Growing America Through Entrepreneurship: Final Evaluation of Project GATE

December 2009

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ACKNOWLEDGEMENTS

The design, implementation, and analysis of the Growing America Through Entrepreneurship (Project GATE) demonstration required an extensive collaborative effort among the U.S. Department of Labor (USDOL); the Small Business Administration (SBA); the Departments of Labor of Minnesota, Pennsylvania and Maine; IMPAQ International (IMPAQ), Mathematica Policy Research (Mathematica); Battelle Memorial Institute (Battelle); Washington Software; and a number of local organizations that provided business assistance services to participants in the project. Many individuals from these and other organizations have made valuable contributions to the success of the Project GATE demonstration.

The authors wish to particularly acknowledge a number of USDOL staff who contributed greatly to the success of the project. We particularly appreciate the support of Jonathan Simonetta, the USDOL Project Officer. Mr. Simonetta provided guidance and valuable input throughout the research design, implementation, and analysis stages of the project.

Within IMPAQ, we would like to thank Lisa Lin and Alicia Schoua-Glusberg, who directed Wave 1 and Wave 2 of the survey; Julie Young who directed Wave 3 of the survey; Hugh Carrington who served as Project Manager and site monitor in the early years of the project; Mia Blecher and Julie Young who served as Project Manager in the latter years; and Eileen Poe-Yamagata who served as site-monitor and contributed to the process evaluation.

This report benefits substantially from the work done by staff at Mathematica Policy Research. Mathematica staff contributed to the design, implementation, and analysis of the early impacts of Project GATE. In particular, we would like to thank Sheena McConnell, the Principal Investigator, who contributed to all study phases, as well as in the writing of the earlier report. We also acknowledge Jeanne Bellotti who led the process evaluation and the report on early GATE findings.

The success of the demonstration also owes much to Terry Johnson of Battelle. Terry provided invaluable guidance throughout the project.

We also thank the late Walter Corson, co-Principal Investigator at Mathematica. Walt's ideas contributed significantly to the design of the demonstration.

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EXECUTIVE SUMMARY

> *Business ownership has always been a cornerstone of the American dream. Many Americans have dreamed of owning their own business at one time or another. The current social and economic climate presents unprecedented opportunity for aspiring entrepreneurs.*[1]

Recognizing the untapped potential of Americans to start their own businesses and become self-employed, the U.S. Department of Labor (DOL), Employment and Training Administration, teamed with the Small Business Administration (SBA) to create a demonstration project—Project GATE (**G**rowing **A**merica **T**hrough **E**ntrepreneurship)—designed to help people create, sustain or expand their own business. This report examines the effectiveness of Project GATE in creating businesses and improving participants' well-being during a 60-month observation period. An earlier report analyzed program impacts during an 18-month observation period (Benus et al. 2008).

Project GATE was implemented in seven sites in three states—Minnesota, Pennsylvania, and Maine—between fall 2003 and summer 2005. Almost anyone interested in starting or growing a small business was eligible to participate in Project GATE. Participants were offered an initial assessment of their business needs, classroom training, one-on-one business counseling, and assistance in applying for business financing.

DOL's One-Stop Career Centers were the gateways to the program. These centers, which provide a wide range of services for job seekers and employers, conducted outreach for Project GATE and hosted the program's orientation sessions. Project GATE added another service—one that focused on helping people become self-employed—to the One-Stop Career Centers' arsenal of employment services. By offering this service in One-Stop Career Centers, Project GATE intended to attract new and more diverse customers to the public workforce system.

IMPAQ International and its subcontractor, Mathematica Policy Research, designed and implemented the evaluation of Project GATE to address the following questions:

[1] http://www.dol.gov/odep/pubs/business/business.htm

- Could Project GATE be replicated?
- Was Project GATE effective in increasing business ownership, employment, and self-sufficiency?

This report presents the findings from the evaluation and policy recommendations based on the evaluation results.

Project GATE Design

Project GATE was designed to serve almost anyone, whether employed or unemployed, who was interested in creating, sustaining or expanding a small business. The program was open to anyone 18 years of age or older who was lawfully able to work in the United States, resided in one of the demonstration states, and had a business idea that was legal and appropriate for federal support. If these criteria were met, no applicant was prevented from participating based on their particular business idea or their qualifications for starting a business.

Intake for Project GATE involved three steps. First, people interested in Project GATE could register in a number of different ways: at a GATE kiosk, at a One-Stop Career Center, through the GATE website, by mailing a postcard, or by calling a toll-free number. Second, those who registered for Project GATE were asked to attend an orientation session at a One-Stop Career Center. At the orientation, a video was shown that described GATE services, the GATE application process, and both the positive and negative aspects of self-employment. Finally, orientation attendees who wished to apply to Project GATE were asked to complete an application package and mail it to IMPAQ International.

Half of those who completed the above three steps were randomly assigned to the GATE participant group and were eligible to receive GATE services. However, Project GATE emphasized customer choice: individual participants were not required to use any of the program services.

Each participant could decide to receive any, all, or none of the following:

- ***Assessment.*** Participants were invited to meet with a counselor to determine the participant's service needs and the provider that would best meet those needs.

- ***Training.*** Project GATE offered a wide variety of training courses, including: general business courses; specific courses on topics such as how to deal with legal and personnel issues; and specialized training courses on such topics as QuickBooks.

- ***Business Counseling.*** Participants were given the opportunity to meet with business counselors for one-on-one assistance with their business, business idea, and/or application for a business loan.

Project GATE was implemented in seven sites:

- Philadelphia, PA
- Pittsburgh, PA
- Minneapolis/St. Paul, MN
- Northeast Minnesota including Duluth, MN and Virginia, MN;
- Portland, ME;
- Lewiston, ME; and
- Bangor, ME.

The sites were selected to include three sites in urban areas and four that were mostly rural—northeast Minnesota and the three sites in Maine.

Evaluation Design

The cornerstone of the evaluation of Project GATE was random assignment. A total of 4,198 applicants to Project GATE were randomly assigned to either the program group or the control group. Members of the program group were offered GATE services; members of the control group were not.

Random assignment ensured that the applicants assigned to the program group would have on average the same observable and unobservable characteristics as applicants assigned to the control group. Any differences in outcomes between the program and control groups can thus be directly attributed to Project GATE with a known degree of statistical precision.

While control group members could not participate in Project GATE, they were not prevented from receiving any other self-employment services offered in the community. Therefore, this

evaluation does not address the impact of Project GATE compared to receiving *no* self-employment services. Instead, it addresses the more policy-relevant question: What is the effect of adding Project GATE to the array of self-employment services already offered in the community?

The impact evaluation examined whether Project GATE affected four main outcomes:

(1) the receipt of self-employment services;

(2) business ownership;

(3) employment and earnings; and

(4) self-sufficiency.

To evaluate these outcomes and to give context to the findings, the evaluation used four sources of data:

- ***Participant Tracking System (PTS).*** The PTS is a web-based data collection system designed to capture project-related data on all individuals who expressed an interest in participating in Project GATE. The PTS captured data at each stage of their participation in GATE: registration, orientation, application, random assignment, assessment, referral, and service. A variety of project monitoring reports were created from the data captured in the PTS database; these reports proved invaluable in managing the implementation of GATE at each participating site.

- ***Site Visits.*** Four rounds of site visits were conducted. During these visits, interviews were conducted with Project GATE administrators, instructors, business counselors, and selected participants.

- ***Three Follow-Up Surveys.*** The first telephone survey was conducted about six months after random assignment; a second survey was conducted about eighteen months after random assignment; a third survey was implemented about sixty months after random assignment. The sample frame included everyone who was randomly assigned to either the program or control group. A total of 3,450 Wave 1 interviews were completed,

yielding a survey response rate of 82 percent. The Wave 2 survey yielded 3,039 completed interviews, for a response rate of 88 percent of the Wave 1 respondents. The Wave 3 survey resulted in 2,450 completed interviews, with a survey response rate of 81 percent of the Wave 2 respondents. An analysis of sample attrition reveals that the observable characteristics of the program and control groups remained similar through all three survey waves.

- ***Unemployment Insurance (UI) Administrative Data.*** Quarterly wage records and UI benefit data were collected for all GATE applicants for the time period covering the 12 months before random assignment and the 12 months following random assignment. Administrative data were not available for the period after the Wave 2 interviews.

Implementation Analysis

A detailed implementation analysis, drawing on data from the application and orientation forms, the PTS, and site visits drew the following conclusions:

- Project GATE incorporated a broad array of service providers;
- Training courses varied across sites;
- A variety of outreach methods were used to attract applicants;
- About three-quarters of the program group received classroom training or individual counseling from Project GATE;
- Project GATE participants received about 13 more hours of self-employment services than control group members;
- The estimated cost of Project GATE per program group member based on the invoice data was $1,321;
- Project GATE attracted a broad range of applicants; and
- Project GATE could be implemented on a wider scale.

Impact Analysis

Overall impacts of Project GATE were estimated by comparing the mean value of each outcome among the program group to the mean value of the outcome among the control group. Impacts were also estimated by site and by subgroup. Special attention was paid to one subgroup: UI recipients at random assignment. This subgroup is of particular interest to DOL since many workforce programs are directed to assist UI recipients. Impact estimates for the full sample and for UI recipients on the key outcomes are presented in detail in Chapters V, VI, and VII. Below is a summary of the main findings.

Business Ownership

- Project GATE had a statistically significant impact on the probability of owning a business only in the first few quarters after random assignment.

- Impacts on business ownership peaked shortly after random assignment and then began to fade. Both program and control group members experienced a steep growth in business ownership shortly after random assignment. At Wave 1, 44 percent of program group members and 38 percent of control group members reported owning a business. The 6 percentage point difference is statistically significant at the 1 percent level. By the time of the Wave 3 survey, program group members were equally likely (37 percent) to own a business as control group members.

- Program group members started their first business sooner and their businesses had greater longevity than control group businesses.

- The impact on business ownership was substantially larger among individuals who were receiving UI benefits at random assignment.

- Men were significantly more likely to benefit from Project GATE than women.

- GATE had no impact on the earnings of the self-employed.

Total Employment

- Project GATE increased the likelihood of self-employment during the first few quarters after enrollment. After the ninth quarter, the impact was not statistically significant.
- Project GATE reduced the likelihood of wage and salary employment in about half of the quarters following random assignment. In the remaining quarters, the impact was insignificant.
- Project GATE had no impact on the likelihood of total employment, defined as self-employment plus wage and salary jobs.
- Among individuals who were receiving UI benefits at random assignment, Project GATE substantially increased the likelihood of self-employment in the early quarters after random assignment.
- Project GATE generated additional jobs for non-participants.

Earnings from Self Employment and Wage and Salary Jobs

- Project GATE had no impact on regular self-employment earnings during any of the 16 quarters following random assignment.
- Project GATE had little impact on earnings from wage and salary employment.
- With the exception of the first two quarters after random assignment, Project GATE had no impact on total earnings during the follow-up period.

Self-Sufficiency

- Over the 60-month follow up period, Project GATE had no impact on the likelihood of UI benefit receipt, number of weeks of benefits, or amount of benefits.
- For UI recipients, GATE had a significant positive impact on the number of weeks of UI benefits and total amount of UI benefits received between random assignment and Wave 1, but not thereafter. Over the 60-month follow-up period, Project GATE

had no impact on the likelihood of UI benefit receipt, number of weeks of benefits, or amount of benefits.

- Project GATE had no impact on the receipt of public assistance benefits.
- Project GATE had no impact on household income or the earnings of the entrepreneur's spouse.

Benefit-Cost Analysis

Policymakers generally view a program as cost-effective if all its benefits, summed over everyone in society, exceed all its costs. The magnitude of the benefits and costs to society indicate how the program affects net resources in the economy. The benefits and costs analysis yielded the following findings:

- During the follow-up period, program group members earned more, on average, from businesses than control group members. The full sample earned on average, approximately $1,100 more; the UI recipient subgroup earned, on average, $3,100 more.
- The cost to the Department of Labor (DOL) of providing GATE services was approximately $1,300 per program group member.
- The main cost of Project GATE was the loss of wage and salary earnings while starting a business. Program group members in the full sample earned on average, approximately $1,500 less than control group members; program group members in the UI recipient subgroup earned, on average, $1,100 less than their control group counterparts.
- For the full sample, the measured costs of Project GATE exceeded its measured benefits from the three perspectives analyzed: participants, non-participants, and society. For these three groups, costs exceeded benefits by $718, $989, and $1,707, respectively.

- For the UI recipient subgroup, however, the measured benefits of Project GATE exceeded its measured costs from two perspectives: participants and society. Participants had a net benefit of $4,523, while society had a net benefit of $2,192.

- Since our methodology of dealing with estimation uncertainty was uniformly conservative, our overall conclusion is that the benefits of Project GATE exceed its costs.

Lessons Learned

The findings from this report suggest the following lessons:

- **Self-employment service programs could be offered at One-Stop Career Centers.** While One-Stop Career Centers are not traditionally known as places to go for self-employment services, Project GATE was able, with some marketing, to draw entrepreneurs and prospective entrepreneurs into the centers.

- **Self-employment services are readily available even in the absence of Project GATE.** The evaluation was designed to examine the impact of adding Project GATE to the array of self-employment programs already available in the communities. Hence, control group members were not prevented from receiving other services in the community. Many did—about 78 percent of control group members received some self-employment services during the 60-month observation period.

- **Increased business ownership does not lead to a statistically significant increase in self-employment earnings in the short run.** Even though program group members were more likely to own a business, Project GATE had no statistically significant impact on business earnings in any of the 16-quarters after random assignment.

- **Loss of earnings from wage and salary jobs is a significant short-run cost of a self-employment program.** While working on their businesses, GATE participants

worked less in wage and salary jobs than control group members, especially in the first few quarters after applying to the program.

- **Self-employment programs have larger impacts on UI recipients.** Impacts on business ownership were higher for those who were receiving UI when they applied to Project GATE. Not having a wage and salary job provided UI claimants with more time to work on their businesses, while the UI benefits provided a regular income.

- **Eighteen months is too short to determine the effectiveness of Project GATE.** The earlier Project GATE evaluation followed sample members for 18 months after random assignment—an extremely short period of time to receive services and build a successful business. The results from this 60-month follow-up study provide a more definitive assessment of the effectiveness of Project GATE.

CHAPTER I.
INTRODUCTION

This report presents the results of a long-run assessment of the impact of Project GATE (**G**rowing **A**merica **T**hrough **E**ntrepreneurship). An earlier report (Benus et al. 2008) covered impact results based on two follow-up surveys, conducted 6 and 18 months after enrollment. In this report, we focus on impact estimates based on a third follow-up survey conducted about five years after enrollment. Thus, the results reported here reflect the long-run impacts of Project GATE.

In 2002, the U.S. Department of Labor (DOL), Employment and Training Administration, teamed with the Small Business Administration (SBA) to create a demonstration project—Project GATE. This random assignment demonstration project was designed to assist people in creating, sustaining or expanding their own businesses. The demonstration was implemented between 2003 and the 2005 in seven sites in the following three states: Pennsylvania, Minnesota, and Maine. Almost anyone interested in starting or growing a small business was eligible to participate in Project GATE. GATE participants were offered an assessment of their business needs, classroom training, one-on-one business counseling, and assistance in applying for business financing. Nonprofit community-based organizations (CBOs) and the SBA's Small Business Development Centers (SBDCs) provided the services.

DOL's One-Stop Career Centers were the gateways to the program. These centers, which provide a wide range of services for job seekers and employers, conducted outreach for Project GATE and hosted the program's orientation sessions. Project GATE added another service—one focused on helping people become self-employed—to the One-Stop Career Centers' arsenal of employment services. By offering this service, it was also hoped that Project GATE would attract new and more diverse customers to the One-Stop Career Centers.

This report addresses three main questions:

(1) Can Project GATE be replicated?

(2) Is Project GATE effective in increasing business ownership, earnings, employment, and self-sufficiency?

(3) Are the benefits of Project GATE commensurate with its costs?

The rest of Chapter 1 discusses the policy interest in self-employment programs and reviews the literature that has developed on self-employment. It then describes the existing array of services available to provide self-employment assistance, prior research on the effectiveness of programs to promote self-employment, and how Project GATE is distinctive from the services already available. This first chapter ends by laying out the organization of the remainder of the report.

1.1 Self-Employment in the U.S. Economy

Self-employment plays a key role in today's economy. The proportion of self-employed Americans has been growing rapidly since the 1970s (Fairlie and Meyer 2000). Recent Census Bureau data indicates that the trend is continuing and today more than 20 million Americans are self-employed, representing 11 percent of the nonfarm labor force.[2] A close look at these numbers demonstrates the importance of small businesses in the U.S. economy. Each day, 2,356 Americans decide to go into business for themselves. Their companies account for 78 percent of all U.S. businesses, and they collectively account for annual receipts of approximately $1 trillion. A recent report by the Kaufmann Foundation of Entrepreneurship[3] reveals that from 2007 to 2008, business starts increased, with approximately 530,000 new businesses created each month. In addition, the report finds that although the entrepreneurship rates for high-income potential businesses[4] reduced sharply due to the current recession, the entrepreneurship rates for low- and

[2] http://www.census.gov/Press-Release/www/releases/archives/economic_census/010314.html

[3] Kauffman Index of Entrepreneurial Activity, 1996-2008.

[4] The report classified businesses according to the potential to produce high levels of income and growth. The low- and medium-income potential businesses are viewed as "necessity" entrepreneurship, while the high-income potential businesses are viewed as "opportunity" entrepreneurship.

medium-income potential businesses continued to increase. Moreover, it has been argued that small businesses create a large share of new jobs and contribute to innovations in products and production processes (Birch 1979; Lerner 2002).

Some workers view self-employment as a desirable substitute for, or supplement to, wage and salary employment.[5] Some even view it as a way out of poverty when they cannot find a desirable wage and salary job. Some research suggests that unemployed workers are more likely than wage and salary earners to enter self-employment (Meager 1992; Rissman 2003). While self-employment is not for everyone, many Americans do want to be self-employed. Some have a passion for a particular business idea, while others want to be their own bosses, have no access to wage and salary jobs in which they can use their skills, and/or desire the flexibility of self-employment. These people often are willing to work hard and have specific skills, interests, and talents they can use in a business.

For many, however, lack of both business knowledge and access to credit pose significant barriers to self-employment. Lack of knowledge may encompass marketing, financing, understanding regulations, developing a business plan, or other aspects of starting and running a business. Disadvantaged populations in particular are less likely to have access to the information sources that provide such knowledge and skills (Brush 1990; Gould and Parzen 1990; Keeley 1990). Many people may need loans to start their businesses but have little collateral and poor or no credit histories. Moreover, commercial banks are reluctant to make loans to small, risky ventures. To address these obstacles to self-employment, programs have been developed to provide classroom training, business counseling, and/or small loans to entrepreneurs. While many of these programs are open to everyone, they are often focused on the unemployed, welfare recipients, or other disadvantaged groups.

The factors that need to be considered by a potential entrepreneur are inherently complex and numerous, and entrepreneurs often have to bear a tremendous amount of risk when they start their businesses. A body of research has developed investigating why individuals choose self-employment and what types of individuals choose it. In particular, research has found that

[5] Throughout this report, the term *wage and salary* is used to describe jobs in which people work for someone else.

entrepreneurs have unique abilities and training that have prepared them to operate their own business. Lazear (2005) developed a model which predicts that individuals with general skills are more suited to entrepreneurship than those with very specific training or experience. Testing the model using a survey of graduates from Stanford Business School, he confirms this prediction when finding that graduates who are employed in "general" as opposed to "specialist" positions are more likely to begin their own business. There could also be other avenues through which individuals acquire the skills for entrepreneurship. For instance, Dunn and Holtz-Eakin (2000) link together parents and their offspring using the National Longitudinal Surveys. They find that children of entrepreneurs are more likely to pursue self-employment, and that this increases with length and success of the parent's business ownership. The intergenerational transmissions are strongest across family members of the same gender (i.e., fathers and sons, or mothers and daughters). Dunn and Holtz-Eakin see this as evidence that entrepreneurial parents are transmitting skills specific to business-ownership to their children. Lastly, Evans and Leighton (1989) find that entrepreneurs tend to have a strong "locus of control," or feeling that they can determine their own destinies. These attitudes and skills have been found to increase the odds that individuals will both attempt entrepreneurship and ultimately succeed at it.

While skills play an essential role in beginning and operating a new company, nearly every small business requires some capital to begin operations. Holtz-Eakin et al. (1994) investigate the effect of a large influx of cash on both the survival probability and revenues of a nascent firm. Linking individuals across 1981 and 1985 income tax returns, they estimate the effect of a large influx of available capital using bequests. They find strong evidence of liquidity constraints for small firms. Injecting $150,000 into a firm increases its survival probability by 1.3 percentage points, and raises its receipts by 20 percent. Black and Strahan (2002) find that increased bank competition raises the number of loans given out, thus improving the potential for self-employment outcomes. Finally, Bradford (2002) and Blanchard et al. (2005) find that differences in either access to credit or the availability of family members with money to lend may be important factors in explaining differences in self-employment.

In addition to skills and resources, personal tastes have long been predicted to influence selection into entrepreneurship. One of the earliest ideas was that entrepreneurship is inherently risky, and therefore individuals with less risk aversion would be drawn towards self-employment (see

Kiholstrom and Laffont, 1979 and Kanbur, 1979). Testing this hypothesis, Cramer et al. (2002) use data from the Brabant Survey of Dutch Children; they find lower levels of risk aversion in those who choose to begin their own business.

Recent studies have confirmed the common observation that earnings among entrepreneurs are often lower than among full-time workers. Hamilton (2000) tests this using the Survey of Income and Program Participation. Among his principal conclusions, he finds that after ten years in business, entrepreneurs earn 35 percent less than similar individuals who are full-time workers. Hamilton views this as evidence of large non-monetary benefits of being an entrepreneur, such as being one's own boss and enjoying increased flexibility. In a related study, Gimeno et al. (1997) surveyed businesses from the National Federation of Independent Businesses to analyze how individuals set thresholds of performance. They find that entrepreneurs who are more motivated, and have family members who have previously owned their own business, set lower thresholds of acceptable performance when deciding whether to continue or abandon their small business. This is viewed as potential evidence that previous exposure to small business ownership or a passion for one's product/service increases the level of non-monetary satisfaction associated with the business.

1.2 Self-Employment Assistance Programs

In the late 1970s and early 1980s, several European countries established programs to help unemployed workers become self-employed. Most of these programs provided either income support or seed capital, together with some training or business counseling. The Chomeur Createurs (Unemployed Entrepreneurs) program in France, implemented nationally in 1980, allowed persons to collect unemployment benefits in a lump sum to finance businesses. The Enterprise Allowance Scheme, implemented nationally in Britain in 1983, provided business counseling and an allowance roughly equal to unemployment benefits for up to one year (Robinson 1993).

In the United States, the past two decades have seen a rapid increase in programs designed to assist people in starting their own businesses. The number of programs offering training, business counseling, or loan assistance, for example, increased from a handful in 1982 to nearly 700 in 2002 (Walker and Blair 2002). Frequently administered by community action groups,

community development corporations, or women's economic development centers, the programs target mainly low-income populations, the unemployed, welfare recipients, refugees, other disadvantaged groups, and women. Funding for these programs comes from federal, state, or local governments, as well as private foundations.

Organizations partially funded by SBA—such as SBDCs and Business Information Centers—also provide assistance to people interested in creating, sustaining or expanding businesses. SBDCs, often associated with a college or university, offer one-on-one business counseling and training in business development. The SCORE is also a partner of the SBA. Composed of former businessmen and businesswomen, SCORE provides free one-on-one counseling to those interested in starting businesses. Business Information Centers provide resources for small business start-up and development, including computer hardware and software; a library of magazines, books, and videos; and on-site counseling through SCORE.

As a response to positive findings from demonstrations of self-employment programs for UI recipients, Congress in 1993 authorized states to establish Self-Employment Assistance (SEA) programs for UI recipients. The authorization was for a five-year period, after which DOL was required to submit a report to Congress on the status of the programs.

