



Munich Personal RePEc Archive

Race and self-employment: The role of training programs, self-employment background, and access to financing

Michaelides, Marios

IMPAQ International, University of Maryland - College Park

01. February 2010

Online at <http://mpa.ub.uni-muenchen.de/20884/>

MPRA Paper No. 20884, posted 22. February 2010 / 16:57

Race and Self-Employment: The Role of Training Programs, Self-Employment Background, and Access to Financing

Marios Michaelides

E-mail: mmichaelides@impaqint.com

Phone: +1(202)215-1171

February 2010

Abstract

This paper uses data from Project GATE to examine the efficacy of offering free self-employment assistance to unemployed individuals interested in self-employment, overall and by race. We also examine the effect of participants' self-employment background, finances, and personal circumstances on their self-employment outcomes. We find that Project GATE led to significant gains in the outcomes of unemployed participants, particularly for black participants. Our analyses also show that significant portions of the race disparities in self-employment outcomes among unemployed participants are attributed to race differences in access to financing. The policy implications of our findings are discussed.

JEL Classifications: J6, H4, L2.

Keywords: unemployment, self-employment, race, small business, Project GATE, training, workforce development.

Introduction

Many unemployed workers in the U.S., particularly those in minority groups, view self-employment as an attractive alternative to salary employment. In their efforts to start and operate a successful business, however, these individuals are likely to face important obstacles, the most important of which are lack of self-employment background and limited access to financing. Previous research shows that among aspiring and existing business owners, nonwhites are more likely than whites to face such obstacles, which partly explains the significant race disparities in self-employment participation and success.

The challenges faced by unemployed individuals interested in starting their own business are an important policy concern, especially since many of these may succeed if they receive appropriate assistance. For this reason, in the past two decades policymakers have focused a lot of attention on supporting unemployed workers achieve their self-employment goals. Besides the federal and local government programs aiming to assist disadvantaged workers secure financing for their small business, a number of self-employment demonstration programs were implemented to provide free assistance to unemployed workers interested in self-employment. The most recent of those programs is Project GATE (Growing America Through Entrepreneurship), which was implemented from 2002 through 2005 in Maine, Minnesota, and Pennsylvania.

Previous work has shown that self-employment programs, including Project GATE, are effective in assisting unemployed workers start their own business and avoid returning to unemployment. One open question, however, is whether such programs are as effective for nonwhite participants, who may face more difficulties than their white peers in successfully pursuing self-employment, as they are for white participants. There is also no work examining if

there are any race disparities in the post-training outcomes of unemployed participants and whether these may be attributed to race differences in characteristics related to self-employment background and access to financing.

This paper uses Project GATE data to fill these research gaps. Our analyses focus on estimating the impact of offering free self-employment assistance on the post-training outcomes of unemployed participants, overall and by race. In addition, we estimate the effect of participant characteristics related to self-employment background, finances, and other personal circumstances on their self-employment outcomes. Based on our results, we are able to assess if Project GATE had a heterogeneous impact on participant outcomes, by race, and the degree to which the observed race disparities in self-employment outcomes are attributed to race differences in the aforementioned characteristics.

1. Background

Self-employment rates for nonwhite workers in the U.S. have been historically lower than those of white workers (Fairlie and Meyer, 1996; 2000). At the beginning of the 21st century, nonwhite workers remain less likely than their white peers to be self-employed; tabulations of the American Community Survey show that from 2006 through 2008, only 6.9% of nonwhite workers in the U.S. were self-employed compared with 11.1% of white workers. There is also significant evidence that minority-owned businesses have lower business receipts and profitability and are more likely to close than white-owned businesses – this research is reviewed nicely by Fairlie and Robb (2007a).

Race disparities in self-employment participation and success are partly attributed to race differences in the obstacles faced by workers pursuing self-employment. Nonwhite workers, for example, have lower levels of human capital (e.g., education) and self-employment background

(e.g., self-employment experience) than whites, so they are less likely to become self-employed (Fairlie and Meyer, 1996; Fairlie, 1999, Smith, 2004, Reynolds et al., 2004) or run a successful business (Bates, 1985; Loftstrom and Bates, 2007; Fairlie and Robb, 2007c). The lower self-employment participation and success for nonwhite workers is also partly attributed to that they are less likely than their peers to inherit or have experience working in a family business (Fairlie, 1999; Fairlie and Robb, 2007b; Hout and Rosen, 2000; Fairlie and Robb, 2007c). Furthermore, nonwhites are less likely than whites to be able to adequately finance the creation or expansion of their business. Specifically, among aspiring and existing business owners, nonwhites have limited access to credit relative to whites due to their lower personal wealth, limited family support, and lower credit history (Cavaluzzo and Walken, 2002; Blanchflower, et al., 2003; Lofstrom and Bates, 2007).

Although pursuing self-employment entails numerous challenges, many unemployed workers, particularly those in minority groups, view self-employment as an attractive alternative to salary employment or as a way to avoid perceived and actual labor market discrimination (Meager, 1992; Bates 1997; Rissman, 2003; Glocker and Steiner, 2007). In the past two decades, policymakers have focused a lot of attention on promoting the reemployment of unemployed workers through self-employment. This led to the establishment of programs that provided free self-employment assistance to unemployed workers interested in starting their own business. The rationale was that such programs may assist these individuals overcome the important challenges associated with the successful pursuit of self-employment and may help them return quickly to productive employment.

At the beginning of the 1990s, the U.S. Department of Labor funded two programs, the Washington Self-Employment and Enterprise Development program and the Massachusetts Self-

Employment Demonstration program, which provided free assistance to unemployed workers interested in starting their own business. Benus et al. (1995) find that those two demonstration programs were effective in assisting participants start their own business and avoid returning to unemployment. In 1993, Congress passed the NAFTA Act, which authorized states to implement temporary self-employment assistance (SEA) programs targeting unemployed workers. The success of the ensuing SEA programs led to their permanent authorization by Congress in 1997 (Vroman, 1997; Kosanovich et al., 2002). As of the early 2000s, however, only 11 states had adopted SEA programs in their workforce development systems, including New York, Pennsylvania, and Oregon.

To reestablish the potential benefits of self-employment programs, the U.S. Department of Labor partnered with the Small Business Administration in 2002 to support Project GATE, a program offering free self-employment assistance to individuals interested in starting their own business. Project GATE was specifically designed as an experimental program in order to estimate its impact and to assess if such programs are a viable policy tool to expedite the reemployment of unemployed workers through self-employment. Benus and Michaelides (2010) show, in fact, that Project GATE was quite effective in increasing the likelihood of starting a new business for participants who were unemployed at the time of application.

As discussed, previous research has shown that self-employment programs are effective in assisting unemployed workers start their own business and avoid returning to unemployment. But previous work has not addressed a number of questions relating to race differences in the effectiveness of such programs and to race disparities in the post-training outcomes of unemployed participants. Are nonwhite participants, who may face more obstacles in pursuing self-employment than their white peers, as likely to benefit from such programs? Are there

important race disparities in the self-employment outcomes of unemployed participants? What is the role of participant characteristics related to self-employment background and access to credit in explaining such disparities?

This paper uses data from Project GATE to address these questions. In Section 2, we provide an overview of Project GATE and the baseline characteristics of unemployed applicants, overall and by three race groups: white, black, and other race. This includes a description of participant characteristics related to self-employment background, financing, and other personal circumstances, as well as an overview of the participant post-training outcomes. In Section 3, we use regression models to estimate GATE's impact on participant outcomes, overall and by race group. The same analyses enable us to estimate the effect of self-employment background, access to financing, and personal circumstances on participant outcomes. In Section 4, we use these results to produce GATE's impact on the outcomes of white, black, and other race unemployed participants. Furthermore, we assess the degree to which race disparities in the self-employment outcomes of unemployed participants are attributed to differences in self-employment background, finances, and personal circumstances. The final section discusses the policy implications of our findings.

