

What Does Political Economy Tell Us About the Dearth of Black Entrepreneurs?

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journals.sagepub.com/home/aex**Vincent E. Mangum**¹ 

Abstract

There is a historical and consistent lack of parity in the Black community between labor and firms. Various authors have attributed entrepreneur-centered failures and shortcomings as the source of Black Entrepreneurship under-performance. This study, however, utilizing the Theory of Market Barriers, sought to discover the factors associated with market conditions that may play a causal role on new firm entry and coincidentally entrepreneurship choice. With count data from the Survey of Minority Owned Enterprises 1992-1997 (SMOBE), this study estimated the parameters of a Limit Profit Model to determine the effect political economic barriers have on new firm entry. The results implicate historical and ongoing biased policy generating imperfect market conditions lowering the economic value of entrepreneurial choice and hindering Black Entrepreneurship. This suggests that among the various explanations for the dearth of Black entrepreneurs, low Black labor demand and persistent high Black unemployment, barriers emanating from political economy, also appear to be important.

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Keywords

Black entrepreneurship, political economy, market barriers

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The Department of Commerce's Minority Business Development Agency (MBDA) Report series developed from the Survey of Business Ownership 2012 data shows that relative to White and Asian-owned firms, Black-owned firms achieve lower revenue, have a shorter lifespan, and employ fewer workers. These findings are consistent over decades and illustrate the lack of parity between the needs of the Black population and available products, services, and employment from Black-owned firms.¹ In addition, the average size of Black-owned firms is small relative to non-Black-owned firms in terms of both gross receipts and employment. Black-owned firms had the lowest average revenue per firm at only \$58,119, employing a mere 975,000 persons—there were more Black-owned firms (2,584,400) than employees. These outcomes become a particular

¹Atlanta Metropolitan State College, GA, USA

Corresponding Author:

Vincent E. Mangum, Dean of the Division of Business and Information Technology, Assistant Professor of Business Administration and Economics, Atlanta Metropolitan State College, 1630 Metropolitan Parkway SW, Atlanta, GA 30310, USA.

Email: vmangum@atlm.edu

concern given the findings that small business owners initially hire persons like themselves, that is, immediate family and other relatives (Bates, 1995).

The state of Black entrepreneurship has historically been a concern for public officials and community leaders for its potential to resolve long-term socioeconomic issues such as poverty (Anderson & Wallace, 1975; Brimmer, 1988; Mangum, 2010). However, the MBDA report failed to offer a conclusive basis for their findings or solutions. The Small Business Administration and various policies have been developed to enhance Black entrepreneurial outcomes with only small measured successes. The results are important because low business activity can be linked to high unemployment and undesirable social ills (Bates, 1997; Bogan & Darity, 2008; Darity & Williams, 1985). Furthermore, entrepreneurship can be a source for improvements in an individual's quality of life (Robb, 2002). Access to contracts can enable Black-owned firms to achieve growth and profitability that increases the owner's equity and diminishes the Black and White wealth gap (Brimmer, 1988). It can also be a pathway to wealth considering an individual's or group's access, acquisition and utilization of the factors of entrepreneurship, that is, human, financial, social, and political capital(s) (Mangum, 2010; Rasheed, 2004). This article fills a void in the literature due to a focus on market conditions in contrast to many authors historically narrowing explanations to personal characteristics of Black entrepreneurs as the basis of under-performance and labor market outcomes (Fairlie & Robb, 2007; Robb, 2002).

The central idea under investigation in this article is that Black-owned firms encounter entry barriers derived from political economy machinations that impact the environment and ultimately the entrepreneurial decision. In short, well-educated potential Black entrepreneurs through a high level of business acumen choose to pursue other labor market opportunities such as career employment after realizing there exists less than favorable market conditions to generate acceptable profits as an entrepreneur. Given the impact of competitive forces on the start-up and long-term success of all firms, this article focuses on political economy in that a confluence of environmental factors may create a less than desirable climate of enterprise negatively impacting the Black entrepreneurial decision. These impediments proffer an advantage to the incumbent and represent market barriers to others that increase the relative height of barriers thereby decreasing the probability of entry for Black-owned firms. Given the historical vestiges of American economic history experienced by Black Americans, political economy of markets may explain the well-documented disparities in self-employment and wealth, where Black-owned firms are significantly underrepresented (Bogan & Darity, 2008; Brimmer, 1988; Fairlie & Robb, 2007).