The report to Congress (Vroman, 1997) recommended permanently adding SEA to the array of programs assisting the unemployed, because SEA increased the likelihood of self-employment. The states with functioning SEA programs served a client base that was older, more highly educated, with lower minority representation, and more likely to come from professional, technical, and managerial occupations than the UI population as a whole. In 1998, Congress passed new legislation permanently authorizing SEA programs.

SEA programs provide training and business counseling in self-employment. They also pay the UI recipient an allowance equal to the participant's UI benefits, even though the participant does not need to search for work and can refuse a job offer. The amount of the allowance is not affected by self-employment income, to avoid acting as a disincentive.

Although the SEA legislation authorized all states to implement SEA programs, a majority of states chose not to implement them. Since its inception, only 11 states have passed enabling

legislation. Eight of those implemented SEA programs -- California, Delaware, Maine, Maryland, New Jersey, New York, Oregon, and Pennsylvania. California terminated its program in July 1998; Pennsylvania's funding for its SEA program has been intermittent.

1.3 The Entrepreneurial Population

About 11 million individuals in the United States are actively working to start a small business. To study this population, the Panel Study of Entrepreneurial Dynamics (PSED) collects data on the process of business formation using a nationally representative sample of nascent entrepreneurs. The first wave (PSED I) began with a telephone screening interview in 1998-2000, which identified a cohort of 830 individuals actively engaged in creating a small business. Three follow-up interviews were conducted. PSED I data collected included demographic variables, activities during business start-up, and characteristics of new firms. A second wave (PSED II) began with a screening interview in 2005-2006 that identified a new cohort of 1,214 nascent entrepreneurs; two follow-up interviews were administered, at 12 and 24 months.

An analysis of the PSED I data (Gartner et al. 2004) found that the median amount of time between the first organizing activity performed to start a business and the first receipt of money, income, or fees from the sale of goods and services was 25 months. A number of different activities may constitute the first organizing activity, such as buying or leasing equipment, facilities or property; or establishing credit from a supplier. The PSED I data indicate that among the U.S. entrepreneurial population as a whole in 1999, the median amount of time between the first organizing activity and when monthly revenues exceeded monthly expenses was 38 months.

Gartner et al. (2004) also analyzed the demographic data from PSED II. The demographic characteristics of these individuals are shown in Table I.1. For comparison, we present the demographic characteristics of Project GATE participants in the same table.

Table I.1: Demographic Characteristics of the Entrepreneurial Population

	U.S. Entrepreneurial Population	GATE
Gender		
Male	64%	54%
Female	36	46
Race[6]		
White	65	57
Black	17	31
Other	18	11
Hispanic Descent		
Hispanic	16	5
Non-Hispanic	84	95
Age		
18-29	31	13
30-44	38	44
45-64	29	41
65+	3	1
Education		
Less than HS	8	4
High School	23	22
Some College	31	37
College	26	18
Post-Graduate	13	19
Marital Status		
Married	57	43
Never Married	30	30
Other	14	26

Source: Panel Study of Entrepreneurial Dynamics (PSED II), Participant Tracking System (PTS) Data

[6] Numbers may not add to 100 percent due to rounding

Almost two-thirds (64 percent) of the entrepreneurial population in the United States is male and almost two-thirds (65 percent) is white. The percentages are somewhat lower for the GATE population (54 percent male and 57 percent white). In the United States, approximately one out of six (16 percent) is Hispanic; among the GATE participants a much smaller proportion (5 percent) is Hispanic. The vast majority of both groups (over 90 percent) have at least a high school diploma, the majority (70 percent or more) has at least some college, and well over one out of ten have some post-graduate education.

1.4 Prior Research on Effectiveness of Self-Employment Programs

Much of the development of programs to help people become self-employed has been shaped by research on their effectiveness. This research has shown that self-employment programs can improve labor market outcomes. Classroom training and one-on-one business counseling have been found to be key components of these programs.

In the late 1980s, an evaluation of self-employment programs in two states, Massachusetts and Washington, was conducted in the UI Self-Employment Demonstration (Benus et al. 1995). The goal of the demonstration in both sites was to help UI recipients create their own jobs by starting businesses. In both states, UI recipients were required to attend workshops on issues related to business start-up and were offered financial assistance. The projects differed between the states in two important ways. First, they differed in their target populations. In Massachusetts, the project was offered only to those new UI claimants identified using a statistical profiling model as being likely to exhaust their benefits; in Washington, the project was offered to most new UI claimants. Second, following the French model, participants in Washington could receive their remaining available UI benefits in one lump-sum payment after meeting certain business milestones. In contrast, following the British model, participants in Massachusetts received periodic payments, but no lump sum.

As with Project GATE, the two demonstrations were evaluated using an experimental approach. Applicants to the programs were randomly assigned to either a program or a control group. Members of the program group could participate in the self-employment program, while control group members could not. Approximately 1,200 sample members (both program and control groups) were followed up in Massachusetts for about 31 months, and approximately 1,500

sample members in Washington were followed up for about 33 months. The findings from these evaluations were generally positive but differed somewhat between the two states:

- In ***Massachusetts***, program group members were more likely than control group members to have a spell of self-employment during the follow-up period. However, the impact did not persist. By the end of the follow-up period, a little more than 30 months after random assignment, there were no differences between program and control group members in the prevalence of self-employment. Combined self-employment and wage and salary earnings for program group members was about $6,000 higher than combined earnings for control group members over the 31 months after random assignment. However, this resulted from an increase in earnings from jobs in which participants worked for someone else; self-employment earnings did not increase. In a benefit-cost analysis, the Massachusetts demonstration yielded net benefits to society and to the government because of the increase in earnings.

- In ***Washington***, program group members were also more likely than control group members to have a spell of self-employment sometime during the follow-up period. Unlike in Massachusetts, the impact did persist and the increased self-employment led to increased self-employment earnings. This increase in self-employment earnings, however, was almost completely offset by a decrease in earnings from wage and salary employment, so it did not lead to an increase in total earnings. The demonstration yielded net benefits to society, but a net cost to the government.

In 1987, the U.S. Department of Health and Human Services approved a demonstration project—the Self-Employment Investment Demonstration (SEID)—designed to test the viability of self-employment as a means of helping welfare recipients. Five states implemented and funded the model: Iowa, Maryland, Michigan, Minnesota, and Mississippi. The SEID model contained four basic components: (1) business training, (2) self-esteem training, (3) business counseling, and (4) assistance in securing business financing. Unlike the UI Self-Employment Demonstration, SEID did not include an evaluation of program impacts, although some follow-up of outcomes was conducted. Of the 1,300 people who enrolled in SEID, 408 started a business during the

demonstration, and about half were able to leave welfare (Raheim and Alter 1998; Guy and Fink 1991). The demonstration suggested that when well-targeted and focused, programs to help people become self-employed could assist some low-income people in achieving economic self-sufficiency (Servon and Bates 1998).

In a non-experimental evaluation of the effectiveness of the Self Employment Assistance (SEA) program in Maine, New Jersey, and New York, Kosanovich and Fleck (2001) compared the outcomes of SEA participants with those of persons who were eligible for SEA but decided not to participate in the program. The evaluation found that two to three years after program enrollment, SEA participants were much more likely to be self-employed, were more likely to be employed in either their own businesses or in regular wage and salary jobs, and were more satisfied with their work than were people who were eligible for SEA but declined to enroll. SEA participants also received more UI benefits on average. These findings, while suggestive, should be interpreted with caution. The differences in outcomes may be due to unobserved differences in the characteristics of SEA participants and eligible nonparticipants rather than to impacts of the program itself.

1.5 The Contribution of Project GATE

DOL contracted with IMPAQ International and its subcontractors[7] to design a program that provided participants with training and business counseling, including help in applying for business loans. The project sought to increase employment, earnings, and self-sufficiency. By promoting small businesses and the jobs they create, Project GATE also aimed to promote economic development in some low-income areas.

Most communities have organizations that provide assistance to people who want to start their own businesses. Project GATE used many of those organizations to provide similar services. However, Project GATE differed from the programs already available at the sites in the following ways:

[7] Mathematica Policy Research, Inc., Battelle Memorial Institute, and the National Center on Education and the Economy.

- ***One-Stop Career Centers Played a Key Role*** – The goal of One-Stop Career Centers is to provide a wide range of services to assist job seekers in finding employment and to aid employers in finding employees. While some centers provide information about the SEA program or other related programs, many provide little or no information about self-employment programs. Most of the training funded out of One-Stop Career Centers focuses on developing skills for a particular wage and salary occupation.

  Project GATE was viewed as another service to be added to the array of employment services already provided by DOL's workforce investment system. The One-Stop Career Centers were the "first stop" in the provision of GATE services. They conducted outreach by housing electronic kiosks with information about Project GATE within the centers themselves, placing brochures about GATE in their resource rooms, displaying posters, and describing the program in orientations. The One-Stop Career Centers also hosted a mandatory orientation for those interested in Project GATE.

- ***Outreach Was Much More Extensive*** – Most self-employment service providers do not conduct extensive outreach. People usually find out about their services through their websites or word of mouth. In contrast, Project GATE used a broad outreach campaign that included paid marketing campaigns, public service announcements, notices about Project GATE inserted in the envelopes containing UI checks, and information about the program in the form of posters and flyers at all One-Stop Career Centers. This difference in outreach approach is likely to affect the population served.

- ***GATE Assessment Staff Matched Participants with and Referred Them to Specific Providers*** – Providers of self-employment services differ in the services they provide and in how they provide those services. Some focus on providing classroom training; others focus on providing business counseling. Some providers are more experienced at providing services to well-educated clients; others are better able to help disadvantaged populations.

Most self-employment providers serve any participant and refer participants to another provider only for services that they do not provide (such as business loans). Therefore, it is often up to participants to find the provider that best meets their needs. One of the innovative aspects of Project GATE was that it involved an individualized needs assessment and referral to providers. Soon after their eligibility for Project GATE was determined, participants were invited to meet one-on-one with a trained business counselor to talk about their business ideas and the challenges they faced in starting a business. As a result of the assessment, participants were then directed to the services and the GATE providers that would best meet their needs.

- ***GATE Participants Did Not Pay for Services*** – Most service providers charge a fee for their services. SBDCs do not charge for one-on-one business counseling but do charge for training. CBOs usually charge a fee, often on a sliding scale. In contrast, Project GATE provided services free of charge to participants.

- ***Project GATE Did Not Screen Out Participants Based on Likelihood of Success*** – Many programs that provide self-employment services screen out, or strongly discourage, participants they view as unlikely to succeed. Reasons for screening out may include the multiple barriers a participant faces—such as lack of capital, lack of skills or knowledge to produce the services or product, naiveté about the challenges of starting a business, or an unrealistic business idea.

  Project GATE accepted into the program everyone who met the eligibility criteria—participants were required to be at least 18 years old, lawfully able to work in the United States, and seeking to create, sustain or expand a business that was legal and appropriate for federal support. If these criteria were met, no applicant was prevented from participating based on a particular business idea or his or her qualifications for starting a business.

1.6 Organization of the Rest of the Report

This report provides a comprehensive description and assessment of Project GATE. In order to provide the reader a complete, self-contained report, we repeat some descriptive sections from the earlier GATE report (Benus et al. 2008). Specifically, we repeat a description of the evaluation design (Chapter II) and a description of the implementation of Project GATE (Chapter III). The next four chapters describe the impacts of Project GATE on the receipt of self-employment services (Chapter IV), self-employment (Chapter V), employment in wage and salary employment and total employment (Chapter VI), and self-sufficiency (Chapter VII). The benefits and costs as well as the cost-effectiveness of Project GATE are analyzed in Chapter VIII. The report ends with a summary of lessons learned (Chapter IX).

CHAPTER II.
EVALUATION DESIGN

The cornerstone of the evaluation is the random assignment of 4,198 eligible Project GATE applicants to either a program group or a control group. Program group members were offered Project GATE services; control group members were not. Using three waves of telephone surveys together with Unemployment Insurance (UI) administrative data, the outcomes of both program and control group members were observed over time.

The evaluation of Project GATE addresses three questions:

(1) Did Project GATE work?

(2) For whom did it work?

(3) Under what circumstances did it work?

The evaluation also addresses how Project GATE was implemented and whether it could be replicated on a wider scale, as well as whether Project GATE met its objectives of increasing business ownership, increasing employment, and improving self-sufficiency. The evaluation explores whether the impacts of Project GATE vary by where and how it is implemented. It also explores whether the impacts of Project GATE vary between various population subgroups.

This chapter describes the design of the evaluation of Project GATE. It begins by describing the demonstration sites. It then describes random assignment, sample development, the approaches to conducting the implementation, and the impact analysis.

2.1 The Demonstration Sites

Project GATE was implemented in seven sites:

- ***Philadelphia, Pennsylvania*** – At this site, five One-Stop Career Centers and three nonprofit CBOs participated in Project GATE.

- ***Pittsburgh, Pennsylvania*** – At this site, seven One-Stop Career Centers and the Duquesne University SBDC participated.

- ***Minneapolis/St. Paul, Minnesota*** – At this site, four One-Stop Career Centers (two in Minneapolis and two in St. Paul), the University of St. Thomas SBDC, and two CBOs (Women Venture; and the Hmong American Mutual Assistance Association) participated.

- ***Northeast Minnesota*** – The northeast Minnesota site included the cities of Duluth and Virginia and surrounding areas. Two One-Stop Career Centers, the University of Minnesota at Duluth SBDC, and one CBO (Northeast Entrepreneur Fund) participated.

- ***Maine*** – Project GATE was implemented in three sites in Maine. These sites included the cities of Bangor, Portland, and Lewiston and surrounding areas. Three One-Stop Career Centers participated, as did the University of Southern Maine SBDC, three CBOs (Main Centers for Women, Work and Community; Penquis Community Action Program; and Coastal Enterprises, Inc.), and the Center for Entrepreneurship at the University of Southern Maine, in partnership with the Heart of Maine organization. For analytical purposes, the three sites in Maine are grouped together into one because of their geographic proximity and because Maine implemented Project Gate in the three sites as a single administrative entity.

The sites were selected purposively to include three sites in urban areas and four sites, northeast Minnesota and three sites in Maine, that comprise largely rural areas.

2.2 Random Assignment and Sample Development

The key design feature of the evaluation of Project GATE is random assignment. Those who attended a GATE orientation, submitted a GATE application, and were found eligible for Project GATE were randomly assigned to either the program group or the control group. In order to ensure that random assignment was conducted consistently across all sites and without any sort of bias, the evaluation contractor performed the random assignment using a computer program

which called on a random number generator. Members of the program group were offered Project GATE services; members of the control group were not.

The use of random assignment ensures that the applicants assigned to the program group will have, on average, the same observable and unobservable characteristics as applicants assigned to the control group. As a result, any differences in outcomes between the program and control groups can be directly attributed to Project GATE with a known degree of statistical precision. Without random assignment, there is always a concern that any differences in outcomes between the program and control group members result from differences in their underlying characteristics rather than program participation.

2.2.1 The Counterfactual

The goal of any program evaluation is to provide an estimate of the effects of a program by comparing outcomes of program participants to what would have happened to them in the absence of the program. Since it is impossible to do this, an experimental evaluation uses the control group as a counterfactual that credibly represents what would have happened to program participants had they not been offered GATE services.

Control group members could not participate in Project GATE—they could neither receive a GATE assessment nor be referred to a GATE provider for free business counseling and/or classroom training. However, control group members were not prevented from receiving any other self-employment services offered in the community. Hence, they could receive services from providers that were not chosen for Project GATE or did not want to participate in Project GATE. They could even receive services from the GATE providers. However, control group members needed to find these providers on their own and may have had to pay for the services. The names of the GATE providers were given after random assignment to GATE program group members only; control group members were never given the names of any self-employment service providers.

The services that the control group members receive—the counterfactual—determine the research questions the evaluation addresses. Hence, it is important to note that this evaluation does not address the impact of Project GATE compared to receiving *no* self-employment

services. Instead, it addresses the more policy-relevant question: What is the effect of adding Project GATE to the array of self-employment services already offered in the communities?

2.2.2 Random Assignment Procedures

Individuals interested in participating in Project GATE were asked to register for the program and attend an orientation. At the orientation, they were shown a video that described the challenges of self-employment, the services provided by Project GATE, and the evaluation, including random assignment. Those still interested in the program after the orientations were asked to complete a nine-page application package. This package asked for information to determine eligibility for Project GATE, including information on the characteristics of the applicant and his or her business idea, detailed contact information, and the signature of the applicant confirming willingness to participate in the evaluation. The package was mailed to the evaluation contractor, which checked that the applicant was eligible, had completed at least most of the application package, had consented to participate in the study, and had not applied to Project GATE previously. Once the applicant had passed these checks, he or she was randomly assigned to the program group or the control group, each with a probability of 50 percent. The evaluation contractor then notified the applicant by mail of their assignment to either the program or the control group and sent a list of new program group members to the service providers. After orientation, applicants took an average of 2.0 weeks to complete an application and mail it to the evaluation contractor. Applicants were randomly assigned less than one week later on average.

2.2.3 Sample Enrollment

Nearly all GATE applicants were randomly assigned. Only three applicants were found ineligible, because their business idea was inappropriate for federal funding. In total, 4,198 applicants were randomly assigned between September 2003 and July 2005 (see Table II.1); just under half were assigned to the program group and just over half to the control group.

Table II.1: Number of GATE Applicants by Site

Site	Total	Program Group	Control Group
Philadelphia	1,179	601	578
Pittsburgh	595	288	307
Minneapolis/St. Paul	1,654	834	820
Northeast Minnesota	203	97	106
Maine	567	275	292
Total	**4,198**	**2,095**	**2,103**

Source: Participant Tracking System

Since the enrollment period was approximately the same for all sites, one might expect that the number of applicants would be approximately the same across all sites. However, more than two-thirds of all applicants were in two sites—Minneapolis/St. Paul and Philadelphia. Less than one-fifth were from the rural sites—northeast Minnesota and the three sites in Maine. This variation in enrollment rates across sites may be explained by various factors, including differences in population density, business culture, economic environment, and demographic characteristics of the local population.

As expected, random assignment produced program and control groups whose members had similar background characteristics at baseline (Appendix Table A.1). Of the 121 characteristics examined, program and control group members differed in 8 characteristics at the 5 percent level of statistical significance, which is close to what would be expected by chance. Of relevance, program group members were slightly younger, had received fewer weeks of unemployment insurance (UI) benefits in the past year, and were slightly less likely to have ever been self-employed. These differences were accounted for in the impact analyses.

2.2.4 Business Partners

Examination of the application data revealed that some applicants applied to Project GATE with their business partners. Of the 4,198 applicants, 245 applicants (about 6 percent of all applicants) reported on their application packages a plan for a business that was identical to that of another applicant. All but about 2 percent of these applicants lived with the person who had

the same plan. While about 91 percent of these applicants had one other partner who applied, 9 percent were in partnerships with 2 to 4 other applicants. The 245 applicants represented 118 business partnerships.

The participation of people who work together on a business raises a concern about contamination in the evaluation. A control group member who had a business partner in the program group could benefit from any services or information received by his or her partner. Some GATE providers would even allow business partners to accompany the GATE participant to classes and business counseling sessions.

To avoid the problem of control group contamination, all members of the business partnership were deleted from the sample if: (a) at least one member of the business partnership was in the control group, (b) at least one other member was in the program group, and (c) these two individuals lived at the same address or submitted the same business idea on their GATE Application Form. Of the 118 business partnerships, 56 (47 percent) had at least one program group member and one control group member and were removed from the sample. These 56 business partnerships consisted of 120 applicants. The remaining sample contained only business partners who were either all in the program group or all in the control group and hence were not at risk of contamination. The remaining sample members in business partnerships were representative of the sample members who were removed from the sample and were reweighted such that the weighted sum of business partnerships was the same as in the original sample.

2.3 Implementation Analysis

The goals of the implementation analysis were to: (1) describe how Project GATE was actually implemented in the demonstration; (2) describe how implementation differed across sites; (3) derive lessons for other sites interested in implementing Project GATE or a similar program; and (4) determine whether Project GATE could be successfully replicated elsewhere.

The analysis uses data collected from the following sources:

- ***Participant Tracking System (PTS)*** – All Project GATE applicants completed an application package before they were randomly assigned. The application package

provided rich data on the characteristics of the applicants just prior to random assignment. An orientation form completed by everyone who attended an orientation provided information on people who attended the orientation but did not complete an application. In addition, all service providers collected information on the results of the assessments, the referrals to service providers, and the type and intensity of services the program group members received from Project GATE. All these data items were captured by the Participant Tracking System (PTS), an Internet-based data collection system created by IMPAQ. A final extract from the PTS was taken on December 31, 2005. GATE applicants were randomly assigned during the period from late September 2003 through early July 2005. Hence, at least six months of data were available on all program group members.

- ***Site Visits*** – Two rounds of site visits were conducted to collect detailed information on the implementation of the programs. These site visits took place in Fall 2004 and Spring 2005. During these site visits, interviews were conducted with administrators, instructors, and business counselors at the service providers; and observations were made of orientations, assessments, classroom training, and one-on-one counseling. GATE service providers assisted in the selection of 18 program participants who were then interviewed in depth about their experiences in Project GATE and in starting their businesses. During the first round of site visits, eight focus groups of randomly selected program participants were conducted, with at least one focus group occurring in each site.

The findings from the implementation analysis are summarized in Chapter III and discussed in detail in Bellotti et al. (2006).

2.4 Impact Analysis

The main goal of the impact analysis is to determine whether Project GATE was effective in meeting its goals. Hence, it examines whether Project GATE affected four main categories of outcomes: (1) the receipt of self-employment services; (2) business ownership, including attempts to start a business, success in starting a business, and the characteristics of the businesses started; (3) employment and earnings in both wage and salary jobs and in self-

employment; and (4) receipt of UI benefits, total household income, public assistance, and spouses' earnings. The analysis also examines whether these impacts differ for different groups of applicants and whether they vary by where and how Project GATE was implemented.

The impact analysis draws on two additional sources of data other than the PTS and the site visits[8]:

- ***Three Follow-Up Surveys*** – A first wave (Wave 1) of telephone interviews was attempted with all program and control group members approximately 6 months after random assignment. A second wave (Wave 2) of telephone interviews was conducted approximately 18 months after random assignment. A third wave (Wave 3) was conducted approximately 60 months after random assignment. In Wave 2 and Wave 3, only those individuals who had completed the previous wave of the survey were contacted for interview. These surveys provide detailed information on outcomes such as receipt of services, completion of business plans and applications for loans, business development, employment, income, and receipt of UI and other benefits. A total of 3,450 Wave 1 follow-up interviews were completed, yielding a survey response rate of 82 percent. The Wave 2 follow-up resulted in 3,039 completed interviews, with a survey response rate of 88 percent of Wave 1. The Wave 3 survey resulted in 2,450 completed interviews, with a survey response rate of 81 percent of Wave 2. In each wave, the response rates were slightly higher for the program than for the control group. Since 2,450 individuals out of 4,198 completed all three waves, the overall response rate for the entire series of three waves was 58 percent.[9]

- ***UI Administrative Data***. – To obtain data on UI claims and receipt of UI benefits, state UI administrative records for all applicants were collected. Quarterly wage records and UI benefit data were collected for the period covering the 12 months prior to random assignment and the 12 months following random assignment.

[8] More information about data collected for the impact analysis is provided in Appendix A.
[9] More details on the response rates are provided in Appendix A.

Since applicants were randomly assigned, unbiased estimates of the impact of Project GATE can be obtained by comparing the average outcomes for those in the program and control groups. To improve the precision of the estimates and correct for any differences in the sample members' characteristics that occurred by chance between the two groups, impacts were estimated using regression models. With each impact estimate is an indication of whether the estimate passes a two-tailed t-test at the 1 percent, 5 percent, or 10 percent levels of significance. Appendix B provides detail regarding weighting and imputation procedures, Appendix C provides more details of the impact estimation, and Appendix D discusses the sensitivity of the findings to the estimation method.