2. Project GATE Overview

In 2002, U.S. Department of Labor partnered with the Small Business Administration (SBA) to support Project GATE (Growing America Through Entrepreneurship). The objective of Project GATE, implemented from 2003 through 2005 in Maine, Minnesota, and Pennsylvania, was to provide free self-employment assistance to individuals interested in starting their own business. Interested individuals could apply for Project GATE participation in designated DOL

One-Stop Career Centers, which included: two sites in rural Maine; one site in Philadelphia, Pittsburgh, and Minneapolis/St. Paul; and two sites in rural Minnesota.

Upon application, each individual was randomly assigned to the treatment or to the control group. Treatment group participants received an initial assessment of their business needs and were then referred to wide array of services, including individual business counseling sessions. In those sessions, participants met with business professionals to discuss their business idea, receive help in producing or refining their business plan, and receive guidance on how to obtain financing for their business through the SBA MicroLoan program or through other sources. For more details on the types of services offered by Project GATE, see Benus et al. (2009). Applicants assigned to the control group were not referred to any Project GATE services.

Since DOL One-Stop locations were the gateways to the program, Project GATE attracted 2,089 applicants who identified themselves as being unemployed at the time of application and looking to start their own business.¹ As Table 1 shows, 64% of unemployed applicants were white, 26% were black, and 10% were other race (i.e., nonwhites, non-blacks). A comparison of the proportion of applicants in Project GATE to the proportion of all unemployed workers in the three states, by race, shows that nonwhites were much more likely than whites to participate in Project GATE. Specifically, 26% of unemployed applicants were black, as were 12% of all unemployed workers in Maine, Minnesota, and Pennsylvania. The ratio of these two proportions (2.17) indicates that black unemployed workers in these states were at least two times more likely than others to apply for Project GATE. Similarly, unemployed workers in the other race

¹ Project GATE accepted all applicants, regardless of employment status at the time of application. Our analysis focuses on unemployed participants for two reasons. First, previous research shows that Project GATE had a significant impact for participants who were unemployed at the time of application but had no effect for all other participants (Benus and Michaelides, 2010). In addition, the unemployed is the only group of aspiring business owners that are policy-relevant; with the exception of Project GATE, self-employment training programs only target unemployed workers. This is true for the demonstration programs in the 1990s, all currently active SEA programs, and Project GATE II (which is currently underway in Alabama, Minnesota, and North Carolina).

category were 2.5 times more likely to apply than their peers. These numbers are consistent with the idea that, among the unemployed, nonwhites are more likely than whites to view self-employment as an attractive alternative to salary employment. This is also an indication that, due to the challenges they face in pursuing self-employment, nonwhites are more likely to seek self-employment assistance.

2.1. Baseline Characteristics of Unemployed GATE Applicants

Project GATE applicants were required to complete an application form requesting baseline information on their demographic characteristics. Table 2 presents these characteristics, overall and by race group. As a result of random assignment, about half the unemployed applicants were in the treatment group, overall and by race. The majority of unemployed applicants were male, as were individuals ages 35-54. About a quarter of all applicants had a high school diploma or less, while the remaining applicants had at least some college attendance. Table 2 also reports the GATE location among unemployed applicants – most applicants were in Minnesota/St.Paul, followed by Philadelphia and Pittsburgh.

GATE applicants were also asked to provide information on characteristics related to their self-employment background, finances, and personal circumstances. These are presented in Table 3. Around 36% of white and 42% of other race applicants had prior self-employment experience (*Ever Self-Employed*), compared to 29% for black applicants. Whites were more likely than black and other race applicants to have prior managerial experience (*Managerial Experience*) and work experience in the area they were interested in starting a new business (*Experience in Area*). Higher proportions of white and other race applicants relative to blacks reported their family owned a business (*Family Business*) and that they had worked in that

business prior to applying to GATE (*Work Family Business*). In contrast, a higher proportion of black applicants had a prepared business plan at the time of application.

White applicants were in a better financial position than their peers at the time of application, indicating that they would be more likely to be able to secure financing for their business. For example, less than a third of whites reported a low credit history score (*Bad/No Credit History*) compared with nearly three quarters for blacks and nearly half for other race applicants. Whites were also more likely to have a relative supporting their family while they were pursuing self-employment (*Family Support*) and much more likely to have annual household income that exceeded \$75,000 (*Income: >\$75K*). Finally, Table 3 indicates that black and other race applicants were more likely than white applicants to be the major caretaker of a child and less likely to have health insurance at the time of application.

2.2. Post-Training Outcomes of Unemployed GATE Applicants

Project GATE included three follow-up surveys to document the post-training outcomes of participants – these were conducted 6 months (Wave 1), 18 months (Wave 2), and 60 months (Wave 3) after random assignment. As Table 4 shows, high response rates were achieved in all three follow-up surveys. In particular, 83% of all unemployed applicants responded to the Wave 1 survey, 89% of whom responded to the Wave 2 survey. Finally, 82% of Wave 2 respondents responded to the Wave 3 survey – in total, 60% of all unemployed applicants responded to all three follow-up surveys. Based on the responses of applicants in the three follow-up surveys, we constructed the following post-training outcomes: likelihood of starting a new business by the time of each survey; likelihood of sustaining a business started by Wave 1 at the time of each survey; employment likelihood; self-employment earnings; total earnings; and household income. The means of these outcomes, overall and by race group are presented in Table 5.

Table 5 shows that, after random assignment, 18.2% of all unemployed participants started a new business by Wave 1, 30.8% started a new business by Wave 2, and 43.7% started a new business by Wave 3. Black participants had a lower likelihood of starting a new business after random assignment than white and other race participants. By Wave 3, for example, 37.7% of black participants started a new business relative to 46% for white and 44.7% for other race participants. The second outcome reported is the likelihood of sustaining a business started between random assignment and Wave 1 by the time of each survey. As Table 5 shows, 17.5% of unemployed participants started a business by Wave 1 that was still in operation at Wave 1. Moreover, 14.1% and 10.5% of participants started a new business by Wave 1 that was still operating at Wave 2 and at Wave 3, respectively. New business sustainability was much higher among white unemployed participants compared to black and other race participants.

Table 5 also shows that 73.8% of unemployed participants were employed (i.e., in salary employment or in self-employment) at Wave 1, compared to 74.8% at Wave 2, and 79% at Wave 3. Also reported are the mean self-employment earnings, total earnings (i.e., self-employment earnings plus earnings from salary jobs), and total household income at the time of each survey. Note that all three earnings measures were higher at each subsequent survey, overall and by race group, indicating that unemployed participants were experiencing a steady earnings growth over time. It is also true that white participants had higher earnings at the time of each follow-up survey than black and other race participants.

The above overview reveals two important race patterns among unemployed Project GATE participants. First, black and other race participants were generally less likely than their white peers to have self-employment background (e.g., prior self-employment experience and work experience in their area of interest) and access to financing (e.g., good credit history and high

household income). Second, black and other race participants were less likely than their white peers to start a new business following random assignment or to start a new business and be able to sustain it. Nonwhite participants also had lower self-employment earnings than white participants. These patterns correspond closely to those found in previous research examining race disparities in self-employment participation and success.

