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Economic Dynamism Thrives in America's Minority Communities:

Leveraging Its Power Depends on
New Conceptualizations

Makada Henry-Nickie

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Makada Henry-Nickie

Makada Henry-Nickie is a fellow in Governance Studies at the Brookings Institution. Her career and research have focused on expanding equitable access to responsible credit and promoting policies that advance inclusive economic opportunities for disadvantaged families and low-income communities.

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Samantha Elizondo is a research assistant in the Race, Prosperity, and Inclusion Initiative at The Brookings Institution. She works on a series of projects related to inclusive economic opportunities, racial inequality, voting, health, and criminal justice reform. Elizondo holds a bachelor's degree in Public Policy from the University of Chicago.

Nicholas C. Smith is a research assistant in the Race, Prosperity, and Inclusion Initiative at The Brookings Institution. He works on a series of projects related to inclusive economic opportunities, racial inequality, voting, and school choice. Smith is a Ph.D. Candidate in the Department of Sociology at Indiana University. He received his B.A. in Sociology from the University of Maryland, College Park, in 2016. Smith's primary interests include social psychology, self and Identity, race/ethnicity, health, stratification and inequality.

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Contents

Introduction	4
Research on Economic Dynamism	5
Entrepreneurial Quality Begets Growth	9
Implications for Job Creation	14
Policy Recommendations	16
Conclusion	19
Appendix	20
References	23

Introduction

C OVID-19 is testing the U.S. economy's resolve in unprecedented ways. The pandemic forced 10.0 million workers into joblessness and accelerated the financial ruin of roughly 100,000 small businesses. The severity of the COVID-recession necessitated massive adrenaline infusions to stabilize the economy in the face of colossal job losses and the extraordinary collapse of small businesses. Unfortunately, the immediacy of formidable challenges obscures the pandemic's damage to economic dynamism in local communities. Dynamism involves a continual cycle of renewal—new businesses form and create jobs to replace the positions that vanished along with defunct companies. Entrepreneurs and the startups they launch drive economic dynamism and are vital to this renewal process.

Startups Energize Job Growth

Startups and young companies energize job growth. In 2018, roughly 430,630 startups created 2.4 million jobs, according to the U.S. Census Bureau's Business Dynamics Statistics (BDS). So far, however, each iteration of stimulus relief has largely ignored the connection between business creation and economic growth. Even the recent \$1.9 trillion American Rescue Plan is silent on investments for entrepreneurs who will undoubtedly play a leading role in replacing the millions of jobs erased during the pandemic. Minority communities have borne the brunt of the pandemic's deleterious impacts: their unemployment rates rose faster than white unemployment rates and remain elevated. The situation for Blacks is especially worrying, with the Black unemployment rate sitting at 9.6%. In human terms, this figure represents roughly 2.0 million jobless Black men and women.

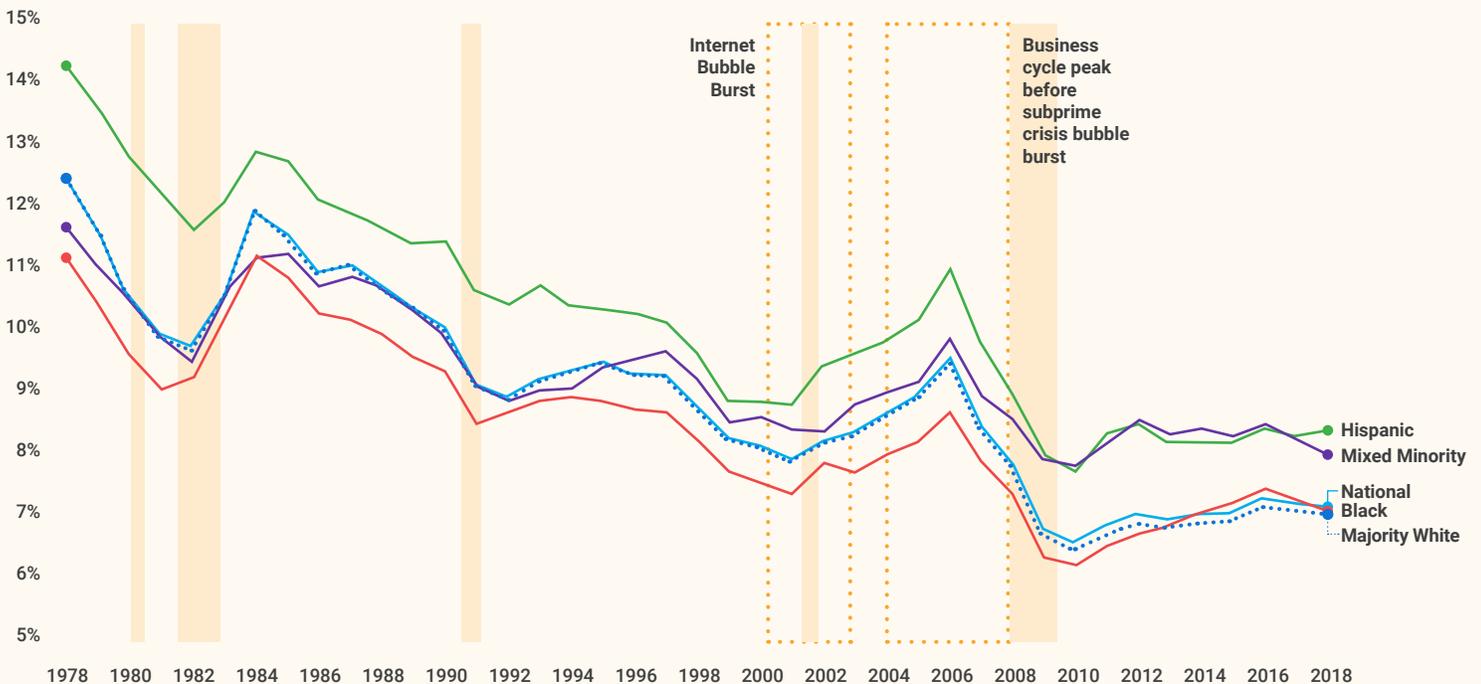
Building Back minority communities requires concomitant labor market investments and policy interventions to strengthen these communities' capacity to cultivate startup growth. Between 2010 and 2018, entrepreneurs in majority-minority communities created 493,879 new businesses and a total of 2.6 million new jobs. Put differently, the average startup born in the wake of the financial crisis generated approximately 5.3 new jobs. Underinvesting in entrepreneurial dynamism leaves prosperity dividends on the table, especially for hard hit communities. Startup formation and entrepreneurial quality as employment growth drivers in minority communities have received scant attention from scholars. This report attempts to close this policy gap: it provides fresh insight into economic dynamism in minority communities and offers policy recommendations attuned to boosting their entrepreneurial dynamism.