This article explores the nature of market conditions generated by political economy that may explain firm entry, profit expectations, growth, size, and success of Black entrepreneurship. Thus, the aim is to investigate barriers stemming from political economy and whether there is a causal link diminishing profitability and growth expectations and subsequently the entry of Black-owned firms. The remainder of this article is organized as follows in proceeding sections with (a) a delineation of the Black entrepreneurs' decision framework and the role of political economy (Theory of Market Barriers), (b) discussion of the Limit Profit Model and methodology, (c) empirical results, and (d) ending with conclusions and policy implications.

Political Economy and the Black Entrepreneurial Decision Framework

The MBDA findings require a view of the decision to start a business from the Black entrepreneurs' perspective regarding their environment and climate of enterprise. A view from their perspective will aid us in understanding the circumstances that have created an historic, persistent, and stark contrast between the rates of parity of Black and non-Black firms stemming from the Black labor market choice.

Starting and operating a business successfully is generally a personal employment choice regarding the source of household income to derive cash-flows for living expenses and build wealth. The average individual chooses the option that they expect will offer them the greatest probability to maximize utility over the course of their work life. The individual's income preference is their employment choice regarding their form of economic productivity to import income for the household budget. For non-wealthy persons, this income is the primary source for the consumption of goods and services in the economy.

Bradford and Osborne (1976) viewed the entrepreneurial decision as a function of the difference between returns to self-employment or expected firm profits and wage employment over costs associated with each endeavor. This entrepreneurial decision can be considered a specific case of the many "employment" options available to the astute individual given their set of characteristics and market environment. The individual would choose entrepreneurship if the expected returns to firm profits were greater than or equal to those for wage employment. "Equal to" is a highly significant model consideration. It summarizes an American cultural belief that business ownership (entrepreneurship) is preferred to labor employment, *ceteris paribus*. This positive psychic factor stemming from culture is important to the individual entrepreneurial decision.

Bradford and Osborne's (1976) findings suggested that prospective and astute entrepreneurs compare the value of income streams from possible employment options at the end of their work life. This also implies a consideration for income stability and risk over time. Utilizing this basis, in the United States, one may easily find that evidence suggests that for the average rational individual starting a business in a "normal" competitive environment given U.S. culture will be the common utility maximizing outcome that can lead to wealth attainment over time. However, if the model is augmented to account for non-market barriers associated with political economy that increases the cost associated with the choice, what will be the outcome of the entrepreneurial decision?

In the entrepreneurial decision framework and at the primary decision level across all firms, incumbents are instrumental in determining the relative profit opportunity in a competitive market environment. Their pricing regimes are instrumental in signaling relative profit and income opportunities to the entrepreneurs. In an effort to compete against market incumbents, entrepreneurs acquire price and profit data from operational decisions of incumbent firms. Masson and Shaanan (1982) state that the price set by incumbents is believed to signal outside firms to the expected level of profit opportunities in an industry. This profit expectation signal serves as a decision variable whether the outside firm can attain a reasonable profit to rationalize market entry given cost constraints associated with market barriers. Potential entrants' base entry decisions on the expected present value of entry using current profits determined by incumbent price selection, as the indicator of future profits (Masson and Shaanan, 1982).

These costs associated with market barriers are determined by the nature of the operating environment relative to the occurrence and height of entry barriers. The environment at a secondary level may also have political economic barriers in addition to standard industry competitive variables that condition the entrepreneurial decision and profit opportunity that may affect some entrepreneurs more than others. For example, the unique history of Black Americans creates particular circumstances and conditions in which primarily Black entrepreneurs have to operate.

The vestiges of slavery include systemic discrimination that founded untoward economic conditions has at least partially created a socially undesirable climate of enterprise (Zajonc, 2003). For example, the implementation of Blacks Codes and Jim Crow policy regimes afflicted Black Americans with restrictions on their voting, education, and employment rights and options that further diminished their income and ultimately wealth possibilities (Brimmer, 1988; Mangum, 2011; Walker, 1998). Those tactics produced racial animus (Kopkin, 2017) but more importantly were codified in law and served to reduce Black American social mobility across generations postslavery (Darity, Dietrich, & Guilkey, 2001), constraining new enterprise development and community economic growth (Boston & Ross, 1996; Butler, 2004).

Weintraub (1945) concluded that the political and religious disguises of American social competition can be traced to the colonial times. It became institutionalized and systematic during the Civil War. There is a parallel between the prevailing social, political, and economic forces and ideas propagated by the ruling class (Schmidt, 1982; Walker, 1998).