3. GATE Impact on Post-Training Outcomes

In this section, we use regression models to estimate GATE’s impact on participant outcomes and to test if that impact varied by race group. Our regression analyses will also enable us to estimate the effect of characteristics related to self-employment background, finances, and personal circumstances on participant post-training outcomes. As discussed, Project GATE was designed as an experimental program, providing a unique opportunity to produce a consistent estimate of the program’s *intent-to-treat* effect on participant outcomes, overall and by race.² To do so, we use the following model:

$$Y = \alpha + \beta_0 \cdot T + \beta_1 \cdot T \cdot Black + \beta_2 \cdot T \cdot Other + \gamma_1 \cdot Black + \gamma_2 \cdot T \cdot Other + DEMO \cdot \delta + X_1 \cdot \varepsilon_1 + X_2 \cdot \varepsilon_2 + X_3 \cdot \varepsilon_3 + u_i \quad (1)$$

The dependent variable in this model (Y) is the post-training outcome of interest. On the right hand side, T is the treatment indicator, which equals 1 if the participant was in the treatment group, 0 else. There are also two indicators for race: $Black$ equals 1 if participant was black, and $Other$ equals 1 if participant was other race (the omitted race group is white). The model also includes interactions between treatment and race, which indicate if the treatment effect varied by race group. In particular, if the estimated interaction parameters (β_1, β_2) are statistically

² Our goal is to estimate the intent-to-treat effect, i.e., the effect of being assigned to the treatment group. Hereafter, “impact” or “effect” refers to the intent-to-treat effect.

different from zero, then GATE had a different impact on black and other race participants than on white participants.

The model also includes all available demographic characteristics from Table 2 (*DEMO*) and the characteristics related to self-employment background (X_1), finances (X_2), and personal circumstances (X_3), as reported in Table 3. Including these characteristics in the model adjusts for any observed differences between the treatment and the control group that may have occurred by chance. In addition, it enables us to estimate the effect of self-employment background, finances, and personal circumstances on participant outcomes. Our expectation is that workers with limited self-employment background (i.e., no self-employment experience, no business plan, no experience in area of interest, and no experience working in a family business) would be less successful in pursuing self-employment than others. In addition, those with limited access to financing (i.e., bad or no credit history, no family support, and low household income) are expected to be less likely than others to be able to adequately finance the creation or expansion of their business, leading to lower self-employment outcomes. Finally, participants with impairing personal circumstances (i.e., child care and no health insurance) may be less able to fully commit in pursuing self-employment than others, leading to lower self-employment participation and success.

We estimate two versions of the model for each post-training outcome, a baseline model and an interactions model. The baseline model has no interactions between treatment and race, that is, it assumes that GATE's impact was the same across all three race groups. The interactions model includes interactions between treatment and race – this model is used to test if the

treatment effect varied by race. These two models are estimated for each post-training outcome using weighted least squares³ and results are presented below.

3.1. New Business Starts, New Business Sustainability, and Employment

Table 6 presents the regression results for the likelihood of starting a new business by the time of each survey. The baseline model (specification 1) shows that the treatment effect on the likelihood of starting a new business by Wave 1 was positive (.095) and significant, indicating that those in the treatment group were 9.5 percentage points more likely than their peers to start a new business within 6 months after random assignment. The interactions model (specification 2) shows that the baseline GATE impact was 10.2 percentage points and statistically significant. The treatment-race interactions, however, lacked statistical significance, indicating that GATE's impact was statistically equal across the three race groups.

We obtain similar results for the likelihood of starting a new business by Wave 2 and by Wave 3. The baseline models (specification 3 and 5) show that GATE had a significant positive impact on the likelihood of starting a new business by Wave 2 and by Wave 3 (8.2 and 5.6 percentage points, respectively). Specifications 4 and 6 show no statistical difference between GATE's impact on white participants and GATE's impact on black or other race participants. We should note, however, the large negative interaction effect for other race participants at Wave 1 (-.067) and at Wave 3 (-.092). Although not statistically significant, these indicate that GATE may have been less effective for other race participants.⁴

³ Project GATE data report weights designed to adjust for treatment-control differences in the survey response rates.

⁴ Since these interaction effects are not statistically significant, we cannot reject the hypothesis that the impact for other race participants was equal to that of whites and blacks. We acknowledge, however, the possibility that lack of statistical significance of the other race interaction effects may be a result of low statistical power (there were only 160 and 106 other race participants at Wave 1 and at Wave 3, respectively).

Interestingly, Table 6 shows that with one exception, the black and other race indicators were statistically zero, indicating that black and other race participants were equally likely to start a new business by the time of each survey as white participants. As expected, results show that participants with some self-employment background were more likely than their peers to start a new business. For example, those with self-employment experience at the time of application were 4.6 and 9.1 percentage points more likely to start a new business by Waves 2 and 3, respectively. Moreover, participants with a business plan, those with experience in their area of interest, and those with experience working in a business owned by their family were generally more likely to start a new business following random assignment.

Personal finances are also important. Participants with bad or no credit history were significantly less likely than others to be able to start their own business by Wave 1 and by Wave 2. A low credit history score is an indication that the individual would not have easy access to credit, making it harder to finance a new business. This effect is statistically zero by Wave 3, presumably because individuals may have had enough time by then to improve their credit history. In addition, participants with higher income were more likely than others to start their own business by each survey. This, again, shows that access to financing is an important consideration in starting a new business – individuals with high household income are likely to have more opportunities to secure financing for their business, either through loans or through their own assets and savings.

Finally, participants who were the primary caretakers for their child were significantly less likely to start a new business by Wave 1 and by Wave 2. This is not surprising, since it would be much more difficult for such individuals to be able to put forth the time commitment required to start a business. As Table 6 shows, the negative effect of being the primary caretaker for a child

disappears by Wave 3 – presumably, when the child is old enough to attend school and the time required for its care is reduced.

Table 7 reports the results when the dependent variable is the likelihood of starting a new business by Wave 1 that still operates at the time of each survey. Specification 1 shows that those in the treatment group were 9 percentage points more likely than their peers to start a new business between random assignment and Wave 1 that was still operating at Wave 1. In the interactions model, the baseline treatment effect was 10 percentage points and significant, but the interaction effects were insignificant. Similar results are obtained for new business sustainability at Waves 2 and 3. So, GATE not only led to a higher likelihood of starting a new business, it also led to a higher likelihood of sustaining that business, even 5 years after random assignment. These impacts do not appear to be statistically different by race group – however, the other race interaction effects are again large and negative, indicating that impacts were lower for this group.

The same results show that black unemployed participants were less likely than their white peers to start a new business at Wave 1 that was still in operation at Wave 2. However, blacks were equally likely as whites to start a business within 6 months of random assignment that was sustained 18 months and 60 months after random assignment. In contrast, new business sustainability was much lower among other race participants relative to white and black participants even 60 months after random assignment. Our results also illustrate the importance of self-employment background in sustaining a new business. Participants with a business plan or experience working in their area of interest were significantly more likely than others to start a new business and sustain it even 60 months after random assignment. In addition, participants with experience working in a business owned by their family had higher new business sustainability at each follow-up survey. Access to financing is an important deterrent of new

business sustainability – participants with a low credit history score and those with low household income were less likely to sustain their new business at each survey.

Table 8 presents the results where the dependent variable is the likelihood of employment. As shown, GATE only had a significant impact on employment at Wave 1. In particular, according to the baseline model (specification 1), GATE led to an increase in the likelihood of employment by 6.7 percentage points at Wave 1. The interactions model (specification 2) indicates that this impact was not statistically different, by race. The remaining specifications indicate that there was no significant impact of GATE on employment at Wave 2 or at Wave 3.

3.2. Self-Employment Earnings

We use a similar analysis to estimate GATE’s impact on self-employment earnings at the time of each survey. Table 9 presents the results for self-employment earnings.⁵ These results suggest that GATE had no impact on the self-employment earnings of participants at the time of each survey. A closer look, however, reveals that the treatment effect in the baseline models (specifications 1, 3, and 5) are higher at each subsequent survey. This provides an indication that, over time, GATE may lead to higher self-employment earnings for unemployed participants. In addition, as specification 6 shows, the total treatment effect for black participants (i.e., baseline plus interaction effect) is quite large. This is an indication that GATE may have had a significant impact on self-employment earnings of black participants 60 months after random assignment – we explore this further below.