Research on Economic Dynamism

Economic dynamism refers to a perpetual cycle of new business births occurring alongside incumbent company deaths. Economic theory posits that the death of unproductive firms releases resources, freeing up labor and capital to flow into more productive ventures—including the new businesses entrepreneurs create.¹ This process of resource reallocation is fundamental to raising productivity, increasing aggregate employment, and accelerating economic growth.² A considerable number of studies have raised concerns about declining dynamism, measured as the proportion of new firms born relative to the total firm population.^{3,4} Figure 1 illustrates this concerning trend and distinct differences in county demographics. As indicated, the majority-Black pattern consistently lags all other groups.

U.S. entrepreneurship writ large has weakened substantially since the 1980s; however, community responses to this secular trend have varied widely. Disaggregating startup formation by predominant ethno-racial groups unmasks considerable heterogeneity in firm formation rates across communities. Majority-Hispanic county startup formation rates consistently outpace all other racially identified county groups. On average, new firms in majority-Hispanic counties accounted for 10.3% of all firms in this report's chosen 40-year period. In 2006, the majority-Hispanic county firm birth rate averaged 11.1% before plummeting nearly 30% during the financial crisis.

Other county groups experienced plunges of equivalent magnitudes. Startup formation in majority-Black counties was comparatively lower than in other demographic groups. Prior to the subprime housing crisis, startup rates in majority-Black counties crested at 8.3%, well below other counties and 14% lower than the national average. In absolute terms, Black communities experienced the steepest decline in startup job creation; 3,473 fewer startups took root in these communities, reducing job creation by 20,543 positions.

Figure 1. Declining Dynamism Through Bubbles and Busts.

The profoundly devastating financial crisis cast a long shadow over startup formation, resulting in a subdued rebound in the recession's aftermath. Majority-Black counties experienced the most robust startup recovery. By 2016, new firm formation in this group regained 84.3% of its pre-recession strength; 9,270 new businesses formed in 2016 compared with the 2006 peak of 10,998. Additionally, majority-Black counties' unconditional gains were more than double that of majority-Hispanic, plural-minority, and majority-white counties, at 9%, 9%, and 11%, respectively.

Despite the diminished startup gap in the post-recession recovery period, majority-Black communities continued to lag other county groups in absolute business creation levels: 76,339 new businesses were born in majority-Black counties while majority-Hispanic and plural-minority counties created 185,728 and 231,812, respectively (Table 1). Between 2016 and 2017, firm formation rates dipped modestly across all county groups and have since only rebounded in majority-Hispanic counties.

Extraordinary credit tightening was a defining feature of the financial crisis. Commercial banks and other financial institutions rapidly withdrew liquidity in response to exceptional uncertainty fueled by cross-institution contagion. The unprecedented capital

Figure 1. Declining Dynamism Through Bubbles and Busts.

Source: U.S. Census Bureau. "Business Dynamics Statistics: Firm Age: 1978–2018." *U.S. Census Bureau, 2018 Business Dynamics Statistics*, 17 Mar. 2021. Race-based groupings are defined according to a simple majority rule: each county inherits a demographic label based on the ethno-racial group that accounts for more than half of the county population. Plural-minority communities include those counties where the non-Hispanic white population is less than 50% but no single ethno-racial group predominates.

Table 1. Descriptive Statistics of Startups by County Demographics, 2010 – 2018.

	Hispanic	Black	Plural Minority
Number of Startups	185,728	76,339	231,812
Job Creation	1,006,750	441,121	1,167,182
Jobs per Startup	5.42	5.78	5.04
Number of Counties	69	80	102

Table 1. Descriptive Statistics of Startups by County Demographics, 2010 – 2018.

Source: U.S. Census Bureau. "Business Dynamics Statistics: Firm Age: 1978–2018." U.S. Census Bureau, 2018 Business Dynamics Statistics, 17 Mar. 2021.

vacuum inhibited startup growth rates across all county groups and subsequently throttled post-recession entrepreneurial rebounds. This dynamic accords with Messer and colleagues' finding that the financial crises suppressed new firm creation, resulting in forgone entrepreneurial dynamism. In other words, the post-Great Recession U.S. economy is missing entrepreneurs who never reappeared once macroeconomic conditions began to improve. This *missing generation* effect was associated with decreased employment and was most pronounced in metropolitan areas that experienced severe downturns.⁵

A 2014 study characterized this weakening entrepreneurship phenomenon as a startup deficit, which the authors contended is largely responsible for jobless recoveries. This deficit, the study argued, forces a systematic reallocation of employment to mature firms, implying that startups may contribute less to job creation during downturns.⁶ The data concur: in 2018, more than a decade after the credit bubble burst, the rate of new venture creation in majority-Black communities and net job creation continued to recede.

Different theories exist in the economics literature regarding factors that depress startup formation. Some economists estimate that prohibitive home prices discourage would-be entrepreneurs and workers from moving to innovation hubs.⁷ Other academics cite population aging and regulatory barriers as possible culprits, though recent evidence refutes the latter.⁸ The debate on the true causal factors driving this structural decline in economic dynamism is far from settled. What's clear in the meantime is the implications of missing startups for job creation, especially in the post-subprime crisis era. The specific effects of missing jobs for local labor markets and future economic growth warrant forensic studies. In the interim, the unremitting decline in dynamism, coupled with the severe COVID-recession, creates an urgent need to shore up startup formation.