This report presents estimates of the impacts of Project GATE on all program group members rather than impacts on those program group members who actually received Project GATE services. Hence, it is an estimate of the offer of Project GATE services rather than their receipt. However, most participants did receive some services—90 percent of those who were randomly assigned to the program group received at least an assessment from Project GATE. Estimates of the impacts on the individuals who actually received services can easily be calculated by dividing the estimates of the impacts on participants by 0.9 and adjusting the standard errors accordingly (Bloom 1984; Angrist et al. 1996; Heckman et al. 1998).

This report focuses mainly on overall differences in outcomes between program and control groups for all the demonstration sites combined. Each sample member is given equal weight. Hence, the overall impacts are disproportionately affected by the impacts in Minneapolis/St. Paul and Philadelphia. Generalizing these results to a larger scale implementation of Project GATE would require assuming that sites that are like the Minneapolis/St. Paul and Philadelphia sites would have more participants than sites like the Pittsburgh and rural sites. This is likely to be the case unless the larger scale implementation focused on rural sites.

To assess the variability of the impacts across sites and sample member characteristics, selected estimates are presented separately for each study site and for subgroups defined by the following characteristics of the sample members as of random assignment: age, gender, race/ethnicity, education level, wage and salary employment, self-employment, receipt of UI benefits, and self-employment prior to random assignment. Most of the outcomes considered will be defined for

all members of the program and control groups. However, in some cases the outcomes compare members of the program and control groups within a particular subset of the sample. In particular, this approach is adopted when the subsets are defined by the outcome. These differences across subsets defined by outcomes may be referred to as "conditional differences." For example, consider the types of businesses formed by those who start businesses. As the sample members who started businesses are not random, and participation in Project GATE may affect who starts a business, the differences in the types of businesses formed by people in the program group and those formed by people in the control group should not be interpreted as an "impact" of Project GATE. Care should be taken in the interpretation of these types of differences. The differences in the types of businesses formed, for example, could have occurred either because Project GATE changed the types of businesses formed or because Project GATE led to different types of people starting businesses.

Of the 4,198 individuals randomly assigned to the program or control group, 3,450 (82 percent) completed the Wave 2 survey. Of these 3,450 individuals, 3,039 (88 percent) completed the Wave 2 survey. Of these 3,039 individuals, 2,450 (81 percent) completed the Wave 3 survey. Thus, 72 percent of the original sample completed Waves 1 and 2 of the survey, and 58 percent of the original sample completed all three survey waves.

If those who responded to a survey differ in a systematic way from those who did not respond, then impact estimates may be biased. To adjust for observable differences in the baseline characteristics of survey respondents and non-respondents, and to reduce the potential for biased estimates, the survey data are weighted. The weights are designed so that the survey respondents represent all the GATE applicants who were randomly assigned in each research group and site. Some survey respondents did not respond to some questions (they may not have remembered the date they began a job, for example). For such missing data items, standard imputation methods were used to impute a value. Appendix B provides more details of the weighting and imputation procedures.

2.5 Conclusion

In this chapter, we have described the seven demonstration sites in Project GATE; the use of random assignment to create a program and a control group with approximately 2,100

individuals in each; the removal of business partners where one partner was assigned to the program group and one to the control group; and the data sources for the implementation analysis as well as for the impact analysis.

In the next chapter, we turn to an in-depth discussion of how Project GATE was implemented in the seven sites —covering project demonstration sites; GATE service providers; intake procedures; outreach and recruitment; services offered; and the Participant Tracking System.

CHAPTER III.
PROJECT GATE IMPLEMENTATION

Because Project GATE was a new demonstration program, an important goal of the evaluation was to document how Project GATE was actually implemented at each site. This type of analysis is valuable for two reasons. First, lessons learned from the implementation are valuable for future implementations of the program. Indeed, in June 2008, DOL awarded grants to four additional states to implement programs very similar to Project GATE, and experience gained from Project GATE was instrumental in helping these four states design their programs. Second, an understanding of the implementation at each site provides context for the findings from the impact evaluation and helps interpret those findings. For example, the presence of a work search waiver for unemployed individuals in Minnesota who were Project GATE program group members enriches our understanding of impacts in that state.

This chapter discusses the main findings from the implementation analysis of Project GATE.[10] The chapter begins by discussing the characteristics of the demonstration sites and the service providers participating in the program. Next, it describes the intake procedures used to enroll interested individuals and the specific outreach and recruitment strategies used to attract prospective sample members to the demonstration. The chapter then discusses the services offered by Project GATE.

3.1 Demonstration Sites

Project GATE was implemented in seven sites in three states:

1. Minneapolis/St. Paul, MN
2. Northeast Minnesota
3. Philadelphia, PA

[10] Bellotti et al. (2006) provides a detailed analysis of the implementation of Project GATE. See: http://wdr.doleta.gov/research/keyword.cfm?fuseaction=dsp_resultDetails&pub_id=2337&bas_option=Keywords&start=1&usrt=4&stype=basic&sv=1&criteria=Project%20GATE

4. Pittsburgh, PA

5. Bangor, ME

6. Portland, ME

7. Lewiston, ME

These sites, chosen purposively, differ in several key ways. Key characteristics of the general population in the communities in which Project GATE was implemented are presented in Table III.1. First, three sites are urban (Minneapolis/St. Paul, Philadelphia, and Pittsburgh) and four sites principally rural (northeast Minnesota and the three sites in Maine). Second, all sites except Philadelphia have predominantly white populations with small Hispanic/Latino populations. In contrast, the population in Philadelphia is 43 percent African American and 10 percent Hispanic/Latino. The Minneapolis/St. Paul area has a substantial Asian population. Third, the sites vary in the average education and income of their populations. Minneapolis/St. Paul has a more educated and higher-than-average–income population, while Philadelphia has a less educated and lower-than-average–income population.

Finally, the sites vary in the predominance of small businesses. Maine has the largest percentage of self-employed people—9 percent of all its workers. The percentage of workers who are self-employed at the other sites is lower than the national average of 7 percent. Although many factors may influence these differences in the prevalence of self-employment, GATE program staff in Maine suggested that residents of the state have a tradition of using self-employment to either make a living or supplement income from other jobs. In contrast, GATE program staff in both Pennsylvania sites described a tradition of working for large companies in their state.

Table III.1: Socioeconomic and Demographic Characteristics of the General Population by Site

Characteristic	Site[a]					
	Minneapolis / St. Paul	NE Minnesota	Philadelphia	Pittsburgh	Maine	USA
Race						
White	81%	95%	45%	84%	97%	75%
African American	9	1	43	12	1	12
Other	10	4	12	3	3	13
Hispanic/Latino Origin	5	1	10	1	1	14
Education						
Less than high school	9	13	29	14	15	20
High school graduate	21	32	33	34	36	29
Some college	30	34	20	24	26	27
Bachelor degree or higher	39	22	18	28	23	24
Families Below Poverty Level	5	7	18	8	8	9
Workers Who Are Self-Employed	5	6	4	5	9	7
Median Household Income	$51,711	$36,306	$30,746	$38,329	$37,240	$41,994
Persons per Square Mile	2,005	32	11,234	1,755	41	80

Source: U.S. Census Bureau, 2000 Census; Statistics of U.S. Businesses, 2001; Bureau of Labor Statistics, 2004.

[a] Statistics given for the County of Philadelphia, Allegheny County, Hennepin County, St. Louis County, the state of Maine, and the United States. Unemployment rates are for 2004; all other data are for 2000.

The GATE Experience

Project GATE consisted of seven distinct stages.

1. **Registration.** Having heard about Project GATE through the outreach campaign, individuals expressed interest in finding out more about the project by registering at the Project GATE Web site, calling a toll-free telephone number, sending in a postcard provided at One-Stop Career Centers, or registering via the Internet using Project GATE kiosks placed at One-Stop Career Centers.

2. **Orientation.** All individuals who registered for the program were mailed a letter inviting them to attend a one-hour orientation session to learn more about the project.

3. **Application.** At the end of the orientation session, individuals who were still interested in participating in the project were provided with a paper Application Form to fill out and mail to the evaluation contractor. This 9-page form requested extensive information about the individual's background and interest in self-employment and served as the primary source of baseline data for the evaluation.

4. **Random Assignment.** Using a random number generator, a computer program randomly assigned eligible applicants to either the program group or the control group, with a 50 percent chance of being assigned to either group.

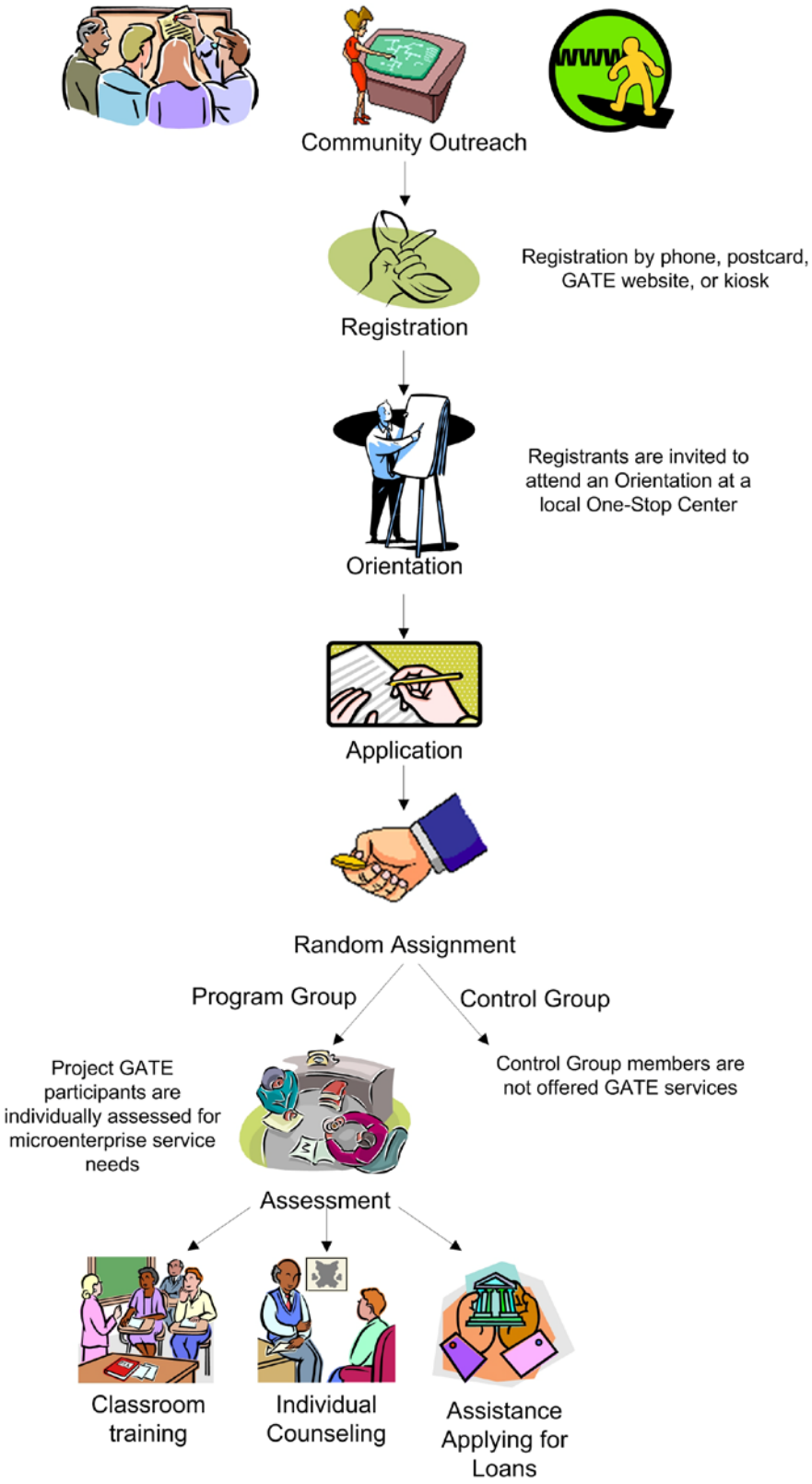
5. **Assessment.** All individuals randomly assigned to the program group were directed to contact an assessment counselor in their area for the assessment interview.

6. **Referral.** The assessment counselor, together with the participant, decided which of the available services would best meet the participant's self-employment training needs, and referred the participant to that service provider.

7. **Service.** The service provider offered entrepreneurship training services to the participant, including classroom training as well as individualized business counseling.

The stages of Project GATE are shown in Figure III.1:

Figure III.1: Stages of Participation in Project GATE



3.2 GATE Service Providers

Project GATE involved multiple service providers at all sites except Pittsburgh (see Table III.2). Altogether, fourteen organizations were involved across all sites. Providers were competitively selected based on four criteria: (1) experience in providing services to assist with business development; (2) ability to provide training in business development and business counseling, including assistance with loan applications; (3) ability to serve sufficient numbers of participants; and (4) ability to provide the services at reasonable cost.

Table III.2: Organizations Involved in Project GATE

Site	Assessment	Training and Business Counseling
Minneapolis/ St. Paul	University of St. Thomas, SBDC Hmong American Mutual Assistance Association (HAMAA)	University of St. Thomas, SBDC Women Venture Hmong American Mutual Assistance Association (HAMAA)
Northeast Minnesota	University of Minnesota at Duluth, SBDC	University of Minnesota at Duluth, SBDC Northeast Entrepreneur Fund (NEEF)
Philadelphia	IMPAQ International[11]	Women's Business Development Center (WBDC) Women's Opportunity Resource Center (WORC) The Enterprise Center
Pittsburgh	Duquesne University, SBDC	Duquesne University, SBDC
Maine	University of Southern Maine, SBDC	University of Southern Maine, SBDC Maine Centers for Women, Work, and Community (WWC) Penquis Community Action Program (CAP) Coastal Enterprises, Inc. Center for Entrepreneurship at the University of Southern Maine/Heart of Maine

[11] The original design of GATE called for SBDCs to provide assessments. However, in Philadelphia, the local SBDCs (Wharton and Temple) chose not to participate in the demonstration. Therefore, IMPAQ International, the evaluation contractor, provided assessments in Philadelphia.

All providers except one were either SBDCs or nonprofit CBOs. The exception was the Center for Entrepreneurship in Maine, located at the School of Business at the University of Southern Maine, which partnered with the Heart of Maine, a resource, conservation, and development organization.

SBDCs and CBOs differ in several important ways, including mission, clientele, staff, and service provision. The mission of SBDCs is economic development—to provide assistance for small business development so as to maintain and strengthen the economy. In contrast, the mission of most CBOs is workforce development—assisting individuals to become self-sufficient. Discussions with staff at both SBDCs and CBOs suggest that the two types of organizations also serve quite different clients. SBDCs in general serve clients who are more educated, have higher incomes, are more likely to be employed, and are further along in starting or planning their businesses than is the CBO typical client. Staff characteristics also differ, with SBDC staff members more likely to be male, white, highly educated, and more experienced in providing self-employment assistance than are staff members at CBOs. Finally, while both SBDCs and CBOs provide training and business counseling, they differ in the ways they provide these services. SBDC counselors expect their clients to be very self-directed. CBOs provide more assistance, give more direction as to what clients need to do, provide more help with tasks, and follow-up with clients more regularly.

3.3 Intake Procedures

Project GATE was designed to serve almost anyone, whether employed or unemployed, who was interested in starting a business. The program was open to anyone 18 years of age or older who was lawfully able to work in the United States, resided in the state, and wished to create, sustain or expand a business that was legitimate and appropriate for federal support.[12] If these criteria were met, no applicants were prevented from participating based on their particular business idea or their qualifications for starting a business. Instead, individuals were expected to self-select into or out of the application process through a three-tiered intake procedure that

[12] Out of more than 4,200 GATE applications, three were rejected due to illegal or inappropriate business ideas.

involved (1) registration, (2) attendance at an orientation, and (3) completion of an application package.

Persons interested in Project GATE first registered for the program by providing their name and mailing address at a GATE kiosk housed at a One-Stop Career Center, at the GATE Web site, by mailing a postcard from the GATE brochure or poster, or by calling a toll-free number. Registered individuals were then notified by mail of the times and locations of GATE orientations in their area. The letter asked the individual to contact the One-Stop Career Center most convenient to them to sign up for an orientation, but did not provide any description of the length of the orientation session or the topics to be covered.

Orientations were held at the participating One-Stop Career Centers, and attendance was required before a GATE application could be submitted. In addition to providing information about services available through Project GATE and at the One-Stop Career Centers, the orientation involved a discussion of some of the negative aspects of self-employment, referred to as the "cold shower," which was designed to ensure that Project GATE applicants had realistic expectations about self-employment. The orientation session typically lasted one hour, including a standard video describing self-employment and Project GATE.

Orientation session attendees who remained interested in participating were then given a nine-page GATE Application Form to take home to fill out. This application form collected baseline data on demographics, self-employment experience, and wage and salary employment history. Orientation session leaders were instructed to provide assistance in filling out the Application Form if explicitly requested to do so by the applicant. However, they were specifically instructed not to tell attendees the names of the GATE service provider organizations in order to avoid contamination issues. Upon completion of the Application Form, the applicant mailed it to the evaluation contractor.

As intended, the intake process led to some people deciding against participating in Project GATE. Even though about 16,000 people registered for Project GATE, only 37 percent (about 6,000) attended an orientation. This large drop-off between registration and orientation likely reflected the small investment in time required to register compared to attending an orientation. It is possible that making the Orientation easier to complete, for example by making it available

online, would have resulted in a higher attendance rate at the Orientation. However, by presenting the Orientation at in-person meetings, Project GATE could ensure more uniformity of the message conveyed during Orientation.

Of those who attended an orientation, 71 percent (about 4,200) chose to apply to Project GATE.

3.4 Outreach and Recruitment

Many new programs find it challenging to spark interest among their target populations, develop a reputation within their communities, and achieve a steady enrollment. As a new initiative and one that included recruitment for a control group, Project GATE required significant outreach efforts to recruit and enroll sufficient numbers of sample members to support the study's experimental design. While general outreach strategies were initiated at all sites, the types and intensity of recruitment efforts were driven by each site's success in meeting its enrollment target.[13]

One-Stop Career Centers were the foundation of the GATE outreach strategy. These centers offer a wide range of services for job seekers and employers but are not traditionally viewed as a resource for self-employment services. Project GATE aimed to attract new and more diverse customers to the One-Stop system. Twenty One-Stop Career Centers participated in GATE; the number per site ranged from two in northeast Minnesota to seven in Pittsburgh (see Table III.3). The centers were chosen for the demonstration based on three general criteria. First, larger centers were generally selected so that they could reach a larger population. Second, some centers were selected to ensure diversity among clients. Third, centers were selected only if their managers wanted to offer Project GATE services.

[13] For a detailed description of outreach efforts in Project GATE, see Bellotti et al. (2006).

Table III.3: One-Stop Career Centers Participating in Project GATE

Site	Number of Participating Centers	Names of One-Stop Career Centers Participating in Project GATE
Minneapolis /St. Paul	4	North Minneapolis WorkForce Center Anoka County WorkForce Center Midway WorkForce Center Dakota County North WorkForce Center
Northeast Minnesota	2	Duluth WorkForce Center Virginia WorkForce Center
Philadelphia	5	North Philadelphia CareerLink Center Northeast Philadelphia CareerLink Center Northwest Philadelphia CareerLink Center South Philadelphia CareerLink Center Calle Americana CareerLink Center
Pittsburgh	7	Pittsburgh/Allegheny County Comprehensive CareerLink Center McKeesport Comprehensive CareerLink Center Allegheny West Comprehensive CareerLink Center Community CareerLink at the Jewish Family and Children's Services Career and Development Center Community CareerLink at the Community College of Allegheny County, South Campus Community CareerLink at the Community College of Allegheny County, North Campus Community CareerLink at the Community College at the Forbes Road Career and Technology Center
Maine	3	Portland Career Center Lewiston Career Center Bangor Career Center

All participating One-Stop Career Centers provided information about Project GATE through electronic kiosks, flyers, brochures, and posters. These outreach materials promoted the Project GATE website. Many centers also conducted open-house events for individuals interested in self-employment, mentioned Project GATE in their general orientations, and hosted Project GATE booths at job fairs. One-Stop Career Center employment counselors also occasionally suggested that customers who seemed well suited to self-employment attend a Project GATE orientation.

In addition to promoting Project GATE at the One-Stop Career Centers, further outreach was conducted in most sites (see Table III.4). Flyers describing Project GATE were periodically mailed with UI benefit checks in Philadelphia, Pittsburgh, and Maine. Staff at some participating One-Stop Career Centers led grassroots networking efforts to share information about the program with other local organizations and government agencies. Finally, mass media marketing—including special media events, advertisements, press releases, and public service announcements—was used across sites in varying degrees to increase the program's visibility. The resources spent on marketing varied, depending on the success of other outreach strategies; for example, Philadelphia required the largest marketing budget, which was more than twice that spent in Minneapolis/St. Paul.

Table III.4: Summary of GATE Outreach Strategies by Site

	Minneapolis /St. Paul	Northeast Minnesota	Philadelphia	Pittsburgh	Maine
One-Stop Promotional Efforts					
Number of GATE kiosks	4	2	5	3	3
Open-house events	No	No	Yes	No	Yes
Booths at job fairs	No	Yes	Yes	Yes	No
Flyers Inserted with UI Checks	No[a]	No[a]	Yes	Yes	Yes
GATE Website	←		National		→
Grassroots Campaigning	Yes	Yes	Yes	Yes	Yes
Mass Media Marketing					
Date of kickoff event	Aug 2002	Aug 2004	Jun 2004	Feb 2004	None
Paid advertising	No	Yes	Yes	Yes	Yes
Type of organization leading marketing effort	One-Stop operator	One-Stop operator	Private firm	One-Stop operator	Private firm
Budget	$19,197	$13,211	$51,355	$39,515	$34,303

[a] The state UI agency in Minnesota was unable to send inserts only to those individuals residing within the two Minnesota sites.

One-Stop Career Centers were the single most important source for prospective GATE sample members, drawing about 37 percent of orientation attendees; however, other outreach strategies also attracted substantial numbers of applicants (see Table III.5). The GATE website was a particularly effective recruiting tool given its comparatively low cost), yielding 12 percent of orientation attendees. Referrals from local agencies drew about 13 percent of orientation attendees, and advertising drew about 12 percent. As Project GATE matured, its reputation spread, and about 23 percent of orientation attendees reported hearing about the program through friends, relatives, business partners, and acquaintances.

Table III.5: How Orientation Attendees Heard About Project GATE

	Minneapolis/ St. Paul	Northeast Minnesota	Philadelphia	Pittsburgh	Maine	Total
At a One-Stop Career Center	40%	58%	28%	36%	37%	37%
Insert with UI check	0	0	5	7	6	3
GATE website	14	13	10	12	9	12
Community agency	16	6	8	11	16	13
Advertisements	6	6	23	16	10	12
Word of mouth	24	20	27	18	19	23
Other	8	9	7	9	10	8
Number of Orientation Forms[a]	**2,272**	**281**	**1,430**	**784**	**834**	**5,601**

Source: Project GATE orientation forms.

Note: Percentages do not add to 100 because respondents were allowed to mark all that apply. Where multiple responses were marked, orientation attendees were not asked to rank the effectiveness of the techniques.

[a] Of the 5,927 who attended an orientation, 5,601 completed an orientation form.