As shown in Table 9, participants with a business plan and experience in their area of interest were likely to earn higher self-employment earnings than their peers. In addition, participants

⁵ We also estimated GATE’s impact on total earnings and household income at the time of each survey. Those analyses show that GATE had no significant impact on total earnings and on household income of unemployed participants, overall or by race. For brevity, we do not present those results, but they are available upon request.

with bad or no credit history and those with lower household income (i.e., \$75,000 or less) were likely to have lower self-employment earnings than their peers following random assignment. The remaining characteristics do not appear to have a significant effect on self-employment earnings.

4. Interpretation of the Results

The regression analyses reported above show that Project GATE had a significant impact on a number of post-training outcomes of unemployed participants. Although we cannot reject the hypothesis that GATE's impact on post-training outcomes was different across race groups, there is evidence suggesting that the total treatment effects may have been higher for white and black participants than for other race participants. Our analyses also show that participant characteristics, particularly those related to self-employment background and finances, had a significant effect on participant outcomes even five years after random assignment.

Below, we quantify GATE's impact on each race group for the following outcomes: likelihood of starting a new business, new business sustainability, employment likelihood, and self-employment earnings. In particular, we calculate the treatment effect for each race group and compare it against the respective control group mean for each post-training outcome – this analysis produces GATE's impact on each outcome as a proportion of the control group mean, by race. In addition, we use a decomposition analysis to assess the degree to which race differences in self-employment background, finances, and personal circumstances explain the important race disparities in self-employment outcomes.

4.1. GATE Impact by Race Group

Using the regression results from the interactions models reported in Tables 6-9, we quantify GATE's impact on the post-training outcomes of unemployed participants, by race. From Equation 1, we know that the effect for white participants is equal to the baseline treatment parameter β_0 . The effect for black participants is the sum of the baseline treatment effect and the interaction treatment effect for black participants (i.e., $\beta_0 + \beta_1$). Similarly, the treatment effect for other race participants is $\beta_0 + \beta_2$. Table 10 presents the control group mean and the treatment effect for each race group for the following outcomes: likelihood of starting a new business; likelihood of starting a new business by Wave 1 that still operates; likelihood of employment; and self-employment earnings. The same table reports GATE's impact on each post-training outcome, expressed as a proportion of the control group mean, by race.

As Table 10 reports, 19.2% of white control group participants started a new business by Wave 1, while the program's impact on the likelihood of starting a new business by Wave 1 for white participants is .102 and is statistically significant. Comparing this impact to the control group mean shows that GATE increased the likelihood of starting a new business by Wave 1 by 53% for white participants. The impact for black participants is also statistically positive, indicating that GATE doubled the likelihood of starting a new business by Wave 1 for black participants. The GATE impact for other race participants was much lower and was statistically insignificant. GATE also led to a higher likelihood of starting a new business by Wave 2 and by Wave 3 for white and black participants, but the impacts for other race participants were statistically insignificant.

Perhaps more importantly, GATE had a substantial impact on new business sustainability for white and black participants, even five years after random assignment. In particular, new business sustainability by Wave 3 for white and black participants increased by 61% and by

76%, respectively, as a result of being in the GATE treatment group. Again, there was no significant impact on other race participants. These results indicate that, at least for white and black participants, GATE not only led to higher likelihood of starting a new business but also to a higher likelihood of sustaining that business. GATE also led to significant short-term increases in the employment likelihood for white and black participants. In particular, GATE increased the likelihood of employment at Wave 1 by 11% for white participants and by 9% for black participants. There was no significant impact on this outcome at Waves 2 and 3.

Finally, as shown in Table 10, GATE had no significant effect on self-employment earnings at Wave 1 and at Wave 2. Note, however, that the program's impact was higher at Wave 2 than it was at Wave 1 for participants in all three race groups. This trend was sustained at Wave 3 when GATE's impact was much higher than its impact at Wave 2 for whites and blacks. In fact, GATE led to a statistically significant increase of 184% in the self-employment earnings of black participants at Wave 3. Similar analyses for total earnings and household income (not shown) reveal no significant impact of GATE on those outcomes, overall or by race. Notably, the estimated treatment effect on total earnings and household income by race, although statistically insignificant, increased with each survey. These analyses are available upon request.

4.2. Decomposition of Race Differences in Self-Employment Outcomes

An overview of the characteristics of unemployed GATE applicants (Table 3) shows there were important race differences in self-employment experience, finances, and personal circumstances. For example, black applicants had lower self-employment and management experience than their peers, while they were less likely to work in a family business. In addition, higher proportions of black and other race applicants had a poor credit history, no financial support from their family, and low household income compared with their white peers. Based on

our regression analyses in the previous section, we also concluded that participants with limited self-employment background, lower access to financing, and impairing personal circumstances had significantly lower self-employment participation and success following random assignment. It is, therefore, true that a portion of the observed race disparities in post-training self-employment outcomes (see Table 5) may be attributed to race differences in the aforementioned characteristics.

Using the regression analyses from the previous section, we decompose the race gap in each self-employment outcome and determine the proportion of that gap that is attributed to race differences in self-employment background, finances, and personal circumstances. For example, consider the means difference in outcomes between white and black participants. Once we estimate Equation 1, we can write the portion of the gap that is due to differences in self-employment background between whites and blacks as $(\overline{X_{1,W}} - \overline{X_{1,B}}) \cdot \hat{\varepsilon}_1$, where $\overline{X_{1,W}} - \overline{X_{1,B}}$ is the white-black means difference in self-employment background characteristics and $\hat{\varepsilon}_1$ the estimated coefficients of those characteristics. Similarly, the portion of the white-black gap that is due to differences in finances is $(\overline{X_{2,W}} - \overline{X_{2,B}}) \cdot \hat{\varepsilon}_2$ and the portion that is due to differences in personal circumstances is $(\overline{X_{3,W}} - \overline{X_{3,B}}) \cdot \hat{\varepsilon}_3$.

Table 11 presents this exercise for the white-black gaps in self-employment outcomes. The likelihood of starting a new business for white participants, for example, exceeded that for black participants by 11.8 percentage points. As Table 11 shows, 3% of that difference is due to white-black differences in self-employment background, 42% is due to differences in finances, and 7% is due to personal circumstances. In other words, due to a better credit history and higher household income, white participants were 42% more likely than black participants to start a new business by Wave 1. We obtain similar results for this outcome for the subsequent surveys,

suggesting that, since white participants had more access to financing at the time of application, they were more likely than black participants to be able to start their own business following random assignment.

Differences in characteristics related to personal finances are also the most important underlying factor of the white-black gap in new business sustainability and self-employment earnings. Between 38%-42% of the white-black gap in new business sustainability at the time of the three follow-up surveys are explained by differences in finances between the two groups. In addition, black participants experienced 22%-41% lower self-employment earnings than white participants at the time of the surveys as a result of their lower access to financing at the time of application.

Table 12 presents the same analysis for the white-other race differences in self-employment outcomes. Differences in self-employment background do little to explain the white-other race gap in self-employment outcomes, although as a result of a better self-employment background, other race participants were 44% more likely than white participants to start a new business by Wave 3. Differences in finances appear again to be the most important underlying factor for the white-other race disparities in the likelihood of starting a new business, new business sustainability, and self-employment earnings.

5. Conclusion

Although previous work shows that self-employment programs are effective in assisting unemployed workers start their own business and avoid unemployment, there is no work examining race differences in the impact of such programs. In addition, previous research does not consider the extent to which participant characteristics related to self-employment background and access to financing may explain race disparities in self-employment outcomes.

This paper addresses these issues using data from Project GATE, a self-employment training program implemented from 2003 through 2005 in Maine, Minnesota, and Pennsylvania.

We show that among unemployed workers in these three states, nonwhites were much more likely than whites to apply for GATE participation. In addition, among unemployed GATE participants, black and other race participants had limited self-employment background, lower access to credit, and other impairing personal circumstances relative to their white peers. Thus, it is not surprising that after random assignment, nonwhite participants were less likely to start and sustain a new business, less likely to be employed, and had lower earnings than their white peers.