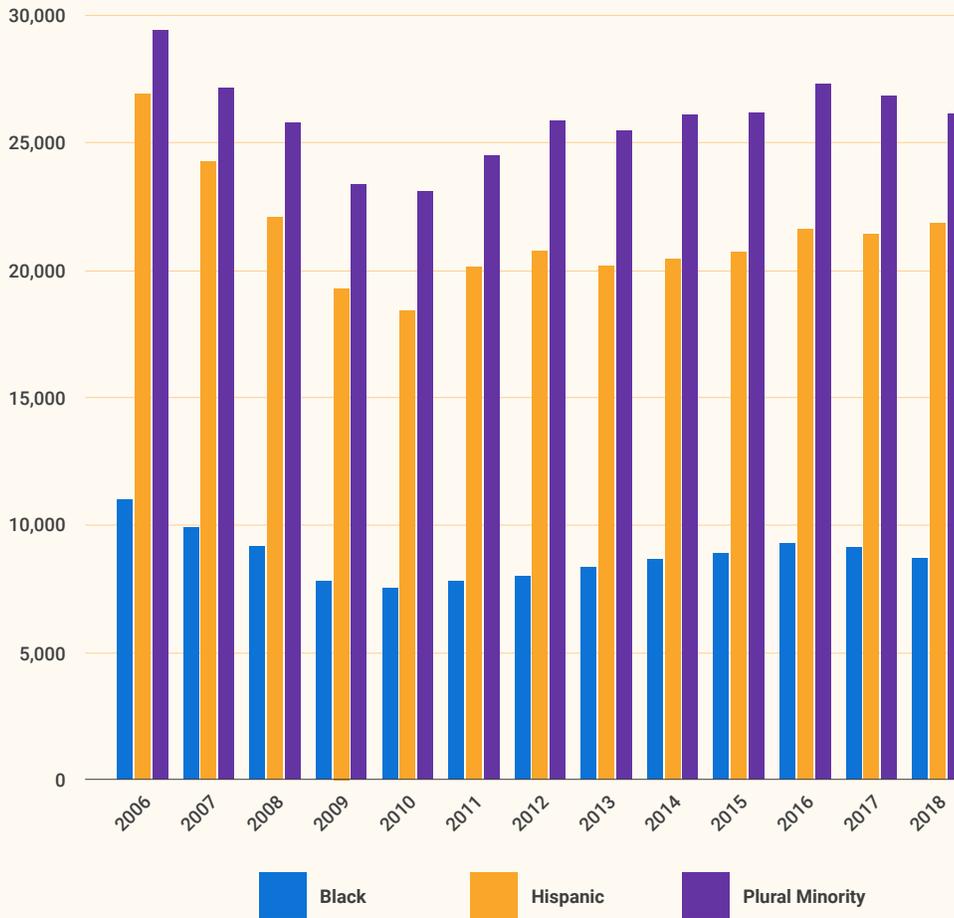


Figure 2. Growth of Entrepreneurial Quality Startups by County Groups, 1988 – 2016. Source: Andrews, Raymond, et al. "Entrepreneurship_by_County_policy.Tab, V.8." *The Startup Cartography Project*, Harvard Dataverse, 2019.

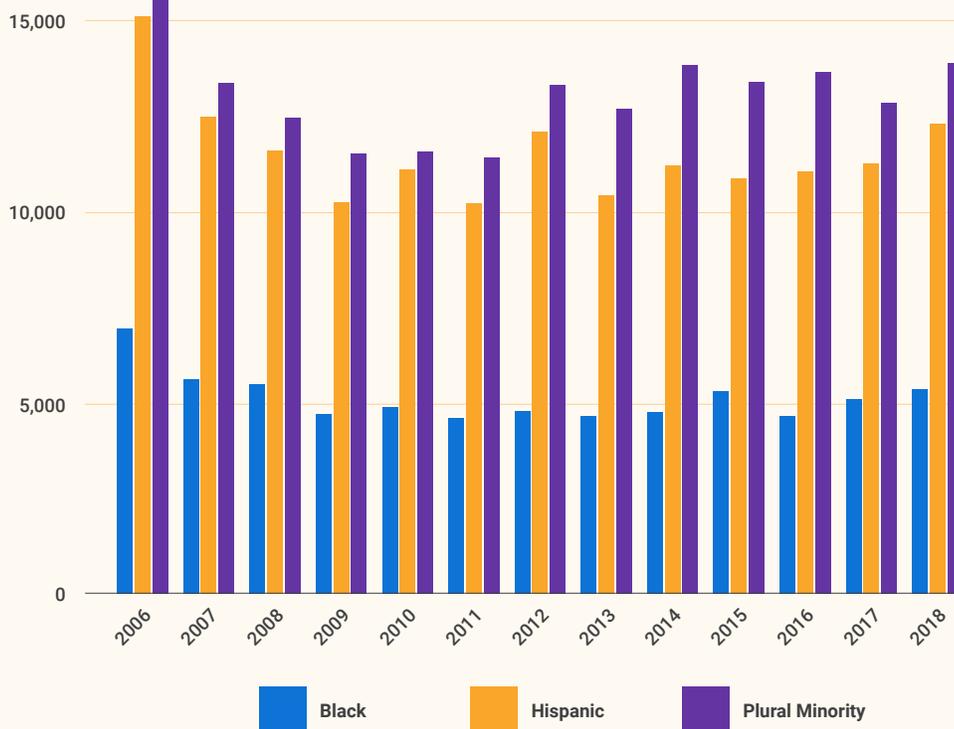


Figure 3. Average Employment Growth and Entrepreneurial Quality in Majority-Minority Counties. Source: U.S. Census Bureau. "Business Dynamics Statistics: Firm Age: 1978–2018." U.S. Census Bureau, 2018 Business Dynamics Statistics, 17 Mar. 2021. Andrews, Raymond, et al. "Entrepreneurship_by_County_policy.Tab, V.8." *The Startup Cartography Project*, Harvard Dataverse, 2019. All variables are log transformed.

