



University of Cyprus
Department of Economics

Working Paper 02-2017

***Nascent Entrepreneurship and Race:
Evidence from the GATE Experiment***

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September 2017

Abstract

We examine white-black disparities in the labor market outcomes of nascent entrepreneurs using data from Project GATE, an experimental-design entrepreneurship training program. Findings show that white nascent entrepreneurs who applied for the program were more successful than their black peers in starting a business, becoming self-employed, and achieving high earnings. These disparities were largely because whites were more likely to have access to start-up financing and – to a lesser extent – because whites had more human capital and business background. The program was found effective in helping both white and black nascent entrepreneurs to start a business and become self-employed, but there is limited evidence that it reduced white-black entrepreneurship gaps.

JEL Classifications: J15, J24, L26, M13,

Keywords: Entrepreneurship, small business, minority entrepreneurship, entrepreneurship entry, human capital, business background, start-up financing, entrepreneurship training.

1. Introduction

Many workers in the U.S. view self-employment as an attractive alternative to salary employment because it offers them with the opportunity to achieve higher earnings and improve their socioeconomic status (Bates 1997; Keister, 2000). While some are attracted to self-employment because it provides them with higher returns than salary employment, others are pushed to consider self-employment out of necessity. For example, unemployed workers with limited job opportunities may consider self-employment as their only option to become reemployed and avoid the prospect of long-term unemployment (Meager, 1992; Rissman, 2003). Low returns to salary employment and labor market discrimination may also push minority workers – such as blacks, Hispanics, and immigrants – to pursue self-employment instead of finding a salary job (Fairlie and Meyer, 1996; Zhou, 2004; Fairlie and Robb, 2008).

Historically, whites and Asian Americans have had higher self-employment and business ownership rates than blacks and Hispanics (Fairlie and Meyer, 2000; Blanchflower, 2009; Fairlie and Woodruff, 2010; Hipple, 2010). Although there has been some convergence over time (Fairlie and Meyer, 2000; Fairlie, 2004), differences remain today. According to the U.S. Bureau of Labor Statistics, about 10.9% of white and 9.6% of Asian American workers were self-employed in 2015, compared with 5.2% of blacks and 8.3% of Hispanics (Hipple and Hammond, 2016). Research also shows that white-owned and Asian-owned businesses have higher business receipts, higher profitability, and lower failure rates than black-owned and Hispanic-owned businesses (Fairlie and Robb, 2007; 2008; Fairlie and Wood, 2010). Other work shows that immigrant workers are more likely than workers born in the U.S. to engage in self-employment activities, with the self-employment rates of certain ethnic groups – such as Koreans, Chinese, Taiwanese, Israelis, Eastern Europeans, and Middle Easterners – exceeding even the rates of white workers (Fairlie and Meyer,

1996; Fernandez and Kim, 1998; Lunn and Steen, 2005).

There is an extensive literature on the underlying factors that may explain racial and ethnic variation in self-employment participation and business outcomes. Previous work shows that whites and Asians have higher levels of education and labor market experience than blacks and Hispanics, indicating that they are more likely to have the skills and knowledge needed to create and run a successful business (Fairlie and Meyer, 2000; Reynolds *et al.*, 2004; Fairlie and Woodruff, 2010; Taehyun, 2011). Whites are also more likely to benefit from intergenerational transfer of business capital and entrepreneurship skills because their parents were business owners or because they had work experience in the family business. This partly explains why whites are more likely than blacks to be successful in starting their own business and why white-owned businesses are larger and more profitable than black-owned businesses (Fairlie, 1999; Hout and Rosen, 2000; Fairlie and Robb, 2007; Fairlie, 2008). Racial disparities in entrepreneurship have also been attributed to differences in start-up financing. Whites and Asians have more access to start-up financing than blacks and Hispanics partly because of high household wealth, financial support from their families, and good credit history, and partly because blacks and Hispanics may face discrimination in the credit market (Blanchflower, *et al.*, 2003; Cavalluzzo and Walken, 2005; Lofstrom and Bates, 2007; Blanchflower, 2009; Asiedu *et al.*, 2012).

Other work has focused on why certain immigrant ethnic groups are more likely than workers born in the U.S. to engage in self-employment activities. One of the explanations offered is that immigrants may face lower returns to salary employment than workers born in the U.S. because of language barriers, incompatible education and training, and lack of citizenship, and thus are more likely to turn to self-employment (Fairlie and Meyer, 1996; Rajjiman and Tienda, 2000; Fernandez and Kim, 1998; Zhou, 2004). While self-employment may be the only option for

economic advancement for some immigrants, particularly the low-skilled, others may select self-employment because it offers them the opportunity to achieve higher returns than salary employment. Evidence shows that high-skill immigrant workers may be more likely than those born in the U.S. to pursue entrepreneurship in order to maximize returns on their skills, bicultural literacy, and business networks in their countries of origin (Guarnizo et al., 1999; Light et al., 2002; Zhou, 2004).

Over the past 25 years, U.S. policymakers recognized that many workers are interested in starting their own business but face significant obstacles in achieving their goals. To help these individuals, the U.S. government created numerous programs administered through the Small Business Administration (SBA) that provide start-up financial support, particularly to minorities, veterans, and women. Policymakers have also supported training programs, aiming to educate individuals interested in starting their own business – particularly the unemployed – on the different aspects of business creation and ownership. In 1998, U.S. Congress authorized states to offer entrepreneurship training to unemployment benefit recipients as a means to help them get reemployed through self-employment (Kosanovich *et al.*, 2002). More recently, the U.S. Department of Labor (DOL) funded Project GATE (Growing America Through Entrepreneurship), a program offering training and business counseling to all individuals interested in entrepreneurship activities (Belloti *et al.*, 2007). Following the program’s success, DOL funded multiple similar programs since the start of the Great Recession, including programs in Alabama, Minnesota, North Carolina, and Virginia (Michaelides and Davis, 2016; Davis *et al.*, 2017).

The aforementioned work provides insights into whether racial disparities in entrepreneurship are attributable to differences in human capital, entrepreneurship skills, and financing access. One limitation of existing studies is that they lacked data for individuals who were in the process of

starting a business, what we term nascent entrepreneurs. Instead, many studies rely on national survey data which include the entire working population, including many individuals who were not interested in entrepreneurship to begin with (e.g., Fairlie and Meyer, 1996; Fairlie and Robb, 2000; Hout and Rosen, 2000; Blanchflower, 2009). Other studies use data on business owners or actual businesses, and thus their analyses ignore nascent entrepreneurs who did not make a successful transition to business ownership (e.g., Blanchflower et al., 2003; Fairlie and Robb, 2007; Asiedu *et al.*, 2012). Moreover, most studies use cross-sectional data that measure outcomes at a single point in time and thus, there is little evidence on racial differences in the dynamics of business creation and ownership, and whether these are affected by individual characteristics. Notable exceptions include Hurst and Lusardi (2004) and Lofstrom and Bates (2007), which use the Panel Study of Income Dynamics and the Survey of Income and Program Participation data, respectively, to study racial differences over time in business entry and exit rates.

Due to data availability, many of the existing studies that examine racial disparities in entrepreneurship focus on a narrow range of characteristics that are correlated with entrepreneurship success. For example, some studies have information on human capital but lack information on self-employment experience and family business background (e.g., Fairlie and Meyer, 1996; Fairlie and Meyer, 2000; Lofstrom and Bates, 2007). Other studies have information on business receipts and/or the business owners' finances, but lack information on the business owners' human capital and business background (e.g., Blanchflower *et al.*, 2003; Reynolds *et al.*, 2004; Cavalluzzo and Walken, 2005). To the extent that observed and unobserved characteristics are correlated, it is unknown if current empirical results overstate the role of observed characteristics in explaining racial entrepreneurship disparities.

Finally, there is no evidence whether entrepreneurship training can help nascent entrepreneurs

to overcome their lack of business expertise and limited access to financing, and thus mitigate the white-black entrepreneurship gaps. Existing studies provide evidence on the overall effects of training, but do not examine the underlying mechanisms that led to program effects (e.g., Benus *et al.*, 2010; Michaelides and Benus, 2012; Fairlie *et al.*, 2015). This is a conspicuous gap considering the substantial support entrepreneurship training programs have received over the past two decades and that their main objective is to help disadvantaged workers to make a successful transition to self-employment.

This paper uses data from the Project GATE program to expand the evidence base on white-black disparities in entrepreneurship outcomes. Project GATE was implemented from September 2003 through July 2005 in three states – Maine, Minnesota, and Pennsylvania. During its implementation period, Project GATE recruited 2,356 individuals (1,492 whites, 620 blacks, and 244 in other race categories) who were at the initial stages of starting their own business and were interested in receiving training to support their efforts. The program used random assignment to assign applicants to the treatment or to the control group. Those assigned to the treatment group were offered the opportunity to participate in training workshops to learn about the different aspects of starting and operating a business, and in business counseling sessions to obtain assistance in developing and executing a viable business plan. Those assigned in the control group were denied participation in program training.

The Project GATE data were selected because of three key features. First, they provide individual characteristics that can be used to partially measure applicants' "initial conditions", such as demographic and human capital characteristics (gender, age, and education), business background (self-employment experience, family business ownership, managerial experience, and experience in area of business idea), and financial circumstances (credit history, family financial

support, and household income). Second, the program used phone surveys at 6, 18, and 60 months after program entry to collect information on applicants' entrepreneurship outcomes, including new business starts, self-employment (overall, in own business, and as independent contractor), and self-employment earnings, as well as on salary employment and earnings. This information allows us to assess racial disparities in outcomes for a five-year period and assess whether these can be attributable to differences in individual characteristics. Third, Project GATE used random assignment to determine which applicants would be offered training (treatment group) and which would be excluded from the program (control group). Thus, we can estimate the program's intent-to-treat (ITT) effects by comparing the outcomes between treatment and control cases, and assess whether effects varied based on individual characteristics.

To our knowledge, the Project GATE data are the first used in this context that provide: (1) individual characteristics that partially measure initial conditions associated with entrepreneurship success; and (2) longitudinal information on entrepreneurship and other labor market outcomes. Moreover, the program's random assignment design provides an opportunity to examine whether training can help nascent entrepreneurs overcome the obstacles they face and thus reduce the racial gap in entrepreneurship success. A key limitation of the Project GATE data is that the program was implemented in three states – Maine, Minnesota, and Pennsylvania – which are not necessarily representative of the entire country. For example, compared with the rest of the U.S., these three states have a disproportionately high number of whites and disproportionately low numbers of blacks, Asians, and Hispanics. This affected the racial composition of Project GATE applicants – the 2,356 applicants were about 63% white, 26% black, 4% Asian, 3% Native American, and 4% other races. Fewer than 4% of the sample were identified as Hispanics; all Hispanics were either white or black. Based on available sample sizes, the analyses here focus on whites and blacks,

which accounted for nearly 90% of the Project GATE sample. Sample sizes were too small to examine Asian, Native American, and other races applicants separately, so these race categories are excluded from the analyses. Thus, while the findings presented here regarding white-black entrepreneurship disparities may have internal validity, we cannot make strong claims about their generalizability to other racial and ethnic groups or to the entire U.S.