Political economic machinations have long been found to be important to the outcomes of market economies. However, microeconomic models of market structure and firm performance have not provided insight or details regarding the role of politics (Mangum, 2011). The impact of the pursuit for power and wealth through political office, laws, and institutions are overlooked. Governmental agents routinely solicit the cooperation of industry while designing legislation, thus, often allowing incumbent firms the ability to influence regulations in their favor (Bratton & Haynie, 1999; Dean & Brown, 1995). Blee, Kemp, Maas, and Mosselman (2003) state governmental barriers have historically been limited to controls exercised through licensure requirements, that is, natural monopolies. Other governmental barriers include inadequate governmental structure, underpaid and unmotivated public servants, and strong bargaining powers (lobbying) of domestic companies with established interests that hinder competition through conflicting laws, arbitrary rule enforcement, questionable ethical practices, and licensing delays (Rasheed, 2004).

Theoretically, Bradford and Osborne (1976) can be augmented to account for the impact of political economic barriers on projected cash-flows, income from employment becomes greater than business income and thus suggests career employment. See Equation 1:

$$\sum_{t=0}^T \frac{Y_t}{(1+r_t)^t} > \sum_{t=0}^T \frac{R_t}{(1+k_t)^t} + \frac{\chi \cdot V_T}{(1+k_t)^T}, \quad (1)$$

where T is the projected length of business involvement and Y_t the yearly wage foregone then the decision point comparison of total returns from business activity consisting of periodic withdrawals and other payments (R_t) plus terminal value (V_T) to employment. χ is the share of the terminal value of the firm ($0 < \chi \leq 1$), r_t is the rate at which wage income is discounted, ρ_t is the rate that business income is discounted and κ_t is the rate at which cashflows from business activities are expected in consideration of extra-normal costs (K_t) emanating from competitive intensity that include political economic barriers in period t , so that $\kappa_t = \rho_t + K_t$. This potential outcome suggests that astute Black Americans will decide that long-term career opportunities provide the highest utility maximizing household income over their life-time considering costs and risks of entrepreneurship.

Methodology and the Limit Profit Model

Given the role of human capital (Fairlie & Robb, 2007) and history of Blacks in America, potential entrepreneurs that are astute and thoughtful may in fact understand that the real costs, that is, barriers to Black entrepreneurship outweigh the economic and psychic benefits.

The Limit Profit Model theoretical framework is best suited to assess the Black entrepreneurial decision under unfavorable market conditions. It has been the model of choice when measuring the impact of barriers on entry as it provides a straightforward approach for theoretical and empirical assessment of market entry barriers (Mangum, 2010). The entry decision is viewed as a function of profit expectations and market entry barriers. A general way to consider the effects of barriers to entry on the limit price is to assume that they are reflective of the incumbent firm's assessment of the probability of entry, profit expectations, and their taste for competition. The limit rate of profit is the rate of profit that incumbents can maintain without encouraging new entry as shown below:

$$E_i = \beta(\pi_i^e - \pi_i^\phi), \quad (2)$$

where E_i is entry into some industry at some period of time, π^e is expected postentry profits, π^ϕ is the limit rate of profit measuring the costs of entry including political economic barriers relative to the level of profits where entry is limited, and β is the unknown parameter entry in response to profitable opportunities.

Entry is conditioned on the probability of successful entry as a function of perceived current profits of incumbents (gathered from pricing signals) that may be obtained by potential entrants. The potential entrant is able to observe the price charged by an incumbent and that price becomes an important indicator of potential profitability.

It is generally assumed that the level of entry will be in proportion to the expected postentry profits net of the costs of entry incurred through the impact or effect of barriers. Profits are believed to reflect the extent to which economic rents have been captured by incumbents. Potential entrants discover a relatively high level of profit from price signals regarding potentially profitable opportunities regarding reproducible factors (Orr, 1974).

Utilizing Mangum's (2010) model, the impact of political economic barriers on profit expectations results in the following econometric:

$$E_i = \alpha + \beta_1 \pi_i^e - \beta_2 \pi_i^\phi + \mu_i \quad (3)$$

The expected outcome is:

$$\frac{\partial E_i}{\partial \pi_i^\phi} = -\beta_2 \pi_i^{\phi-1} < 0 \quad (4)$$

where π^ϕ denotes political economic barriers associated with entry as a primary factor affecting new Black-owned firm entry. Subsequently, the empirical test is expected to show that the prevalence of political economic barriers limits new Black-owned firm entry reducing the expected number of firms in the market.