Our impact analyses show that GATE had a substantial positive effect on participant outcomes even five years after random assignment. Moreover, we find GATE was equally effective for black and white participants, despite the fact that at the time of application, black participants faced more challenges in pursuing self-employment than whites. In fact, black participants experienced the highest gains – five years after random assignment, GATE had increased their likelihood of starting a new business by almost a quarter, doubled their likelihood of sustaining their new business, and led to almost three times higher self-employment earnings. Our results are less conclusive for other race participants, for whom the program’s impact appears to be very small.

We also find that participant characteristics related to self-employment background, access to financing, and personal circumstances, significantly affected their self-employment outcomes. Based on these results, we assess the degree to which these characteristics may explain the important race disparities in self-employment outcomes of unemployed GATE participants. We find that due to lower access to financing at the time of application, black and other race participants were less likely than white participants to start and sustain a new business and

earned lower self-employment earnings. In contrast, race differences in self-employment background and personal circumstances only accounted for a small fraction of race gaps in these outcomes.

The results of this paper shed more light on whether self-employment programs can emerge as a new strategy for improving the self-employment outcomes of the unemployed, particularly for race minorities. Our results suggest that such programs are likely to attract a disproportionately higher number of nonwhite unemployed workers, presumably because nonwhites face more challenges in pursuing self-employment than whites and are therefore more likely to seek self-employment assistance. Even though many unemployed participants may have no self-employment background and limited access to financing, self-employment programs can still be very effective in improving participant outcomes, at least for white and black participants. These results, combined with the higher application rates among blacks, suggests that availability of government programs offering free self-employment assistance may contribute to closing the white-black gap in self-employment participation and success.

Overall, we conclude that offering self-employment assistance to unemployed workers interested in self-employment is an effective policy tool in promoting the rapid reemployment of these workers through the creation of small business. Besides their short-term positive effects, these programs may also have positive long-run effects through the creation of new jobs and through the potential reduction in the important race disparities in self-employment outcomes. We also recommend that future programs consider strategies to address the important credit constraints faced by unemployed participants. If future programs focus more intensely on assisting participants secure financing for their business, their impact could be significantly improved, particularly for black and other race participants.

Table 1: GATE Application among the Unemployed

	Total	White	Black	Other Race
Unemployed GATE Applicants	2,089	1,344	546	199
Proportion of Applicants	--	0.64	0.26	0.10
Proportion of Population	--	0.84	0.12	0.04
<i>Ratio</i>	--	<i>0.76</i>	<i>2.17</i>	<i>2.50</i>

Note: Reported are the number of unemployed applicants (Unemployed GATE Applicants); proportion of all applicants, by race; and proportion of all unemployed workers, by race.

Table 2: Characteristics of Unemployed GATE Applicants

	All Applicants	White	Black	Other Race
Total	2,089	1,344	546	199
Treatment Group	1,025 (49%)	665 (49%)	260 (48%)	100 (50%)
Male	1,249 (60%)	853 (63%)	284 (52%)	112 (56%)
Age Group				
Less 25 Yrs	54 (3%)	20 (2%)	26 (5%)	8 (4%)
25-34 Yrs	387 (19%)	202 (15%)	131 (24%)	54 (27%)
35-44 Yrs	675 (32%)	403 (30%)	203 (37%)	68 (34%)
35-54 Yrs	720 (34%)	525 (39%)	142 (26%)	53 (27%)
55+ Yrs	253 (12%)	194 (14%)	43 (8%)	16 (8%)
Education				
Less High School	71 (3%)	37 (3%)	24 (4%)	10 (5%)
High School Diploma	470 (23%)	282 (21%)	148 (27%)	40 (20%)
Associate Degree/Some College	766 (37%)	447 (33%)	242 (44%)	77 (39%)
College Degree	369 (18%)	287 (21%)	52 (10%)	30 (15%)
Post-Graduate Degree	413 (20%)	291 (22%)	80 (15%)	42 (21%)
Married	920 (44%)	691 (51%)	147 (27%)	82 (41%)
Has Child Under 18	910 (44%)	520 (39%)	294 (54%)	96 (48%)
Born in the US	1,920 (92%)	1,289 (96%)	497 (91%)	134 (67%)
Disabled	151 (7%)	101 (8%)	28 (5%)	22 (11%)
No English	73 (4%)	22 (2%)	15 (3%)	36 (18%)
Site				
Philadelphia	490 (23%)	106 (8%)	331 (61%)	53 (27%)
Pittsburgh	317 (15%)	216 (16%)	84 (15%)	17 (9%)
Minneapolis/St. Paul	907 (43%)	691 (51%)	121 (22%)	95 (48%)
Maine	258 (13%)	227 (17%)	6 (1%)	25 (13%)
Rural Minnesota	117 (6%)	104 (8%)	4 (1%)	9 (5%)

Note: Reported are the number of unemployed applicants (with sample proportions in parenthesis), overall and by race.

Table 3: Self-Employment Background and Personal Finances, Unemployed GATE Applicants

	All Applicants	White	Black	Other Race
Total	2,089	1,344	546	199
Self-Employment Background				
Ever Self-Employed	733 (35%)	490 (36%)	160 (29%)	83 (42%)
Managerial Experience	1,357 (65%)	920 (68%)	313 (57%)	124 (62%)
Business Plan	436 (21%)	241 (18%)	149 (27%)	46 (23%)
Experience in Area	1,711 (82%)	1,127 (84%)	431 (79%)	153 (77%)
Family Business	1,501 (72%)	1,027 (76%)	329 (60%)	145 (73%)
Work Family Business	673 (32%)	438 (33%)	162 (30%)	73 (37%)
Finances				
Bad/No Credit History	913 (44%)	426 (32%)	396 (73%)	91 (46%)
Family Support	953 (46%)	658 (49%)	218 (40%)	77 (39%)
Income: <\$25k	703 (34%)	332 (25%)	286 (52%)	85 (43%)
Income: \$25k-\$75K	1,069 (51%)	736 (55%)	236 (43%)	97 (49%)
Income: >\$75k	317 (15%)	276 (21%)	24 (4%)	17 (9%)
Personal Circumstances				
Child Care	353 (17%)	173 (13%)	129 (24%)	51 (25%)
Health Insurance	1,299 (62%)	907 (68%)	278 (51%)	114 (57%)

Note: Reported are the number of unemployed applicants (with sample proportions in parenthesis), overall and by race.

Table 4: Response Rates to Follow-up Surveys, Unemployed GATE Applicants

	All Applicants	White	Black	Other Race
All Applicants	2,089	1,344	546	199
Wave 1 Respondents [% of all applicants]	1,737 [83%]	1,150 [86%]	427 [78%]	160 [80%]
Wave 2 Respondents (% of Wave 1 respondents) [% of all applicants]	1,539 (89%) [74%]	1,053 (92%) [78%]	351 (82%) [64%]	135 (84%) [68%]
Wave 3 Respondents (% of Wave 2 respondents) [% of all applicants]	1,261 (82%) [60%]	894 (85%) [67%]	261 (74%) [48%]	106 (79%) [53%]

Note: Reported is the number of unemployed applicants; proportion of all applicants is reported in brackets; and proportion of respondents in previous survey is reported in parenthesis.

