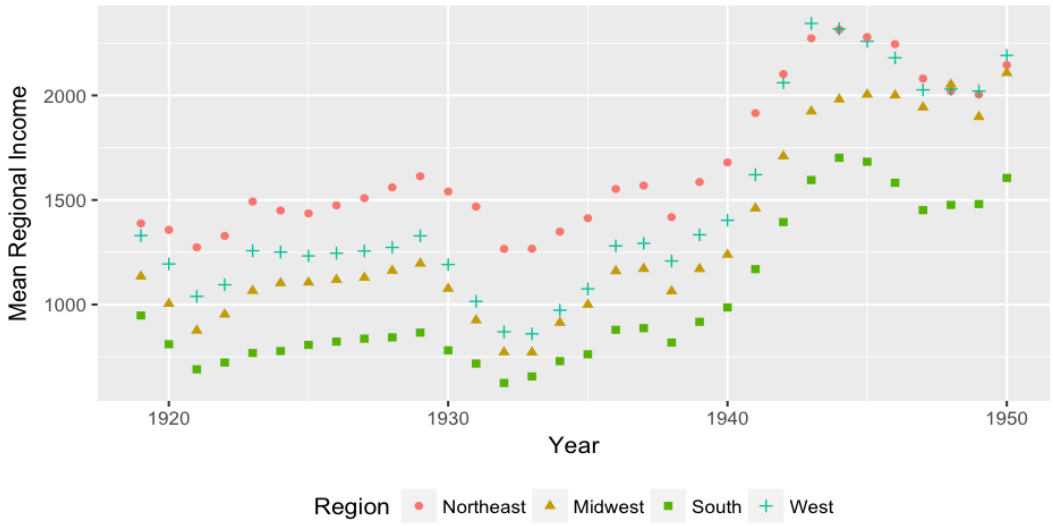


Table 2: PSID Summary Statistics

	Mean	SD	Min	Max
ln(Father State Income 13-19)	0.74	0.50	-0.92	1.85
ln(Child State Income 13-19)	1.39	0.25	-0.40	2.19
Father Born 1910-1920	0.06	0.24	0	1
Female	0.40	0.49	0	1
Black	0.23	0.42	0	1
White	0.75	0.44	0	1
Age	47.37	12.15	30	75
Married	0.57	0.50	0	1
Number Children	0.86	1.12	0	9
Education	13.87	2.73	0	17
ln(Household Income)	9.17	0.85	-2	14
Self Employed	0.11	0.31	0	1
% Liquid Assets in Savings	0.78	0.36	0	1
% Liquid Assets in Stocks	0.12	0.27	0	1
ln(Inheritance) ($n = 1187$)	8.98	2.04	4.16	19.76

† Incomes and inheritance are adjusted for inflation to $1967 US dollars.
†† The number of observations is 21,566 except where specified.

Table 3: Parental Investment and Saving in Adulthood Results

Outcome Variable:	*Percent Liquid Assets in Savings*			
	(1)	(2)	(3)	(4)
ln(Time Reading)	0.402*	0.383*	0.389*	0.372*
	(0.171)	(0.166)	(0.167)	(0.165)
ln(State Income 13-19)	0.124	0.119	0.140	0.144
	(0.111)	(0.110)	(0.115)	(0.113)
x ln(Time Reading)	-0.242**	-0.229*	-0.228**	-0.218*
	(0.097)	(0.094)	(0.092)	(0.092)
Female	0.017	0.012	0.019	0.010
	(0.030)	(0.025)	(0.026)	(0.025)
Black	0.024	0.013	0.005	0.004
	(0.020)	(0.021)	(0.022)	(0.024)
White	-0.012	-0.013	-0.017	-0.015
	(0.014)	(0.014)	(0.016)	(0.016)
Age	0.212	0.217	0.199	0.191
	(0.156)	(0.159)	(0.154)	(0.142)
Age^2	-0.004	-0.004	-0.003	-0.003
	(0.003)	(0.003)	(0.003)	(0.002)
Married		-0.014	-0.003	0.008
		(0.026)	(0.022)	(0.021)
# Children		0.015*	0.005	0.004
		(0.006)	(0.004)	(0.005)
Education			0.027	0.022
			(0.046)	(0.044)
$Education^2$			-0.001	-0.001
			(0.002)	(0.002)
ln(Income)				-0.025**
				(0.010)
R-squared	.014	.016	.021	.025
N	1197	1197	1197	1192