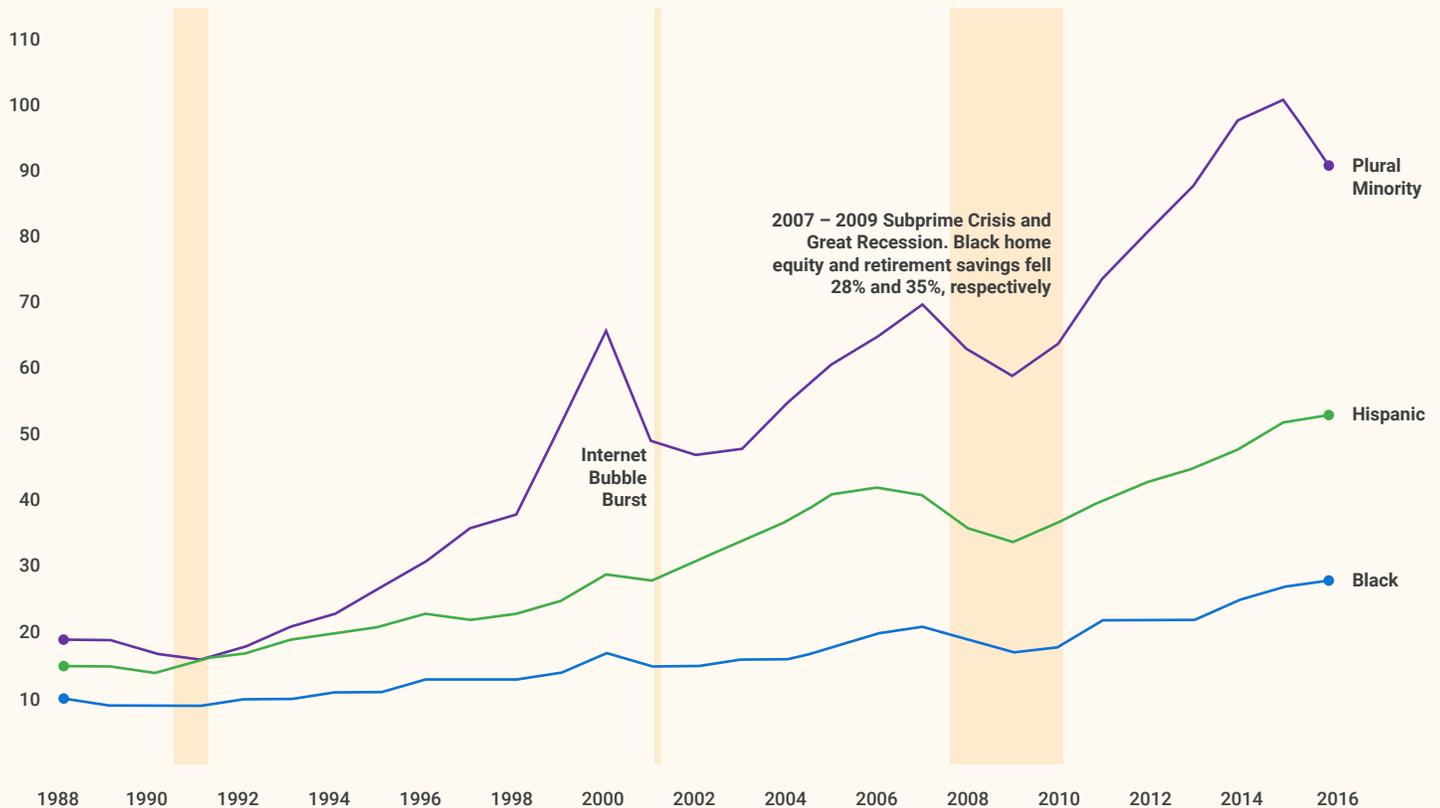
Entrepreneurial Quality Begets Growth

Business cycle downturns exacerbate Pugley's *startup deficit* and affect the structural quality of a county's entrepreneurial stock. Many startups die during incubation. Only a select few survive and eventually grow into employers; these firms are intrinsically valuable to local communities, given their potential to create jobs. Unfortunately, BDS data are count measures that do not capture the job creation or innovation potential (i.e., entrepreneurial quality) of startups, which in part explains the mismatch between expected employment payoff and entrepreneurial policies. Policymakers need better tools to identify job-creating startups because of these businesses' propensity to deliver future growth.

Motivated by the decoupling of quantity and startup quality during business downturns, this report draws on Startup Cartography Project (SCP) policy data to understand the structural composition of entrepreneurial quality across county-demographic groups. Jorge Guzman and Scott Stern pioneered an innovative methodology that measures entrepreneurial quality over 25-years and across 34 states.⁹ Guzman and Stern's novel methodology is a substantial improvement over limited count-based measures that do not reflect the intrinsic qualities of new businesses. Notably, the set of entrepreneurial measures are standardized over time and place allowing for robust place-based comparisons and improved entrepreneurial dynamics analyses.

Conceptually, SCP's Regional Entrepreneurial Quality Index (RECPI) combines the conventional count-based dynamism measure with an innovative quality-adjustment factor: Entrepreneurial Quality Index (EQI). The EQI factor exploits observable institutional features, including news media mentions, business records, and trademark and patent filings with demonstrable power to predict startup clusters' growth potential.¹⁰ SCP defines the quality of a startup to scale and achieve a growth outcome such as issuing an Initial Public Offering (IPO) or a high-value acquisition. SCP's indicators directly measure these observables, capturing the intrinsic quality inherent in a startup. For example, if a startup eventually scales and issues an IPO, then it's likely that the firm embodied the necessary features traditionally associated with success, defined as profitability. Because the likelihood of these events is low, as stated earlier, few startups survive to grow into profitable businesses. Nonetheless, this study exploits the idea that profitability is correlated with increased potential to create jobs. SCP's quality indicators collectively function as an ecological quality adjustment factor that can be applied to the cohort of businesses born each year and is well-suited to robust inter-region comparisons.^{11,12,13}

SCP's work allows policymakers to directly estimate the growth potential inherent in their ecosystem. These measures thus enable policy planners to address a key question: is my local community conducive to innovation? Figure 4 tracks the growth of quality-adjusted startup formation through 2016 (data beyond this date are not currently available).