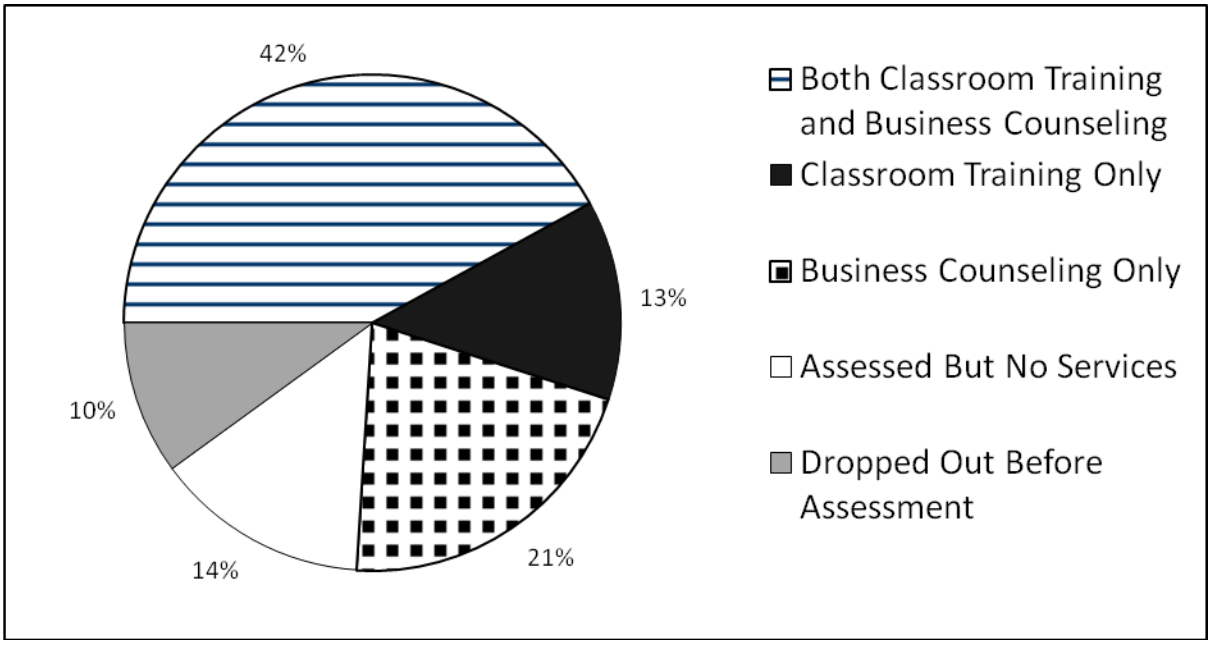
3.5 Services Offered

To help build the business knowledge of individuals interested in creating, sustaining or expanding small businesses, Project GATE, as previously noted, offered three basic services: (1)

an assessment, (2) classroom training, and (3) one-on-one business counseling. None of these services was required; each member of the program group was given a choice to select which (if any) services to receive. To receive classroom training or one-on-one business counseling, however, a program group member was required to meet with a counselor for an initial needs assessment.

The vast majority (90 percent) of GATE program group members received some services from GATE providers. About two-fifths (42 percent) received both training and business counseling, while 21 percent received business counseling but no training, and 13 percent received only training (see Figure III.2). About one-quarter (24 percent) received neither training nor business counseling. Those GATE participants who received an assessment received about 15 hours of services, on average.

Figure III.2: Receipt of Service Among Program Group Members



Source: Project GATE Participant Tracking System

The length of time spent in Project GATE varied across participants. While 17 percent of GATE participants who received an assessment spent less than one month in Project GATE, 5 percent spent one year or more. GATE participants who received an assessment spent four months in the program, on average.

3.5.1 The Assessment: Tailoring Services to Participants' Needs

As businesses are diverse, so are the needs and goals of aspiring entrepreneurs. The GATE assessment, the first service provided by the program, was designed to ensure that the services a participant received were tailored to his or her individual needs. This assessment was conducted during a counseling session where the GATE participant met one-on-one with an experienced business counselor. The GATE assessment had two key goals: (1) to provide a professional appraisal of an individual participant's needs, and (2) in all but one site, to make a referral of that individual to the most appropriate GATE provider.

The infrastructure of GATE providers played a role in shaping the objectives of the sessions at each site (see Table III.6). In particular, the sites varied in their referral procedures. In Pittsburgh, the SBDC was the only organization that provided GATE services—including assessments, training, and business counseling—and, therefore, referrals were not needed. In Maine, the SBDC conducted the assessment and provided business counseling, and referrals were made only for classroom training. At all other sites, individuals were referred to a single provider to receive classroom training, business counseling, or both.

The assessment often resembled a first business counseling session. Counselors typically held a semi-structured discussion on topics such as the business idea, prior experience relevant to the business, credit history and availability of equity and collateral, ability of the participants to support themselves while starting a business, and other barriers. While GATE providers were instructed not to deny participants' services based on their business ideas or suitability for self-employment, most providers did give participants frank assessments of their ability to pursue entrepreneurship and in some cases discouraged GATE participants whom they believed would not succeed.

Table III.6: Summary of GATE Infrastructure at Each Site

Site	Assessment Provider	Services Provided by Assessment Provider	Services Offered by Other GATE Providers	Referrals Made to Single or Multiple Providers
Philadelphia	IMPAQ International	None	Training and business counseling	Single
Pittsburgh	SBDC	Training and business counseling	No other providers	Not applicable
Minneapolis/St. Paul	SBDC	Training and business counseling	Training and business counseling	Single
Northeast Minnesota	SBDC	Training and business counseling	Training and business counseling	Single
Maine	SBDC	Business counseling	Training	Multiple

Four main factors influenced the decision on where to refer clients. First, assessors often referred participants with vague business ideas or little experience to providers that offered introductory training. Second, the location of services was described as an important factor in the rural areas of northeast Minnesota and Maine and the inner city of Philadelphia. Third, given that some training courses ran for several months, assessors tried to minimize wait times by referring participants to providers that were about to begin a new training series. Fourth, the need for credit repair courses—which were scarce—sometimes affected the choice of provider.

3.5.2 Classroom Training: Building the Framework for New Businesses

Across all GATE sites, the program offered a total of 54 different training programs. Some sites offered several types of training to meet different needs, depending on the education and

experience of participants, the stage of business development, and the types of businesses they wanted to start. The courses offered included:

- ***General Introductory Courses*** – These were designed for people who had not yet operated a business and might not even have a clear idea for a business. Their purpose was to provide an overview of what being an entrepreneur entails. The training might touch on subjects such as legal structure, business plans, and marketing. These courses tended to be short, varying from one to five sessions.

- ***General Intermediate Courses*** – These were designed for people who knew they wanted to start a business, had an idea of the type of business they wanted, but had not yet completed a business plan. These programs usually lasted 10 to 12 weeks and ran for 2 or 3 hours per week. In total, they were about 30 hours in length, although some could be as long as 60 hours.

- ***General Advanced Courses*** – These were designed for people who had already started a small business but wanted it to grow. In these classes, more advanced material was presented on each topic than in the introductory courses. Additional topics might also be covered, such as how to manage growth in a business or how to deal with legal and personnel issues. Sometimes, there was a prerequisite that the business achieve a certain size before a participant could attend an advanced course.

- ***Specialized Courses*** – Many providers also offered specialized training programs that focused on using the Internet for business, learning computer programs useful to business owners (such as the small business accounting software, QuickBooks), or assisting with specific types of businesses (such as starting a child care business).

The training programs were generally the same programs the providers had offered prior to Project GATE. As a result, the number and variety of programs offered by a particular site varied considerably and reflected the availability of programs in the local markets. To accommodate the increased demand resulting from participants in Project GATE, however, the training courses were sometimes offered at additional locations or more frequently. Several

providers also adapted the curricula to the needs of GATE participants; for example, some added training components on credit repair.

3.5.3 Business Counseling

In addition to classroom training, members of the GATE program group were offered business counseling in the form of one-on-one counseling sessions. In these sessions, participants were provided access to experienced business counselors who could offer advice and guidance on all aspects of creating, sustaining or expanding a small business.

3.6 Participant Tracking System

To track individuals through the stages of Project GATE, a Web-based data collection system called the Participant Tracking System (PTS) was developed. This system received input from individuals registering for the project, orientation session leaders, data entry staff processing the completed paper Application Forms, assessment counselors, and service provider staff. The PTS provided output in the form of management and monitoring reports to provide project managers with insights into the project status and recent trends in enrollment and participation. Also, the Application Form data were used as baseline data on all applicants.

3.7 Conclusion

This chapter has presented details about the implementation of Project GATE in the individual sites. Key findings are:

- Project GATE was implemented successfully across a variety of sites, suggesting that it could be replicated on a wider scale.
- GATE outreach needed to go beyond the One-Stop Career Centers to meet the enrollment targets. In some sites, a mass media campaign was necessary.
- GATE service providers and the training offered varied both within and between sites. While some sites offered a wide range of training courses, the choice was more limited in others. CBO and SBDC providers in each site provided different services.

- About 90 percent of all GATE program group members received an assessment and about 75 percent received training, business counseling, or both.

The next chapter reviews the impact of Project GATE on receipt of self-employment services, types and hours of services received; amount spent on services; and perception of their usefulness.

CHAPTER IV.
RECEIPT OF SELF-EMPLOYMENT SERVICES

Project GATE service providers offered GATE participants' classroom instruction on starting or growing a business and the opportunity to receive counseling from trained business counselors. This chapter examines the impact of Project GATE on the types and amount of self-employment services received.

The chapter first describes the services offered by Project GATE as well as the services available to the control group; it then describes the estimated impacts on the total receipt of self-employment services during the follow-up period (taking into account that program group members could also receive non-GATE self-employment services). Types of services received, service providers, number of hours of services received, and amount spent on services are then described. The chapter ends with a discussion of the survey respondents' assessment of the usefulness of the services they received.

4.1 Services Available to Program and Control Group Members

Project GATE offered program group members three main types of services: (1) assessment, (2) classroom instruction, and (3) business counseling. Program group members received these services free of charge from a GATE provider. As described in Chapter III, soon after being randomly assigned to the program group, participants received a letter asking them to set up an appointment with a GATE assessment counselor. During the assessment, the counselor determined the participant's need for services and the most appropriate GATE provider (in Pittsburgh there was only one provider). The assessment counselor would then make a referral and notify the provider of the referral.

While training and business counseling are the two most commonly offered self-employment services, other forms of self-employment services were sometimes available. Both GATE providers and providers that did not participate in the demonstration would sometimes offer additional services such as:

- ***Mentoring*** – Some organizations link a new entrepreneur with an experienced businessperson. This differs from business counseling in that the mentor is a volunteer, not a professional business counselor. The SCORE (SCORE), for example, links new entrepreneurs with volunteer retired business executives.

- ***Peer Support or Networking*** – Some providers organize meetings for people interested in starting a business so they can give one another advice and support.

- ***Individual Development Accounts*** – Individual development accounts, administered by nonprofit CBOs, help people save for a specific goal, such as starting a business. Participants deposit funds into the accounts, which are matched by the CBO. Participants can withdraw funds from the accounts to start or grow a business or for other specific goals.

- ***Business Incubators*** – Some providers offer low-cost space with subsidized overhead costs (incubators) for start-up businesses for a limited period of time.

- ***Credit Repair*** – Some organizations provide classes on becoming credit worthy, including repairing bad credit histories and personal financial management.

- ***Business Libraries*** – Providers often have business libraries that house the information necessary to conduct market research. Some providers also provide access to online business library services, such as HillSearch.[14]

Table IV.1 lists self-employment service providers at each site during the demonstration; the GATE providers are indicated with an asterisk. This list, which may not be exhaustive, includes all the providers identified from discussions with One-Stop Career Center staff, discussions with other self-employment service providers at each site, an Internet search, and a directory of U.S. self-employment programs compiled by the Aspen Institute (Walker and Blair 2002). Some providers were not asked to participate in Project GATE, usually because they did not have the ability to provide both business counseling and classroom training.

[14] http://www.hillsearch.org.

Table IV.1: Programs That Provide Self-Employment Services at GATE Sites during the GATE Demonstration

Site	SBA-Affiliated Programs	Community-Based Organizations and Others
Philadelphia, PA	Temple University Wharton School of Business	Women's Business Development Center (WBDC)* Women's Opportunity Resource Center (WORC)* The Enterprise Center* Philadelphia Minority Business Development Corporation Ben Franklin Technology Partners of Southeastern Pennsylvania Philadelphia Commercial Development Corporation Philadelphia Development Partnership Technical Assistants Community College of Philadelphia
Pittsburgh, PA	Duquesne University* University of Pittsburgh SCORE	Microenterprise Training Program Northside Community Development Fund McKeesport CareerLink Center
Minneapolis/St. Paul, MN	University of St. Thomas* SCORE	WomenVenture* Hmong American Mutual Assistance Association (HAMAA)* Neighborhood Development Center Inc. Phillips Community Development Corporation Whittier Community Development Corporation Community Action of Minneapolis Metropolitan Economic Development Association Microenterprise Grant Program Minneapolis Consortium of Community Developers Southeastern Minnesota Microenterprise Fund
Northeast Minnesota	University of Minnesota at Duluth*	Northeast Entrepreneur Fund (NEEF)*
Maine	University of Southern Maine* SCORE	Maine Centers for Women, Work, and Community (WWC)* Penquis Community Action Program (CAP)* Coastal Enterprises, Inc. (CEI)* Center for Entrepreneurship at the University of Southern Maine and the Heart of Maine*

*Participated in Project GATE.

Although at least one SBDC and one CBO offered self-employment services in each site, the number of providers varied considerably. The most providers were identified in the large cities—Minneapolis/St. Paul and Philadelphia. Northeast Minnesota had the fewest providers. SCORE had chapters in Pittsburgh, Minneapolis/St. Paul, and Maine, but not in Philadelphia or northeast Minnesota.

Two GATE sites—Pennsylvania and Maine—operated the SEA program prior to and during Project GATE. The SEA program provides free self-employment training and business counseling from providers in the community to UI recipients. The programs in Pennsylvania and Maine were small—fewer than 100 SEA participants annually in Philadelphia and Pittsburgh and 100 to 200 in Maine. Persons eligible for SEA were also eligible for Project GATE and could participate in SEA, GATE, or both. In Pennsylvania, relatively few GATE applicants were also eligible for SEA. In Maine, about one-quarter of GATE applicants were accepted into the SEA program. Eligibility for SEA was unaffected by random assignment—both program and control group members could participate.

In addition to being offered GATE services, as noted, program group members might also be offered additional services, from both GATE providers and providers not in the demonstration, if they met the eligibility requirements and paid any required fees.

Control group members could not participate in Project GATE, but they could receive training and business counseling or other self-employment services in the community. They could receive these from any provider, irrespective of whether the provider participated in Project GATE.

However, the services offered to GATE participants differed from the services that control group members could receive in five important ways. Specifically, GATE participants were:

- ***Provided Assistance Finding Services*** – The letter notifying program group members that they were eligible for Project GATE included the name and telephone number of an assessment counselor. The assessment counselors were also notified of the assignments, and if they did not hear from a participant, they would call the participant to schedule the assessment. In contrast, control group members were told

they were not eligible for Project GATE and were not given the names of any service providers. Prior to random assignment, neither program nor control group members were given names of providers.

- ***Provided an Assessment of their Needs*** – Program group members received an assessment of their needs and a referral to the most appropriate GATE service provider. Control group members might also find a service provider who would assess their needs. But, due to competition between providers for clients and funding, the assessor would have been unlikely to refer the control group member to any other organization.

- ***Provided Services Free of Charge*** – Program group members did not pay for their assessment, training, or business counseling. Control group members were likely to have been charged for these services. Most providers usually charged for training and business counseling to people not in Project GATE, though the charges would typically be on a sliding scale and would not cover all the costs. SBDCs were the exception; they always provide business counseling (though not training) free of charge.

- ***Never Refused Services*** – Program group members could not be denied GATE services for any reason. In contrast, some providers would screen out (i.e., deny services to) non-GATE clients who they thought would not succeed in their business endeavors.

- ***Given Preference for Services*** – GATE providers would give priority to GATE program group members in filling slots for a class or assigning a business counselor.

The control group was designed to represent the counterfactual—what would have happened to program group members in the absence of Project GATE. However, the experiences of control group members may have differed from what their experiences would have been in the absence of Project GATE in three ways, any of which could bias the impact results:

- ***Increased Capacity*** – Some providers used the GATE funds to add classes. These were usually classes that they had provided previously. With the GATE funds,

however, they were able to provide classes more frequently and/or in additional locations. To the extent that GATE participants did not fill these classes, the new classes increased the availability of services to control group members. This would imply that control group members would receive more services than they would have in the absence of Project GATE, resulting in downwardly biased impact estimates on service receipt due to GATE.

- ***Crowding Out*** – Conversely, some GATE providers did not hire new staff and did not increase their total service capacity because of Project GATE. Program group members were given priority for program slots. But if the provider had no excess capacity, program group members may have taken slots that in the absence of Project GATE would have been available for control group members. This would imply that control group members would receive fewer services than they would have in the absence of Project GATE, and impact estimates on service receipt due to GATE would be upwardly biased.

- ***Contamination*** – One-Stop Career Staff were asked not to provide the names of any GATE service provider (or any other provider) to control group members. However, some control group members may have learned about the availability of services at GATE providers from program group members they knew or had met earlier during the orientation. This would imply that control group members would receive more services than they would have in the absence of Project GATE, and impact estimates on service receipt would be downwardly biased.

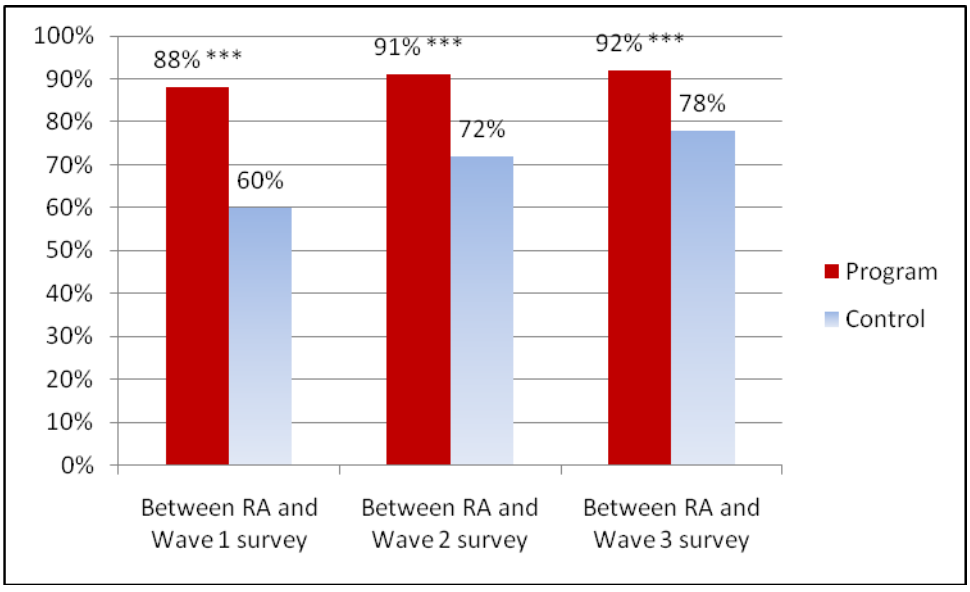
For the most part, control group members' experiences do approximate what their experiences would have been in the absence of Project GATE and these potential sources of bias are thus relatively small. The most likely causes are (1) a slight downward bias in Maine, where providers increased their capacity to provide classes and most attendees at the new classes were not GATE participants; and (2) a slight upward bias in Minneapolis/St. Paul where providers served the most GATE participants and some providers noted that there were waiting lists for services.

As described above in Section 2.2.4, contamination becomes an issue among control group members who were business partners with program group members. To eliminate this problem from the analysis, the 2.9 percent of our original sample of 4,198 applicants who were in mixed program/control group business partnerships were removed from the sample prior to analysis. The sample was further restricted in the analysis of Wave 3 survey data to include only individuals who completed all three survey waves. There were 2,450 such individuals, consisting of 1,274 Program group members and 1,176 Control group members.

4.2 Receipt of Any Self-Employment Services

Project GATE substantially increased the likelihood of receiving self-employment services. [Figure IV.1]

Figure IV.1: Impacts on Receipt of Self-Employment Services



Source: Follow-up surveys, Waves 1, 2, and 3.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

As indicated in Figure IV.1, 88 percent of program group members reported receiving some self-employment services by the time of the Wave 1 survey. The receipt of at least some self-employment services increased to 92 percent by Wave 3. Thus, during the 60-month observation period, nearly all program group members received at least some self-employment services. In contrast, the percentage of control group members was only 60 percent by Wave 1, growing to 78 percent by Wave 3. Thus, GATE had a significant impact on receipt of self-employment services, at each of the three waves of the survey. An analysis of receipt of self-employment services by site and service type (not shown) reveals that a positive program-control differential was evident in all sites and across all types of services.

A substantial percentage of control group members sought out self-employment services on their own; this percentage increased substantially over time. Nonetheless, receipt of self-employment services by control group members lagged that of the program group in level and timing. Additional details on the receipt of self-employment services are presented in Table IV.2.

Table IV.2: Impacts on Receipt of Self-Employment Services

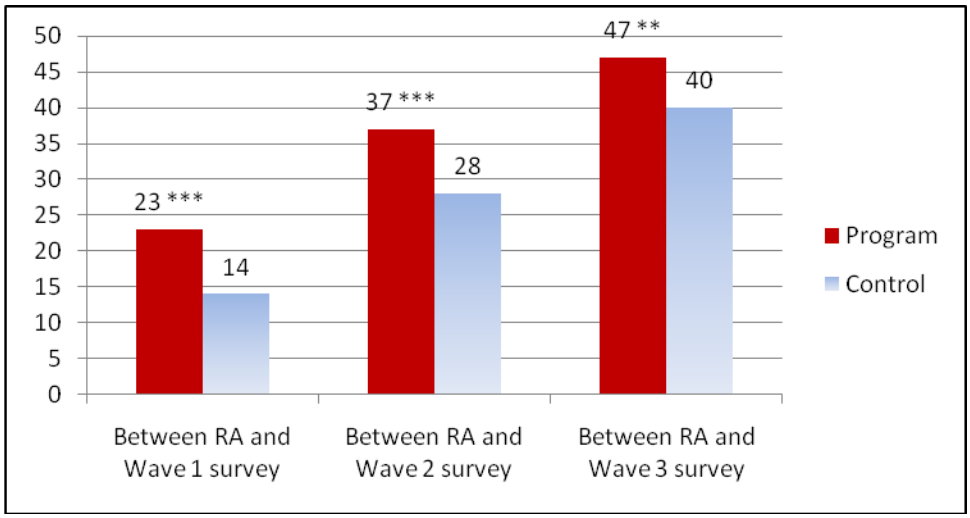
Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants	
Any Self-Employment Services				
Between random assignment and Wave 1 survey	88%	60%	28	***
Between random assignment and Wave 2 survey	91	72	19	***
Between random assignment and Wave 3 survey	92	78	14	***
Any Classes, Workshops, or Seminars				
Between random assignment and Wave 1 survey	68	40	29	***
Between random assignment and Wave 2 survey	75	53	22	***
Between random assignment and Wave 3 survey	77	59	18	***
Any One-on-One Business Counseling				
Between random assignment and Wave 1 survey	55	21	34	***
Between random assignment and Wave 2 survey	61	29	31	***
Between random assignment and Wave 3 survey	63	34	29	***
Any Peer Support/Networking				
Between random assignment and Wave 1 survey	15	11	5	***
Between random assignment and Wave 2 survey	23	17	6	***
Between random assignment and Wave 3 survey	27	22	5	***
Any Other Self-Employment Services				
Between random assignment and Wave 1 survey	7	6	2	*
Between random assignment and Wave 2 survey	10	8	2	**
Between random assignment and Wave 3 survey	13	10	3	**
Number of Respondents	**1,274**	**1,176**	**2,450**	

Source: Follow-up surveys, Waves 1, 2, and 3.
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.
Numbers may not add to 100% due to rounding.

4.3 Hours of Services Received

Project GATE substantially increased the number of hours of self-employment services received. [Figure IV.2]

Figure IV.2: Impacts on Hours of Self-Employment Services Received



Source: Follow-up surveys, Waves 1, 2, and 3.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

As indicated in Figure IV.2, self-employment service hours increased over time for both program and control group members. But program group members received more self-employment service hours than control group members at every survey wave. The difference in hours persisted and was statistically significant throughout the observation period.

The Wave 3 survey instrument asked about receipt of self-employment services over the 12 months prior to the survey. Because the Wave 3 survey was administered several years after the Wave 2 survey, there is a gap of about two years, immediately after the Wave 2 survey, when we do not know the hours of self-employment services received by the respondents. Thus, the label "Between random assignment and Wave 3 survey" must be interpreted with this caveat in mind.