The economist, Joe Bain (1956) has been credited as an early researcher in the study of barriers precluding potential entry. In response to a call from Donald H. Wallace at the 48th meeting of the American Economic Association, he completed what was considered the first thorough study of the nature and extent of the barriers to free market entry. He defined barriers as the advantage of established firms in an industry over potential entrants with advantages expressed as the ability of incumbents to consistently raise prices above the competitive level without attracting new entrants (Bain, 1956).

Hirshleifer (1978) posited that market competition manifests socially and emanates from the "law of natural economy." It occurs by an advantage-seeking groups' desire to obtain and maintain dominance, power, and control over economic, cultural, and political ideology. The advantage-seeking group is able to develop economic power due to a limited supply of global resources utilized as the factors of production in creation of goods and services. Economic power is consequently utilized to assert specific cultural and political ideologies that validate and perpetuate dominance and control.

Incumbent firms realize and sustain market advantage as "first movers" (through historical political impediments to entry of other firms) and anti-competitive practices that may include lobbying tactics and discrimination. Lobbying tactics by incumbent firms allow them to acquire and maintain market advantage in public and private sectors. In the public sector, they are able to manipulate regulatory policy and contracting opportunities. The power and control exercised by incumbents have three primary benefits. They are able to shape public policy, obtain public contracts, and deny these same opportunities to other potential entrants.

Various aspects of strategy and management decision-making play out in competitive markets. However, the special circumstances that Black entrepreneurs have endured are not reflected in the consideration regarding their climate of enterprise and markets in which they operate. Barriers of political economy that may limit Black entrepreneurs include (a) undesirable socio-economic conditions where the potential consumer market exhibits persistent high unemployment and poverty (Brimmer, 1988), (b) burden with discriminatory practices from non-Black consumers (Price, 2005), and (c) are limited by anti-competitive public policy and biased elected officials (Mangum, 2010).

Empirical Assessment

The dependent variable NETENTRY is measured as the difference between 1992 and 1997 firm counts due to the lack of a preferred gross measure (Chappell, Kimenyi, & Mayer, 1990). This procedure enriched the data set by giving information on firm exit as well (Mayer & Chappell, 1992). For example, some counties had negative entry rates specifying more firms exiting than entering in the county. Due to our present focus on market entry, counties without entry or negative rates are coded zero (Duetsch, 1984). This procedure eliminates the problem of negative valued integers for the Poisson specification placing our primary focus on market entry. Firm exit is beyond the scope of this study but does present a future research opportunity.

To estimate the parameters of the empirical Limit Profit Model of Black-owned firm entry, this study used data from the Survey of Minority Owned Business Enterprises 1992-1997 (SMOBE). SMOBE is a product of the Department of Commerce Economic Census acquired through a mailed survey to over 2.5 million businesses nationally every 5 years. A sample of businesses and self-employed persons are randomly selected to represent their type of business and geographic area to provide valuable economic data on business owners' race, ethnicity, and gender. This survey is part of the economic census program, which the Census Bureau is required to conduct every 5 years by law (Title 13 of the United States Code).²

In this article, we utilize historical but not the latest available data³ due to three reasons: SMOBE data to measure entry is linked with additional political data from the Joint Center for Political and Economic Studies collected by survey organized and updated over periods of years as funding is available, and second, the lack of parity in Black American labor markets has been found in MBDA reports since their inception revealing a constant state of disequilibrium although causal factors are uncertain. The cross-section method of this study reduces the role of change in causal factors placing primary focus on the variables in question in this period of time, and finally, various authors have shown consistency in American culture that produces discriminatory practices and political economy effects (Beck & Katz, 2011) to support the reality of stationarity in outcomes.

The discrete nature of new firm entry is well suited for an estimation framework in which the probability distribution for the dependent variable is discrete (Cameron & Trivedi, 1998; Price, 2005). The entrepreneurial decision framework leads to an econometric model of data measured as counts where the choice is made in the specified time period. In addition, the empirical model, generalized Poisson regression (GPR), permits a specification of the mean value of a discrete integer-valued dependent variable as a nonlinear function of independent variables that is analogous to standard linear regression frameworks, permitting ease of interpretation of parameter coefficients.⁴

The climate of enterprise and market conditions were considered in regard to the levels of unemployment and poverty across all counties. However, data measuring unemployment and poverty exhibit an extremely high correlation. Subsequently, the influence of employment and income in each county on entrepreneurship was measured as a barrier utilizing the unemployment rate (UNEMPLOY). Unemployed and low-income persons are assumed to lack the potential

discretionary income for consumption necessary to create and operate the firm successfully. Subsequently, we should expect less entrepreneurship as unemployment and poverty increase.