Figure 4. Growth of High-Quality Startups, 1988 – 2016.

Plural-minority counties outperform all other geographic areas in terms of quality. Naturally, diverse counties have a discernible advantage in startup quality relative to other demographic areas. This outcome is expected given that counties such as Santa Clara, San Francisco, and Alameda—the proverbial bedrock of Silicon Valley, CA—are core members of the plural-minority group. Table 2 summarizes post-Recession startup quality. Overall, majority-Black and Hispanic counties lagged plural minority counties in their capacity to cultivate innovative startups.

The main takeaway from this exercise is not the expected pattern. Instead, this analysis confirms that Hispanic and Black communities embody ecological characteristics that are conducive to incubating quality startups, though not to the degree of historical innovation hubs. Furthermore, the ecological entrepreneurial quality is significantly correlated with employment growth. Figure 5 attempts to summarize the relationship between employment growth and entrepreneurship

Figure 4. Growth of High-Quality Startups, 1988 – 2016.

Source: Andrews, Raymond, et al. "Entrepreneurship_by_County_policy.Tab, V.8." *The Startup Cartography Project*, Harvard Dataverse, 2019.

Table 2. Descriptive Statistics of Regional Entrepreneurial Cohort Potential by County Majority-Minority Demographic Groups, 2007 – 2016

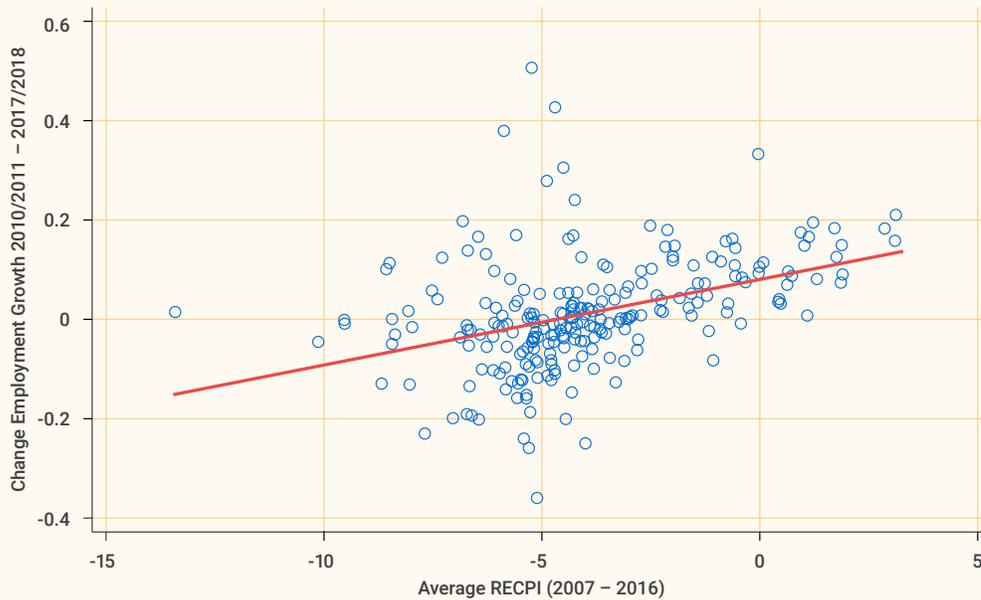
	Hispanic (N = 69)	Black (N = 80)	Plural (N = 98)
Mean	455.8	172.4	804.7
25th Percentile	428.2	154.2	776.2
75th Percentile	470.5	181.9	855.0
Standard Deviation	(20.1)	(13.2)	(37.9)
Number of Observations	1,982	2,260	2,506

Table 2. Descriptive Statistics of Regional Entrepreneurial Cohort Potential by County Majority-Minority Demographic Groups, 2007 – 2016 (N = 3,137).

Source: U.S. Census Bureau. "Business Dynamics Statistics: Firm Age: 1978–2018." *U.S. Census Bureau, 2018 Business Dynamics Statistics*, 17 Mar. 2021. Andrews, Raymond, et al. "Entrepreneurship_by_County_policy.Tab, V.8." *The Startup Cartography Project*, Harvard Dataverse, 2019.

quality. The goal of this statistical picture is to establish whether entrepreneurial quality adjusted startup formation rates in majority-minority counties is statistically correlated with employment outcomes over time.

Additional results (see Appendix) confirm a positive interaction between employment growth, entrepreneurship quality, and startup formation. Entrepreneurial quality, as an independent policy variable, informs average employment growth, though to a lesser extent than the quantity-based measure. This pattern corroborates earlier studies highlighting the importance of new business creation in aggregate net job creation.¹⁴ The role of EQI in predicting employment growth is a new contribution to the entrepreneurship literature which merits closer attention.¹⁵ The simple model indicates that EQI may be an important policy instrument that likely plays a larger role in determining employment growth than the startup rate.¹⁶ Moreover, startup formation models based exclusively on quantity measures may overestimate the indicator's effect on growth outcome variables. Still, the size of the formation rate coefficient is not trivial; it is statistically significant, speaking to the material impact of startup formation on spurring a jobs-driven recovery. It is important to acknowledge that the simple model presented here may well suffer from endogeneity owing to omitted variables and simultaneity issues (i.e., employment growth may influence contemporaneous startup formation and cohort quality). Nonetheless, the simple model emphasizes the importance of entrepreneurial quality to job creation in local minority economies.

Figure 5. Average Employment and Entrepreneurial Quality, Majority-Minority Counties.