Averaging over all participants (where those who did not receive services are considered to have received 0 hours of service), GATE program group members received an average of about 47 hours of services between random assignment and Wave 3. By contrast, control group members received an average of about 40 hours of service. The difference in service hours was statistically significant at the 5 percent level.

Additional details on hours by type of service are presented in Table IV.3. The impact of GATE was strongest for receipt of classroom training and receipt of individual counseling. GATE had no impact on receipt of mentoring services.

Table IV.3: Impacts on Hours of Self-Employment Services Received

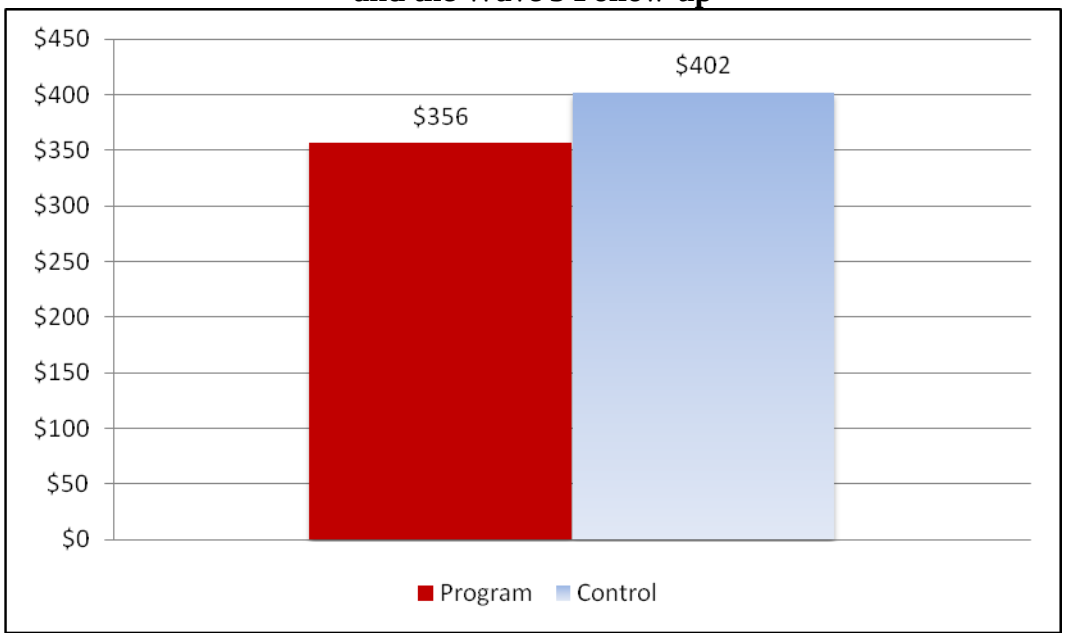
Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Total			
Between random assignment and Wave 1 survey	23%	14%	8 ***
Between random assignment and Wave 2 survey	37	28	9 ***
Between random assignment and Wave 3 survey	47	40	7 **
Classes, workshops, or seminars			
Between random assignment and Wave 1 survey	15	7	8 ***
Between random assignment and Wave 2 survey	22	14	7 ***
Between random assignment and Wave 3 survey	26	20	6 ***
One-on-one counseling/business counseling			
Between random assignment and Wave 1 survey	2	1	1 ***
Between random assignment and Wave 2 survey	3	1	1 ***
Between random assignment and Wave 3 survey	3	2	1 ***
Peer support/networking			
Between random assignment and Wave 1 survey	2	1	1 **
Between random assignment and Wave 2 survey	3	2	1 *
Between random assignment and Wave 3 survey	4	3	1
Number of Respondents	**1274**	**1176**	**2450**

Source: Follow-up surveys, Waves 1, 2, and 3.
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

4.4 Amount Spent on Services

Project GATE had no impact on total spending for self-employment services over the four-year study period. [Figure IV.3]

Figure IV.3: Amount Spent on Self-Employment Services between Random Assignment and the Wave 3 Follow-up



Source: Follow-up survey waves 1, 2, and 3
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

While Project GATE offered services free of charge, many other providers charged for services. On average, members of the program group spent $356 on self-employment services (other than GATE services) during the follow-up period compared with $402 spent by members of the control group (see Figure IV.3). These are means taken over all members of the program and control groups, including those who received no services.

Note that in Figure IV.3, the totals for spending on self-employment services exclude services received during the time interval from the Wave 2 survey to 12 months prior to the Wave 3 survey, approximately 2 years, on average. This is because, as noted, the Wave 3 survey asked respondents about their spending on self-employment services only during the 12 months immediately prior to the Wave 3 survey.

An examination of spending for self-employment services between random assignment and each of the three waves of the follow-up survey reveals that Project GATE had an impact on that spending only between random assignment and Wave 1. During this period, program group members spent $90, on average, less than the $169 for Control group members, with the $79 difference statistically significant at the 1 percent level. This is not surprising, since a major feature of Project GATE was the offer of free self-employment services to program group members. Since the services were tailored to each individual's needs, it is not surprising that program group members did not supplement their GATE entrepreneurial training with additional spending on self-employment services during the first 6 months or so of their GATE tenure.

4.5 Perceptions of Service Usefulness

Survey respondents who received self-employment services were asked in each survey about the perceived usefulness of the services received. In the earlier report (data from the Wave 1 and Wave 2 surveys) Project GATE participants were described as much more likely than control group members to respond that the self-employment services they received were "very useful." About 52 percent of program group members viewed the services as "very useful," compared to 36 percent of control group members, a statistically significant difference. Conversely, control group members were more likely to report the services were "not at all useful." Among program group members, only 6 percent of the program group reported that the services they received were "not at all useful," compared to 14 percent of the control group.

In the Wave 3 survey we found no difference in perceptions regarding the usefulness of self-employment received during the preceding 12 months (see Table IV.4). Self-employment services received in this time period are no longer related to GATE, and are thus likely to be similar for Program and Control group members.

Table IV.4: Perceptions of Usefulness of Services at the Wave 3 Follow-up

Outcome	Program Group Mean	Control Group Mean	Conditional Differences	
Perceived Usefulness of Services[a]				
Very useful	45%	41%	4	
Somewhat useful	40	40	0	
Not very useful	7	9	-2	
Not at all useful	8	10	-2	
Ways Services Viewed as Helping "A Lot" or "Somewhat"[b]				
Developing a business plan	65	59	6	*
Deciding whether to pursue self-employment	66	60	6	**
Refining a business idea	76	67	9	***
Developing a marketing strategy	69	67	2	
Networking	74	72	2	
Dealing with accounting issues	47	45	3	
Dealing with legal issues	46	44	2	
Dealing with clients	63	62	1	
Providing psychological support	51	46	5	
Dealing with credit issues	37	33	4	
Using computers and technology	52	49	3	
Hiring and dealing with employees	35	34	1	
Applying for loans	25	23	2	
Were There Other Services Would Have Liked to Receive	50	56	-5	**
Types of Services Would Have Liked to Receive[c]				
Classroom Training	16	20	-4	
Business counseling	25	28	-2	
Peer Support/Networking	13	16	-3	
Mentoring	21	20	1	
Loans/Finance/Credit	28	33	-5	*
Other	51	52	0	

Source: Wave 3 follow-up survey.

Notes: Reported means and differences are regression-adjusted to control for differences between the program and control group members in baseline characteristics.

a Means computed using only the 1,000 sample members who reported receiving services.

b Means computed using only the 951 sample members who reported that the services they received helped "a lot" or "somewhat."

c Means computed using only the 1,303 sample members who reported that they would have liked to receive other services.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

4.6 Conclusion

This chapter has examined the impact of Project GATE on the types and amount of self-employment services received by nascent entrepreneurs. Key findings are:

- About 92 percent of the program group received some self-employment services during the follow-up period compared to about 78 percent of the control group.
- During the follow-up period, Project GATE participants received 7 more hours of service than control group members.
- GATE participants spent on average $131 less of their own funds than control group members on self-employment training services.
- GATE participants were more likely than control group members to report that they found the services they received to be useful.

The following chapter addresses whether Project GATE increased business ownership. It discusses business ownership; impacts on business preparation and start-up attempts; impacts on business openings and closures; number of businesses owned; business size; earnings from businesses; differences in the types of businesses developed; and challenges to starting a business.

CHAPTER V.
BUSINESS OWNERSHIP

A key goal of the Project GATE demonstration was to impart business knowledge, entrepreneurial skills, and access to resources that could help participants achieve their goal of self-employment. Chapter IV presented evidence that Project GATE led to a modest increase in the receipt of training, business counseling, and other self-employment services. This chapter presents estimates of the impacts of receiving these additional services on business ownership and business earnings.

Specifically, this chapter presents the impacts on business ownership among the entire GATE sample as well as the impact by site and by subgroup. Special attention is paid to the subgroup of GATE applicants who were receiving Unemployment Insurance (UI) benefits at application. The chapter continues with a discussion of impacts on the number of businesses owned, business openings and closures, business size, time to start of business, business longevity, and business earnings. The chapter then describes differences in the types of businesses developed by program and control group members. Finally, the chapter reviews challenges that program and control group members faced while pursuing self-employment.

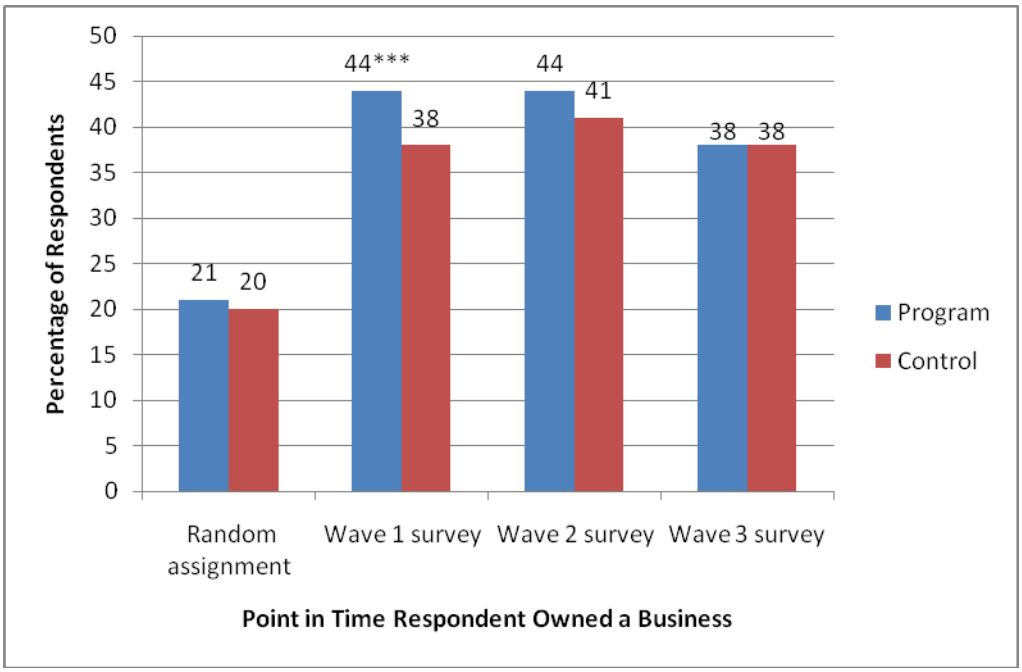
5.1 Business Ownership

This section addresses the impact of Project GATE on business ownership over time. The section also reviews impacts across demonstration sites and across key subgroups.

5.1.1 Overall Impacts on Business Ownership

Project GATE had a positive impact on business ownership in the initial quarters after random assignment. [Figure V.1]

Figure V.1: Business Ownership Rate at Wave 1, 2, and 3



Source: Follow-up surveys, Wave 1, 2, and 3.
Notes: Reported means and impacts are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics.
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

At random assignment, both program and control groups started out with similar percentages of business owners.[15] As indicated in Figure V.1, approximately 1 out of 5 GATE applicants

[15] Throughout the report, we use "at random assignment" and "at the time of application" interchangeably since they occurred almost simultaneously. Typically, applicants were randomly assigned within a few days of their application.

already owned a business at random assignment (21 percent of the program group and 20 percent of the control group). Most likely, these business owners applied to Project GATE in order to learn how to grow their existing business or to develop a new business. By the time of the Wave 1 survey (approximately 6 months after random assignment), the percentage of business owners among the program group had more than doubled -- to 44 percent.[16] The business ownership percentage for the control group had also increased dramatically -- to 38 percent. This difference of 6 percentage points between the program and control groups is statistically significant at the 1 percent level.

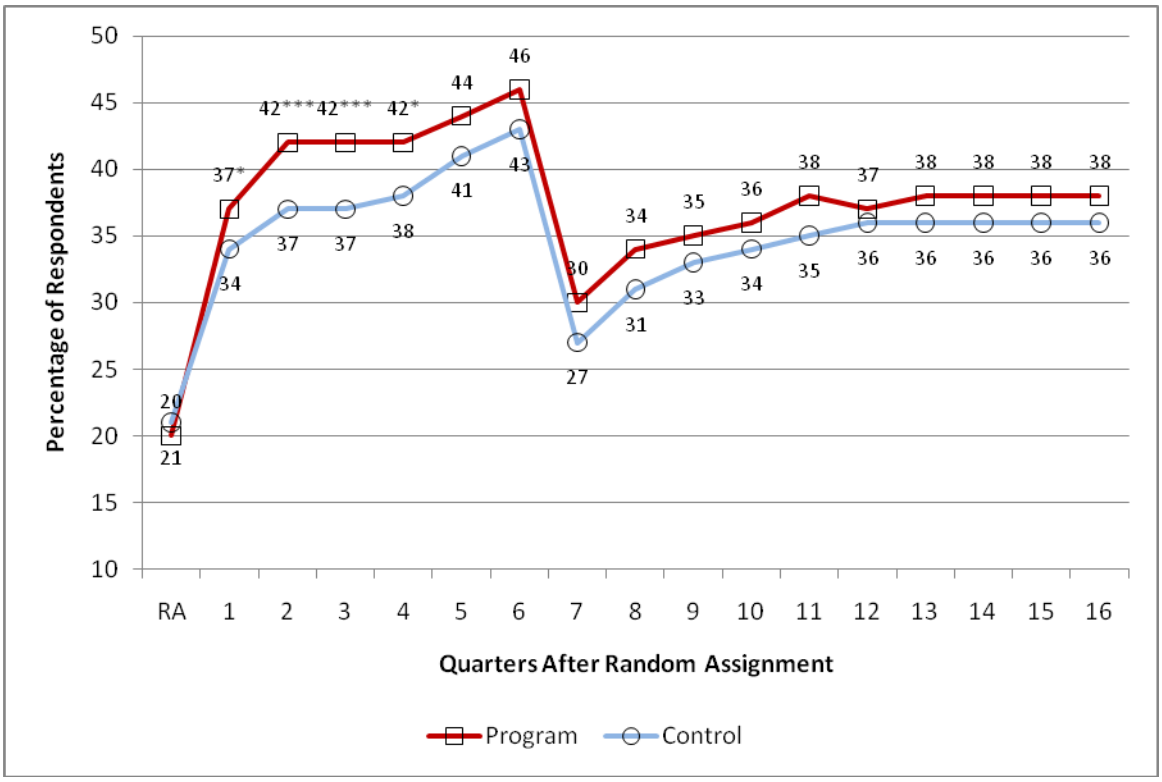
At Wave 2 (approximately 12 months later), the program group percentage of business owners remained at 44 percent; control group members' business ownership percentage increased to 41 percent. The 3 percentage point difference at Wave 2 is not statistically significant. Similarly, at Wave 3 (approximately 60 months after random assignment), the difference between the two groups is not statistically significant. In fact, the percentage of business ownership for both groups declined to 38 percent by Wave 3. These results suggest that Project GATE only increased business ownership early in the follow-up period. After this initial period, control group members caught up with the program group in percentage of business ownership, eliminating any difference between the two groups.

Figure V.2 presents business ownership by quarter.[17] Project GATE had a positive impact of 3 to 5 percentage points on the likelihood of business ownership during the first four quarters after random assignment. Both the program group and the control group experienced a steep growth in business ownership during the first three quarters after random assignment. By the end of the first quarter, the program group had nearly doubled its rate of business ownership to 37 percent; the rate climbed further to 46 percent by the end of the sixth quarter (or 18 months) after random assignment.

[16] Business ownership at each survey wave is defined as: business that is operating at the time of the survey.

[17] Business ownership in a quarter is defined as: business that is operating during the specific quarter.

Figure V.2: Business Ownership by Quarter



Source: Follow-up surveys, Wave 1, 2, and 3.
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

The rapid growth and statistically significant impacts of GATE on business ownership in the first few quarters after random assignment were likely caused by two related factors. First, the main provision of GATE services occurred within the first few months after random assignment. Following acceptance into Project GATE, many program group members quickly enrolled in services and almost immediately began work on their businesses. The initial push from Project GATE services likely sparked the large surge in business ownership among program group members.

Second, among control group members, there was also a rapid surge in business ownership following random assignment. But the increase in business ownership among the control group lagged behind the program group. The slower growth rate for the control group may be due to the fact that control group members either chose to pursue their business ideas without assistance or they found other self-employment assistance services with some delay. As discussed in Chapter IV, many control group members eventually found self-employment services on their

own. As a result of these two factors, control group members started their business with some delay. Ultimately, however, they began to close the gap in business ownership rates with their program group counterparts after the first few quarters following random assignment.

A careful examination of Figure V.2 reveals an interesting anomaly; that is, the percentage of business ownership fell precipitously for both program and control group members between quarter 6 and quarter 7. Inasmuch as this precipitous drop coincided with the timing of the Wave 2 survey, we investigated this phenomenon in detail. Our conclusion is that the drop is due to what is known as the "seam effect."[18] The seam effect is a well-known phenomenon associated with longitudinal surveys; a disproportionate number of changes in a respondent's status are reported (or inferred to have taken place) at the 'seam' between the end of the reference period for Wave t and the start of the reference period for Wave t+1 of a panel survey.[19]

Close analysis of the data reveals that this phenomenon is due to recall error. That is, the Wave 3 questionnaire included the following question: "since the last survey interview, have you been self-employed." Because the Wave 3 survey was conducted approximately 3½ years after the Wave 2 survey, a number of people who answered 'no' to this question should have answered 'yes.' We reach this conclusion based on the following analysis:

- At Wave 3, a total of 1,238 respondents said they did not own a business at some time between Wave 2 and Wave 3.
- Among these 1,238 respondents who said they did not own a business during this period, 196 (or about 16 percent) reported on the Wave 2 survey that they were "currently self-employed."

[18] Robert B. Nielsen and Alfred O. Gottschalck "Estimating Employment Transitions in the Presence of a Seam Effect," *Applied Economics Research Bulletin Peer-Reviewed Working Paper Series*, 2, 1-19 (2009).

[19] Peter Lynn, Nicholas Buck, Jonathan Burton, Annette Jäckle, Heather Laurie, *A Review of Methodological Research Pertinent to Longitudinal Survey Design and Data Collection*, ISER Working Papers, Number 2005-29.

- For the Wave 3 responses to be accurate, 196 individuals would have had to close their business on the day of the Wave 2 survey, which is very unlikely.

Thus, we conclude that 16 percent of the people who said on the Wave 3 survey that they did not own a business since Wave 2 actually did own a business for a time after Wave 2. Thus the conspicuous "dip" in the graph between quarter 6 and 7 reflects the seam effect.

5.1.2 Impacts by Site

Project GATE had similar impacts on business ownership in all sites. [Figure V.4]

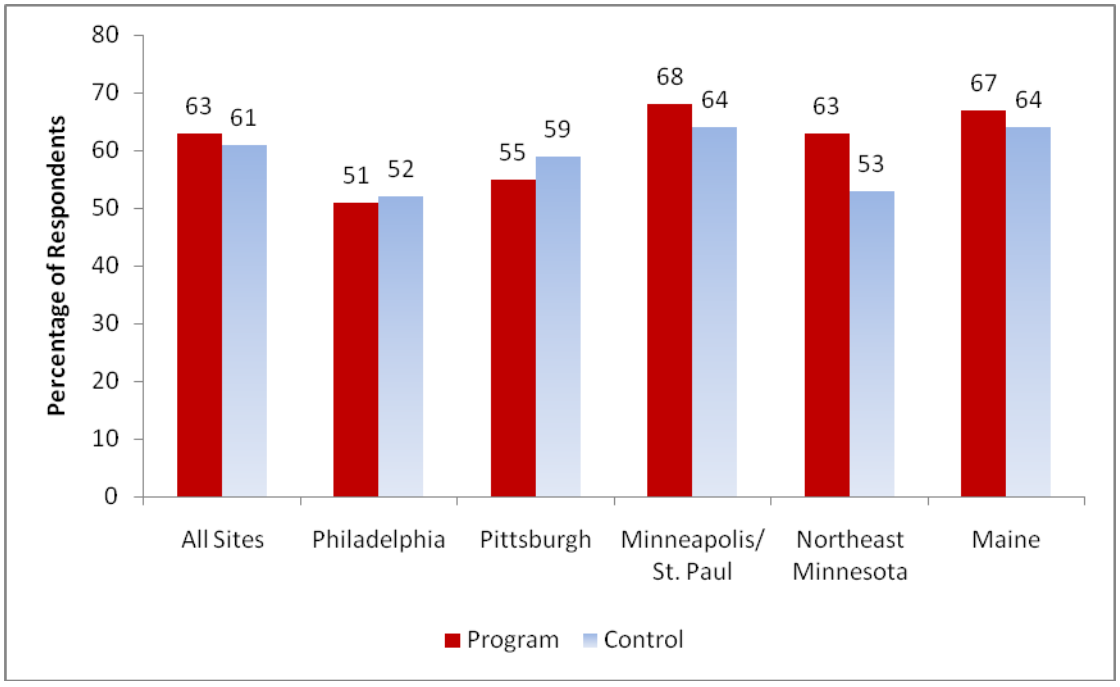
Key elements of the GATE intervention were implemented across all the sites, although the exact mix of services offered and the organizations providing those services varied substantially. Despite this variation, no significant differences in the impacts on business ownership across the participating sites were found. Small sample sizes in some sites, however, make it hard to draw strong conclusions from this finding.

As reported in the earlier 18-month report (Benus et al. 2008), the impact on ever owning a business within the first 18 months after random assignment was statistically significant. That is, over the 18-month period after random assignment, program group members were more likely to have owned a business. Moreover, we found that the impact was largest and statistically significant (9 percentage points) in Minneapolis/St. Paul. This site also experienced among the highest levels of business ownership overall, with 64 percent among program group members and 55 percent among control group members owning a business.

As indicated in Figure V.3, the results for the 60-month follow-up period are quite different. For example, the overall difference in business ownership between the program and control group at Wave 3 is no longer statistically significant. Specifically, over the 60-month follow-up period, 63 percent of program group members owned a business compared to 61 percent for the control

group. In contrast, at Wave 2, the overall business ownership percentages were 55 percent for the program group and 49 percent for the control group. Thus, between Wave 2 and Wave 3, the program group percentage increased by 8 percentage points (55 percent to 63 percent) and the control group percentage grew by 12 percentage points (49 percent to 61 percent). This result reinforces our earlier finding that GATE was significant in promoting business start-up and ownership early in the follow-up period. After this initial period, the control group began to catch up with the program group, and by the end of the 5-year observation period the two groups are similar with respect to business ownership.

Figure V.3: Impacts on Business Ownership by Site



Source: Follow-up surveys, Wave 1, 2, and 3.
Notes: Reported means and impacts are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics.
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

Examination of the impact by site also indicates no significant impact differences in any of the sites. Whereas there were some site differences in Wave 2, by Wave 3 there were no longer any site differences.[20]

5.1.3 Impacts by Receipt of Unemployment Insurance

Compared to the full sample, GATE had a more substantial impact on business ownership among those who were receiving UI benefits at random assignment. [Figure V.4]

For a number of reasons, sample members who were receiving UI benefits at random assignment are of particular interest to DOL policymakers. First, UI recipients constitute about 42 percent of all GATE applicants. Second, DOL's SEA program provides UI recipients with self-employment services similar to Project GATE. Third, previous studies have found sizable impacts from self-employment assistance programs for UI recipients (Benus et al. 1995). For these reasons we focus below on UI recipients.