Results show that there were important white-black differences in characteristics among nascent entrepreneurs in the data. Whites were older and more educated than blacks, indicating that they had higher levels of human capital when they started their business start-up efforts. Higher proportions of whites than blacks had prior experience in self-employment, working in a family business, and in a salaried managerial position, indicating that they were more likely to have acquired entrepreneurship skills. Importantly, the majority of whites had good credit history and many had high household income and financial support from their own families, indicating that they had more access to start-up financing. On the other hand, the majority of blacks had an unfavorable credit history, low household income, and limited family support.

Program compliance was very high, with 83% of white and 76% of black treatment cases receiving at least one of the training types offered by the program (workshop training and/or business counseling). About 41% of whites received both workshop training and counseling, 25% received workshop training only, and 18% received business counseling only. Similarly, 37% of blacks received both workshop training and counseling, 34% received workshops only, and 6% received counseling only.

It is also evident that whites had better entrepreneurship outcomes than blacks during the 60-month follow-up period. About one in every four whites started a business and became self-employed in their own business within six months, compared with just about one in every ten

blacks. Also, many more blacks than whites turned to salary employment early on and were not involved in self-employment. These differences were sustained through the entire 60-month follow-up period. Partly due to differences in self-employment rates and differences in earnings conditional on self-employment, whites achieved higher self-employment earnings early on and experienced higher earnings gains over time. However, self-employment earnings accounted for a small portion of total earnings, reflecting the fact that nascent entrepreneurs in the sample were more likely to end up in salary jobs and to have higher earnings than those who became self-employed. Analyses of total earnings (self-employment plus salary earnings) show that nascent entrepreneurs in the sample achieved self-sufficiency in the long-term, with whites earning much higher amounts than blacks.

Using regression analyses, we identified the role of observed characteristics measuring human capital, business background, and financing access in explaining the above patterns. We find that white-black differences are largely attributable to observed factors. Characteristics measuring human capital and financing access are important in explaining disparities in short-term outcomes, while long-term disparities are largely attributable to financing access and – to a lesser extent – characteristics associated with entrepreneurship skills. These results suggest that the most important factor contributing to white-black differences in entrepreneurship outcomes is financing access, while the role of human capital and business background may be less important than previous work has suggested.

Finally, analyses of the effects of Project GATE show that the program helped participants to start their own business and become self-employed earlier than they would in the absence of the program. As a result, program participants were more likely than control cases to start a business and become self-employed in their own business throughout the 60-month follow-up period. The

program had no effects on earnings, which is likely due to the fact that relatively more control cases turned to salary employment, which had higher returns than self-employment. Additional analyses show that program effects did not vary substantively based on available characteristics measuring human capital, business background, and access to financing. Thus, while government-sponsored entrepreneurship training can help participants achieve better business start-up and self-employment rates, it has limited value in reducing racial gaps in entrepreneurship success.

Finally, there was important variation in entrepreneurship outcomes based on the types of training received by program participants. Those who received business counseling only were much more likely to start a business and become self-employed than those who received no training or received workshop training only. Moreover, those who received both workshop training and counseling had much higher business start and self-employment rates than all other participants, including those who received counseling only. These results point to the possibility that offering business counseling combined with workshop training may be a more effective strategy than offering stand-alone business counseling or workshop training with no counseling.

The remainder of this paper is organized as follows. Section 2 provides an overview of entrepreneurship training programs implemented in the United States, and a detailed description of the Project GATE program, including comparisons of the characteristics of white and black nascent entrepreneurs who applied for the program. Section 3 presents descriptive analyses of individual outcomes over the 60-month follow-up period and differences between whites and blacks. Section 4 presents the empirical analyses, including regression models that estimate the effects of training and initial conditions on individual outcomes, a decomposition of the relative importance of initial conditions in explaining white-black disparities in outcomes, and analyses of program effects. Section 5 summarizes the findings.

2. Background

2.1 *Entrepreneurship Training in the United States*

In the early 1990s, U.S. policymakers recognized that nascent entrepreneurs were facing significant obstacles to achieve their goals, including lack of entrepreneurship know-how and start-up financing. To assist nascent business owners to secure start-up capital, the SBA offers a wide range of programs, including the 7(a) Loan Program and the Microloan Program.¹ These programs provide partial financial support to small businesses, with particular emphasis on supporting start-up efforts of minorities, veterans, and women. Policymakers have also focused a lot of attention on programs that provide free entrepreneurship training. In 1992, DOL funded demonstration programs in Washington and Massachusetts, which offered training and partial financial support to unemployment benefit recipients who were interested in starting a business (Benus *et al.*, 1995). Following the programs' success, U.S. Congress authorized states to implement self-employment assistance (SEA) programs targeting unemployment benefit recipients (Benus *et al.*, 1995; Kosanovich *et al.* 2002). Government studies of SEA programs showed that states did not have resources to provide participants with wide-ranging training, while the programs' mandate to focus on unemployment benefit recipients limited their reach (Kosanovich *et al.*, 2002; Wandner, 2008).

In 2003, DOL supported Project GATE to showcase the potential effects of offering entrepreneurship training through local employment offices. The program was designed to accept applications from all interested individuals – not just unemployed workers who were collecting unemployment benefits – and to offer much more extensive training than SEA programs operating at the time. Project GATE offered participants with training workshops on the different aspects of starting and operating a new business and individual business counseling (Bellotti *et al.*, 2007).

¹ For details, see: <https://www.sba.gov/loanprograms>

Evidence on the program's success (Benus *et al.*, 2010; Michaelides and Benus, 2012) showed that training helped participants who were not already self-employed or employed in a full-time salary job to start their own business and become self-employed earlier than they would in the program's absence. Based on these results, DOL funded multiple entrepreneurship training programs since the start of the Great Recession, including the GATE II programs in Alabama, Minnesota North Carolina, and Virginia (Michaelides and Davis, 2016; Davis *et al.*, 2017), the Startup Quest program in Florida,² and the Virginia Employment Through Entrepreneurship Consortium (VETEC) program in Virginia.³

2.2 *Project GATE Description*

Project GATE accepted applications from September 2003 to July 2005 in 21 public employment offices in Maine, Minnesota, and Pennsylvania. Applicants were required to complete an application form and provide information on their socioeconomic and labor market characteristics. During the recruitment period, 2,356 individuals who were at the initial stages of starting their own business applied for Project GATE.⁴ Upon application, each individual was randomly assigned with equal probability to the treatment or to the control group. Treatment cases were offered full access to program training, while control cases were not allowed to receive program training but were free to pursue similar training elsewhere.

Program training included workshops to educate participants on the different aspects of starting

² See: https://www.doleta.gov/workforce_innovation/pdf/grantees/SkillSourceGroup_abstract.pdf.

³ See: https://www.doleta.gov/workforce_innovation/pdf/grantees/AlachuaBradfordFloridaWorks_abstract.pdf

⁴ The program also accepted applications from 775 business owners who were anticipating that training would help them expand their business, and from 1,067 individuals who were employed in full-time jobs and interested in learning more about the entrepreneurship process. These individuals are excluded from the analyses because they were not actively engaged in business start-up activities at program application; for analyses of the characteristics and outcomes of these applicants, see Benus *et al.*, (2010).

and operating a business. These workshops were designed to provide information and technical assistance on specific topics, including credit application, development of marketing materials, staff hiring, and dealing with relevant legal issues. The program also offered business counseling sessions with experienced consultants, in which participants had an opportunity to discuss their business idea, receive assistance in developing a business plan, and obtain information on business financing options, including SBA programs. Much emphasis was provided on helping participants to refine their business idea, develop a viable business plan, and learn about start-up financing options, including assistance in determining their eligibility for Federal programs. For a detailed discussion of Project GATE training, see Belloti et al. (2007) and Benus *et al.* (2010).

When the program implementation started in 2003, the three Project GATE states were not representative of the entire U.S. in terms of the racial and ethnic distribution of the workforce. As seen in Appendix A, the U.S. labor force in 2003 comprised 78% whites, 11% blacks, 5% Asians, <1% Native Americans, and 6% other races. By comparison, the labor force in the Project GATE states had more whites (88%) and fewer blacks (6%) and Asians (2%). Hispanics were also underrepresented in the Project GATE states (3%) relative to the entire U.S. (3%). Similarly, among self-employed workers, whites were overrepresented and blacks, Asians, and Hispanics were underrepresented in Project GATE states relative to the entire U.S. According to Project GATE application data, the race composition of the 2,356 applicants was as follows – 1,492 whites, 620 blacks, 85 Asians, 59 Native Americans, and 100 in other races.⁵ The analyses here focus on white and black applicants only, which accounted for nearly 90% of the Project GATE sample. Sample sizes for Asian, Native American, and other races categories were too small to consider them separately, and thus they are not included in the analyses. Overall, whites and

⁵ 84 white applicants and 33 black applicants were identified as Hispanics. There were no Hispanics in the remaining race categories.

blacks, the two race groups considered here, accounted for 94% of the labor force and 96% of self-employed workers in the Project GATE states, and for 89% of the labor force and 94% of self-employed workers in the entire U.S. Thus, the results presented here regarding white-black disparities in entrepreneurship are not necessarily generalizable to other racial and ethnic groups or to the entire U.S.

Table 1 shows that relatively more whites were male and 45+ years old relative to blacks. Only about 6% of whites and 5% of blacks were Hispanic, reflecting the relatively low proportion of Hispanics in the state. Program applicants were generally well-educated, but whites were more likely to have at least a college degree. Relatively more blacks had some college education (i.e., completed at least one year of college or had an associate degree). The data do not report the immigration status of applicants, but report their citizenship status – about 99% of whites and 96% of blacks were U.S. citizens. While the majority of applicants had no self-employment experience, relatively lower proportions of blacks reported previous experience. Similarly, relatively fewer blacks had experience in a family business, had held a job in a managerial position, or had work experience in an area relevant to their business idea. Whites had more favorable financial circumstances than blacks. Less than one third of whites reported bad/no credit history compared with nearly three quarters of blacks. Whites were also much more likely to have family financial support for starting a business and annual household income \$50,000 or higher.

These figures suggest that there were important white-black differences in initial conditions. Relative to blacks, whites had higher human capital, as measured by age and education. Whites were also more likely to have accumulated entrepreneurship skills and business capital because of their self-employment experience, engagement in a family-owned business, and managerial experience. Moreover, whites had more favorable financial circumstances than blacks – as

measured by credit history, family financial support, and household income – suggesting that they were in a much better position to secure start-up financing. To the extent that these characteristics are positively correlated with entrepreneurship success, white nascent entrepreneurs in the sample were in better position to succeed than their black peers.