Table 5: Post-Training Outcomes, Unemployed GATE Participants

	All	White	Black	Other Race
Started New Business				
By Wave 1	.182 (.007)	.227 (.009)	.109 (.010)	.130 (.018)
By Wave 2	.308 (.008)	.346 (.011)	.238 (.014)	.261 (.026)
By Wave 3	.437 (.010)	.460 (.012)	.377 (.019)	.447 (.034)
Started New Business by Wave 1, Still Operates				
At Wave 1	.175 (.006)	.220 (.009)	.102 (.009)	.121 (.018)
At Wave 2	.141 (.006)	.182 (.009)	.077 (.009)	.060 (.014)
At Wave 3	.105 (.006)	.134 (.009)	.061 (.009)	.028 (.023)
Employed				
At Wave 1	.738 (.007)	.762 (.009)	.713 (.014)	.669 (.025)
At Wave 2	.748 (.009)	.760 (.010)	.745 (.015)	.676 (.028)
At Wave 3	.790 (.008)	.811 (.010)	.748 (.017)	.758 (.029)
Self-Employment Earnings				
At Wave 1	3,025 (222)	3,755 (306)	1,756 (308)	2,466 (817)
At Wave 2	4,106 (244)	5,083 (344)	2,526 (359)	2,419 (571)
At Wave 3	5,311 (364)	6,560 (511)	2,764 (454)	3,616 (907)
Total Earnings				
At Wave 1	24,159 (488)	24,560 (664)	23,097 (753)	24,938 (1,696)
At Wave 2	29,462 (599)	31,651 (832)	25,482 (8610)	27,042 (1,810)
At Wave 3	42,854 (871)	45,119 (1,166)	37,916 (1,310)	40,726 (2,852)
Household Income				
At Wave 1	34,308 (637)	38,406 (813)	25,915 (885)	34,936 (2,962)
At Wave 2	37,264 (757)	42,277 (999)	27,550 (1,000)	33,613 (3,239)
At Wave 3	56,330 (992)	60,745 (1,261)	45,454 (1,653)	55,772 (3,699)

Note: Reported are sample means with standard error in parenthesis.

Table 6: Regression Results – Likelihood of Starting a New Business

	Started New Business By Wave 1		Started New Business By Wave 2		Started New Business By Wave 3	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	.095 (.019)***	.102 (.026)***	.082 (.024)***	.069 (.030)**	.056 (.029)*	.070 (.035)**
Treatment x Black	--	-.004 (.046)	--	.044 (.058)	--	.012 (.072)
Treatment x Other Race	--	-.067 (.063)	--	.019 (.086)	--	-.092 (.110)
Black	-.042 (.027)	-.039 (.030)	-.007 (.036)	-.028 (.044)	-.034 (.047)	-.037 (.058)
Other Race	-.063 (.035)*	-.030 (.045)	-.058 (.048)	-.068 (.065)	-.021 (.059)	-.084 (.085)
Ever Self-Employed	.026 (.021)	.027 (.021)	.046 (.026)*	.046 (.026)*	.091 (.031)***	.090 (.031)***
Managerial Experience	.016 (.021)	.017 (.021)	.028 (.027)	.028 (.027)	.018 (.033)	.020 (.033)
Business Plan	.050 (.025)**	.050 (.025)**	.050 (.032)	.050 (.032)	.045 (.039)	.046 (.039)
Experience in Area	.051 (.023)**	.051 (.023)**	.045 (.031)	.045 (.031)	.046 (.039)	.046 (.039)
Family Business	.001 (.023)	.000 (.023)	-.009 (.030)	-.008 (.030)	.004 (.038)	.004 (.038)
Work Family Business	.046 (.024)**	.046 (.024)**	.089 (.030)***	.088 (.030)***	.075 (.035)**	.072 (.036)**
Bad/No Credit History	-.049 (.022)**	-.049 (.022)**	-.061 (.028)**	-.061 (.028)**	-.050 (.035)	-.048 (.035)
Family Support	-.017 (.023)	-.018 (.023)	-.013 (.029)	-.012 (.029)	-.019 (.036)	-.018 (.035)
Income: <\$25k	-.060 (.022)***	-.061 (.022)***	-.052 (.029)*	-.052 (.030)*	-.042 (.038)	-.047 (.037)
Income: >\$75k	.086 (.034)**	.087 (.034)**	.112 (.039)***	.111 (.039)***	.154 (.043)***	.156 (.043)***
Child Care	-.047 (.027)*	-.046 (.027)*	-.097 (.035)***	-.096 (.035)***	-.044 (.045)	-.045 (.045)
Health Insurance	.017 (.020)	.018 (.021)	-.008 (.027)	-.008 (.037)	-.021 (.033)	-.015 (.033)
Demographics	Yes	Yes	Yes	Yes	Yes	Yes
Site Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-Squared	.089	.090	.079	.079	.076	.079

Note: Reported are weighted linear regression estimates with standard errors in parenthesis. Also included in the specification but not reported are available demographics (as shown in Table 2) and site fixed effects. Statistical significance: *, **, *** = 10%, 5%, 1%.

Table 7: Regression Results – Likelihood of Starting a New Business at Wave 1 that Still Operates

	Started New Business by Wave 1, Still Operates at Wave 1		Started New Business by Wave 1, Still Operates at Wave 2		Started New Business by Wave 1, Still Operates at Wave 3	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	.090 (.019)***	.100 (.025)***	.068 (.018)***	.075 (.024)***	.053 (.017)***	.065 (.024)***
Treatment x Black	--	-.008 (.040)	--	-.007 (.040)	--	-.013 (.039)
Treatment x Other Race	--	-.077 (.062)	--	-.052 (.053)	--	-.072 (.050)
Black	-.053 (.027)**	-.049 (.030)*	-.029 (.024)	-.024 (.028)	-.033 (.024)	-.021 (.027)
Other Race	-.076 (.024)**	-.038 (.044)	-.103 (.030)***	-.076 (.037)**	-.106 (.025)***	-.067 (.032)**
Ever Self-Employed	.008 (.021)	.008 (.021)	.012 (.020)	.012 (.020)	.006 (.018)	.006 (.018)
Managerial Experience	.013 (.020)	.014 (.020)	.010 (.020)	.011 (.020)	-.009 (.020)	-.007 (.020)
Business Plan	.045 (.025)*	.045 (.025)*	.035 (.024)	.035 (.023)	.045 (.023)**	.045 (.023)**
Experience in Area	.042 (.022)*	.042 (.022)*	.040 (.020)**	.040 (.020)**	.048 (.019)***	.048 (.019)**
Family Business	.006 (.023)	.004 (.023)	-.010 (.022)	-.010 (.022)	-.011 (.021)	-.012 (.021)
Work Family Business	.044 (.023)*	.043 (.023)*	.054 (.023)**	.054 (.023)**	.036 (.021)*	.036 (.022)*
Bad/No Credit History	-.048 (.021)**	-.047 (.021)**	-.072 (.020)***	-.071 (.020)***	-.047 (.020)**	-.047 (.020)**
Family Support	-.009 (.022)	-.010 (.022)	-.039 (.022)	-.029 (.022)	-.028 (.023)	-.028 (.023)
Income: <\$25k	-.048 (.022)**	-.049 (.022)**	-.017 (.021)	-.018 (.021)	-.032 (.021)	-.034 (.021)
Income: >\$75k	.082 (.034)**	.083 (.034)**	.081 (.032)**	.082 (.032)**	.026 (.029)	.027 (.029)
Child Care	-.039 (.026)	-.038 (.026)	-.004 (.026)	-.004 (.026)	.006 (.027)	.005 (.027)
Health Insurance	.017 (.020)	.018 (.020)	.037 (.019)*	.038 (.019)**	.022 (.018)	.024 (.019)
Demographics	Yes	Yes	Yes	Yes	Yes	Yes
Site Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-Squared	.085	.086	.084	.084	.066	.067

Note: Reported are weighted linear regression estimates with standard errors in parenthesis. Also included in the specification but not reported are available demographics (as shown in Table 2) and site fixed effects. Statistical significance: *, **, *** = 10%, 5%, 1%.