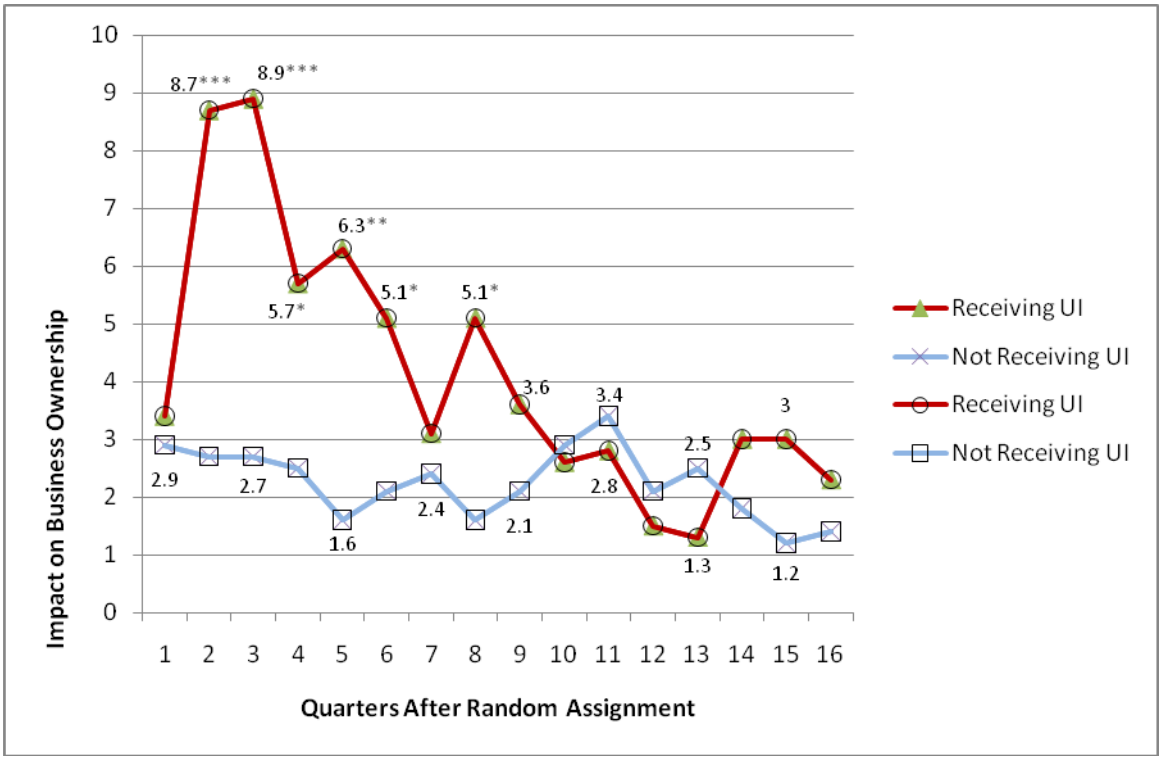
The impact on business ownership for those who were receiving and those were not receiving UI benefits at random assignment are presented in Figure V.4. As indicated in the figure, the impact for the subgroup receiving UI benefits is statistically significant during the early post random assignment quarters (Q2-Q6). During this period, the impact ranged between 5 and 9 percentage points. For the subgroup that was not receiving UI benefits at random assignment, the impact was substantially lower and not statistically significant in any first quarter. In Q2, for example, the impact was 8.7 percentage points for those receiving UI benefits (significant at the 1 percent level) while the impact was 2.7 percentage points for those not receiving UI benefits (not significant). An F-test[21] was conducted to test jointly the hypothesis that the two subgroups have

[20] At Wave 2, the impact of GATE was statistically significant in Minneapolis/St. Paul; the impact in the other sites was not significant.

[21] An F-test is used to perform more sophisticated statistical tests of linear restrictions, as opposed to a t-test that compares the means of two random variables. Here, there are four groups: male program (mean b1), male control

equal levels of business ownership for all quarters. The hypothesis was rejected at the 5 percent level of significance, indicating that the two subgroups have different levels of business ownership in at least some of the 16 quarters. Comparing the results in Figure V.4 with the results presented earlier for the full sample (Figure V.2), we conclude that the impacts presented in Figure V.2 are largely driven by the impacts for the subgroup that received UI benefits at random assignment. The subgroup that was not receiving UI benefits reduced the overall impact of Project GATE.

Figure V.4: Impacts on Business Ownership For Those Receiving and Those Not Receiving UI Benefits at Random Assignment



Source: Follow-up surveys, Wave 1, 2, and 3.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

(mean b2), female program (mean b3), female control (mean b4). The null hypothesis for the equality of impacts across gender is: (b1-b2) = (b3-b4), or b1=b2+b3-b4 which is a linear restriction on the model. Since we are using a covariate-adjusted regression model, an F-test is a more convenient way to proceed than a t-test.

Several factors are likely to be responsible for the larger impact of Project GATE on UI recipients. For example, UI recipients may have fewer alternative opportunities in the regular labor market, making self-employment more attractive. Also, not having a wage and salary job provides the unemployed with more time to work on their business. Finally, receipt of UI benefits provides UI recipients with a regular income while attempting to start a business. The results presented above are consistent with previous research, which also found that unemployed individuals are much more likely to attempt self-employment than those already working in wage and salary jobs (Evans and Leighton 1989; Meager 1992).

5.1.4 Impacts by Other Subgroups

Project GATE increased business ownership among men more than among women. [Table V.1]

In addition to the differences between impacts for UI recipients and non-UI recipients, subgroup analysis also revealed that Project GATE increased business ownership among men more than among women. Men experienced an impact of 7 percentage points on business ownership over the 60-month follow-up period (see Table V.1). An F-test was used to test the hypothesis that the magnitudes of the impact on men and on women were identical. The hypothesis was rejected at the 1 percent level, suggesting that the magnitude of the impact on men was different from that on women.

Previous studies have shown mixed results on whether there are gender differences in the effect of self-employment assistance services. One study (Aronson 1991), showed that men are more likely to become self-employed following self-employment services. Another study (Benus et al. 1995) showed that, in one demonstration state women were more likely than men to benefit from self-employment services, but in a second demonstration state there was no gender difference.

A new study recently released by the Small Business Administration reported that women base their self-employment decisions on lifestyle and family factors, while men are motivated by

earnings potential (Gurley-Calvez et al., 2009). The authors suggest that the differences in motivating factors to become entrepreneurs could indicate the need for policies encouraging the self-employment of women in general, and targeting innovative, high-earning women in particular.

Of the 16 subgroups examined (see Table V.1), significant differences in the impacts on overall business ownership were found for only 2 subgroups: males and UI recipients. Given that the evaluation team tested many subgroups, these differences could be appearing by chance.

Table V.1: Impacts on Business Ownership

Subgroup [a]	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants	
Receiving Unemployment Insurance at Random Assignment				
Yes	61%	55%	5.4	*
No	63	63	-0.3	
Submitted a UI Claim in Quarter Prior to Random Assignment				
Yes	61	61	0.6	
No	61	59	1.9	
Working at Random Assignment				
Yes	57	58	-0.5	
No	61	57	3.7	
Self Employed at Random Assignment				
Yes	89	90	-1.2	
No	56	53	2.6	
Ever Self Employed Prior to Random Assignment				
Yes	72	69	2.9	
No	50	48	1.8	
Gender				
Male	65	58	6.5	**
Female	60	63	-3.7	
Age Greater Than or Equal to 40 Years				
Yes	59	58	0.7	
No	66	63	2.6	
Education Greater Than 12th Grade				
Yes	66	62	3.5	
No	60	59	0.5	

Race is White			
Yes	65	63	1.9
No	59	57	1.6
Past Credit Problems			
Yes	61	59	2
No	63	62	1.2
Minor Living in the Household			
Yes	61	59	2
No	60	58	2
Have More than 5 Years of Managerial Experience			
Yes	64	63	1.6
No	60	59	1
Household Income			
Less than $25,000	54	55	-1.2
Greater than or equal to $25,000	69	66	3.1
Lacks A Car, Telephone, Computer, or Bank Account			
Yes	57	54	3.7
No	64	62	1.9
Receiving TANF, Food Stamps, SSI, or General Assistance			
Yes	53	52	0.9
No	63	61	1.2
Score on Personal Assessment of Suitability for Self Employment[b]			
Less than 90	62	61	1.3
Greater Than or Equal to 90	62	60	1.9
Number of Respondents	**1,274**	**1,176**	**2,450**

Source: Follow-up surveys, Waves 1, 2, and 3.

Notes: Reported means and impacts are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics.

[a]Defined by characteristics reported on the GATE application form prior to random assignment.

[b]The GATE application form asked whether the applicant would say whether 21 statements about their personality were "very true," "somewhat true," "neither true nor untrue," "somewhat untrue," or "very untrue." A scale was developed from these scores that could range from 21 to 105, with a higher score indicating a personality that is usually viewed as more conducive to business development.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

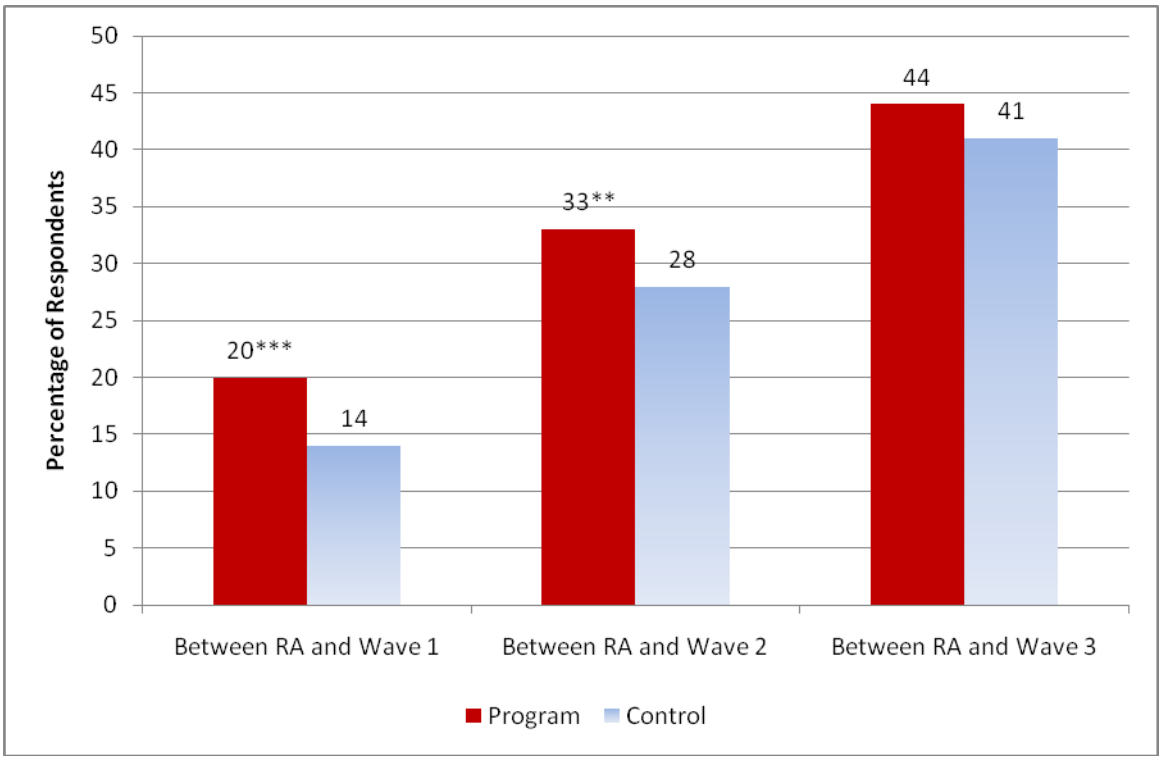
5.2 Impacts on Business Openings and Closures

GATE had a significant impact on the number of business start-ups in the early quarters following random assignment. GATE had no impact on the number of business closures. [Figure V.5 and Figure V.6]

The life cycle of business start-ups can vary dramatically. Data from the first U.S. Panel Study of Entrepreneurial Dynamics reveals that, after about four and a half years, about one-third of individuals were operating a new business, one-third were still in the active start-up phase, and one-third had disengaged from the entrepreneurial process (Gartner et al. 2004). In this section we examine whether GATE had an impact on new business openings and closures. The vast majority (about 95 percent) of businesses owned by sample members were started from scratch. Less than 5 percent of program or control group members acquired their businesses through a purchase, inheritance, or other transfer of ownership.

Program group members, however, were significantly more likely than control group members to start a new business after random assignment. As indicated in Figure V.5, between random assignment and the Wave 1 survey, 20 percent of GATE program group members, compared to 14 percent of control group members, reported owning a business that was established after their application to the GATE program -- a 6 percentage point difference that is significant at the 1 percent level. Over time, the difference between the two groups declined but remained statistically significant through Wave 2. Between random assignment and Wave 2, 33 percent of the program group opened a business while 28 percent of the control group did the same (a 5 percentage point difference). By the time of the Wave 3 survey, the difference was not statistically significant.

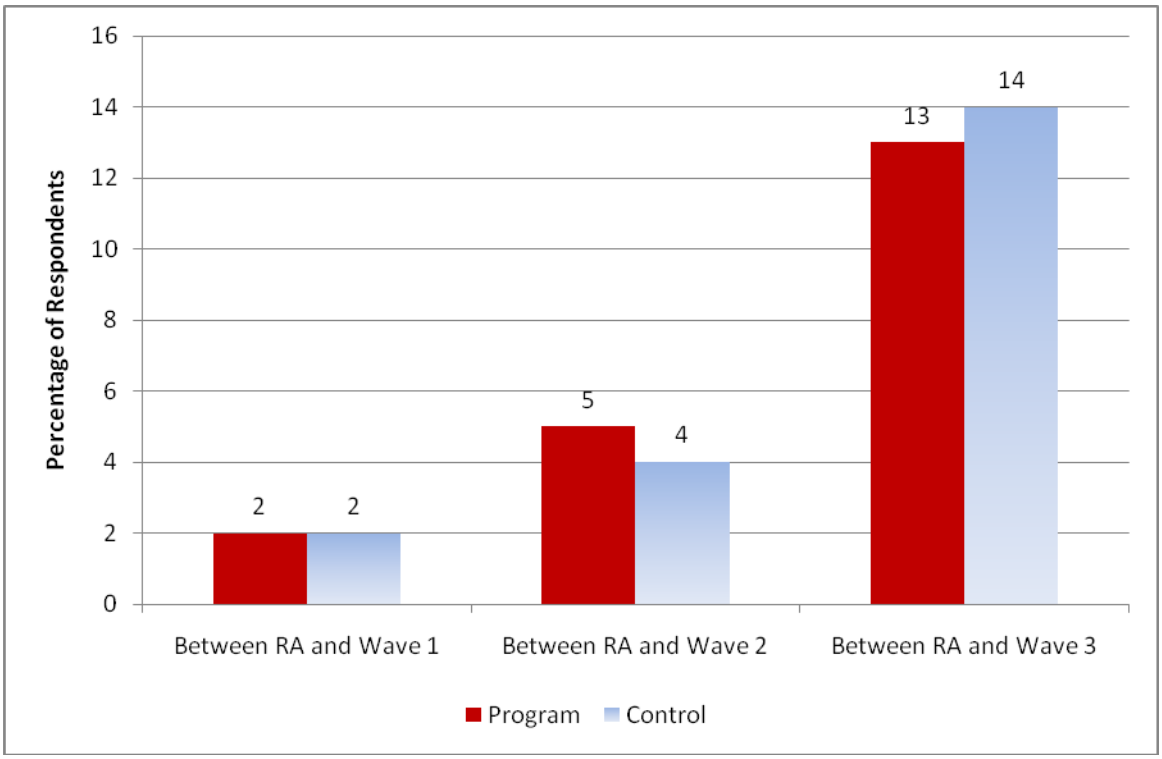
Figure V.5: Impacts on Business Openings



Source: Follow-up surveys, Wave 1, 2, and 3.
Notes: Reported means and impacts are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics.
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

In contrast to GATE's impact on business openings, GATE had no impact on business closings. As indicated in Figure V.6, between random assignment and Wave 1, the proportion of individuals closing their business was 2 percent for both program and control groups. Throughout the observation period, 13 percent of program group members and 14 percent of control group members had a business closure.

Figure V.6: Impacts on Business Closures



Source: Follow-up surveys, Wave 1, 2, and 3.
Notes: Reported means and impacts are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics.
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

5.3 Number of Businesses Owned

As indicated in Table V.2, 37 percent of GATE participants, compared to 33 percent of control group members, reported having owned one business between random assignment and the Wave 1 survey, a difference significant at the 10 percent level. However, between Wave 1 and Wave 2 the difference between program and control group dissipated. There was also no difference for the period between Wave 2 and Wave 3.

The average number of businesses owned between random assignment and the Wave 1 survey was slightly higher among program group members compared to control group members (0.5 vs. 0.4, significant at the 1 percent level). This difference also disappeared for the period between Wave 1 and Wave 2 and for the period between Wave 2 and Wave 3.

Table V.2: Impacts on Number of Businesses Operated

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants	
Number of Businesses Operated Between Random Assignment and Wave 1				
1	37%	33%	4%	*
2	4	3	1	
3 or more	0	0	0	
Average	0.5	0.4	0.1	***
Number of Businesses Operated Between Wave 1 and Wave 2				
1	39	38	1	
2	4	4	0	
3 or more	1	1	0	
Average	0.5	0.5	0	
Number of Businesses Operated Between Wave 2 and Wave 3				
1	38	38	0	
2	5	4	0	
3 or more	0	0	0	
Average	0.5	0.5	0	
Number of Respondents	**1,274**	**1,176**	**2,450**	

Source: Follow-up surveys, Wave 1, 2, and 3.

Notes: Reported means and impacts are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

5.4 Business Size

Businesses owned by both the program and control group members were generally small. As indicated in Table V.3, there is little difference between the program and control group in the proportion of businesses that had employees.[22]

Only about one-quarter of the business owners in Wave 3 reported having any employees. Thus, the vast majority of businesses provided employment only for the business owner. At Wave 3, for example, only 24 percent of the businesses owned by the program group had any employees other than the owner. The percentage of control group businesses with employees was 28 percent (not statistically different). For both program and control groups, there appear to be small increases in employees between each of the survey waves, suggesting that the businesses experienced a modest employment growth over time. However, the vast majority of businesses were still small in size, with only a tiny fraction reporting more than five employees (not shown).

[22] Although the differences in the sizes of the businesses may be informative, they should not be considered as impacts of Project GATE. The observed differences could be a result of an impact of Project GATE on the size of business owned, but could also be a result of Project GATE leading to different types of people starting a business.

Table V.3: Employees of Current or Most Recent Businesses

Outcome	Program Group Mean	Control Group Mean	Conditional Difference
Has Any Employees			
Wave 1[a]	19%	16%	3
Wave 2[b]	23	22	2
Wave 3[c]	24	28	-4
Has Full-Time Employees			
Wave 1[a]	10	11	0
Wave 2[b]	11	11	0
Wave 3[c]	10	13	-3
Has Part-Time Employees			
Wave 1[a]	15	13	3
Wave 2[b]	18	17	1
Wave 3[c]	19	22	-3
Number of Respondents	**1,274**	**1,176**	**2,450**

Source: Follow-up survey, Waves 1, 2, and 3.

Notes: Reported means and differences are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics. As the means were computed over nonrandom samples of the program and control group, the differences should not be interpreted as impacts.

[a] Means computed over 1,025 respondents who owned a business between random assignment and the Wave 1 survey.

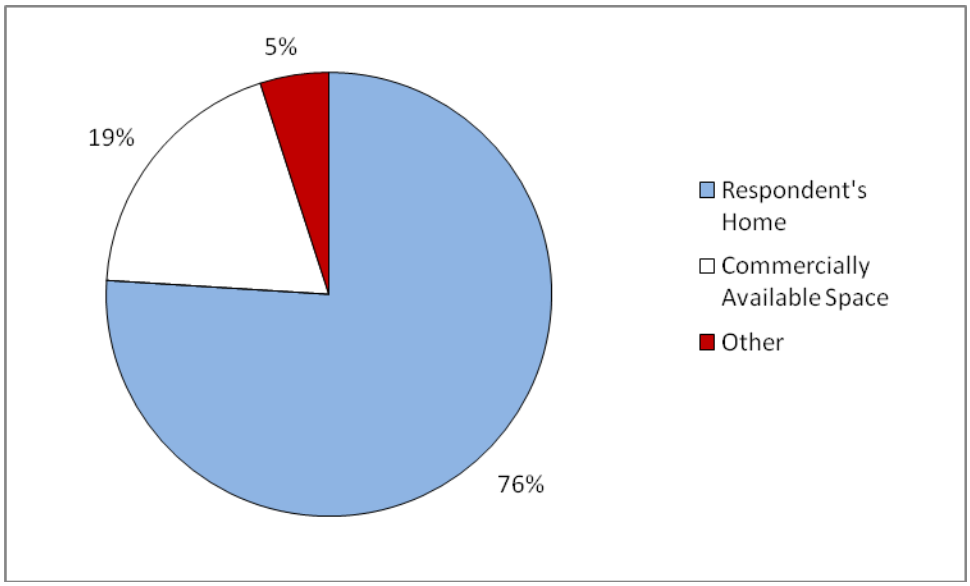
[b] Means computed over 1,097 respondents who owned a business between the Wave 1 and 2 surveys.

[c] Means computed over 955 respondents who owned a business between the Wave 2 and 3 surveys.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

Consistent with the fact that most entrepreneurs worked alone, about 76 percent of all businesses in the Wave 3 survey were operated out of the respondents' homes (see Figure V.7). Another 19 percent were located in commercially available space. This is a slight increase over Wave 2, when 79 percent were operated in the home and only 16 percent located in commercially available space. No program-control differences in business location were found.

Figure V.7: Location of Current or Most Recent Business



Source: Follow-up surveys, Wave 3.
Notes: Reported means and impacts are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics.
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

Among business owners, business profitability was similar for both program and control group members. [Table V.4]

As indicated in Table V.4, control group members reported significantly higher average monthly sales than program group members in Wave 1. The level of monthly sales did not differ between the two groups in subsequent waves, however. Reported monthly expenses did not differ between program and control group business owners in any wave.

We believe that the reported monthly sales and expenses levels may not be accurately reported by all business owners (due to the general reluctance of business owners to reveal their sales and expense figures). As a result, we constructed a measure to indicate business profitability more objectively: the ratio of reported sales to reported expenses. As indicated in Table V.4, more than half of both program and control group members reported that their sales exceeded

expenses. Furthermore, business profitability appears to have increased in each wave for both groups.

Table V.4: Sales, Expenses, and Salary Payments of Current or Most Recent Business

Outcome	Program Group Mean	Control Group Mean	Conditional Difference
Average Monthly Sales			
Wave 1[a]	$2,944	$4,975	-$2,031 *
Wave 2[b]	4,473	5,482	-1,009
Wave 3[c]	4,970	6,441	-1,471
Average Monthly Expenses			
Wave 1[a]	1,875	2,553	-678
Wave 2[b]	2,481	3,069	-588
Wave 3[c]	3,595	4,329	-734
Sales Exceed Expenses			
Wave 1[a]	54%	52%	3
Wave 2[b]	55	56	-1
Wave 3[c]	63	58	4

Source: Follow-up survey, Waves 1, 2, and 3.

Notes: Reported means and differences are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics. Means computed using only sample members who owned a business between random assignment and Wave 1. As the means were computed over nonrandom samples of the program and control group, the differences should not be interpreted as impacts.