Table 2 shows that about half of the applicants in each race group were assigned in the treatment and thus were offered program training, and the remaining half were assigned in the control group and thus were excluded from the program. To test if treatment assignment was truly random, we used multivariate analysis of variance (MANOVA) to test the null hypothesis that there were no treatment-control differences in available characteristics and their interactions. The MANOVA F-statistics produced p-values of .307 for whites and .655 for blacks, and thus the null hypothesis cannot be rejected. These results provide confidence that – within each race category – treatment and control groups were identical in observed and unobserved factors that may have affected individual outcomes.

To document applicant outcomes after program entry, Project GATE included three follow-up surveys, conducted at 6 months (Wave 1), 18 months (Wave 2), and 60 months (Wave 3) after random assignment. As shown in the bottom panel of Table 2, high survey response rates were achieved, but whites were more likely to respond to each survey. Survey attrition raises concerns about whether the treatment-control group balance in characteristics was maintained among survey respondents. We produced MANOVA statistics to test if there were treatment-control differences in characteristics and their interactions among survey respondents in each race group. Results show that the treatment-control balance in characteristics was maintained for each race group across all surveys, mitigating concerns about survey attrition bias.⁶ There are also concerns that

⁶ The MANOVA p-values for the Wave 1, 2, and 3 surveys were .418, .759, and .773 for whites, and .294, .871, and .695 for blacks.

survey attrition varied based on individual characteristics such that survey respondents were not representative of the applicant population. Separate analyses show that male, 18-34 year-old, and no high school diploma individuals had slightly lower response rates. Similarly, individuals with no family business, no managerial experience, and less than \$25,000 household income were less likely to respond. No differences in survey attrition were detected for the remaining characteristics. In the empirical analyses that follow, survey attrition weights are used to account for these differences and ensure that results are representative of the initial sample.

Using Wave 1 survey responses, we identify which treated cases received program training and the type of training they received. Table 3 presents training take-up rates for treatment cases, by race, as follows: (1) *received any training* is the proportion of treatment cases that received at least one type of training (workshops and/or counseling); (2) *workshops only* is the proportion of treatment cases that received workshop training and no counseling; (3) *counseling only* is the proportion of treatment cases that received counseling and no workshop training; (4) *workshops & counseling* is the proportion of treatment cases that received both workshop training and counseling; and (5) *no workshops, no counseling* is the proportion of treatment cases who received no workshop training and no counseling.

Table 3 shows that program compliance was high, with 83.2% of white and 76.4% of black treatment cases receiving at least one type of training. Looking at individual training types, whites were less likely than blacks to receive workshop training only; 24.5% of whites and 33.5% of blacks received workshop training but no counseling. In contrast, whites were much more likely than blacks to receive business counseling only, with 17.8% of whites and only 5.9% of blacks receiving counseling but no workshop training. About 41% of whites received both workshop training and business counseling, compared with 37.2% of blacks. Only 16.8% of whites and

23.6% of blacks received no training whatsoever, indicating that relatively few applicants did not intend to receive training.

Disparities in individual training types are perhaps associated with white-black differences in initial conditions and the design of individual training services. Whites – who had more business experience and were in better financial condition than their peers – were more likely to receive counseling (stand-alone or in combination with workshop training) presumably because they needed more guidance in developing their business plan and securing financing rather than learning about the business start-up process. Similarly, black treated cases lacked the business background of their peers, and thus were more likely to participate in workshop training only to obtain the entrepreneurship skills they needed to succeed.

3. White-Black Disparities in Outcomes

Survey responses are used to construct labor market outcomes for treatment and control cases in the 60-month period after program entry. In particular, we measure whether individuals were able to start a business by the time of each survey, and whether – by the time of each survey – they were self-employed in their own business or self-employed as independent contractors (i.e., they did not own a business). We also measure whether individuals were employed in a salary job at the time of each survey, as well as their monthly individual earnings at the time of each survey, including self-employment earnings, salary earnings, and total earnings.

Table 4 presents the labor market outcomes by race. Starting with the results based on the 6-month survey, whites were appreciably more likely than blacks to start a business. About one in every four whites started a business by month 6 after program entry, as compared with about one in every ten blacks. Whites were also appreciably more likely than blacks to be self-employed at

month 6 – nearly 40% were self-employed, with 25% self-employed in their own business and 15% self-employed as independent contractors. Notably, a relatively larger share of the self-employed at month 6 among blacks were in independent self-employment.

Many aspiring entrepreneurs turned to salary employment and were not involved in self-employment at month 6. As seen in Table 4, about 44% of blacks were employed in a salary job and were not self-employed, as compared with 36% of whites. We also see that some individuals were employed in a salary job but were also self-employed on the side.⁷ Total employment rates measure whether individuals were self-employed and/or employed in a salary job. Whites had higher total employment rates than blacks, which is entirely attributable to the fact that whites were more successful in becoming self-employed in their own business within six months of program entry. In terms of total employment, the large white-black self-employment difference was somewhat mitigated because blacks were more likely to turn to salary employment.

Racial differences in average monthly earnings at month 6 are consistent with the above patterns. Partly because whites were more likely to start a business and become self-employed, they had nearly 5 times higher average monthly earnings from self-employment at month 6.⁸ Dividing earnings by the self-employment rate shows that – conditional on self-employment – whites had much higher earnings than blacks. Whites also achieved higher earnings from salary employment – conditional on salary employment or otherwise – and thus, overall, had higher total earnings at month 6. At month 6, the annualized total earnings for whites were \$22,272, compared with \$13,932 for blacks. Notably, earnings from self-employment accounted for a small proportion of total earnings – 16.8% for whites and 5.6% for blacks.

⁷ Separate analyses show that the vast majority of those who were employed in a salary job *and* self-employed, they were self-employed as independent contractors.

⁸ Self-employment earnings include any salary earnings from own business.

By month 18, the proportion of individuals who started a business increased for both whites and blacks by about 10 percentage points. Overall self-employment rates increased to 43.8% for whites and 25.8% for blacks by month 18, with the increases almost entirely attributable to self-employment in own business. The proportions turning to salary employment increased by month 18 for both race groups, with blacks remaining more likely than whites to be exclusively employed in a salary job. The increase in self-employment and salary employment rates is reflected in total employment rates – by month 18, 80.7% of whites and 71.2% of blacks were self-employed and/or employed in a salary job. Both race groups experienced an increase in earnings, with self-employment earnings still accounting for a small share of total earnings.

By month 60, nearly 44% of whites and 31% of blacks had started a business. Self-employment rates were higher for whites; however, rates for both race groups declined relative to month 18. Whites' salary employment rate remained about the same between month 18 and 60, but the black rate declined to under 47%. Overall, at month 60, about 77% of whites were self-employed and/or employed in a salary job, compared with nearly 63% of blacks. Both race groups experienced large gains in total earnings, which were mostly driven by gains in salary earnings. Similar to the short-term results, self-employment earnings at month 60 accounted for no more than 10% of total earnings for each race group. Notably, while whites had much higher earnings than blacks, the average nascent entrepreneur in both groups was able to achieve self-sufficiency – by month 60, annualized total earnings were \$60,348 for whites and \$28,188 for blacks.

4. Empirical Analyses

The figures presented thus far show that there were important white-black differences in characteristics, indicating that whites had higher levels of human capital, business background,

and financing access than blacks. Comparisons of individual outcomes in the 60-month follow-up period show that whites had a more successful transition to business ownership and self-employment than blacks. In this section, we use multivariate regression models to address two questions – one, whether white-black differences in initial conditions can explain disparities in entrepreneurship success, and two, whether training can help participants to improve their outcomes and, potentially, close the white-black entrepreneurship gap. To address these questions, we use baseline models of the following form:

$$Y = \alpha + \beta \cdot T + \gamma \cdot Black + DHC \cdot \delta + BUS \cdot \varepsilon + FIN \cdot \zeta + u_i \quad [1]$$

The dependent variable in the model (Y) is the outcome of interest; the model is estimated separately for each outcome listed in Table 4. Control variables on the right hand side include: T the treatment indicator, which equals 1 if the individual was in the treatment, 0 else; and $Black$, a race indicator that equals 1 if the individual was black and zero otherwise. The model also controls for all available characteristics – as reported in Table 1 – including: demographic and human capital (DHC), business background (BUS), and financial circumstances (FIN). DHC also includes fixed effects for program sites to account for variation in outcomes based on geographic area. Parameters of interest in this model include: (1) β , which estimates the program’s intent-to-treat (ITT) effect, assuming the effect is identical across race groups; (2) δ , ε , and ζ , which capture the relationship between observed and the outcome; and (3) γ , which measures white-black differences in the outcome that are not attributable to observed characteristics or training.

To ensure that results are representative of the entire applicant population – not only those who responded to the surveys – we use weighted least squares models which account for the likelihood of survey response. In particular, each model is estimated using weights that equal to the inverse of the predicted likelihood of responding to the survey based on all observed characteristics listed

in Table 1. These weights – which are common in the evaluation literature (e.g., MacConnel *et al.*, 2006; Trenholm *et al.*, 2007; Michaelides and Benus, 2012) – are designed to adjust for survey non-response based on observed characteristics, making the estimation sample representative of all program applicants. For a discussion of the methodology used to construct these weights, see Benus *et al.*, (2010). Note that the results obtained using survey attrition weights – as reported below – are similar to those obtained without using weights, indicating that survey attrition does not influence the results in a meaningful way.

4.1 Results

Table 5 presents the regression results for outcomes based on the month-6 survey. The program had positive and significant effects on new business starts and self-employment – treatment cases were 9.8 percentage points more likely to start a business and 10.3 percentage points more likely to be self-employed relative to control cases. Relative to the control group mean – shown at the bottom of the table – the program increased business starts by 59% and self-employment rates by 35%. The entire effect on self-employment is attributed to self-employment in own business; the effect on independent self-employment is close to zero. The program made participants less likely to turn to salary employment but increased total employment by 5.3 percentage points (7%), an effect that was driven by the positive effect on self-employment. The program had no effects on self-employment earnings and total earnings.

The *Black* parameters show that positive white-black disparities in the likelihood of starting a business and the likelihood of self-employment (total and in own business) remain after controlling for program effects and initial conditions. However, with the exception of self-employment in own business, differences are not statistically significant. At the same time, controlling for

observed characteristics, there are no racial differences in independent self-employment. White-black differences in salary employment at month 6 are largely explained, while differences in self-employment and total earnings at month 6 cannot be entirely attributed to observed factors.