The number of Historically Black Colleges and Universities (HBCU) per county in each state was included to provide insight into their potential impact as sources of business acumen, entrepreneurial capital stock, social networking, and contractual opportunities that enhance successful entrepreneurship. In the presence of HBCUs, counties are expected to exhibit more entrepreneurial activity compared to non-HBCU counties, *ceteris paribus*.

The number of Black elected officials per county is obtained from NRBEO and summed across county and type of elected office.⁵ BELECT was included to test the impact, if any that the presence of elected officials may have on entrepreneurial opportunities and new firm entry (Anderson & Wallace, 1975; Bates, 1997; Fairlie & Robb, 2007). The presence of Black elected officials is expected to reduce the likelihood of negative policy, enhance market conditions, and increase the probability of Black entrepreneurship.

Whether a state was a former member of the Confederacy, during the American Civil War (CONFED), provides insight regarding the historical nature of political entry barriers to the entry decision of Black American entrepreneurs. We expect that CONFED, capturing the legacy of slavery—particularly the racial political economy it may have engendered—will increase the relative height of barriers. A dummy variable was utilized to indicate counties of former confederate member states. Theory suggests that Black entrepreneurs in each former member state are expected to have less opportunity, entry, and success due to limited access to public resources and the presence of political economic barriers (Butler, 2004).

Other independent variables include gross sales per firm for each county, calculated as the ratio of the difference between gross sales divided by the number of firms. Relative price and profit data are acquired by potential entrants and used in their decision-making framework to determine the appropriateness of the decision to enter. PROFITS is utilized to proxy the high barriers implemented by incumbent firms realizing significant margins and market share. Incumbents essentially used their profits to increase market barriers to thwart potential entrants. Firm sales and profits exhibited a high correlation, therefore only PROFITS was modeled.

Interaction terms, HBCU \times BELECT, HBCU \times UNEMPLOY, and HBCU \times CONFED, were designed to reveal the impact of human capital, political capital, and political and economic barriers on new firm entry while reducing potential model multicollinearity. Correct and significant signs and larger coefficient magnitudes will indicate that interaction terms have greater influence on new firm entry than other single independent variables.

The covariate summary reported in Table 1 reveals outcomes of the county level business environment for Black firms. The maximum profit per firm that could attract new firm entry, leading to positive community impact and procuring lobbying assistance was a total of \$14,818,500. However, the mean (average) profits for a county firm that operated was only \$292,833, suggesting on average, businesses that entered the market were capable of providing a limited living for the entrepreneur and enhance the local community through employment and community infrastructure investment.

Table 2 reports parameter estimates of the empirical Limit Profit Model across two specifications of a GPR: (a) Simple Poisson and (b) Zero-Inflated Negative Binomial. Where relevant, we also report as a goodness-of-fit measure pseudo R^2 , a test for over-dispersion ($\alpha = 0$) and a Vuong test for the adequacy of the Zero-Inflated Negative Binomial specification.⁶ Models, Negative Binomial and Zero-Inflated Poisson, were also tested; however, revealed similar results as the Simple Poisson. Thus, given the solid results from the Zero-Inflated Negative Binomial, a contrast was chosen by comparing with the Simple Poisson.

The sign on HBCU is not as expected according to Human Capital Theory and all variables are statistically significant. The initial results may not identify causal effects due to very low probability values for each variable, very low standard errors, and a significant deviance statistic

Table 1. Summary Statistics.

Variable	Obs.	M	SD	Minimum	Maximum
NETENTRY	465	446.387	1,099.02	0	11,257
HBCU	465	5.51613	4.37078	0	15
CONFED	465	0.65806	0.47487	0	1
PROFITS(000s)	332	292.833	1,212.22	0	14,818.5
BELECT	465	11.1462	21.6631	0	277
DENSITY	464	1,030.99	4,139.14	1.03	66,940.1
UNEMPLOY	463	5.2784	2.45049	1.3	16
HBCUBELECT	465	52.7462	89.4108	0	960
HBCUCONFED	465	5.28602	4.58562	0	15
HBCUUNEMPLOY	465	30.7609	32.2736	0	226.5
BLKPOP	464	0.22831	0.16771	0.0017	0.783

Table 2. Comparison of Zero-Inflated Negative Binomial and Poisson Regression Results.