[a]Means computed over 1,060 respondents who owned a business between random assignment and the Wave 1 survey.
[b]Means computed over 1,154 respondents who owned a business between the Wave 1 and 2 surveys.
[c]Means computed over 1,212 respondents who owned a business between the Wave 2 and 3 surveys.
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

5.5 Time to Start First Business

Program group members started their business earlier than control group members [Table V.5 and Figure V.8]

As indicated in Table V.5, among program group members who started a business, 69 percent started their business within a year of random assignment whereas 64 percent of control group businesses started during the same time frame. On average, program group members started their business approximately 11.0 months after random assignment compared to 13.1 months for control group members.[23]

Table V.5: Time to Start of First Business after Random Assignment

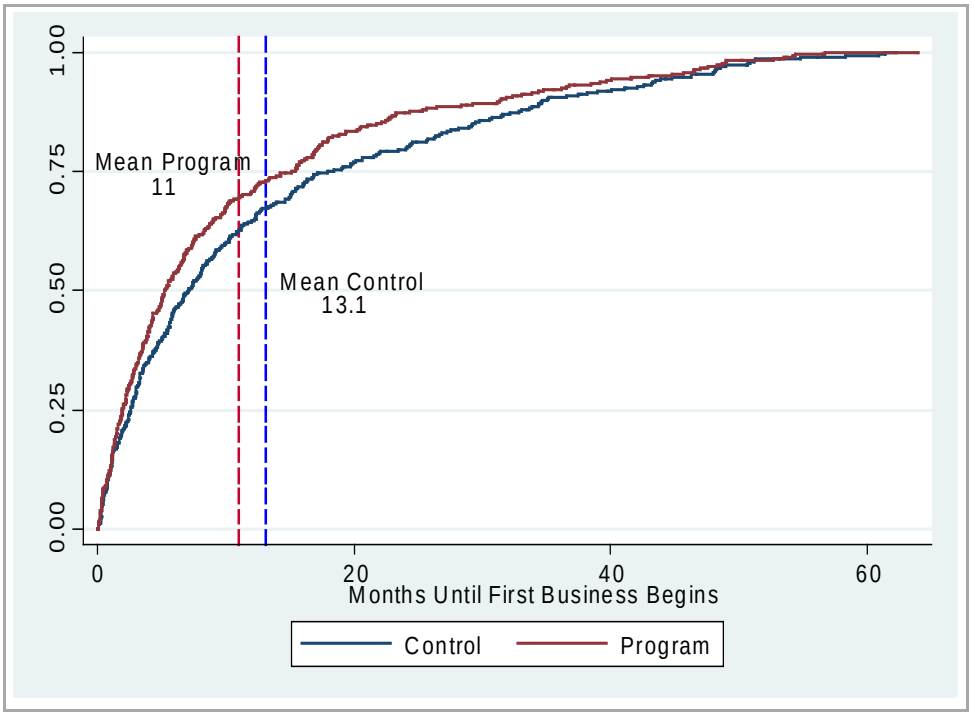
Outcome	Program Group Mean	Control Group Mean	Conditional Differences	
0-1 year	69%	64%	5	
1-2 years	18	15	3	
2-3 years	6	11	-6	***
3-4 years	5	5	0	
4+ years	3	4	-2	
Mean (in Months)	11.0	13.1	-2.1	**

Source: Wave 1, 2, 3 follow-up survey.
Notes: Reported means and differences are regression-adjusted to control for differences between the program and control group members in baseline characteristics.
a Means computed using only the 1,009 sample members who established a new business between random assignment and wave 3.
b The p-value for a chi-square test of distributional differences is 0.007.
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

[23] Although the differences in business start timing may be informative, the difference should not be considered as impacts of Project GATE. The observed differences could be a result of Project GATE leading to different types of people starting a business.

An alternative methodology for analyzing time to start of first business is examining the cumulative hazard distribution, where the hazard is defined as the start of the first business after random assignment. The cumulative hazard distribution indicates the probability that an individual started a first business in a given month during the observation period. The graphical representation of the cumulative hazard function is presented in Figure V.8. It demonstrates that at random assignment and in the very early weeks following random assignment there was little difference between the program and control group. Starting at about month 3, the probability a program group member started a business began to exceed that of a control group member. This gap widened until around month 25, after which it slowly began to narrow. It was not until around month 50 that the gap between program and control group members narrowed to a very small amount. In summary, the program group members were able to start their businesses earlier and, on average, it took longer for control group members to start their first business.

Figure V.8: Time to Start First Business



Source: Wave 1, 2, 3 follow-up survey.

5.6 Business Longevity

The longevity of first business started after random assignment was greater for program group members than control group members. [Table V.6 and Figure V.9]

As indicated in Table V.6, businesses started by program group members appear to have slightly greater longevity than businesses started by control group members. On average, business started by program group members remained in operation for 32.5 months while businesses started by control group members remained in operation 30 months. This observed difference may reflect the fact that program group members started their businesses sooner than control group members and the truncation of the observation period at approximately 5 years[24].

Table V.6: Longevity of Business

Outcome	Program Group Mean	Control Group Mean	Conditional Differences	
Businesses that operated between wave2 and wave3				
0-1 year	17%	19%	-2	
1-2 years	15	21	-6	*
2-3 years	22	20	2	
3-4 years	26	23	3	
4+ years	20	18	2	
Mean (in Months)	32.5	30	2.5	*

Source: Wave 1, 2, and 3 follow-up surveys.
Notes: Reported means and differences are regression-adjusted to control for differences between the program and control group members in baseline characteristics.
a Means computed using only the 652 businesses which operated between wave 2 and wave 3. The p-value for a chi-square test of distributional differences is 0.16.
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

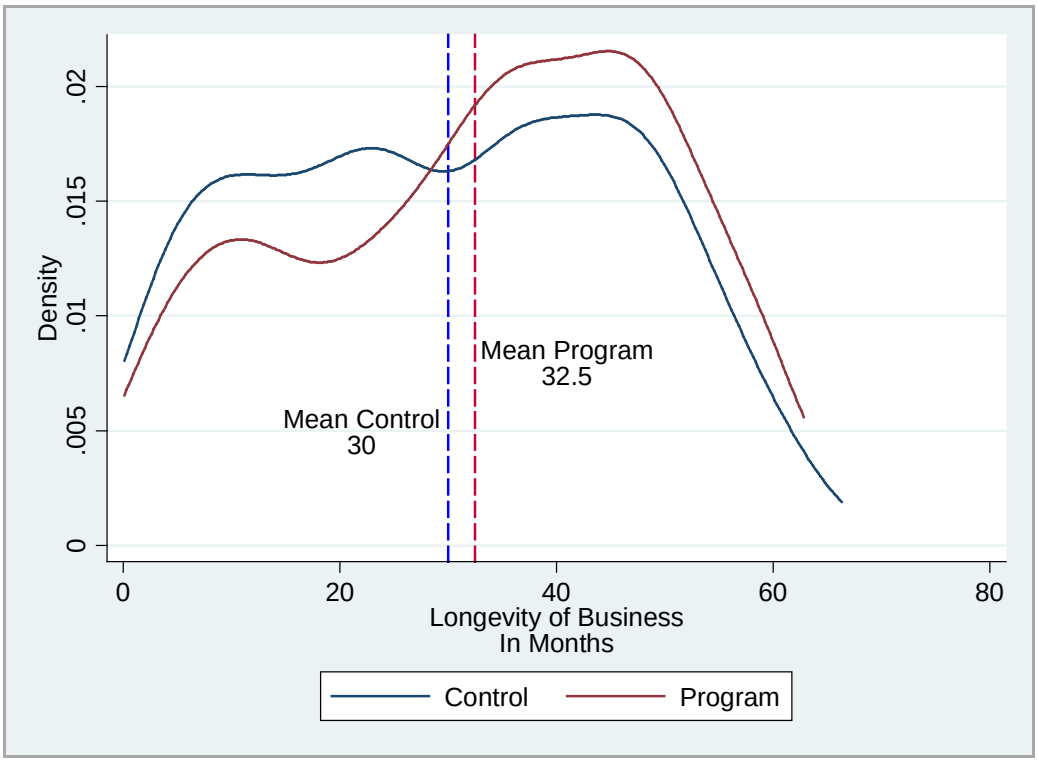
[24] While these differences are interesting, the differences should not be considered as impacts of Project GATE. The observed differences could be a result of Project GATE leading to different types of people starting a business.

Business longevity is also presented graphically in Figure V.9. The graph represents the entire probability distribution of business longevity. This graph reveals two results:

- The average business among program group members lasted 32.5 months, slightly higher than the average of 30 months for control group members.
- Program group members had relatively more businesses lasting for approximately 27 to 60 months, compared to control group members. Conversely, control group members had relatively more businesses lasting 0 to 27 months than program group members.

Both of these results are consistent with Project GATE helping individuals start their businesses earlier. Because program group members tended to start their businesses earlier, by the cutoff point of data analysis at the Wave III survey, their businesses tended to have higher longevity, and up until Wave III were just as likely to remain in operation as were control group businesses.

Figure V.9: Business Longevity



Source: Wave 1, 2, 3 follow-up survey.

5.7 Earnings from Businesses

Project GATE did not have an impact on the earnings of business owners. [Table V.7 and Figure VI.10]

Survey respondents who had owned businesses were asked about the wages and salaries they paid themselves from each of their own businesses. In spite of the relatively high self-employment rates, very few respondents reported receiving wages or salaries through self-employment. Over the entire follow-up period, the program group earned about $11,000 on average in wages and salary from self-employment, while the control group earned an average of about $10,000 in salary related to self-employment (see Table V.7 and Figure V.10). As indicated, the difference in earnings was not statistically significant in any of the 16 quarters. Over the 16 quarter observation period, the difference in earnings between the program and control groups was $962 (not statistically significant).

Besides wages and salaries, self-employed individuals may also have non-salary sources of income through their businesses, such as bonuses, profit distribution, or owners' draw from revenues. Both groups earned, on average, an additional $3,500-$3,700 in non-salary income.[25] The total difference between the two groups was $166 dollars, which was not statistically significant.

[25] The low level of reported total compensation from businesses may be real—most businesses are in their infancy. However, income underreporting may also be playing a role. Underreporting by the self-employed is well documented. Kesselman (1989) estimates that while nearly all wage and salary earnings (98 to 99 percent) were reported to the Internal Revenue Service, those who were self-employed reported only 79 percent of their income. This may be because it is more difficult to accurately measure business earnings than it is to measure wage and salary earnings, or it may be driven by people intentionally understating income for tax reasons. Since more program group members than control group members owned businesses, possible underreporting of self-employment income may disproportionately underestimate the income of the program group.

Table V.7: Impacts on Earnings

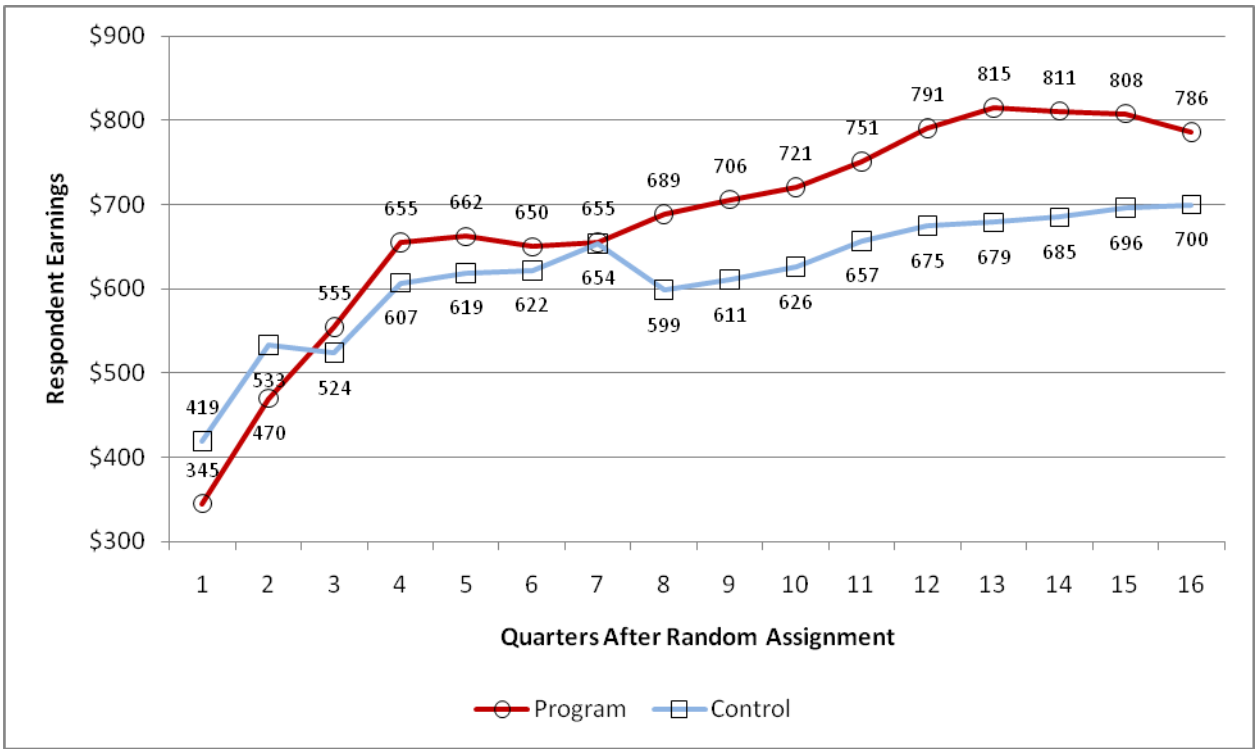
Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Earnings from Businesses in Quarter After Random Assignment			
Quarter 1	$345	$419	-$74
Quarter 2	471	533	-62
Quarter 3	555	524	31
Quarter 4	655	607	47
Quarter 5	662	619	43
Quarter 6	649	622	27
Quarter 7	655	654	1
Quarter 8	689	599	90
Quarter 9	706	611	95
Quarter 10	721	626	95
Quarter 11	751	657	94
Quarter 12	791	675	116
Quarter 13	815	679	136
Quarter 14	811	685	126
Quarter 15	808	696	111
Quarter 16	786	700	86
All quarters 1 to 16	10,870	9,906	962
Total Non-Salary Income from Businesses	3,700	3,533	166
Number of Respondents	**1,274**	**1,176**	**2,450**

Source: Follow-up surveys, Waves 1, 2, and 3.

Notes: Reported means and impacts are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

Figure V.10: Impacts on Earnings



Source: Follow-up surveys, Wave 1, 2, and 3.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

A similar analysis (see Figure VI.11 in Chapter 6), suggests similar albeit somewhat larger results for GATE participants receiving UI at random assignment. For individuals receiving UI at random assignment, program participants earned an additional $3,088 through self-employment earnings (not statistically significant), and $1,655 more in non-salary income (statistically significant at the 10 percent level).

5.8 Differences in the Types of Businesses Developed

Project GATE may influence not only the prevalence and timing of business ownership but also the characteristics of businesses developed by participants. This section examines the ownership structure and location, business financing, and industries in which businesses were developed.

5.8.1 Ownership Structure

The ownership structure of respondents' businesses did not differ significantly between program and control groups at the Wave 3 survey. Over 60 percent of respondents reported that their current or most recent business was a sole proprietorship (see Table V.8). Approximately one-quarter of the businesses were organized as corporations and the remainder were either partnerships, cooperatives, or other forms of business ownership structures.

Table V.8: Ownership Structure of Most Recent Business at Wave 3

	Program Group Mean	Control Group Mean	Conditional Difference
Sole proprietorship	62%	61%	1
Corporation	28	26	2
Partnership	4	6	-2
Cooperative	1	1	0
Other	7	6	1
Number of Respondents	**623**	**578**	**1,201**

Source: Follow-up survey, Wave 3.

Notes: Reported means and differences are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics. Means computed using only sample members who owned a business between random assignment and Wave 1. As the means were computed over nonrandom samples of the program and control group, the differences should not be interpreted as impacts.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

5.8.2 Business Financing

Given that most businesses owned by the study sample were small start-ups, it is not surprising that respondents tended to fund their businesses largely with personal resources. About 85 percent of both program and control group members used their own savings to support their businesses (see Table V.9). However, the control group was more likely, by 5 percentage points, to take out a business loan (13 percent for the program group and 18 percent for the control group). The control group also invested more in the business, on average, than did the program group ($39,681 versus $27,589).

Table V.9: Financing of Most Recent Business

Outcome	Program Group Mean	Control Group Mean	Conditional Difference	
Types of Investments in the Business at Wave 2[a,b]				
Participant's savings	85%	86%	-1	
Personal loans	13	18	-5	**
Business loans	9	11	-2	
Grants	3	1	2	
Other capital	9	9	0	
Average Investment in the Business at Wave 2[a,c]				
Total	$27,589	$39,681	-$12,092	*
Participant's own money	17,473	20,091	-2,618	
Personal loans	7,795	14,811	-7,016	
Business loans	10,292	13,573	-3,282	
Grants	32	9	22	
Other capital	804	1,260	-456	
Family Member Owned Part of the Business				
Wave 1[d]	10%	4%	6	***
Wave 2[a]	10	7	3	
Wave 3	10	8	2	
Percent of Business Owned at Wave 1[d]				
By participant	90	93	-2.8	**
By family member	5	2	2.6	***
Percent of Business Owned at Wave 2[a]				
By participant	92	9	0.21	
By family member	4	3	1.21	
Percent of Business Owned at Wave 3				
By participant	92	92	0.92	
By family member	4	4	0.2	

Notes: Reported means and differences are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics. As the means were computed over nonrandom samples of the program and control group, the differences should not be interpreted as impacts.

[a]Means computed over 1,025 respondents who owned a business between random assignment and Wave 1.

[b]Means computed over 1,097 respondents who owned a business between the Wave 1 and 2 surveys.

[b]Means computed over 955 respondents who owned a business between the Wave 2 and 3 surveys.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

5.9 Challenges to Starting a Business

Self-employment is not an easy pursuit. Every respondent who attempted to own a business during the follow-up period reported facing at least one challenge. The most common challenges faced by both program and control group members were insufficient capital or startup funds, finding clients, and becoming known or getting exposure (see Table V.10). The challenges reported in the Wave 3 survey were generally similar for the two groups. There were, however, some significant differences. More program group members than control group members reported challenges in finding clients. However, more control group members than program group members reported problems with the availability of supplies, products, or materials, as well as more problems with taxes.

A number of these challenges changed in importance over time. For example, as seen in Figure V.11, the challenge of lack of capital or start-up funds declined over time for both program and control group members. The challenge of finding clients, as indicated in Figure V.12, differed significantly between the two groups in Wave 3. One-third of program members reported finding clients as a challenge compared to one-quarter of the control group.

Table V.10: Challenges to Starting a Business

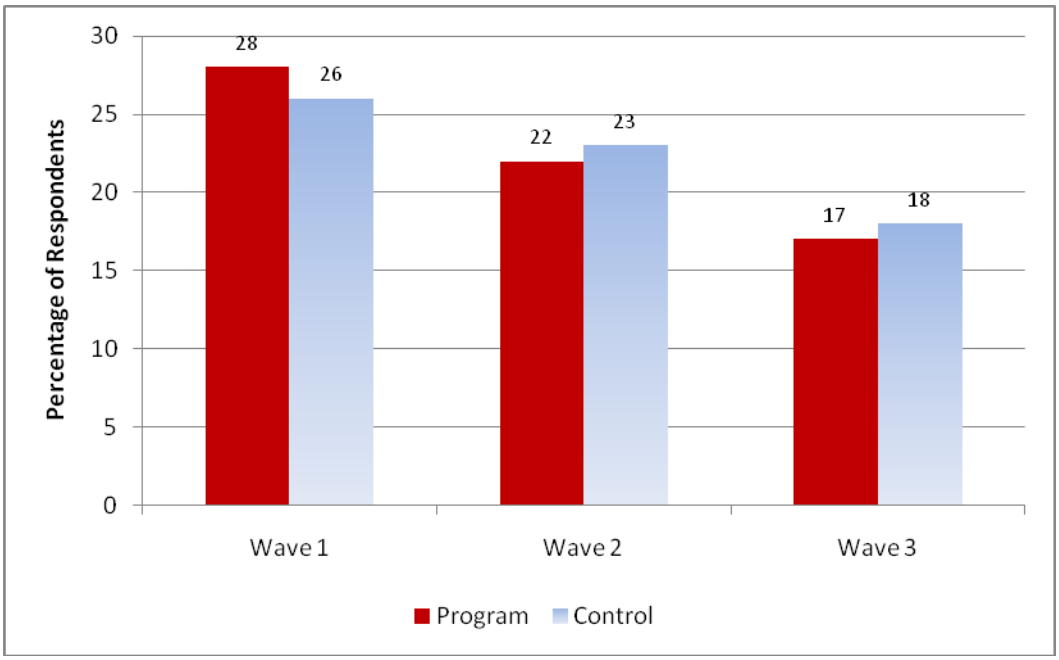
Challenge	Program Group Mean	Control Group Mean	Conditional Difference	
Lack of capital or start-up funds	18%	18%	0	
Finding clients	34	26	7	**
Becoming known or getting exposure	16	15	1	
Insufficient cash flow	5	4	1	
Amount of time and work involved	7	6	1	
Regulations or licenses	3	4	0	
Insurance	1	1	0	
Problems with Supply or Product or Material Availability	1	3	-2	*
Uncertainty or changing economy	4	3	1	
Personal or Family Barriers	2	1	0	
Insufficient sales	0	0	0	
Difficulties hiring qualified staff	1	1	0	
Dealing with clients	1	0	1	
Finding a location	1	2	-1	
Local competition	0	1	0	
Taxes	1	2	-1	*
Other	38	41	-2	
Number of Respondents	**574**	**524**	**1,098**	

Source: Follow-up surveys, Wave 3.

Notes: Reported means and differences are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics. Means computed using only sample members who owned a business between Waves 2 and 3. As the means were computed over nonrandom samples of the program and control group, the differences should not be interpreted as impacts.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

Figure V.11: Lack of Capital or Start-up Funds is a Challenge

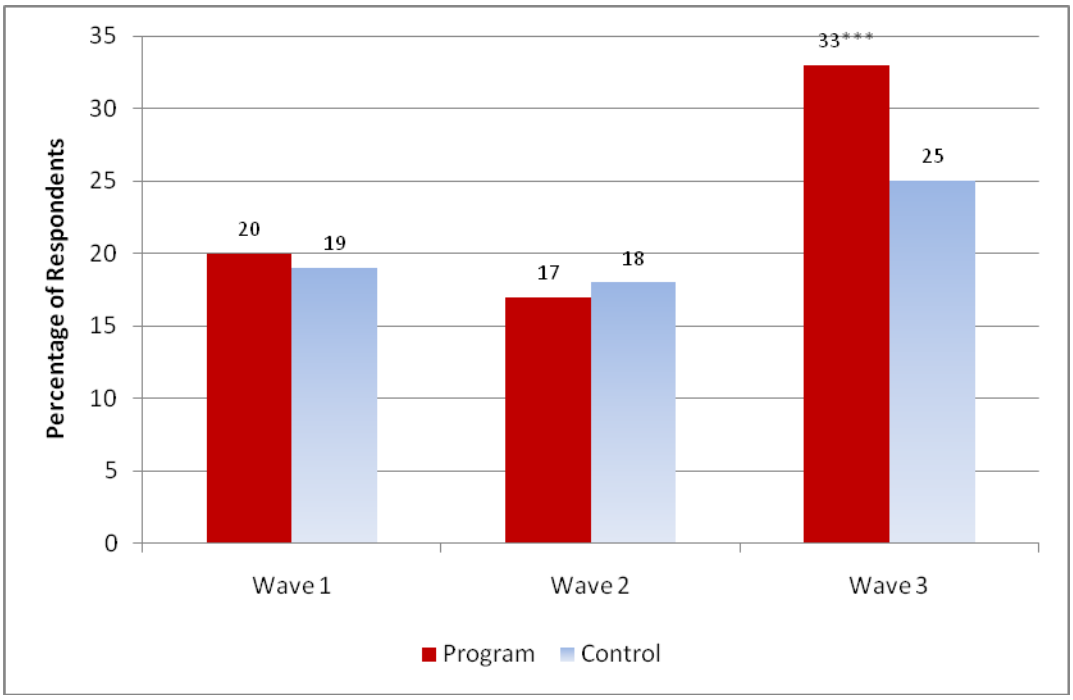


Source: Follow-up surveys, Waves 1, 2, and 3.