Turning to individual characteristics, there is a positive relationship between entrepreneurship success and education – individuals with a post-graduate degree were more likely to start a business, become self-employed (overall and in their own business), and achieve high self-employment earnings. Older individuals (55+ years) had lower-than-average business starts, self-employment in own business, and earnings, presumably because they anticipated that entrepreneurship activities would not yield sufficient returns in their remaining work life. Nascent entrepreneurs with self-employment experience were more likely to start a business and become self-employed than those with no experience. Experience in a family business had little bearing on outcomes in month 6. Financial circumstances are associated with better entrepreneurship outcomes – individuals with good credit history were more likely to start a business and become self-employed early on (particularly in their own business), and less likely to turn to salary employment. There is also a positive relation between household income and entrepreneurship success; individuals with household income at least \$75,000 had higher self-employment rates and self-employment earnings. These individuals were also less likely to turn to salary employment.

The month-18 results – presented in Table 6 – show that the program’s positive effects on new business starts and self-employment (overall and in own business) were sustained, but effects on total employment had dissipated. White-black differences were largely explained by observed factors as evidenced by the fact that black parameters were small and lacked statistical significance. Self-employment experience, managerial experience, and experience in business area is positively correlated with business starts and self-employment in own business. Managerial

experience is also associated with higher salary employment rates and higher earnings. Favorable financial circumstances played a critical role in the success of nascent entrepreneurs at month 18. Nascent entrepreneurs with bad/no credit history were less likely than those with good credit to start a business and become self-employed (overall and in their own business), and were, in fact, more likely to turn to salary employment. Similarly, those with high household income were more likely to start a business and become self-employed in their own business by month 18, as well as to achieve high self-employment and total earnings.

Results for long-term outcomes are presented in Table 7. Treatment cases remained more likely than control cases to start a business by month 60, which – given that most business starts occurred by month 18 – is largely attributable to the program’s early effects. White-black disparities in long-term entrepreneurship outcomes were entirely attributable to observed factors. Demographic and human capital characteristics played a less important role in explaining long-term success, but the importance of business background characteristics remained strong. Individuals with self-employment experience had higher self-employment rates (overall and in both types of self-employment) and, as a result, had higher overall employment rates. Individuals with managerial experience had higher salary earnings and total earnings than those with no such experience, suggesting that many had attractive salary job options. It is evident that financial circumstances affected long-term outcomes. Individuals with bad/no credit history remained less likely to start a business and become self-employed in their own business. Individuals with high household income had much higher self-employment rates and – partly as a result – achieved higher self-employment earnings. High-income individuals were less likely to turn to salary employment, but nevertheless had much higher total earnings, suggesting that they had better salary job options than their peers.

4.2 *The Role of Initial Conditions*

Using the regression results based on equation [1], the observed white-black gap in each outcome is decomposed such that we can quantify the proportion of the gap that is attributable to race differences in characteristics measuring demographic/human capital, business background, and financial circumstances. The portion of the white-black gap that is attributable to demographic/human capital factors is estimated as $(\overline{DHC}_W - \overline{DHC}_B) \cdot \hat{\delta}$, where $\overline{DHC}_W - \overline{DHC}_B$ are the differences in mean characteristics and $\hat{\delta}$ are the estimated parameters. By the same token, the portion of the white-black gap that is attributable to business background characteristics is estimated by $(\overline{BUS}_W - \overline{BUS}_B) \cdot \hat{\varepsilon}$ and the portion due to financial circumstances is estimated by $(\overline{FIN}_W - \overline{FIN}_B) \cdot \hat{\zeta}$.

Table 8 presents the decomposition of entrepreneurship outcomes; Appendix A presents decompositions for salary and total employment. For illustration, Table 8 shows that the white-black gap in the likelihood of starting a business by month 6 was 15.5 percentage points – 7.2 percentage points (46%) of this gap is attributed to white-black differences in demographic/human capital factors, 0.7 percentage points (5%) to differences in business background characteristics, and 6.0 percentage-points (39%) to differences in financial circumstances. Overall, 80% of the white-black gap is explained by observed characteristics, mainly by those measuring demographic/human capital factors and financial circumstances.

Demographic/human capital characteristics also explain about half the white-black difference in self-employment at months 6 and 18. These factors do not account for the white-black gap in self-employment earnings at month 6 but account for about 17% of the gap at month 18 (although the latter lacks statistical significance). Business background characteristics account for no more than 8% of the short-term white-black gaps in self-employment and self-employment in own

business. These factors explain a higher portion of white-black gaps in independent self-employment – 20% at month 6 and 13% in month 18. Interestingly, these characteristics had a limited role in explaining differences in self-employment earnings.

Results also show that white-black differences in financial circumstances play an important role in explaining observed gaps. At least one third of the white-black gap in starting a business and becoming self-employed at month 6 is because whites had better credit and higher household income. Perhaps not surprisingly, financial circumstances primarily affect the white-black gap in self-employment in own business, which requires higher start-up capital than independent self-employment. White-black differences in financial circumstances also explain 39% of the gap in self-employment earnings at month 6. Similar results are obtained at month 18.

Observed characteristics explain a large portion of the white-black gaps at month 60, although the portion of the explained gaps is slightly lower than in earlier periods. Demographic/human capital characteristics played a limited role in explaining long-term gaps. At the same time, the importance of business background grew relative to the earlier periods – 9% of the started business gap and 20% of the self-employment gap is because whites had higher levels of entrepreneurship skills than blacks. Financial circumstances were very important, accounting for 56% of the long-term gap in the likelihood of starting a business, 53% in the self-employment likelihood, 81% in the likelihood of self-employment in own business, and 58% in self-employment earnings.

4.3 The Role of Entrepreneurship Training

The training offered by Project GATE was designed to help participants to improve their entrepreneurship skills, as well as to provide technical assistance on a wide range of topics associated with the business start-up process. The expectation was that the program would help

participants gain a better understanding of the business start-up process, refine their business idea, develop a feasible business plan, and maximize their chances to secure start-up financing. In addition to improving their entrepreneurship skills, participants may have also acquired skills to help them find better salary jobs and improve their earnings potential.

The above analyses show that the program had some positive effects on participants' outcomes. The key finding is that the program helped participants to start a business and become self-employed earlier than they would in the program's absence. As Table 5 shows, treatment cases were 8.5 percentage points (52%) more likely than control cases to start a business and 9.1 percentage points (32%) more likely to become self-employed by month 6, with the latter almost entirely attributable to self-employment in own business. As a result, the overall employment rate for treatment cases exceeded the rate for control cases by 4.4 percentage points (6%), with the effect mitigated by the fact that treatment cases were less likely to obtain salary employment.

Table 6 shows that some program effects were sustained at month 18, when treatment cases were 37% more likely to start a business and 15% more likely to be self-employed; the latter was driven by the program's effect on self-employment in own business. Any effects on total employment had dissipated because control cases experienced a relatively higher increase in self-employment and salary employment between month 6 and month 18. Table 7 shows that, in the long-term, the program's effect on business starts was sustained mostly because the majority of business starts occurred early on, but the program had limited long-term effects on self-employment. There was no long-term effect on overall self-employment, which is the result of two opposite facts – the program increased self-employment in own business by 4.1 percentage points (19%) and reduced independent self-employment by 2.7 percentage points (23%). Finally, there is no evidence that the program helped participants to achieve higher earnings.

Theoretically, program effects on entrepreneurship outcomes may vary based on initial conditions. For example, it is possible that the program helped participants with a strong educational and business background to start a business early on, but was less effective for individuals who were not well-qualified to become entrepreneurs. Similarly, the program may have been more valuable for individuals with favorable financial circumstances who, with the right assistance, could identify and apply for attainable start-up financing options. It is possible, however, that the program was more effective for individuals who lacked the required skills, business background, and credit access to start a business and become self-employed. For instance, the program may have helped those with limited business background to acquire the entrepreneurship skills needed to start a business, or that the program helped those with unfavorable financial circumstances to secure securing start-up financing.

Understanding the mechanisms that led to program effects is important in this context. If there are heterogeneous effects based on individual characteristics, then the above analyses – which assume homogeneous effects – are not sufficient to characterize program effects and identify whether certain types of participants experienced better outcomes because of the program. Importantly, if the program was more effective for individuals with unfavorable initial conditions, then the program may have had higher effects for black participants, who had lower human capital, business background, and credit access than whites. This would suggest that training programs may play an important role in closing the white-black gaps in entrepreneurship success.

To investigate these possibilities, we estimated entrepreneurship outcomes using variations of the baseline regression model that include interactions of the treatment indicator and characteristics related to demographics and human capital, business background, and financial circumstances. We also tested if there were significant differences in program effects based on

interactions of observed characteristics. With few exceptions, our analyses produced limited evidence that treatment interactions with observed characteristics were substantively important.

To showcase the types of results obtained from this exercise, Table 9 presents analyses of the interaction treatment effects based on three characteristics – whether the individual had a college degree or higher, self-employment experience, and bad/no credit history. For illustration, consider the results for starting a business by month 6. The first row – summarizing the results of the baseline model (no interactions) – shows that the program’s effect was 9.7 percentage points, and that individuals with a college degree, self-employment experience, and good credit history were significantly more likely than their peers to start a business by month 6. The interactions model results – summarized in the second row – show that the baseline effect was 10.3 percentage-points and statistically significant. The treatment interaction with college degree was zero, indicating that the program did not have differential effects based on whether the participant had a college degree. The treatment interaction with self-employment experience was 5.2 percentage points and the treatment interaction with credit history was -4.8 percentage points; both lacked statistical significance. Similarly, we find no evidence of substantive variation in program effects based on education, self-employment experience, and credit history on other outcomes at month 6.

The same table shows no variation in treatment effects at months 18 and 60, with two exceptions – effects on starting a business by month 18 and 60 varied based on whether the individual had self-employment experience, and program effects on self-employment in own business at month 60 was higher for educated participants. These results, however, may not constitute robust evidence that the program had substantively different effects based on these characteristics, especially since the parameters of the actual characteristics declined relative to the baseline model. In any case, results do not indicate that the program helped participants with no

college education, no self-employment experience, and bad/no credit history to improve their entrepreneurship outcomes beyond the baseline effects that apply for all participants.⁹ Separate analyses provide very limited evidence that program effects varied based on race, gender, age, managerial experience, and household income, or the interactions of these characteristics.

Finally, we investigate the possibility that program effects varied based on the types of training received by program participants. As discussed earlier, most treatment cases (83.2% of whites and 76.4% of blacks) received at least one type of training offered by the program (see Table 3). Many treatment cases received both workshop training and business counseling (40.9% of whites and 37.2% of blacks), with about equal proportions receiving one training type or the other. Notably, 16.8% of white and 23.6% of black treatment cases received no training. To this point, our analyses have focused on estimating the program’s intent-to-treat effects, which provide little guidance on the value of the individual training types offered by the program. An interesting question is whether training workshops were more effective than business counseling in helping participants to achieve their goals, or vice versa. Another interesting question is whether receiving both workshop training and business counseling was more conducive to helping participants to start their own business and become self-employed than receiving one or the other.