Dependent variable	NETENTRY							
	ZINB	Poisson	ZINB	Poisson	ZINB	Poisson	ZINB	Poisson
	Coef.	Coef.	SE	SE	z	z	p > z	p > z
HBCU	0.20128	-0.0149	0.08358	0.00107	2.41	-13.92	0.016*	0*
CONFED	0.3112	-0.3813	0.22639	0.00994	1.37	-38.36	0.169	0*
PROFITS	-0.0004	-0.0009	5.10E-05	1.50E-05	-8.52	-60.77	0*	0*
BELECT	0.01451	0.01154	0.00368	3.60E-05	3.94	322.81	0*	0*
DENSITY	0.00011	4.20E-05	2.40E-05	1.60E-07	4.53	257.68	0*	0*
UNEMPLOY	-0.0293	-0.0116	0.05208	0.00124	-0.56	-9.33	0.573	0*
HBCUBELECT	0.00386		0.00093		4.17		0*	
HBCUCONFED	-0.2475		0.0817		-3.03		0.002*	
HBCUUNEMPLOY	-0.0094		0.00547		-1.71		0.087**	
_cons	5.77112	6.26867	0.2884	0.00761	20.01	824.03	0*	0*
inflate								
BLKPOP	-0.0957		60,562.2		0		1	
_cons	-24.211		17,988.5		0		0.999	
/lnalpha	0.06508		0.06894		0.94		0.345	
alpha	1.06725		0.07358					

Note. Likelihood-ratio test of alpha = 0: $\text{chibar2}(01) = 1.7e+05$ $\text{Pr} > = \text{chibar2} = 0.0000$. Vuong test of zinb vs. standard negative binomial: $z = -8.91$ $\text{Pr} > z = 1.0000$. Inflation model = logit; Log likelihood = -2230.412; Number of obs = 330; Nonzero obs = 330; Zero obs = 0; Poisson deviance = 622,465.9; LR $\text{chi2}(9) = 243.66$; Prob > $\text{chi2} = 0$. ZINB = Zero-Inflated Negative Binomial Model.

* $p < .05$. ** $p < .10$.

that measures model goodness-of-fit. Measuring goodness-of-fit provides an assessment of the efficacy of the Poisson regression model underlying the parameter estimates.⁷ Consequently, the value (goodness-of-fit chi-square) for the deviance statistic (622,465.9) and its significant probability provide evidence failing to support the assumption of equi-dispersion and is possibly evidence of excess zeroes. The Poisson model assumption of equi-dispersion was too restrictive and parameter estimates may not identify causal effects, perhaps as a result of over-dispersion in individual variable values.

The next set of parameters in Table 2 is from a Zero-Inflated Negative Binomial Model (ZINB) specification where the assumption of equi-dispersion is relaxed. The ZINB is a technique utilized to achieve identification in count models by adjusting for excess zeroes or heteroscedastic data. A binary probability model determines whether a zero or a nonzero outcome occurs.

The ZINB model introduces unobserved discrete heterogeneity to differentiate variables that always have zero counts and those at risk of having a zero count. The ZINB model combines the negative binomial regression model with a binary logit or probit model, differentiating the variables that always have a zero count from those that do not.⁸ The model is inflated assuming that zeroes exist due to no Black firm entry. The lack of new Black firm entry would be expected to be positively correlated with the presence of political economic barriers, spatially.⁹

In general, the ZINB parameter estimates reported in Table 2 appear to be well defined given model diagnostics. In the case of over-dispersion, the ZINB model is a better suited empirical model for count data by relaxing the Poisson assumption of equi-dispersion.¹⁰

The likelihood ratio test reported in Table 2 is a test of the over-dispersion parameter alpha. When the over-dispersion parameter is zero, the ZINB distribution is equivalent to a Poisson distribution. In this case, alpha is significantly different from zero and thus reinforces that the Poisson distribution is not appropriate. The over-dispersion parameter confirms that the ZINB model is the more appropriate model that accounts for over-dispersion in the data revealing more precise standard errors and coefficients resulting in valid and reliable estimates.

The Vuong statistic is the test of choice for non-nested over dispersed data modeled through a regime splitting mechanism (Vuong, 1989). It is used to test alternatively distributed data that systematically produce a different proportion of zeroes than the Poisson distribution.

The Vuong statistic is the standard for testing the hypothesis that $E[m_i] = 0$ and shows a limiting standard normal distribution. It is a bi-directional statistic where positive values of v favor the standard negative binomial model and small negative values favor the ZINB. For example, the value of the Vuong Test with a value of -8.91 reveals that the ZINB is the more appropriate model supporting our assumptions of over-dispersion and excess zeroes in the data.