To illustrate the informational value of SCP's entrepreneurial quality indicators, counties were ranked by EQI. Between 2004 and 2007, Montgomery County, AL, ranked as the number one majority-Black county per the EQI index. During this period, inventors in Montgomery County filed 26 utility patents with the U.S. Patent Office, and Hyundai—a global auto manufacturer—selected the county as the home of its Hyundai Motor Manufacturing Alabama (HMMA) plant. In 2005, Hyundai completed construction and placed the \$1.1 billion advanced manufacturing facility into service. According to Auburn University at Montgomery, the plant's ecosystem generated 34,000 full-time jobs and \$1.0 billion in annual payroll by 2010.¹⁷

HMMA's supply chain ecosystem is an impressive example of classic agglomeration theory wherein firms selectively sort across geographic regions to exploit location-specific knowledge assets and capture productivity spillovers. A reconciliation of HMMA's reported supplier network with Alabama's business registration database confirmed that three of HMMA's Montgomery-based companies registered with the state between 2007 and 2010 as new domestic corporations, including a certified minority-owned business. Fortuitously, this small contingent of firms survived the catastrophic subprime crisis as small employer firms with multi-million gross annual revenues. Collectively, these firms contribute to Montgomery County's local tax base and aggregate employment.

Figure 5. Average Employment and Entrepreneurial Quality, Majority-Minority Counties.

Source: U.S. Census Bureau. "Business Dynamics Statistics: Firm Age: 1978–2018." *U.S. Census Bureau, 2018 Business Dynamics Statistics*, 17 Mar. 2021. Andrews, Raymond, et al. "Entrepreneurship_by_County_policy.Tab, V.8." *The Startup Cartography Project*, Harvard Dataverse, 2019.

Table 3. Startups Founded between 2013 and 2016 in Top 10 Entrepreneurial Quality Counties.

	Black	Hispanic
Firm Size (Employees)		
1 – 10	41	23
11 – 50	50	23
>50	36	13
Est. Gross Revenue		
Less than \$1M	16	15
\$1M - \$10M	34	9
>\$10M	19	2
Selected Emerging Industries		
Software, Platforms & Mobile Apps	201	63
Information Technology	69	24
Data and Analytics	75	22
Artificial Intelligence & Related Technologies	27	9
Biotechnology	7	3

Table 3. Startups Founded within Top 10 Entrepreneurial Quality Counties.

Crunchbase data are not available for all startups. Startups may be double-counted across multiple industry groups. Numbers reflect only firms born from 2016-2018 and labeled active in CrunchBase database as of April, 2021. Source: <https://www.crunchbase.com>.

Comparatively, Washington, D.C. ranked fourth behind Montgomery County, AL, in average cohort quality during the same period. D.C. business registration records revealed that new companies born in the 2004–2006 window tended to be micro-employers with average annual gross revenues of \$432,426 and were disproportionately clustered in the services industry. Ranking average entrepreneurial quality in the post-crisis era revealed a relative shift among the counties. Between 2013 and 2016, Washington, D.C. rose to the number 1 position in majority-Black counties. Within majority-Hispanic counties Monterey, San Benito, and San Bernardino ranked in the top 3. Data collected from Crunchbase, a business intelligence platform, confirm that entrepreneurs in the top 10 ranked majority-Black and majority-Hispanic counties founded roughly 300 new businesses between 2013 and 2016.

Table 3 summarizes available data on startups founded within the top 10 ranked during the post-crisis recovery era and substantiates the robustness of SCP's entrepreneurial quality indices. According to Crunchbase, new ventures created within the top ranked counties had a high probability of survival, created jobs, and generated significant gross revenues. Notably, Crunchbase's data indicate that a significant number of startups were clustered in high-productive emerging industries such as software, biotechnology, information services, and 3D technology. This emerging industry distribution paints an encouraging narrative

Implications for Job Creation

Spatial variations aside, the long-term secular decline in both entrepreneurial quality and the number of newborn firms is alarming. Although startup formation recovers in the aftermath of an economic recession, the recovery tends to be weaker than formation rates in pre-recession epochs. This phenomenon has enormous implications for regional economic recovery and the role of policy planners in bolstering startup recovery. Startup quality will undoubtedly affect the quality of jobs created, wages, and longer-term impacts on workforce composition.

Table 4 depicts clustering patterns and a concerning quantity–quality trade-off. During the post-Great Recession era, startup employment was disproportionately concentrated in the Accommodation and Food Services sector. This pattern held for all three groups, though majority-Black counties over-indexed the other two county groups in food service jobs by at least 1.6 percentage points. However, majority-Black counties led in startup health care jobs: the Professional Services and Health Care sectors accounted for 11.6 % and 12.3% of startup employment in this county group, respectively.

Majority-Hispanic counties over-index in Retail Trade, Construction, and Transportation startup employment relative to other county groups. While plural-minority communities exhibited an expected competitive advantage in Information industry jobs, the sector accounted for 5.7% of all startup employment within the county group—nearly three times more than the relative employment shares in majority-Black and majority-Hispanic counties. The skew of startup employment toward the Food Services, Retail Trade, and Professional Services and Administrative Support sectors in majority-Black and majority-Hispanic counties suggests that the wage quality associated with these jobs are likely biased downward. Hourly earnings in the Accommodation and Food Services and Retail Trade sectors averaged \$15.80 and \$21.15, respectively, according to recent Bureau Labor Statistics estimates. Comparatively, average hourly earnings in the Information sector—where plural-minority counties have carved out a clear advantage—were \$44.45, roughly 3.0 times higher than the lowest-ranked Food Services sector.

Business dynamism supposedly involves productivity upgrades as new, young, and more productive companies, which are better adapted to current technologies, emerge to replace old, unproductive businesses. However, the distributions displayed in Table 4 are not entirely consistent with this theory and allude to a worrying substitution trend wherein old, less productive employment is replaced with low-paying jobs that are not necessarily more productive or technology-enabled.

Table 4. Distribution of Job Creation by Startups, 2010 – 2018.