If treatment cases were randomly assigned to each training condition (no training, workshops only, counseling only, and workshops plus counseling) we could modify model [1] to estimate the effects of each condition. The modified model would be as follows:

$$Y = \alpha + \beta_0 \cdot T + \beta_1 \cdot T \cdot Work + \beta_2 \cdot T \cdot Couns + \beta_3 \cdot T \cdot Work \cdot Couns + \gamma \cdot Black + DHC \cdot \delta + BUS \cdot \varepsilon + FIN \cdot \zeta + u_i \quad [2]$$

⁹ Similar results are obtained when the specification includes treatment interactions with a single characteristic, with each pair of characteristics, and characteristics interactions.

Compared to model [1], this model includes three additional control variables: $T \cdot Work$ – equals 1 if individual was assigned in the treatment and received workshop training only, 0 else; $T \cdot Couns$ – equals 1 if individual was assigned in the treatment and received counseling only, 0 else; $T \cdot Work \cdot Couns$ – equals 1 if individual was assigned in the treatment and received both workshop training and counseling, 0 else. If treatment cases were randomly assigned to each condition, then the parameters of interest would be: (1) β_0 , which estimates the program’s baseline effect, that is, the effect for treatment cases who received no training; (2) β_1 , which estimates the value-added of receiving workshop training only; (3) β_2 , which estimates the value-added of receiving business counseling only; and (3) β_3 , which estimates the value-added of receiving both training and workshops.¹⁰

However, treatment cases were not randomly assigned to different training conditions, but rather selected which types of training to receive. This introduces the possibility of selection bias which may influence the accuracy of the estimates in a substantial way. Suppose that receiving both workshop training and business counseling is more effective than receiving one or the other. Under this scenario, and in the absence of selection bias, the β_3 parameter would be positive and statistically significant, indicating that there is additional value in receiving both training types. It is likely, however, that individuals who selected to receive both training types differed in a systematic way from those who received one or the other based on factors that are not observed in the data. This would introduce selection bias into the parameter β_3 , with the direction of the bias determined by the sign of the correlation between the unobserved factors and the outcome.

For example, suppose that the most motivated individuals were the ones most likely to receive

¹⁰ The total program effect would be: β_0 for those who received no training; $\beta_0 + \beta_1$ for those who received workshop training only; $\beta_0 + \beta_2$ for those who received business counseling only; and $\beta_0 + \beta_1 + \beta_2 + \beta_3$ for those who received both workshop training and business counseling.

both training types, as well as the ones most likely to be successful in starting a business, regardless of whether they received training. In this absence of measures of individual “motivation”, the parameter β_3 would overestimate the true value-added of receiving both training types. One could also make the opposite argument. If those who were the least likely to succeed because of factors not observed in the data were the ones most likely to opt to receive both training types as a means to improve their chances for success, then the direction of the bias would be negative, and β_3 would in fact underestimate the true value-added of receiving both training types.

Since there is no way of identifying the existence and direction of the selection bias, the results of model [2] cannot be confidently used to accurately characterize the effects of different training conditions. Nevertheless, we can use model [2] to examine whether there was significant variation in individual outcomes based on the types of training they received. Table 10 presents the estimated parameters β_0 , β_1 , β_2 , and β_3 for each outcome. For illustration, at month 6, the parameters β_0 (no training) and β_1 (workshop training only) were -.012 and .023, respectively, and lacked statistical significance. These results indicate that treatment cases who received no training and those who received workshop training only had the same business start rates as those in the control group. The parameter β_2 (counseling only) was .165 and statistically significant at the 1% level, indicating that treatment cases who received counseling only were more likely to start a business by month 6 than control cases, treatment cases who received no training, and treatment cases who received workshops only. Similarly, the parameter β_3 (workshop training plus counseling) was large and statistically significant (19.7 percentage points), indicating that those who received both workshops and training were much more likely to start a business by month 6 than all others, including treatment cases who received business counseling only. We find similar results for self-employment (overall and in own business) at month 6.

The month-18 results provide similar patterns. Treatment cases who received counseling only were significantly more likely than treatment cases who received no training or workshop training only to start a business and become self-employed. Those who combined business counseling with workshop training were even more successful, achieving much higher business start and self-employment rates than all other participants, including those who received business counseling only. The month-60 results show that participants who received both training types were more likely to maintain higher outcomes relative to their peers.

One way of interpreting these findings is that business counseling played a more important role than workshop training in explaining program results. Participants who received business counseling – either stand-alone or in combination with workshop training – were more successful than those who received workshop training only to start their own business and become self-employed. By the same token, combining business counseling with workshop training appears to be even more effective in improving participants' outcomes than providing stand-alone business counseling. An alternative interpretation is that, because of unobserved factors, those who opted to receive counseling (alone or combined with workshop training) were more likely to succeed than those who opted to receive workshop training only or no training at all. This would mean that our results may overestimate the value-added of counseling only (β_2) and the value-added of workshops plus counseling (β_3) and may underestimate the value-added of workshops only (β_1). Since there is no way of measuring selection bias in this context, we cannot use these results to confidently attribute program success to particular training conditions.

Nevertheless, the differences in outcomes between those who received business counseling and those who did not are very large, pointing to the possibility that results are not driven exclusively by selection and that the business counseling offered by the program was indeed more

effective than training workshops. By the same token, treatment cases who received both counseling and workshop training had substantially higher outcomes than those who received one or the other, suggesting that combining counseling with training may be a more effective intervention than providing only one or the other.

5. Discussion – Conclusion

This paper expands the evidence base on white-black disparities in entrepreneurship success using data from the Project GATE experiment. We find that white nascent entrepreneurs who applied for Project GATE began their business start-up efforts with much more favorable initial conditions relative to their black peers. Whites were older and more educated than blacks, indicating that they had higher levels of human capital. Whites were also much more likely to acquire entrepreneurship skills and business background through their prior experience in self-employment, working in a family business, and in a managerial position. Importantly, the majority of whites had good credit history and many whites had high household income or financial support from their families. In contrast, the vast majority of blacks had an unfavorable credit history, low household income, and limited family support.

The longitudinal nature of the data enables us to identify racial patterns in the dynamics of entrepreneurship outcomes. Whites were more successful in starting a business and becoming self-employed over the entire 60-month follow-up period. Whites also needed less time to become self-employed in their own business. Within 6 months, about a quarter of whites were self-employed in a business, compared to about one in every ten blacks. These disparities were sustained to the end of the 60-month follow-up period. We also find that many nascent entrepreneurs in the data turned to salary employment within six months. As a result, in the short-

run, relatively more nascent entrepreneurs were employed in salary jobs than they were self-employed. The proportion self-employed relative to the proportion in a salary job increased over time, indicating that – in the long-term – the number of nascent entrepreneurs who remained engaged in self-employment declined.

The earnings analyses show that whites had higher earnings from self-employment early on and experienced a much higher increase over time. At month 6, whites earned \$3,672 annually from self-employment, which was nearly five times the amount earned by blacks. By month 60, annual self-employment earnings for whites increased to \$5,700, which was nearly three times the amount earned by blacks. The white-black self-employment earnings gap is tied to some extent to the fact that whites were more likely to be self-employed, but also because – conditional on self-employment – they had higher self-employment earnings. We also find that the main source of income for nascent entrepreneurs in the sample was, ultimately, income from salary employment. This finding is attributable to two factors: (1) nascent entrepreneurs in the sample were more likely to end up in salary jobs than in self-employment, particularly in the long-term; and (2) those who became self-employed had lower earnings than those who turned to salary employment. Moreover, while nascent entrepreneurs were able to achieve self-sufficiency over time, whites achieved much higher total earnings than blacks.

We decomposed the white-black gaps in entrepreneurship success to identify the proportion of the observed gaps attributable to characteristics that measure human capital, business background, and financial circumstances. Results show that white-black differences are largely attributable to characteristics measuring these factors. In the short-run, characteristics measuring human capital and financial circumstances explain about three quarters of the gaps in business starts and self-employment. Financial circumstances also explain about 40% of the short-term differences in self-

employment earnings. Financial circumstances also play an important role in explaining white-black gaps in long-run outcomes, including business starts (56%), self-employment (53%), self-employment in own business (81%), and self-employment earnings (40%). Demographic/human capital characteristics are not very important in explaining long-term gaps, but the importance of business background characteristics grew relative to the earlier periods.

These findings provide insights on the relative importance of initial conditions in explaining racial disparities in short-term and long-term entrepreneurship outcomes. Our results suggest that financial circumstances are the single most important factor contributing to white-black differences in entrepreneurship success. White nascent entrepreneurs begin their business start-up efforts with better credit and higher household income than blacks, indicating that they may have more access to start-up financing. Thus, whites are in a better position to start a business early on, helping them to achieve higher self-employment rates and earnings than blacks. The financial situation of nascent entrepreneurs also explains white-black differences in long-term success. This may be due to the fact that those with favorable financial circumstances get a head start in the entrepreneurship process, helping them to improve their outcomes over time. It is also possible that strong finances are a good predictor for the future financial situation of nascent entrepreneurs and, thus, their ability to secure financing for starting or expanding their business.

The evidence on the importance of human capital and business background is mixed. White-black gaps in short-term outcomes are partly because whites have higher levels of human capital. Although human capital may help nascent entrepreneurs start a business and become self-employed early on, they play a limited role in explaining long-term outcomes. The importance of business background characteristics in explaining white-black differences in the short-term is limited, but they are important in explaining long-term differences. This indicates that whites are

more likely to enjoy long-term success than blacks because they acquire more entrepreneurship skills and business experience prior to pursuing self-employment. Notably, prior involvement in self-employment or in a managerial salary job appear to be much more important in explaining white-black gaps than prior involvement in a family business.

Analyses of program's effects show that the program led to substantial positive impacts within six months, increasing the likelihood of starting a business by 59%, overall self-employment by 35%, and self-employment in own business by 60%. These results indicate that the program helped participants to start their own business and become self-employed earlier than they would in the program's absence. In fact, effects on business starts and self-employment in own business were sustained for up to 60 months after program entry, which shows that the program helped participants to improve their long-term business ownership and self-employment prospects. However, the program had no substantive effects on earnings, presumably because relatively more control cases turned to salary employment, which yielded higher earnings than self-employment throughout the follow-up period. There is also no evidence that the program helped participants to improve their ability to obtain higher returns from salary employment.

Further analyses show that there was no substantive variation in program effects based on individual characteristics. This indicates that the program did not produce differential effects based on whether participants had less favorable initial conditions, and thus did not contribute to reducing racial entrepreneurship gaps. Finally, analyses of differences in entrepreneurship outcomes based on the types of training received show that treatment cases who received business counseling but no workshop training were much more successful than those who received no training and those who received workshop training only in starting a business and becoming self-employed. Moreover, treatment cases who received both workshop training and business

counseling achieved much better outcomes than all other participants, including those who received only counseling. These results point to the possibility that business counseling may have played a more important role than workshop training in explaining program results, and that combining counseling with workshop training could maximize the impacts of training programs.