An additional measure to validate the preferred model is the utilization of Akaike Information Criterion (AIC) that measures model fit. AIC is an estimate of the expected relative distance between the fitted model and the unknown random process that generated the observed data (Gelman, Dunson, Rubin, Stern, & Carlin, 2014). Generally, a smaller AIC denotes a better predictive performance of a model when compared to another. Table 3 illustrates this outcome when comparing results of tests of the Poisson and ZINB models. The Poisson model has an AIC of 171,320.1 while the ZINB is 4,486.8, clearly supporting previous evidence that the ZINB is the preferred model.

The sign on HBCU is as expected human capital theoretical foundations and confirms the long-held role of HBCUs in the Black American community with respect to their missions, social networks, and contracting opportunities. BELECT contributes 1.4% (.01451) to the change in the mean number of Black-owned firms in each county. Black elected officials positively and significantly affect Black firm entry. Black elected officials appear to utilize their election, bully pulpit, and policy to support the interests of Black entrepreneurs. This result suggests that there are implications for electing Black public officials (political capital) to mitigate impact of political economic barriers.

For the ZINB single variable parameter estimates HBCU, PROFITS, BELECT, and DENSITY are significant at the 5% level. The interaction variables HBCU \times BELECT and HBCU \times CONFED are significant and increase in magnitude in our model at the 5% level and HBCU \times UNEMPLOY at the 10% level. HBCU \times BELECT further supports and enhances the role of HBCUs in the presence of political capital in the form of Black elected officials; actually, increasing the impact of HBCU on new firm entry with a coefficient of .2.

Table 3. AIC and BIC Model Tests.

Model	Obs.	ll(null)	ll(model)	df	AIC	BIC
Poisson	330	-199,778.8	-85,650.07	10	171,320.1	171,358.1
ZINB	330	-2,352.24	-2,230.41	13	4,486.823	4,536.212

Note. AIC = Akaike information criterion; BIC = Bayesian information criterion; ZINB = Zero-Inflated Negative Binomial Model.

Utilizing interaction variables in the model, the likelihood of Black-owned firm entry in a socio-economically challenged county (HBCU \times UNEMPLOY) is reduced by -94% (-0.0094). Communities with limited income and possibly high rates of unemployment and poverty do not have the necessary consumption expenditures to build and grow the successful firm.

Biased elected officials are a deterrent given that a former confederate state (HBCU \times CONFED) impedes the entry of Black-owned firms reducing the number of firms -24.75% (-0.2475) in each county. The historical nature of the social struggle in former confederate states lead to expected significant impediments to accessing contracting opportunities. *Richmond v. J.A. Croson* court decision diminishing affirmative action in minority contracting in the state of Virginia provides actual evidence. The reduction in contracts awarded in some cities to Black-owned firms after the decision was near 99% (Walker, 1998).¹¹

Discussion and Policy Implications

This article sought to explore and reveal insight on the dearth of Black entrepreneurs. It began with the premise and assumption that like any other ethnicity as a part of American culture and economic environment, Black Americans considering the entrepreneurial decision would choose to start a business at similar population rates relative to every other ethnic group, *ceteris paribus*, unless there was some invisible deterrent, limiting their access to entrepreneurial capitals and ability to do so. This article finds that an additional barrier exists and includes but not limited to political economic barriers to market entry.

Appealing to political economic theory regarding new firm entry, it was found that market competitors' strategic operational decisions negatively impact markets. In addition, socioeconomic conditions, anticompetitive public policy, and biased elected officials presumably negatively affect fairness in the allocation of public contracts by not enforcing equal opportunity laws governing commerce in a political jurisdiction. Thus, the presence of these political economic factors could increase barriers to new firm entry faced by Black entrepreneurs.

The Limit Profit Model results suggest that Black-owned firm entry is indeed impeded by political economic entry barriers and therefore increase those barriers. This finding has at least three plausible and supporting explanations. First, there are clear advantages to "first-movers." Market competition alone in a "free-market" can limit entry of other firms. Second, the market environment that exhibits undesirable socio-economic conditions reduces Black entrepreneurial choice diminishing successful entry and survival. Third, it suggests that anti-competitive public policy and biased elected officials unfairly exercise their potential authority over contracts, rules, regulations, and laws governing equal opportunity with respect to commerce in their political jurisdictions, that is, county, state, federal, in a manner that reduces the prospects for Black-owned firms' participation in public and private markets.

The parameter estimates reported in this article reveal historical and contemporary environmental factors that have constrained the formation and growth of a Black entrepreneurial class. First, growth and survival prospects for the Black-owned firm are extremely important due to research findings that suggest small business owners' hire persons like themselves; Blacks hire

Blacks, Whites hire Whites (Bates, 1997). Second, there are implications for community and economic development policy and presents an opportunity to study the potential effects of political economics barriers over time.