Table 8: Regression Results – Likelihood of Employment

	Employed at Wave 1		Employed at Wave 2		Employed at Wave 3	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	.067 (.022)***	.079 (.026)***	.024 (.023)	.015 (.028)	-.018 (.025)	-.036 (.028)
Treatment x Black	--	-.016 (.052)	--	.020 (.055)	--	.097 (.067)
Treatment x Other Race	--	-.080 (.080)	--	.037 (.089)	--	-.086 (.072)
Black	.018 (.034)	.026 (.043)	.051 (.026)	.042 (.045)	-.089 (.042)**	-.134 (.054)**
Other Race	-.045 (.043)	-.005 (.059)	-.066 (.048)	-.085 (.068)	.009 (.041)	.059 (.053)
Ever Self-Employed	.099 (.023)***	.099 (.023)***	.045 (.024)*	.045 (.024)*	.082 (.026)***	.083 (.026)***
Managerial Experience	-.041 (.024)*	.041 (.024)*	-.029 (.025)	-.030 (.025)	.039 (.029)	.038 (.029)
Business Plan	.053 (.027)**	.054 (.027)**	.029 (.029)	.029 (.029)	.003 (.033)	.006 (.033)
Experience in Area	.027 (.029)	.027 (.030)	.036 (.031)	.036 (.031)	.041 (.035)	.041 (.034)
Family Business	.004 (.028)	.003 (.028)	-.020 (.029)	-.019 (.030)	.022 (.032)	.024 (.032)
Work Family Business	-.006 (.026)	-.007 (.026)	.028 (.028)	.028 (.028)	.006 (.029)	-.000 (.029)
Bad/No Credit History	.002 (.026)	.003 (.026)	-.013 (.027)	-.013 (.027)	-.036 (.031)	-.033 (.031)
Family Support	-.001 (.026)	-.002 (.026)	.034 (.027)	.034 (.027)	-.014 (.031)	-.015 (.031)
Income: <\$25k	.002 (.026)	-.002 (.027)	.034 (.027)	.034 (.029)	-.094 (.033)***	-.096 (.033)***
Income: >\$75k	-.057 (.034)*	-.057 (.034)*	-.022 (.035)	-.023 (.035)	.004 (.033)	.005 (.033)
Child Care	-.101 (.034)***	-.100 (.034)***	-.047 (.035)	-.047 (.035)	.025 (.038)	.027 (.038)
Health Insurance	.030 (.025)	.031 (.025)	.031 (.026)	.031 (.026)	.029 (.029)	.033 (.029)
Demographics	Yes	Yes	Yes	Yes	Yes	Yes
Site Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-Squared	.055	.055	.035	.035	.116	.120

Note: Reported are weighted linear regression estimates with standard errors in parenthesis. Also included in the specification but not reported are available demographics (as shown in Table 2) and site fixed effects. Statistical significance: *, **, *** = 10%, 5%, 1%.

Table 9: Regression Results – Self-Employment Earnings

	Self-Employment Earnings at Wave 1		Self-Employment Earnings at Wave 2		Self-Employment Earnings at Wave 3	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	242 (482)	598 (651)	462 (639)	720 (873)	1,658 (1,057)	1,614 (1,564)
Treatment x Black	--	-571 (1,110)	--	-562 (1,569)	--	1,167 (2,198)
Treatment x Other Race	--	-2,149 (1,456)	--	-1,170 (1,472)	--	-2,907 (2,489)
Black	-563 (903)	-271 (1,219)	-38 (1,209)	246 (1,695)	-2,151 (1,379)	-2,678 (1,775)
Other Race	-1,108 (954)	-48 (1,444)	-2,198 (946)**	-1,597 (1,187)	-3,690 (1,356)***	-2,745 (1,835)
Ever Self-Employed	844 (616)	850 (614)	1,313 (830)	1,311 (821)	1,569 (1,090)	1,568 (1,088)
Managerial Experience	280 (579)	311 (582)	682 (728)	709 (741)	-947 (1,198)	-943 (1,218)
Business Plan	1,937 (905)**	1,939 (901)**	1,815 (1,070)*	1,811 (1,065)*	1,154 (1,390)	1,192 (1,392)
Experience in Area	1,257 (329)***	1,253 (430)***	1,650 (580)***	1,655 (581)***	3,520 (932)***	3,515 (930)***
Family Business	-1,456 (752)*	-1,479 (759)*	-1,593 (980)	-1,613 (994)	-402 (1,472)	-397 (1,497)
Work Family Business	365 (559)	347 (553)	1,316 (727)*	1,314 (729)*	768 (1,272)	674 (1,295)
Bad/No Credit History	-1,104 (680)*	-1,096 (687)	-1,859 (898)**	-1,855 (906)**	-150 (1,127)	-86 (1,139)
Family Support	-1,321 (688)*	-1,339 (689)*	-1,139 (817)	-1,153 (820)	-2,465 (1,506)	-2,453 (1,501)
Income: <\$25k	-12 (522)	-37 (529)	-24 (657)	-36 (664)	553 (1,094)	481 (1,118)
Income: >\$75k	1,780 (994)*	1,818 (992)*	3,748 (1,296)***	3,769 (1,296)***	6,999 (1,884)***	7,026 (1,886)***
Child Care	-202 (598)	-194 (600)	-816 (924)	-820 (927)	-845 (1,284)	-832 (1,265)
Health Insurance	-379 (505)	-350 (508)	165 (641)	189 (650)	-352 (965)	-244 (979)
Demographics	Yes	Yes	Yes	Yes	Yes	Yes
Site Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-Squared	.047	.048	.062	.063	.064	.065

Note: Reported are weighted linear regression estimates with standard errors in parenthesis. Also included in the specification but not reported are available demographics (as shown in Table 2) and site fixed effects. Statistical significance: *, **, *** = 10%, 5%, 1%.

Table 10: GATE Impact on Post-Training Outcomes

	White	Black	Other Race
Started New Business by Wave 1	.192 (.012)	.096 (.013)	.108 (.024)
GATE Impact	.102 (.026)***	.098 (.032)***	.036 (.058)
<i>GATE Impact (% of control group mean)</i>	+53%	+102%	+33%
Started New Business by Wave 2	.322 (.015)	.218 (.020)	.020 (.035)
GATE Impact	.069 (.030)**	.112 (.049)**	.088 (.080)
<i>GATE Impact (% of control group mean)</i>	+21%	+51%	+440%
Started New Business by Wave 3	.437 (.018)	.357 (.027)	.449 (.051)
GATE Impact	.070 (.035)**	.082 (.062)	-.022 (.104)
<i>GATE Impact (% of control group mean)</i>	+16%	+23%	-5%
New Business Sustained at Wave 1	.185 (.012)	.088 (.013)	.102 (.024)
GATE Impact	.100 (.025)***	.092 (.031)***	.022 (.056)
<i>GATE Impact (% of control group mean)</i>	+54%	+105%	+22%
New Business Sustained at Wave 2	.155 (.012)	.068 (.012)	.030 (.015)
GATE Impact	.075 (.024)***	.067 (.031)**	.022 (.047)
<i>GATE Impact (% of control group mean)</i>	+48%	+99%	+73%
New Business Sustained at Wave 3	.106 (.011)	.055 (.013)	.010 (.010)
GATE Impact	.065 (.024)***	.052 (.025)**	-.007 (.032)
<i>GATE Impact (% of control group mean)</i>	+61%	+95%	-70%
Employed at Wave 1	.744 (.014)	.716 (.020)	.633 (.038)
GATE Impact	.079 (.026)***	.062 (.033)*	-.002 (.076)
<i>GATE Impact (% of control group mean)</i>	+11%	+9%	-0%
Employed at Wave 2	.751 (.014)	.758 (.021)	.629 (.042)
GATE Impact	.015 (.028)	.035 (.046)	.052 (.085)
<i>GATE Impact (% of control group mean)</i>	+2%	+5%	+7%
Employed at Wave 3	.821 (.014)	.733 (.025)	.806 (.040)
GATE Impact	-.036 (.028)	.062 (.060)	-.122 (.086)
<i>GATE Impact (% of control group mean)</i>	-4%	+8%	-15%
Self-Employment Earnings at Wave 1	4,024 (405)	2,300 (583)	3,631 (1,662)
GATE Impact	598 (651)	27 (872)	-1,550 (1,288)
<i>GATE Impact (% of control group mean)</i>	+15%	+1%	-43%
Self-Employment Earnings at Wave 2	5,234 (512)	2,764 (606)	2,038 (767)
GATE Impact	720 (873)	158 (1,248)	-450 (1,136)
<i>GATE Impact (% of control group mean)</i>	+14%	+6%	-22%
Self-Employment Earnings at Wave 3	6,071 (690)	1,509 (372)	4,066 (1,276)
GATE Impact	1,614 (1,564)	2,781 (1,411)**	-1,293 (1,881)
<i>GATE Impact (% of control group mean)</i>	+27%	+184%	-32%

Note: The first row reports the control group mean with standard error in parenthesis; the second row reports the GATE impact with standard error in parenthesis; and the third row reports the impact of GATE as a percentage of the control group mean. Statistical significance: *, **, ***=10%, 5%, 1%.