In conclusion, the results of this paper show that white nascent entrepreneurs are more successful than blacks in starting a business, becoming self-employed, and achieving high earnings. These disparities are largely because whites have higher human capital, business background, and access to financing, conditions that provide them with an important advantage in their business start-up efforts. It is evident, however, that the most important factor explaining white-black gaps in short-term and long-term entrepreneurship success is financing access. Finally, government-sponsored entrepreneurship training can be effective in helping nascent entrepreneurs to improve their entrepreneurship skills and become self-employed in their own business earlier than they would in the absence of training. These programs, however, are unlikely to be more effective for nascent entrepreneurs with unfavorable initial conditions, and thus have limited value in closing the racial gaps in entrepreneurship success. Finally, it appears that – to reduce racial gaps – policymakers should consider the value of strategies that address the credit constraints that nascent entrepreneurs are likely to face. These strategies may include providing more emphasis on credit assistance services within existing training programs, or offering direct start-up financing to minority nascent entrepreneurs.

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Table 1: Characteristics of Project GATE Applicants

	White	Black
Total	1,492	620
Demographic/Human Capital Characteristics		
Male	.617	.481
Female	.383	.519
Hispanic	.056	.053
Non-Hispanic	.944	.947
Age		
18-24 Years	.019	.484
25-34 Years	.152	.245
35-44 Years	.307	.374
45-54 Years	.387	.253
55+ Years	.135	.079
Education		
No High School Diploma	.028	.048
High School Diploma	.237	.279
Some College	.330	.439
College Degree	.203	.098
Post-Graduate Degree	.202	.136
Married	.520	.266
Disabled	.094	.103
U.S. Citizen	.987	.960
Business Background		
Self-Employment Experience	.267	.190
Family Business	.762	.586
Managerial Experience	.666	.537
Experience in Business Area	.815	.774
Financial Circumstances		
Bad/no Credit History	.330	.726
Family Financial Support	.495	.403
Household Income		
<\$25,000	.255	.540
\$25,000-49,999	.337	.319
\$50,000-4974999	.200	.097
\$25,000-49,999	.208	.043

Note: Reported is the sample proportion.

Table 2: Random Assignment and Survey Response Rates

	White	Black
Total	1,492	620
Random Assignment†		
Treatment	750 (50.3%)	305 (49.2%)
Control	742 (49.7%)	315 (50.8%)
Survey Response		
Respondents, Wave 1 (month 6) (proportion of all applicants)	1,272 (85.3%)	488 (78.7%)
Respondents, Wave 2 (month 18) (proportion of Wave 1 respondents) (proportion of all applicants)	1,152 [90.6%] (77.2%)	403 [82.6%] (65.0%)
Respondents, Wave 3 (month 60) (proportion of Wave 2 respondents) (proportion of all applicants)	970 [84.2%] (65.0%)	303 [75.2%] (48.9%)

Note: †= Total number of applicants with sample proportion in parenthesis. ††= Number of survey respondents, with the proportion of the total number of applicants in parenthesis and the proportion of respondents to previous survey in brackets.

Table 3: Training Take-Up Rates, Treatment Cases

	White	Black
Received Any Training	.832	.764
Workshops Only	.245	.335
Business Counseling Only	.178	.059
Workshops & Counseling	.409	.372
No Workshops, no Counseling	.168	.236

Note: Reported is the training take-up rates for treatment cases who responded to the Wave 1 survey (sample size: 656 whites and 242 blacks).

Table 4: Labor Market Outcomes

	White	Black
Month 6		
Started Business by Month 6	.257	.103
Self-Employment at Month 6	.395	.197
<i>Own Business</i>	.246	.092
<i>No Business</i>	.149	.105
Salary Employment at Month 6	.468	.506
<i>No Self-Employment</i>	.361	.441
<i>Self-Employment</i>	.107	.066
Total Employment at Month 6	.756	.637
Self-Employment Earnings at Month 6	306 (1,140)	65 (428)
Salary Earnings at Month 6	1,550 (3,339)	1,096 (1,490)
Total Earnings at Month 6	1,856 (3,431)	1,161 (1,552)
Month 18		
Started Business by Month 18	.346	.206
Self-Employment at Month 18	.438	.258
<i>Owns Business</i>	.292	.164
<i>No Business</i>	.146	.094
Salary Employment at Month 18	.519	.576
<i>No Self-Employment</i>	.370	.454
<i>Self-Employment</i>	.149	.122
Total Employment at Month 18	.807	.712
Self-Employment Earnings at Month 18	369 (1,299)	83 (405)
Salary Earnings at Month 18	1,970 (3,456)	1,405 (1,991)
Total Earnings at Month 18	2,339 (3,563)	1,487 (2,047)
Month 60		
Started Business by Month 60	.438	.307
Self-Employment at Month 60	.368	.271
<i>Owns Business</i>	.262	.191
<i>No Business</i>	.106	.079
Salary Employment at Month 60	.513	.465
<i>No Self-Employment</i>	.405	.356
<i>Self-Employment</i>	.108	.109
Total Employment at Month 60	.773	.627
Self-Employment Earnings at Month 60	475 (1,963)	159 (701)
Salary Earnings at Month 60	4,554 (10,876)	2,277 (4,048)
Total Earnings at Month 60	5,029 (10,924)	2,349 (3,756)

Note: Reported is the sample proportion or sample mean with standard deviation in parenthesis. Sample sizes: Wave 1 (1,272 whites, 488 blacks); Wave 2 (1,152 whites, 403 blacks); Wave 3 (970 whites, 303 blacks).

Table 5: Regression Results, Labor Market Outcomes, Month 6

	Started Business	Self-Employment	Self-Employment, Own Business	Self-Employment, No Business	Salary Employment	Total Employment	Self-Employment Earnings	Total Earnings
Treatment	.098 (.019)***	.103 (.022)***	.095 (.019)***	.008 (.016)	-.050 (.024)**	.053 (.021)**	10 (47)	-60 (143)
Black	-.046 (.029)	-.049 (.033)	-.056 (.029)*	.007 (.025)	-.015 (.036)	-.048 (.032)	-159 (72)**	-647 (220)***
Male	.018 (.020)	.043 (.022)*	.021 (.019)	.022 (.017)	-.006 (.024)	.031 (.022)	145 (48)***	553 (149)***
Hispanic	-.048 (.042)	-.061 (.048)	-.061 (.041)	.001 (.036)	-.021 (.052)	-.083 (.046)*	-77 (103)	-130 (318)
Age								
18-24 Years	-.082 (.065)	-.087 (.075)	-.107 (.064)	.019 (.057)	.007 (.081)	-.038 (.072)	8 (162)	-259 (496)
25-34 Years	.006 (.029)	.015 (.033)	.003 (.029)	.011 (.025)	-.011 (.036)	-.004 (.032)	45 (72)	-90 (220)
45-54 Years	-.021 (.023)	-.009 (.027)	-.010 (.023)	.001 (.020)	-.037 (.029)	-.051 (.026)	7 (58)	-322 (177)*
55+ Years	-.062 (.032)*	-.033 (.036)	-.054 (.031)*	.021 (.027)	-.111 (.039)***	-.109 (.035)***	-134 (78)*	-826 (241)***
Education								
No HS Diploma	.008 (.055)	-.003 (.063)	.018 (.054)	-.021 (.057)	.077 (.069)	.017 (.060)	-9 (137)	8 (419)
Some College	.034 (.025)	.040 (.029)	.037 (.025)	.003 (.025)	-.022 (.031)	.035 (.028)	10 (62)	-20 (190)
College Degree	.018 (.030)	.068 (.035)**	.015 (.030)	.053 (.020)**	.086 (.038)	.027 (.033)	-93 (75)	403 (230)*
Post-Graduate Degree	.066 (.030)**	.099 (.035)***	.067 (.030)**	.032 (.026)	.044 (.037)	.065 (.033)**	130 (75)*	490 (230)**
Married	-.012 (.024)	-.007 (.028)	-.013 (.022)	.006 (.021)	-.080 (.030)***	-.040 (.026)	42 (60)	-178 (184)
Disabled	-.030 (.033)	-.009 (.037)	-.032 (.032)	.022 (.028)	-.206 (.041)***	-.212 (.035)***	-16 (81)	-559 (248)**
U.S. Citizen	-.092 (.068)	-.073 (.078)	-.108 (.067)	.035 (.059)	.119 (.085)	-.020 (.079)	-566 (169)***	-111 (519)
Self-Emp. Experience	.039 (.022)*	.079 (.026)***	.029 (.022)	.051 (.019)***	-.010 (.028)	.024 (.024)	-4 (56)	90 (170)
Family Business	-.005 (.022)	.019 (.025)	.002 (.022)	.017 (.019)	-.027 (.026)	.026 (.024)	-39 (54)	109 (165)
Managerial Experience	.034 (.021)*	.045 (.024)*	.027 (.019)	-.018 (.018)	-.027 (.026)	.049 (.022)**	34 (51)	-189 (157)
Experience in Area	.055 (.024)**	.025 (.027)	.043 (.024)*	.021 (.019)	.007 (.030)	.011 (.024)	110 (59)*	257 (182)
Bad/no Credit History	-.062 (.033)***	-.040 (.025)	-.060 (.022)***	-.021 (.019)	.106 (.027)***	.011 (.024)	-10 (54)	326 (167)**
Family Support	-.018 (.022)	-.003 (.026)	-.013 (.022)	.010 (.019)	.060 (.028)**	.029 (.024)	-78 (56)	-30 (170)
Household Income								
<\$25,000	-.046 (.025)*	-.052 (.029)*	-.034 (.025)	-.018 (.022)	.002 (.013)	-.039 (.028)	-35 (63)	-476 (191)**
\$50,000-74,999	.060 (.029)**	.092 (.033)***	.051 (.029)*	.041 (.025)	-.009 (.036)	.041 (.032)	96 (72)	184 (222)
\$75,000+	.105 (.031)***	.166 (.036)***	.102 (.031)***	.064 (.027)**	-.124 (.039)**	.046 (.034)	461 (78)***	374 (239)
R-Squared	.0919	.1142	.0874	.0303	.0566	.0731	.0716	.0538
Sample mean	.214	.340	.203	.133	.478	.783	239	1,664
Control group mean	.167	.291	.158	.136	.500	.772	237	1,675

Note: Reported is the estimated parameter with standard error in parenthesis. ***, **, * = statistically significant at the 1%, 5%, 10% level. Included but not reported are site fixed effects. Sample size = 1,760.