	Black	Hispanic	Plural Minority
Accommodation and Food	20.3	18.7	18.7
Administrative Support	9.6	9.6	7.8
Arts and Recreation	1.6	1.5	1.7
Construction	3.6	5.8	5.8
Educational Services	1.5	1.5	1.8
Finance and Insurance	5.4	4.2	4.0
Healthcare	12.3	12.6	12.3
Information	4.0	2.1	5.7
Manufacturing	1.9	3.0	3.3
Management Companies	3.1	1.0	1.6
Mining	0.1	1.5	0.1
Other Services	5.1	4.5	4.8
Professional Services	11.6	7.6	10.3
Real Estate	3.4	3.2	3.1
Retail Trade	9.4	13.0	11.2
Transportation	4.0	5.5	3.2
Utilities	0.2	0.2	0.1
Wholesale Trade	3.1	4.5	4.5

Here again SCP's quality indicator proves insightful. Quarterly Workforce Indicator data are combined with quantiles of startup quality to assess the relationship between the two. After controlling for unemployment and college education, startup quality is positively related to average wages paid by startups. In majority-minority counties, new businesses at the top of the quality distribution pay 10.1% higher average wages than those at the bottom (see Appendix). The question of the startup workforce's composition is beyond the scope of this paper but is equally crucial to the entrepreneurial discourse. However, recent studies show that young firms, including startups, disproportionately hire young workers.¹⁸ The optimistic interpretation is that startup employment may provide a crucial on-ramp to the labor market for younger workers.

The decoupling of startup-driven employment and underlying wage quality has grave implications for sustainable aggregate employment and local economic growth. Without policy intervention, startup job creation in majority-Black and Hispanic communities will skew toward lower quality and reinforce inequality.

Table 4. Distribution of Job Creation by Startups, 2010 – 2018. Source: U.S. Census Bureau. "Business Dynamics Statistics: Firm Age: 1978–2018." *U.S. Census Bureau, 2018 Business Dynamics Statistics*, 17 Mar. 2021.

Policy Recommendations

This paper presents a strong case for favoring entrepreneurial policies that target high-quality startups over a set of policies that broadly encourage entrepreneurship. In truth, some scholars have maintained that an entrepreneurship policy paradigm naively trained on increasing the absolute number of startups is tantamount to resource wasting. Instead, they argue, policymakers should solely focus on encouraging high-growth venture formation while ignoring low-value startups.¹⁹ It is both politically and morally infeasible to implement this ideology. Real-world policy setting requires policymakers to consider a broader cost-benefit framework. Entrepreneurship facilitates the reallocation of human capital from a resource-wasting state of unemployment to a productive state where jobless individuals and others facing structural employment barriers open businesses to generate income with meaningful implications for income inequality.²⁰ This reallocation process is essential to the long-run economic and sociocultural welfare—and revitalization—of minority communities.

The current pandemic-induced recession compounds a preexisting long-term decline in business dynamism. Policymakers must implement extraordinary policy interventions to reverse the *startup deficit* and replace the tremendous loss in productive capacity accelerated by the COVID-19 crisis. Policymakers must reorient the social Sudoku puzzle to solve for an optimal policy collective that, when appropriately aligned, (1) creates an enabling growth environment conducive to the success of high-quality startups, (2) improves the growth odds and underlying quality of *forever small startups*, and (3) increases the conversion of young subsisting firms into growth-oriented entities.

1 ***State economic development agencies and the federal government should work together to scale up an ecosystem of coordinated accelerator networks.*** This prescription is admittedly not novel; indeed, many prominent examples already exist, including the High Tech, Small Business Focused Accelerator program administered by the Small Business Administration's (SBA) Office of Investment and Innovation.²¹ Conceptually, the program's hunger games design will lead to the discovery of a few tech-focused high-growth startups, but the \$50,000 seed capital prize sets the bar too low and may increase the false positive rate. Altogether, the SBA's program is inappropriately configured and incompatible with the scale of dynamism replacement required to fill cavernous Main Street productivity gaps.

2 *The federal government should invest a minimum of \$1.0 billion in high-quality minority accelerator networks.* The federal government needs to decide whether inclusive innovation matters. It has a duty to prioritize cultivating the entrepreneurship capacity of majority-minority communities—anything less than a billion-dollar investment sets the stage for a race to the bottom. SBA’s signatory accelerator program was last funded in 2019 to the tune of \$3.0 million. Comparatively, FarmWise Labs, a small agro-tech company started in 2016, raised \$24.0 million in venture capital funding—700% more than the federal government’s investment—during the height of the COVID-19 crisis.²² In the early days of the pandemic, the Canadian government added \$1.2 billion to its Industrial Research Assistance Program to support startups and created a \$95.0 million innovation fund for Black entrepreneurs. A billion-dollar investment acknowledges the importance of incubating minority entrepreneurship.

3 *State and federal agencies need to broaden their conceptualization of accelerators.* Crucial interactions between ecosystem assets such as preexisting skills and technology stocks are the building blocks of innovation and growth. This precept underscores Akron, Ohio’s inspirational transformation from a low-productivity rubber manufacturing center into a competitive polymer and advanced materials hub. Researchers term the dynamic interplay of these preexisting assets “network spillovers.” Supply chain ecosystems that embody high spillover propensities are particularly successful at supporting high-growth startups alongside profitable incumbent companies. These institutions draw strength from a combination of tangible and intangible network externalities, agglomeration economies, knowledge spillovers, and arranged financing.

Accelerator programs that exclusively target new ventures ignore key intangible network externalities of inestimable value. These externalities are just as important to growing young incumbents as access to capital. Publicly funded accelerators should be organized as organic enabling environments conducive to the growth of high-quality startups in tandem with upgrades to the quality of existing young businesses.

Accelerators deliberately configured to break down silos between supportive startup and small business policies will facilitate spillovers to new and low-quality firms. The social spillover space inherent in accelerators promotes spontaneous dynamic interactions vital to the transfer of technical know-how and general quality upgrades for weaker companies and undeveloped ideas. This expanded model will be most impactful in minority communities with underdeveloped entrepreneurial institutions, large numbers of sole proprietorships, and weak economies.