Table 11: Decomposition of White-Black Differences in Self-Employment Outcomes

	Actual Difference	Self-Employment Background	Finances	Personal Circumstances
Started a New Business				
By Wave 1	.118	.003 (3%)	.049 (42%)	.008 (7%)
By Wave 2	.108	.005 (5%)	.056 (52%)	.009 (8%)
By Wave 3	.083	.009 (11%)	.055 (67%)	.001 (2%)
Started a New Business by Wave 1, Still Operates				
At Wave 1	.118	.002 (2%)	.045 (38%)	.007 (6%)
At Wave 2	.105	.001 (1%)	.044 (42%)	.007 (6%)
At Wave 3	.073	-.003 (4%)	.030 (41%)	.003 (11%)
Self-Employment Earnings				
At Wave 1	\$1,999	-253 (13%)	622 (31%)	-41 (2%)
At Wave 2	\$2,557	-138 (5%)	1,068 (41%)	115 (5%)
At Wave 3	\$3,796	29 (1%)	815 (22%)	33 (1%)

Note: The first column reports the means difference in outcomes between white and black participants; the remaining columns report the portion of that difference that is explained by: differences in self-employment background; differences in finances; and in personal circumstances. In parenthesis are reported the proportions of the actual difference.

Table 12: Decomposition of White-Other Race Differences in Self-Employment Outcomes

	Actual Difference	Self-Employment Background	Finances	Personal Circumstances
Started a New Business				
By Wave 1	.097	-.001 (1%)	.026 (27%)	.008 (8%)
By Wave 2	.085	-.004 (5%)	.030 (35%)	.012 (14%)
By Wave 3	.013	-.006 (44%)	.031 (239%)	.003 (27%)
Started a New Business by Wave 1, Still Operates				
At Wave 1	.099	-.001 (1%)	.024 (24%)	.007 (68%)
At Wave 2	.122	-.002 (1%)	.020 (16%)	.004 (4%)
At Wave 3	.106	-.002 (2%)	.013 (12%)	.002 (1%)
Self-Employment Earnings				
At Wave 1	\$1,289	-107 (8%)	235 (18%)	-13 (1%)
At Wave 2	\$2,664	-117 (4%)	598 (22%)	121 (5%)
At Wave 3	\$2,944	-1 (0%)	508 (17%)	72 (2%)

Note: The first column reports the means difference in outcomes between white and other race participants; the remaining columns report the portion of that difference that is explained by: differences in self-employment background; differences in finances; and in personal circumstances. In parenthesis are reported the proportions of the actual difference.

References

- Bates T. (1985). Entrepreneur Human Capital Endowments and Minority Business Viability. *Journal of Human Resources*, Vol. 20, No. 5, pp. 540-554.
- Bates T. (1997). *Race, Self-Employment, and Upward Mobility: An Illusive American Dream*. Woodrow Wilson Center Press, Washington DC; Johns Hopkins University Press, Baltimore, MD.
- Benus, J., Johnson T., Wood M., Grover N., and Shen T. (1995). *Self-Employment Programs: A New Reemployment Strategy: Final Report on the UI Self-Employment Demonstration*. Unemployment Insurance Occasional Paper no. 95-4. U.S. Department of Labor, Washington DC, 1995.
- Benus J., McConnell S., Bellotti J., Shen T., Fortson K., Kahvecioglu D. (2008). *Growing America Through Entrepreneurship: Findings from the Evaluation of Project GATE*. U.S. Department of Labor Report, May 2008.
- Benus J., Michaelides M. (2010). *Are Self-Employment Programs Effective? Evidence from Project GATE*. IMPAQ International Working Paper, January 2010.
- Blanchflower D.G., Levine P.B., Zimmerman D.J. (2003). Discrimination in the Small Business Credit Market. *Review of Economics and Statistics*, Vol. 85, No. 4, pp. 930-943.
- Cavaluzzo K., Wolken J. (2002). *Small Business Loan Turndowns, Personal Wealth, and Discrimination*. Working Paper.
- Fairlie R.W. (1999). The Absence of the African-American Owned Business: An Analysis of the Dynamics of Self-Employment. *Journal of Labor Economics*, Vol. 17, No. 1, pp. 80-108.
- Fairlie R.W., Meyer B.D. (1996). Ethnic and Racial Self-Employment Differences and Possible Explanations. *Journal of Human Resources*, Vol. 31, pp. 757-793.
- Fairlie R.W., Meyer B.D. (2000). Trends in Self-Employment among White and Black Men: 1910-1990. *Journal of Human Resources*, Vol. 35, No. 4, pp. 643-649.
- Fairlie R.W., Robb A.M. (2007a). Access to Financial Capital among U.S. Businesses: The Case of African American Firms. *The Annals of the American Academy of Political and Social Science*, Vol. 613, No. 47, pp. 47-72.
- Fairlie R.W., Robb A.M. (2007b). Families, Human Capital, and Small Business: Evidence from the Characteristics of Business Owners Survey. *Industrial Relations and Labor Review*, Vol. 60, No. 2, pp. 225-245.

- Fairlie R.W., Robb A.M. (2007c). Why Are Black-Owned Businesses Less Successful than White-Owned Businesses? The Role of Families, Inheritances, and Business Human Capital. *Journal of Labor Economics*, Vol. 25, No. 2, pp. 289-323.
- Glocker D., Steiner V. (2007). Self-Employment: A Way to End Unemployment? Empirical Evidence from German Pseudo-Panel Data. IZA Discussion Paper No. 2561.
- Hout M., Rosen H.S. (2000). Self-Employment, Family Background, and Race. *Journal of Human Resources*, Vol. 35, pp. 670-692.
- Kosanovich W.T., Fleck H., Yost B., Armon W., Siliezar S. (2002). Comprehensive Assessment of Self-Employment Assistance Programs. Employment and Training Administration Occasional Paper 2002-01. U.S. Department of Labor, Washington DC 2002.
- Lofstrom M., Bates T. (2007). African American's Pursuit of Self-Employment, IZA Discussion Paper No. 3156.
- Meager N. (1992). Does Unemployment Lead to Self-Employment? *Small Business Economics*, Vol. 4, pp. 87-103.
- Reynolds P.D., Carter N.M., Gartner W.B., Greene P.G. (2004). The Prevalence of Nascent Entrepreneurs in the United States: Evidence from the Panel Study of Entrepreneurial Dynamics. *Small Business Economics*, Vol. 23, pp. 263-284.
- Rissman E.R. (2003). Self-Employment as an Alternative to Unemployment. Federal Reserve Bank of Chicago, Working Paper 2003-34.
- Smith D.T. (2004). Developing Self-Employment Among African Americans: An Examination of Human Capital Resources. *Development and Society*, Vol. 33, No. 1, pp. 81-92.
- Vroman, W. (1997). Self-Employment Assistance: Revised Report. Report to Congress, Washington DC, 1997.