Black-owned firms experience decreased growth and survival prospects resulting in less employee hires and capital formation. There are broad implications for Black entrepreneurship, employment, and wealth. In addition, some fundamental political economic implications include electioneering to increase the number of Black elected officials, voter registration, office-seeking, voting, and accountability.

To the extent that political economic barriers have been historical and ongoing, the results suggest that the historical contemporary dearth of Black Americans among the self-employed is at least partially explained by the historical and contemporary climate of enterprise experienced by Black entrepreneurs that have diminished Black business ownership rates and entrepreneurship as a utility maximizing choice over their work life.

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Notes

1. Minority Business Development Agency (MBDA) staff has defined parity to be the rate of business ownership by each ethnicity compared to its proportion of the U.S. population.
2. The Census Bureau combines data from these surveys with data from the other components of the economic census and presents them in the Survey of Minority-Owned Business Enterprises publication and tabulation series. The published data include number of firms, sales and receipts, paid employees, and annual payroll and are presented by geographic area, industry, firm size, and legal form of organization. Businesses were eligible to be selected for these surveys if they reported any business activity on the 1992 and 1997 Internal Revenue Service forms.
3. SMOBE (Survey of Minority Owned Enterprises) was no longer published after 1997. However, minor changes were made in the survey structure along with a name change to Survey of Business Owners in 2002 (<https://www.census.gov/programs-surveys/sbo/news-updates/updates.html>).
4. Generalized Poisson regression (GPR) accounts for non-negative integer values for the dependent variable and the infrequent nature of entry by modeling the number of occurrences of an event as a function of independent variables permitting zero entry observations to be a natural outcome of the econometric specification. The “zero entry” counties provide insight on the nature of entry behavior relative to profit opportunities and costs. It is the zero entries that provide an indication of the impact of entry barriers and the ability of incumbent firms to deter profits that may preclude entry of new firms.
5. Due to the nature of the political process in which policy implementation lags are present, values are lagged by 1 year relative to observation of net business entry. The primary basis of the lag is the annual nature of the public budgeting and contracting cycle.
6. As a test of the explanatory power of the overall regression, a likelihood ratio test is also reported. These methods were chosen instead of others because in the ordinary least squares (OLS) regression count data are highly non-normal and are not well estimated by OLS regression.
7. Goodness of fit can be shown using Pseudo- R^2 , plotting residuals against the fitted values to assess variances, or Deviance and Pearson chi-square divided by the degrees of freedom to detect over-dispersion or under-dispersion. Because the Poisson model assumes that variance and mean are equal, dividing the deviance and Pearson statistic by the degrees of freedom should be approximately one. A value less than 1 indicates under-dispersion and values greater than 1 indicate over-dispersion.
8. Inflation designates the class of variables used to define those in the always zero class (inflation = 1). The probability of being in the class is: $\Pr(\text{always } 0 | x_i, z_i) = \Pr(\text{inflation} = 1 | x_i, z_i) = F(z_i, \lambda) = \Psi_j$, where

F is a cumulative distribution function for the logistic when logit is used for the binary model. The predicted rate combines the results for those variables that are always zero with those that are not using equation: $E(y_i|x_i, z_i) = [0 \times \Psi_i] + [\mu_i \times (1 - \Psi_i)] = \mu_i - \mu_i \Psi_i$.

9. To calculate the probability of observing a particular count, the results from the count equation must be adjusted according to the probability of the observation being in the always zero category (Long & Freese, 2001).
10. Zero-Inflated Negative Binomial Model (ZINB) accounts for instances that the variance of the model is greater than its mean. We can test for over-dispersion with the dispersion parameter alpha. The test measures the equality of the mean and the variance imposed by the Poisson distribution against the alternative that the variance exceeds the mean. In this case, the null hypothesis (H_0) becomes there is no difference between variance and mean versus the alternative hypothesis (H_a) that the variance is larger than the mean—over-dispersion (Cameron & Trivedi, 1998).
11. Former Confederate states and southern U.S. states are dissimilar. The list of southern U.S. states is based on criteria by the U.S. Census Bureau.

ORCID iD

Vincent E. Mangum  <https://orcid.org/0000-0002-7871-1975>

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Author Biography

For nearly 15 years, **Vincent E. Mangum**, Phd, has been supporting the baccalaureate education of at-risk youth in under-served communities across southeastern United States. He currently serves as dean of the Atlanta Metropolitan State College (AMSC), Division of Business and Information Technology.