4

State and federal agencies should partner with accelerators to create procurement set-asides for young firms and high-quality startups. Contract-based revenue from procurement set-asides is an efficient source of capital for startups. Tax incentives are not efficient or sufficient to stimulate startup-driven job creation. The penultimate objective of a successful accelerator is to create a thick network of suppliers and customers. The Department of Defense's (DoD) Defense Innovation Unit (DIU) based in Mountainview, CA is a transformative model that has been demonstrating the adaptability of the federal procurement process to startups. In the five years since DIU's 2015 founding, the program awarded 56 prototype agreements valued at \$11.7 billion with companies that, according to DIU, were mostly small businesses or nontraditional defense contractors. Importantly, this defense spending was spread across 28 states and six countries.²³

Procurement set-asides represent a tremendously effective market maker for minority communities. In response to the 1980s popularity of city contract set-asides, Black self-employment increased 3 percentage points. As a result of deliberate and coordinated policy decisions, state agencies and the federal government have created space in an assortment of markets to accommodate high-quality Black entrepreneurs.^{24,25,26,27,28} The benefit of inclusion flows through Black founders to their communities as increased employment and quality jobs. Following DoD's example, state and local agencies should recognize the extraordinary transformative power that systems-level customers wield in spurring entrepreneurial dynamism in minority communities.

Conclusion

Incentivizing startup formation is not a singular palliative to recession rebounds. However, newly started companies, in combination with other factors, play a critical role in economic growth.²⁹ Majority-minority communities urgently need policy intervention; these communities have endured tremendous losses to their entrepreneurial dynamism.

This report provides a policy-relevant, positivist frame to help policymakers situate and value minority communities' potential to incubate new firms, nurture new micro-industries, and generate high-skilled job opportunities. If Congress and the Biden Administration are genuine in their commitment to close racialized inequality gaps, then there must be thoughtful, meaningful investment in the capacity of minority communities to create the innovation necessary to renew their economies.

Appendix

	(1)	(2)	(3)
EQI	.0838*** (.0123)		.0451* (.0192)
Startup Formation		.2089*** (.058)	.1982** (.0648)
Observations	243	241	239
R-squared	.0791	.2281	.2601
Number of Counties	247	247	247

Table A1. Entrepreneurial Indicators and Average Employment Growth (Dependent variable: Average Employment Growth, 2010/11 – 2017/18). Robust standard errors are in parentheses *** $p < .01$, ** $p < .05$, * $p < .1$. Note: All variables are log transformed, dependent variables are averages for the period and startup formation represents the startup rate per 1,000 workers

	Black	Hispanic	Plural Minority
Avg. RECPI	.0135* (.0044)	.0243** (.0061)	.0124*** (.0026)
Wage Growth	-.0357 (.0396)	.0292 (.0291)	.1742 (.1194)
County GDP Growth	.1101** (.0303)	.1709*** (.0084)	.1272 (.0791)
Observations	78	69	85
R-squared	.2428	.5073	.3643
Number of Counties	81	69	99

Table A2. OLS Regression Quality-Adjusted Startup Formation and Employment Growth (Dependent variable: Average Employment Growth, 2010/11 – 2017/18). Robust standard errors are in parentheses *** $p < .01$, ** $p < .05$, * $p < .1$. Source: U.S. Census Bureau. "Business Dynamics Statistics: Firm Age: 1978–2018." U.S. Census Bureau, 2018 Business Dynamics Statistics, 17 Mar. 2021. Andrews, Raymond, et al. "Entrepreneurship_by_County_policy.Tab, V.8." *The Startup Cartography Project*, Harvard Dataverse, 2019.

Panel A: County Demographics

Average Startup Employee Earnings	Full Model	Minority Counties
% Unemployment	-0.091*** (0.014)	-0.321*** (.051)
% College Educated	0.064*** (.029)	0.036 (.09)
2nd Quantile	0.029** (.012)	0.019 (.045)
3rd Quantile	0.060*** (.013)	0.004 (.051)
4th Quantile	0.092*** (.012)	0.006 (.053)
5th Quantile	0.132*** (.014)	0.107* (.057)
R-squared	0.075	0.213
Number of Observations	3,085	232

Panel B: Counties Nested in the Same Metropolitan Statistical Area

	Atlanta-Sandy Springs- Roswell, GA	New York-Newark-Jersey City, NY-NJ-PA	Washington-Arlington- Alexandria, DC-VA
% Unemployment	0.561** (0.240)	0.685 (.410)	0.19 (.179)
% College Educated	0.878*** (.189)	2.109*** (.693)	1.285*** (.302)
Pooled Upper Quantile	0.154** (.062)	0.119* (.066)	0.081 (0.73)
R-squared	.593	.501	.715
Number of Counties	29	25	24

Table A3: OLS Regression Startups Cohort Quality and Job Quality. Standard errors are in parentheses *** $p < .01$, ** $p < .05$, * $p < .1$. Source: U.S. Census Bureau. "Business Dynamics Statistics: Firm Age: 1978–2018." U.S. Census Bureau, 2018 Business Dynamics Statistics, 17 Mar. 2021. Andrews, Raymond, et al. "Entrepreneurship_by_County_policy.Tab, V.8." *The Startup Cartography Project*, Harvard Dataverse, 2019.

	Avg. Startup Cohort Quality	Avg. Startup Formation Rate
Local Agglomeration Factors		
Firm Density	.237 (.76)	.448 (.613)
% Self-Employed	.371** (.144)	-.138 (.116)
Firm Size/Labor Force	.172 (.748)	-1.048* (.603)
Firm Deaths	-.024 (.037)	-.012 (.03)
Economic Climate Factors		
Startup Job Creation	.011 (.018)	.234*** (.015)
State Unemployment Rate	.153** (.072)	.078 (.058)
% State Labor Force Growth	.021** (.009)	.021*** (.008)
% State Per Capita Income Growth	.005 (.01)	.005 (.008)
State Subsidies	-.067 (.087)	.237*** (.07)
Regional Labor Force Composition		
% College Educated	-1.245 (.971)	.792 (.783)
No. of Observations	936	936
Adj R2	.764	.768
No. of Counties	236	236
County FE	Yes	Yes
Year Dummy	No	No

Table A4. Policy Levers. Standard errors are in parentheses *** $p < .01$, ** $p < .05$, * $p < .1$. Source: U.S. Census Bureau. "Business Dynamics Statistics: Firm Age: 1978–2018." U.S. Census Bureau, 2018 Business Dynamics Statistics, 17 Mar. 2021. Andrews, Raymond, et al. "Entrepreneurship_by_County_policy.Tab, V.8." *The Startup Cartography Project*, Harvard Dataverse, 2019.

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