Table 6: Regression Results, Labor Market Outcomes, Month 18

	Started Business	Self-Employment	Self-Employment, Own Business	Self-Employment, No Business	Salary Employment	Total Employment	Self-Employment Earnings	Total Earnings
Treatment	.099 (.023)***	.053 (.024)**	.067 (.022)***	-.014 (.017)	-.030 (.025)	.016 (.020)	83 (57)	49 (160)
Black	-.027 (.036)	-.034 (.038)	-.031 (.034)	-.003 (.027)	.007 (.039)	-.036 (.032)	-47 (89)	-287 (249)
Male	.027 (.024)	.040 (.025)	.019 (.023)	.021 (.018)	-.013 (.026)	.036 (.021)*	214 (59)***	441 (166)***
Hispanic	-.045 (.050)	-.088 (.053)*	-.041 (.048)	-.047 (.038)	.057 (.055)	.021 (.049)	-71 (125)	51 (350)
Age								
18-24 Years	-.032 (.085)	-.046 (.082)	-.068 (.081)	.022 (.064)	.093 (.094)	.012 (.076)	99 (212)	74 (593)
25-34 Years	.058 (.037)	.057 (.038)	.029 (.034)	.026 (.027)	-.013 (.040)	.016 (.032)	-50 (90)	-233 (251)
45-54 Years	-.010 (.028)	.019 (.030)	.006 (.027)	.013 (.021)	-.006 (.031)	-.008 (.025)	75 (70)	20 (197)
55+ Years	-.038 (.037)	.017 (.039)	-.026 (.036)	.043 (.028)	-.156 (.041)***	-.103 (.034)***	-133 (94)	-930 (260)***
Education								
No HS Diploma	-.092 (.067)	-.053 (.071)	-.046 (.064)	-.007 (.051)	.022 (.074)	.017 (.060)	367 (168)**	265 (471)
Some College	.042 (.031)	.038 (.032)	.032 (.029)	.005 (.023)	.039 (.034)	.035 (.028)	17 (77)	245 (215)
College Degree	.009 (.036)	.045 (.038)	.023 (.035)	.021 (.027)	.038 (.040)	.027 (.033)	-84 (91)	670 (254)***
Post-Graduate Degree	.065 (.036)*	.094 (.038)***	.068 (.035)**	.026 (.028)	.034 (.040)	.065 (.033)**	103 (91)	789 (254)***
Married	-.002 (.030)	.026 (.031)	.004 (.028)	.022 (.022)	-.050 (.033)	-.040 (.026)	17 (74)	163 (206)
Disabled	-.066 (.040)*	-.094 (.042)**	-.066 (.038)*	-.027 (.030)	-.169 (.044)***	-.212 (.035)***	-44 (99)	-664 (277)**
U.S. Citizen	-.080 (.088)	-.073 (.093)	-.102 (.085)	.028 (.030)	-.015 (.098)	-.020 (.079)	-161 (221)	173 (617)
Self-Emp. Experience	.075 (.027)***	.091 (.028)***	.063 (.026)**	.029 (.067)	-.049 (.030)	.024 (.024)	-15 (68)	-535 (189)***
Family Business	-.009 (.027)	.004 (.028)	-.012 (.026)	.016 (.020)	.010 (.040)	.026 (.024)	17 (67)	-67 (187)
Managerial Experience	.055 (.025)**	.066 (.026)**	.052 (.024)*	.014 (.019)	.019 (.038)	.049 (.022)**	105 (63)*	374 (176)**
Experience in Area	.070 (.029)**	.036 (.031)	.053 (.028)*	-.017 (.022)	-.035 (.033)	.022 (.026)	123 (74)*	-60 (206)
Bad/no Credit History	-.092 (.027)**	-.060 (.028)**	-.085 (.025)***	.025 (.02)	.075 (.029)***	.011 (.023)	-61 (66)	135 (186)
Family Support	-.012 (.027)	-.013 (.029)	-.013 (.026)	.000 (.021)	.034 (.030)	.029 (.024)	-103 (68)	-260 (189)
Household Income								
<\$25,000	-.027 (.031)	-.016 (.033)	-.003 (.030)	-.013 (.023)	-.020 (.034)	-.039 (.028)	-92 (77)	-291 (216)
\$50,000-74,999	.072 (.035)**	.058 (.037)	.044 (.034)	.015 (.027)	.005 (.039)	.041 (.042)	98 (88)	588 (246)**
\$75,000+	.101 (.037)***	.096 (.040)**	.074 (.036)**	.021 (.028)	-.045 (.041)	.046 (.034)	377 (94)***	1,149 (262)***
R-Squared	.0866	.0902	.0665	.0252	.0403	.0731	.0684	.1009
Sample mean	.310	.391	.258	.132	.534	.783	295	2,118
Control group mean	.261	.367	.226	.141	.544	.772	253	2,072

Note: Reported is the estimated parameter with standard error in parenthesis. ***, **, * = statistically significant at the 1%, 5%, 10% level. Included but not reported are site fixed effects. Sample size = 1,555.

Table 7: Regression Results, Labor Market Outcomes, Month 60

	Started Business	Self-Employment	Self-Employment, Own Business	Self-Employment, No Business	Salary Employment	Total Employment	Self-Employment Earnings	Total Earnings
Treatment	.088 (.027)***	.034 (.026)	.058 (.024)**	-.024 (.017)	-.052 (.028)*	-.012 (.024)	120 (98)	597 (536)
Black	-.036 (.044)	.012 (.042)	.024 (.039)	-.012 (.027)	-.067 (.045)	-.103 (.038)***	-59 (158)	-1,244 (866)
Male	-.014 (.028)	.007 (.027)	-.020 (.025)	.027 (.017)	-.051 (.029)*	-.030 (.025)	252 (101)**	1,445 (555)***
Hispanic	-.028 (.060)	-.098 (.059)*	-.104 (.053)*	.006 (.038)	-.074 (.062)	-.124 (.053)**	51 (218)	-365 (1,192)
Age								
18-24 Years	.072 (.108)	.152 (.106)	.183 (.096)*	-.031 (.067)	-.015 (.110)	.148 (.095)	390 (397)	-612 (2,176)
25-34 Years	.114 (.044)***	.044 (.043)	.057 (.039)	-.013 (.027)	.024 (.045)	.054 (.039)	220 (159)	-498 (870)
45-54 Years	-.025 (.033)	-.001 (.033)	-.002 (.030)	.002 (.021)	-.045 (.034)	-.048 (.029)*	45 (121)	-783 (661)
55+ Years	-.030 (.036)	-.042 (.043)	-.034 (.039)	-.008 (.027)	-.167 (.045)***	-.174 (.039)***	-4 (159)	-2,153 (870)**
Education								
No HS Diploma	-.158 (.089)*	.037 (.087)	-.044 (.079)	.081 (.055)	.034 (.091)	.072 (.078)	-116 (324)	21 (1,776)
Some College	.035 (.037)	.009 (.037)	.031 (.033)	-.022 (.023)	.025 (.038)	.019 (.033)	42 (136)	1,480 (742)**
College Degree	.007 (.043)	.033 (.042)	.018 (.038)	.015 (.027)	.056 (.044)	.052 (.038)	-227 (155)	2,077 (850)**
Post-Graduate Degree	.010 (.043)	.025 (.042)	.009 (.038)	.016 (.027)	.107 (.044)**	.071 (.038)*	-22 (155)	3,088 (848)***
Married	-.030 (.036)	.022 (.035)	-.024 (.032)	.046 (.023)**	-.019 (.037)	-.009 (.032)	78 (131)	-26 (717)
Disabled	-.071 (.038)	-.045 (.047)	-.060 (.042)	.015 (.030)	-.196 (.049)***	-.197 (.042)***	-116 (172)	-1,745 (944)*
U.S. Citizen	.087 (.110)	.007 (.107)	.019 (.097)	-.011 (.068)	-.106 (.112)	-.077 (.096)	231 (397)	718 (2,172)
Self-Emp. Experience	.082 (.032)**	.129 (.031)***	.067 (.028)**	.062 (.020)***	-.053 (.033)	.061 (.028)**	-31 (115)	-1,281 (635)**
Family Business	-.018 (.032)	.023 (.031)	.014 (.028)	.008 (.020)	.013 (.033)	.013 (.028)	-19 (116)	-342 (633)
Managerial Experience	.067 (.030)**	.041 (.029)	.034 (.027)	.007 (.019)	.028 (.031)	.047 (.026)*	84 (109)	1,638 (596)***
Experience in Area	.044 (.035)	.072 (.035)**	.060 (.031)*	.012 (.022)	-.007 (.036)	.028 (.031)	-68 (116)	-1,186 (703)*
Bad/no Credit History	-.080 (.032)**	-.068 (.031)**	-.071 (.028)**	.003 (.020)	-.011 (.033)	-.054 (.028)	-68 (116)	-58 (636)
Family Support	-.021 (.033)	-.023 (.032)	-.022 (.029)	-.001 (.021)	.008 (.034)	-.007 (.029)	-318 (119)	-374 (653)
Household Income								
<\$25,000	-.032 (.037)	-.034 (.027)	-.027 (.033)	-.007 (.023)	-.096 (.038)**	-.099 (.033)***	-73 (135)	-1,952 (759)***
\$50,000-74,999	.076 (.042)*	.051 (.041)	.069 (.037)*	-.018 (.026)	.001 (.043)	.058 (.037)	322 (151)**	-403 (824)
\$75,000+	.165 (.043)***	.070 (.042)*	.099 (.038)***	-.030 (.027)	-.086 (.044)**	.012 (.038)	503 (156)**	1,812 (852)**
R-Squared	.0776	.0515	.0483	.0294	.0651	.1093	.0514	.0856
Sample mean	.407	.345	.245	.100	.502	.738	400	4,022
Control group mean	.362	.330	.216	.113	.521	.739	337	4,393

Note: Reported is the estimated parameter with standard error in parenthesis. ***, **, * = statistically significant at the 1%, 5%, 10% level. Included but not reported are site fixed effects. Sample size = 1,273.