† Robust Standard errors clustered by age in parentheses (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$)

Table 4: Conditions During Parent's Impressionable Years and Inheritance

Outcome Variable:	*ln(Total Inheritance)*		
	(1)	(2)	(3)
ln(Father State Income 13-19)	-0.352***	-0.347**	-0.304**
	(0.126)	(0.130)	(0.141)
Black		0.336	0.506
		(0.784)	(0.803)
White		-0.087	-0.014
		(0.338)	(0.348)
Female			-0.427**
			(0.159)
Married			-0.039
			(0.165)
# Children			-0.086
			(0.053)
R-squared	.007	.008	.017
N	1041	1041	1041

† Robust Standard errors in parentheses (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$)

Table 5: Baseline Effects of Parental Exposure to Great Depression on Financial Behavior

Outcome Variable:	𝟙[Self-Employed]		% Liquid Assets in Stocks		% Liquid Assets in Savings	
	(1)	(2)	(3)	(4)	(5)	(6)
ln(Father State Income 13-19)	-0.008	-0.010	-0.088***	-0.098***	0.060***	0.151***
	(0.016)	(0.016)	(0.013)	(0.012)	(0.010)	(0.011)
Father Born 1910-1920	-0.064***	-0.060***	0.046**	0.039*	-0.021*	-0.014
	(0.017)	(0.019)	(0.019)	(0.020)	(0.012)	(0.025)
x State Income 13-19	-0.057*	-0.059*	0.095***	0.089**	-0.106***	-0.114**
	(0.030)	(0.030)	(0.036)	(0.036)	(0.020)	(0.051)
Female	0.036***	-0.037***	-0.027***	-0.032***	0.023***	0.037**
	(0.009)	(0.010)	(0.010)	(0.010)	(0.006)	(0.015)
Black	-0.054**	-0.044**	-0.080***	-0.054*	0.098***	0.023
	(0.017)	(0.018)	(0.029)	(0.029)	(0.015)	(0.037)
White	0.029*	0.030*	0.010	0.010	-0.026*	-0.027
	(0.017)	(0.017)	(0.028)	(0.027)	(0.015)	(0.032)
Age	0.007*	0.004	0.008*	0.000	-0.008***	-0.002
	(0.004)	(0.003)	(0.004)	(0.003)	(0.002)	(0.004)
Age^2	-0.000	-0.000	-0.000**	0.000	0.000***	0.000
	(0.004)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Married	0.001	-0.015	0.070***	0.015	-0.056***	-0.010
	(0.011)	(0.011)	(0.009)	(0.010)	(0.004)	(0.011)
Number Children	0.009*	0.008*	0.000	-0.003	-0.002	-0.007*
	(0.005)	(0.004)	(0.005)	(0.003)	(0.004)	(0.004)
Education		0.002		0.015***		-0.012***
		(0.002)		(0.003)		(0.004)
$Education^2$		-0.000		-0.000***		0.000***
		(0.000)		(0.000)		(0.000)
ln(Household Income)		0.022***		0.074***		-0.086***
		(0.009)		(0.006)		(0.009)
R-squared	.033	.034	0.066	0.116	0.042	0.098
N	21566	21566	21566	21566	21566	21566
Birth State Fixed Effects	x	x	x	x	x	x

† Household characteristic controls include value of liquid assets, household income, race, sex, years of education, number of children, and marital status

†† Robust Standard errors in parentheses (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$)