Table 8: Decomposition of White-Black Differences in Entrepreneurship Outcomes

	Whites-Blacks Actual Difference	Difference Attributable to:		
		Demographic/ Human Capital	Business Background	Financial Circumstances
Month 6				
Started Business	.155 (.022)*** [100%]	.072 (.034)*** [46%]	.007 (.005) [5%]	.060 (.011)*** [39%]
Self-Employment	.198 (.025)*** [100%]	.098 (.039)** [49%]	.015 (.005)*** [8%]	.067 (.012)*** [34%]
<i>Own Business</i>	.154 (.021)*** [100%]	.080 (.034)** [52%]	.006 (.004) [4%]	.054 (.011)*** [35%]
<i>No Business</i>	.044 (.018)** [100%]	.019 (.029) [43%]	.009 (.004)** [20%]	.013 (.009) [30%]
Self-Employment Earnings	241 (53)*** [100%]	-23 (85) [-10%]	-3 (11) [1%]	93 (27)*** [39%]
Total Earnings	695 (161)*** [100%]	48 (261) [7%]	2 (35) [0%]	84 (82) [12%]
Month 18				
Started Business	.140 (.027)*** [100%]	.040 (.044) [29%]	.011 (.006) [8%]	.067 (.013)*** [48%]
Self-Employment	.179 (.028)*** [100%]	.090 (.046)* [50%]	.016 (.006)*** [9%]	.049 (.014)*** [27%]
<i>Own Business</i>	.128 (.025)*** [100%]	.060 (.042) [+47%]	.009 (.005)* [+7%]	.050 (.013)*** [+40%]
<i>No Business</i>	.052 (.020)** [100%]	.030 (.033) [58%]	.007 (.004)* [13%]	-.001 (.010) [-2%]
Self-Employment Earnings	286 (66)*** [100%]	49 (110) [17%]	15 (14) [5%]	113 (33)*** [40%]
Total Earnings	853 (187)*** [100%]	240 (308) [28%]	-5 (39) [-1%]	256 (92)*** [30%]
Month 60				
Started Business	.131 (.032)*** [100%]	-.021 (.056) [16%]	.012 (.007)* [9%]	.074 (.016)*** [56%]
Self-Employment	.097 (.031)*** [100%]	-.042 (.055) [-43%]	.019 (.006)*** [20%]	.051 (.016)*** [53%]
<i>Own Business</i>	.070 (.028)** [100%]	-.064 (.050) [-91%]	.012 (.006)** [17%]	.057 (.014)*** [81%]
<i>No Business</i>	.027 (.019) [100%]	.022 (.035) [81%]	.007 (.004)* [26%]	-.006 (.010) [22%]
Self-Employment Earnings	316 (115)*** [100%]	-92 (205) [-18%]	4 (24) [4%]	135 (58)** [40%]
Total Earnings	2,680 (640)*** [100%]	678 (1,125) [25%]	52 (131) [2%]	802 (316)*** [30%]

Note: Reported is the difference with standard error in parenthesis. In brackets is the proportion relative to the actual difference. ***, **, * = statistically significant at the 1%, 5%, 10% level.

Table 9: Project GATE Interaction Effects, Entrepreneurship Outcomes

	Treatment	Treatment x College Degree	Treatment x Self-Emp. Exp.	Treatment x Bad Credit	College Degree	Self-Employment Experience	Bad/No Credit History
Month 6							
Started Business	.097 (.019)***	--	--	--	.043 (.025)*	.039 (.022)*	-.063 (.033)***
	.103 (.033)**	.000 (.040)	.052 (.044)	-.048 (.040)	.042 (.033)	.012 (.032)	-.038 (.030)
Self-Employment	.103 (.022)***	--	--	--	.084 (.030)***	.079 (.026)***	-.040 (.025)
	.135 (.038)***	-.006 (.046)	-.009 (.050)	-.066 (.045)	.086 (.037)**	.083 (.036)**	-.006 (.034)
Self-Employment, Own Business	.094 (.019)***	--	--	--	.042 (.025)*	.029 (.022)	-.061 (.022)***
	.102 (.033)***	.003 (.040)	.037 (.043)	-.043 (.039)	.039 (.032)	.009 (.031)	-.038 (.029)
Self-Employment, No Business	.009 (.016)	--	--	--	.042 (.022)*	.051 (.019)***	.021 (.019)
	.033 (.029)	-.009 (.035)	-.045 (.038)	-.023 (.034)	.046 (.028)	.074 (.027)***	.032 (.026)
Self-Employment Earnings	4 (47)	--	--	--	19 (64)	-3 (56)	-15 (54)
	60 (82)	-193 (100)*	-67 (108)	78 (98)	117 (81)	35 (78)	-59 (74)
Month 18							
Started Business	.097 (.023)***	--	--	--	.037 (.031)	.075 (.027)***	-.094 (.027)***
	.090 (.040)**	-.000 (.048)	.087 (.052)*	-.037 (.048)	.036 (.040)	.029 (.038)	-.073 (.036)**
Self-Employment	.051 (.024)**	--	--	--	.069 (.033)**	.091 (.028)***	-.061 (.028)**
	.052 (.042)	-.001 (.051)	.060 (.055)	-.039 (.051)	.069 (.042)*	.060 (.040)	.040 (.038)
Self-Employment, Own Business	.065 (.022)***	--	--	--	.045 (.030)	.063 (.026)**	-.086 (.025)***
	.063 (.039)	-.012 (.046)	.073 (.050)	-.029 (.046)	.051 (.038)	.025 (.037)	-.070 (.035)**
Self-Employment, No Business	-.014 (.017)	--	--	--	.024 (.024)	.029 (.020)	.025 (.021)
	-.011 (.030)	.011 (.037)	-.013 (.040)	-.010 (.036)	.018 (.030)	.035 (.029)	.030 (.028)
Self-Employment Earnings	78 (57)	--	--	--	9 (78)	-15 (68)	-65 (66)
	69 (101)	-123 (121)	64 (131)	98 (121)	72 (99)	-44 (96)	-117 (91)

(Table 9 continues on next page)

(Table 9 continued from previous page)

	Treatment	Treatment x College Degree	Treatment x Self-Emp. Exp.	Treatment x Bad Credit	College Degree	Self-Employment Experience	Bad/No Credit History
Month 60							
Started Business	.087 (.027)*** .050 (.047)	-- .035 (.056)	-- .123 (.062)**	-- -.026 (.058)	.008 (.037) -.009 (.047)	.082 (.032)** .019 (.045)	-.080 (.032)** -.065 (.043)
Self-Employment	.034 (.026) .048 (.046)	-- .066 (.055)	-- -.045 (.061)	-- -.078 (.057)	.029 (.037) -.006 (.046)	.129 (.031)*** .148 (.044)***	-.067 (.031)** -.025 (.043)
Self-Employment, Own Business	.058 (.024)** .025 (.042)	-- .097 (.050)*	-- .025 (.055)	-- -.039 (.051)	.013 (.033) -.037 (.042)	.067 (.028)** .051 (.040)	-.071 (.028)** -.049 (.039)
Self-Employment, No Business	-.024 (.017) .023 (.030)	-- -.032 (.035)	-- -.069 (.039)*	-- .041 (.036)	.016 (.023) .031 (.029)	.062 (.020)*** .097 (.028)***	.003 (.020) .024 (.027)
Self-Employment Earnings	115 (98) 154 (172)	-- -22 (205)	-- -36 (225)	-- -59 (210)	-124 (135) -113 (171)	-32 (116) -14 (162)	-73 (116) -43 (159)

Note: Reported is the estimated parameter with standard error in parenthesis. ***, **, * = statistically significant at the 1%, 5%, 10% level.

Table 10: Regression Results, Training Received and Entrepreneurship Outcomes

	Started Business	Self-Employment	Self-Employment, Own Business	Self-Employment, No Business	Self-Employment Earnings
Month 6					
Treatment (T)	-.012 (.033)	-.027 (.038)	-.011 (.033)	-.016 (.029)	-11 (84)
T, Workshop	.023 (.040)	.052 (.045)	.024 (.039)	.028 (.035)	-8 (99)
T, Counseling	.165 (.046)***	.174 (.053)***	.143 (.046)***	.031 (.041)	128 (116)
T, Workshop, Counseling	.197 (.037)***	.226 (.043)***	.195 (.037)***	.032 (.033)	10 (93)
Month 18					
Treatment (T)	-.025 (.042)	-.059 (.044)	-.039 (.040)	-.020 (.032)	0 (106)
T, Workshop	.028 (.049)	.065 (.052)	.042 (.047)	.023 (.037)	24 (123)
T, Counseling	.163 (.056)***	.130 (.060)**	.141 (.054)***	-.011 (.043)	258 (142)*
T, Workshop, Counseling	.224 (.046)***	.183 (.049)***	.179 (.044)***	.003 (.035)	91 (117)
Month 60					
Treatment (T)	-.053 (.051)	-.005 (.051)	-.039 (.046)	.034 (.032)	-139 (188)
T, Workshop	.056 (.059)	.016 (.059)	.065 (.053)	-.049 (.037)	288 (217)
T, Counseling	.121 (.067)*	-.001 (.066)	.054 (.060)	-.054 (.042)	359 (245)
T, Workshop, Counseling	.256 (.056)***	.085 (.056)	.171 (.050)***	-.086 (.035)**	294 (205)

Note: Reported is the estimated parameter with standard error in parenthesis. ***, **, * = statistically significant at the 1%, 5%, 10% level. Included but not reported are site fixed effects. Sample size = 1,760.

Appendix A: Race and Ethnicity Distribution

	Civilian Labor Force		Self-Employed Workers	
	Entire U.S.	Project GATE States	Entire U.S.	Project GATE States
Total	141.3 million	9.3 million	14.3 million	900,244
White	109.9 million (78%)	8.2 million (88%)	12.3 million (86%)	845,183 (94%)
Black	15.9 million (11%)	602,977 (6%)	744,710 (5%)	20,738 (2%)
Asian	6.5 million (5%)	222,536 (2%)	668,906 (5%)	20,587 (2%)
Native American	1.0 million (<1%)	31,866 (<1%)	71,931 (<1%)	2,485 (<1%)
Other Race	8.0 million (6%)	192,918 (2%)	556,482 (4%)	11,251 (1%)
Hispanic	18.0 million (13%)	251,875 (3%)	1.3 million (9%)	11,582 (1%)
Non-Hispanic	123.3 million (87%)	9.0 million (97%)	13.0 million (91%)	888,662 (99%)

Note: Reported is the race and ethnicity distribution of the civilian labor force in 2003 (18 years old or older) and of self-employed workers (18 years old or older). Source: Tabulations of the 2003 American Community Survey.

Appendix B: Decomposition of White-Black Differences in Salary and Total Employment

	White-Black Actual Difference	Difference Attributable to:		
		Demographic/ Human Capital	Business Background	Financial Circumstances
Month 6				
Salary Employment at Month 6	-.038 (.027) [100%]	.006 (.043) [-16%]	-.007 (.005) [18%]	-.058 (.014)*** [153%]
Total Employment at Month 6	.118 (.024)*** [100%]	.060 (.038) [51%]	.008 (.005) [7%]	.012 (.012) [10%]
Month 18				
Salary Employment at Month 18	-.057 (.028)** [100%]	-.065 (.049) [-114%]	.001 (.006) [2%]	-.028 (.015)* [-49%]
Total Employment at Month 18	.095 (.024)*** [100%]	.009 (.039) [9%]	.013 (.005)*** [14%]	.021 (.012)* [22%]
Month 60				
Salary Employment at Month 60	.048 (.033) [100%]	-.041 (.057) [-85%]	.002 (.007) [4%]	.019 (.016) [40%]
Total Employment at Month 60	.146 (.029)*** [100%]	-.109 (.049)** [-75%]	.013 (.006)** [9%]	.057 (.014)*** [39%]

Note: Reported is the difference with standard error in parenthesis. In brackets is the proportion relative to the actual difference. ***, **, * = statistically significant at the 1%, 5%, 10% level.