Notes: Reported means and differences are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics. Means computed using only sample members who owned a business between Waves 2 and 3. As the means were computed over nonrandom samples of the program and control group, the differences should not be interpreted as impacts.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

Figure V.12: Finding Clients is a Challenge



Source: Follow-up surveys, Waves 1, 2, and 3.
Notes: Reported means and differences are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics. Means computed using only sample members who owned a business between Waves 2 and 3. As the means were computed over nonrandom samples of the program and control group, the differences should not be interpreted as impacts.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

Table V.11 presents the challenges reported by those who tried to start a business but were not ultimately successful. Not surprisingly, the types of challenges reported by these individuals differed sharply from those who owned a business during the follow-up period. Lack of capital or start-up funds was the single biggest challenge for those who unsuccessfully attempted to start a business. Becoming known was another barrier for significantly more respondents who were not able to start a business. By comparison, those who reported owning a business during the follow-up period were more likely to report challenges related to finding clients, becoming known or getting exposure, hiring staff, and insufficient cash flow.

Table V.11: Challenges to Starting a Business, by Success at Starting a Business, Among Both Program and Control Groups

Challenge	Mean for Those Who Attempted But Did Not Own A Business	Mean for Those Who Owned A Business	Conditional Difference
Lack of capital or start-up funds	47%	19%	-28 ***
Becoming known or getting exposure	7	30	21 ***
Finding clients	7	16	9 ***
Amount of time and work involved	6	6	0
Regulations or licenses	4	3	0
Finding a location	6	1	-5 ***
Insufficient cash flow	3	4	1
Insurance	1	1	0
Problems with supply or product or material availability	1	2	0
Taxes	2	2	0
Uncertainty or changing economy	3	4	1
Personal or family barriers	2	2	0
Insufficient sales	1	0	0
Local competition	0	1	1
Dealing with clients	1	1	0
Difficulties hiring qualified staff	2	1	-1
Other	43	40	-3
Number of Respondents	**282**	**1,098**	**1,380**

Source: Follow-up surveys, Wave 3.

Notes: Reported means and differences are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics. As the means were computed over nonrandom samples of the program and control group, the differences should not be interpreted as impacts.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

5.10 Conclusion

This chapter examined the impact of Project GATE on business ownership and the dynamics of business start-up. Key findings are:

- Project GATE had a positive and statistically significant impact on the probability of owning a business in the first few quarters after random assignment.
- Impacts on business ownership peaked shortly after random assignment and then began to fade. By the Wave 3 survey, control group members were as likely as program group members to be self-employed.
- Program group members started their first business sooner and their businesses had greater longevity than control group businesses.
- The impact on business ownership was larger among individuals who were receiving UI at random assignment. Men were also significantly more likely to benefit from Project GATE than women.
- GATE had no impact on the earnings of the self-employed.

The next chapter examines whether Project GATE increased total employment and earnings from self-employment and wage and salary employment combined. Outcomes of interest include total employment rate, number of months worked, number of hours worked, earnings, and job satisfaction. Characteristics of wage and salary jobs held by GATE sample members are also described.

CHAPTER VI.
EMPLOYMENT AND EARNINGS

Project GATE was seen as a way to increase self-sufficiency by providing participants an alternative avenue for employment—working for oneself. This chapter explores whether, and by how much, Project GATE affected self-employment and self-employment earnings. In addition, the chapter explores whether Project GATE also affected wage and salary employment and earnings. Thus, this chapter addresses whether Project GATE affected *total employment* and *total earnings* — whether working for oneself or for someone else. While the findings presented in Chapter V suggest that Project GATE had no impacts on self-employment earnings, Project GATE could still have affected *total earnings* if the program affected wage and salary jobs earnings.

If Project GATE simply shifts people to start their own business (i.e., to self-employment) rather than taking wage and salary jobs, or if GATE leads more people to start businesses concurrently with wage and salary jobs, total employment will remain unchanged. If, on the other hand, Project GATE helps people enter self-employment who would otherwise struggle to find wage and salary jobs, GATE could increase total employment. The latter is consistent with previous findings in separate studies by Evans and Leighton (1989) and Meager (1992). An evaluation of the UI Self-Employment Demonstration in Massachusetts also found some evidence that self-employment assistance programs have a positive impact on total employment. Specifically, the Massachusetts program increased both the number of months in self-employment and wage and salary employment, and hence increased total employment (Benus et al. 1995). The same evaluation found that participants in Washington were more likely to be self-employed and less likely to be employed in wage and salary jobs, but that the former effect was larger, leading to increases in total employment.

This chapter begins by discussing the sources of data on employment and earnings. It then discusses the impacts of Project GATE on employment rates and hours worked. Next, it discusses the impacts on employment in the businesses that were started, followed by participants' earnings. The chapter concludes with an examination of the effects of Project GATE on job satisfaction and the characteristics of jobs for those who were employed.

6.1 Source of Data on Employment and Earnings

The follow-up survey collected data on employment and earnings. The survey collected data in three waves: about 6 months, 18 months, and 60 months after random assignment. Respondents were asked about all the businesses they owned (up to a maximum of five) as well as all the wage and salary jobs they held (up to a maximum of five), either since random assignment (in the Wave 1 survey) or since the previous wave of the survey (in the Wave 2 and Wave 3 surveys).

While the Wave 3 follow-up survey was scheduled to be, on average, 60 months after random assignment, some respondents did not have a full five years of earnings information following random assignment. Specifically, the Wave 3 surveys began in January 2009 and ended in August 2009 whereas random assignments were made from September 2003 through July 2005. As a result, for some respondents the Wave 3 survey was less than five years after random assignment. To avoid differential follow-up periods, we chose to report all earnings results for 16 quarters (48 months) following random assignment.

For each business the respondent owned, the start date and end date of the business was collected, along with key attributes of the business such as monthly sales, average weekly hours worked by the respondent at the business, the respondent's income from the business, and loans or grants used to acquire the business. For each wage and salary job held, the respondents were asked about the start and end dates of the job, and other variables such as occupation, industry, earnings from the job, and fringe benefits. The start and end dates of each business owned and each job held were used to construct a history of employment over the entire follow-up period from random assignment through the date of the Wave 3 survey.

In the earlier Project GATE impact evaluation (Benus et al. 2008); earnings data were also available from Unemployment Insurance (UI) administrative data. These administrative data provided total quarterly earnings from wage and salary jobs as reported by employers to state UI agencies. Although most wage and salary jobs are covered, self-employed workers are not included in these data. For the current impact evaluation, additional UI administrative data were not available. For this reason, all earnings outcomes in this report are based on survey data.

6.2 Employment Rate

This section examines the impact of Project GATE on the probability of being employed. We examine separately: (a) the probability of being self-employed, (b) the probability of being employed in a wage and salary job, and (c) the probability of total employment—defined as either self-employment or wage and salary employment.

Since some individuals were employed at the time of random assignment, while others were unemployed and receiving UI benefits, we examine separately the employment rates of the full sample and the sample of UI recipients at random assignment.[26] The employment rate of UI recipients is of particular interest, since GATE may play an important role in helping these individuals replace their lost income in the short run and provide a sustainable income in the long run. If GATE has a differential impact for UI recipients, self-employment programs like GATE may play an important role during periods of economic recession, when there are fewer wage and salary jobs available for the unemployed.

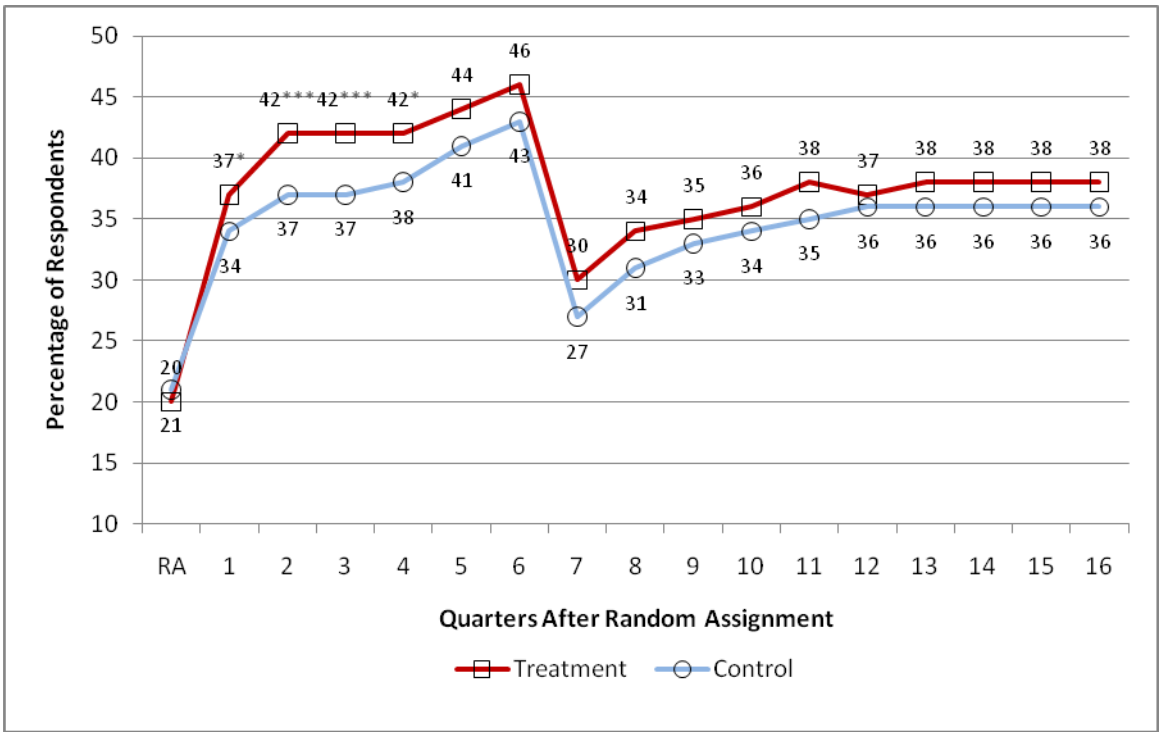
6.2.1 Self-Employment Rate

Project GATE increased the likelihood of self-employment during the first few quarters after enrollment. After the ninth quarter, the impact was not statistically significant. [Figure VI.1]

During eight of the first nine quarters after random assignment Project GATE increased the likelihood of owning a business by 3 to 5 percentage points (see Figure VI.1). For example, in the second quarter after random assignment, 42 percent of the program group owned a business, compared to 37 percent of the control group (statistically significant at the 1 percent level). After the ninth quarter following random assignment, the differences in self-employment rates were negligible and not statistically significant.

[26] Some individuals may also have been unemployed but not receiving UI benefits. This group is included in the full sample.

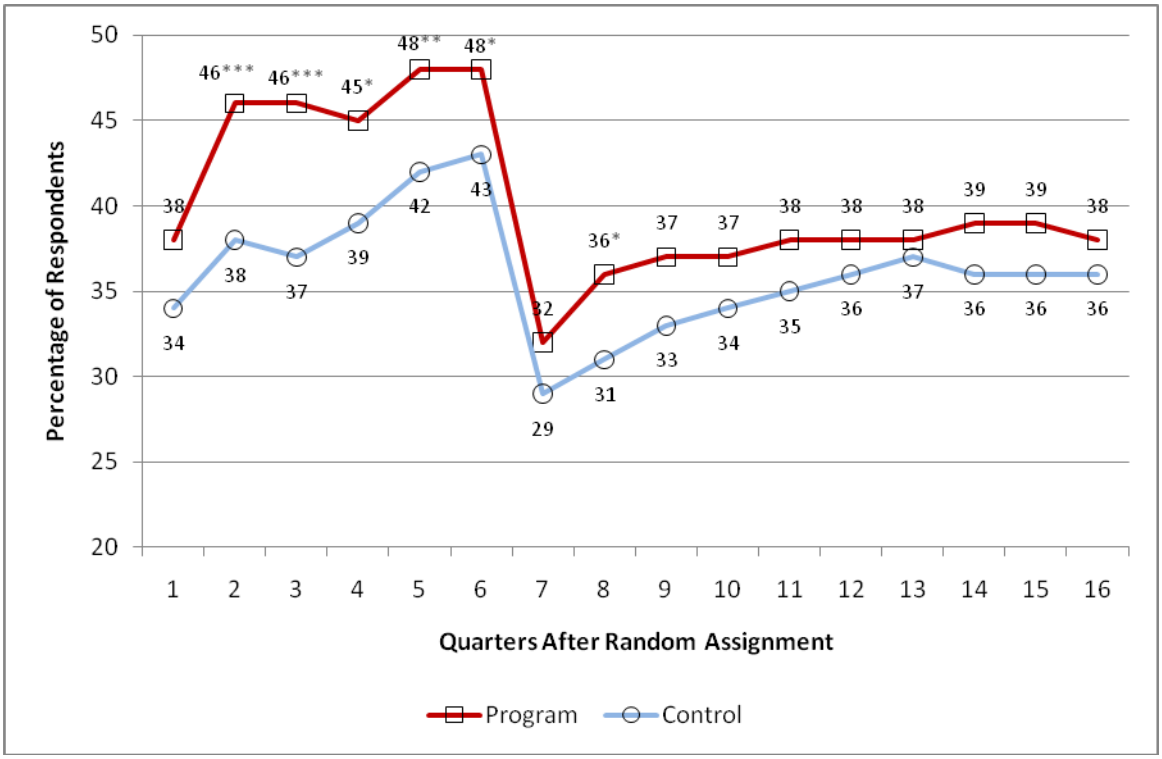
Figure VI.1: Self-Employment Rate by Quarter (Full Sample)



Source: Follow-up surveys, Wave 1, 2, and 3.
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

Among UI recipients at random assignment, Project GATE substantially increased the likelihood of self-employment in the early quarters after random assignment. [Figure VI.2]

Figure VI.2: Self-Employment Rate (UI Recipients at Random Assignment)



Source: Follow-up surveys (Waves 1, 2 and 3)

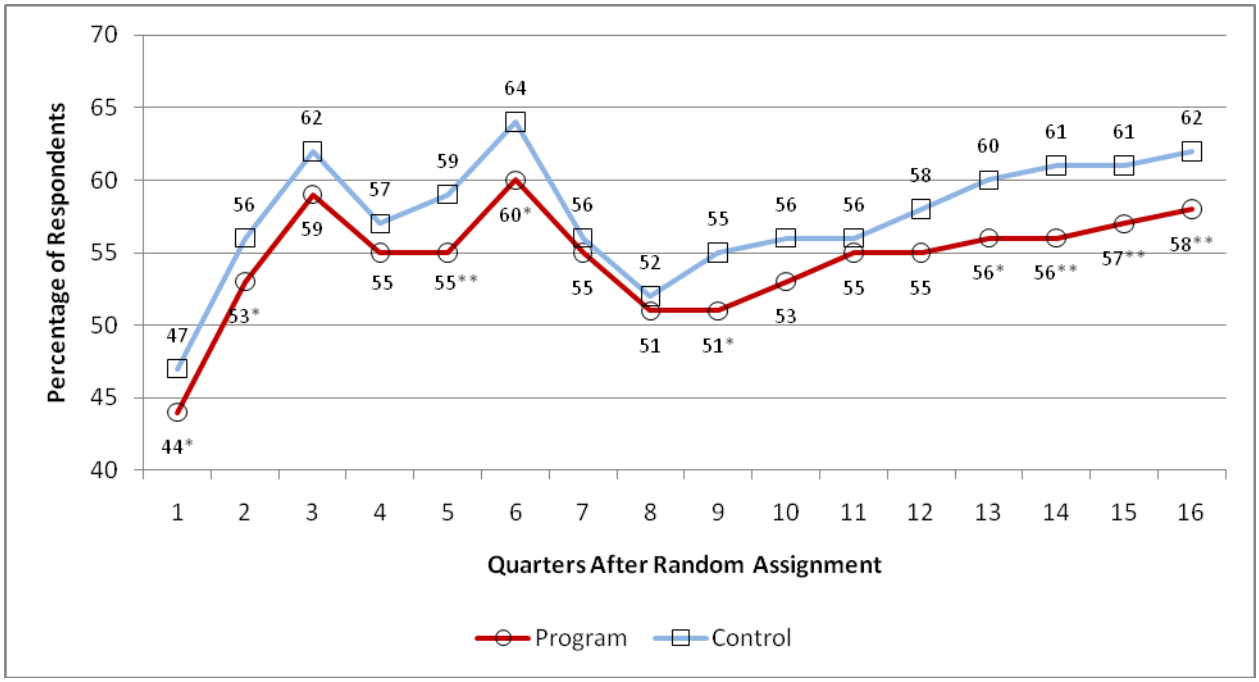
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level

A comparison of Figure VI.1 with Figure VI.2 indicates that the impact of Project GATE was more pronounced for individuals receiving UI benefits at the time of random assignment than for the sample as a whole. Specifically, for UI recipients at random assignment, the impact ranged between 6 and 9 percentage points during Q2 through Q6 after random assignment. Similar to the findings for the full sample, the impact declined substantially over time. At Q16, the difference between the program and the control group was negligible and not significant.

6.2.2 Employment Rate at Wage and Salary Jobs

Project GATE reduced the likelihood of wage and salary employment in about half the quarters following random assignment. In the remaining quarters, the impact was insignificant. [Figure VI.3]

Figure VI.3: Wage and Salary Employment Rate (Full Sample)



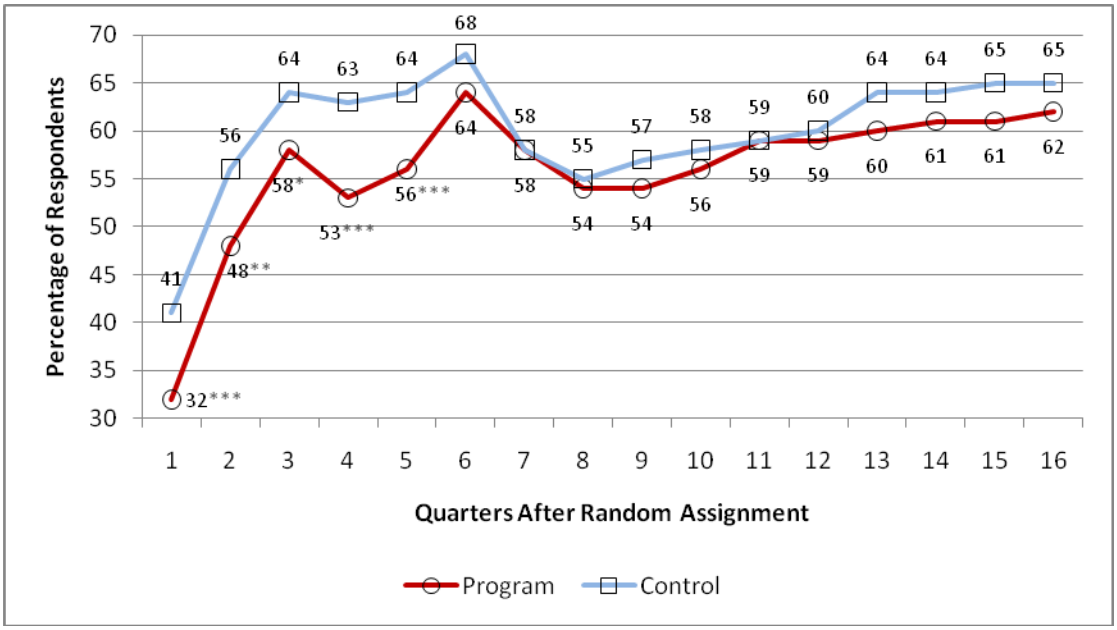
Source: Follow-up surveys (Waves 1, 2 and 3)

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level

As indicated in Figure VI.3, control group members were generally more likely than program group members to be employed in wage and salary jobs throughout the follow-up period. In approximately half of the 16 quarters after random assignment, this difference was statistically significant. For example, during the fourth year after random assignment (Q13-Q16), about 61 percent of control group members had a wage and salary job, compared to 57 percent of program group members.

Among participants who were unemployed at random assignment, Project GATE decreased the likelihood of being employed in a wage and salary job during most of the first year and a half after random assignment. [Figure VI.4]

Figure VI.4: Employment in Wage and Salary Jobs (UI Recipient at Random Assignment)



Source: Follow-up surveys (Waves 1, 2 and 3)
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level

As shown in Figure VI.4, the impact of GATE on the likelihood of wage and salary employment for those who were UI recipients at random assignment was negative and substantial during the first 5 quarters after random assignment. Specifically, GATE reduced the likelihood of wage and salary employment by 6 to 10 percentage points. After the fifth quarter, however, the negative impact on wage and salary employment dissipated and was not statistically significant. This result is in contrast to the results for the full sample (Figure VI.3), where the impact was negative and statistically significant in year 4 following random assignment.

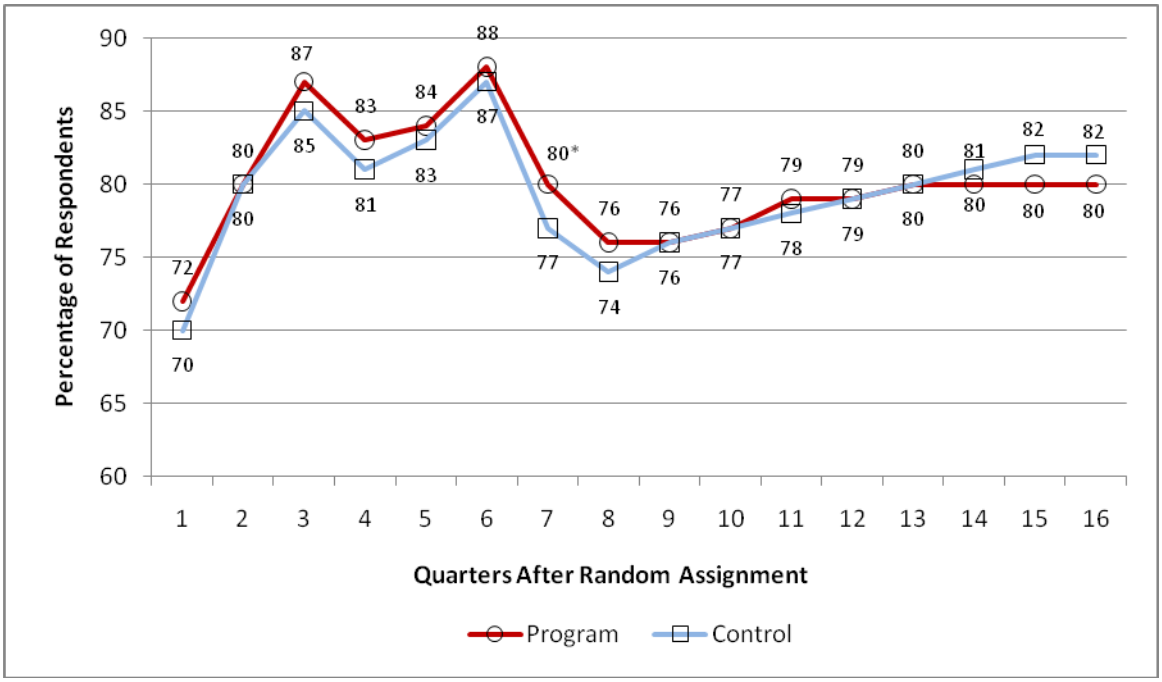
In summary, the results presented above indicate that, for the full sample, GATE had a modest and statistically significant positive impact on the likelihood of self-employment for approximately six quarters following random assignment. During much of this period, GATE had a statistically significant negative impact on the likelihood of wage and salary employment. For UI recipients at random assignment, however, the impacts of GATE were more pronounced. Both the positive impacts on the likelihood of self-employment and the negative impacts on the likelihood of wage and salary employment were more pronounced.

6.2.3 Total Employment Rate

The findings thus far have demonstrated that GATE participants are more likely to be self-employed but less likely to be working in wage and salary jobs during the early quarters after random assignment. These two impacts may offset each other. In this section, we combine self-employment and wage and salary employment to explore whether Project GATE led to an increase or decrease in total employment for GATE participants.

Project GATE had no impact on the likelihood of total employment for the full sample. [Figure VI.5]

Figure VI.5: Overall Employment Rate (Full Sample)

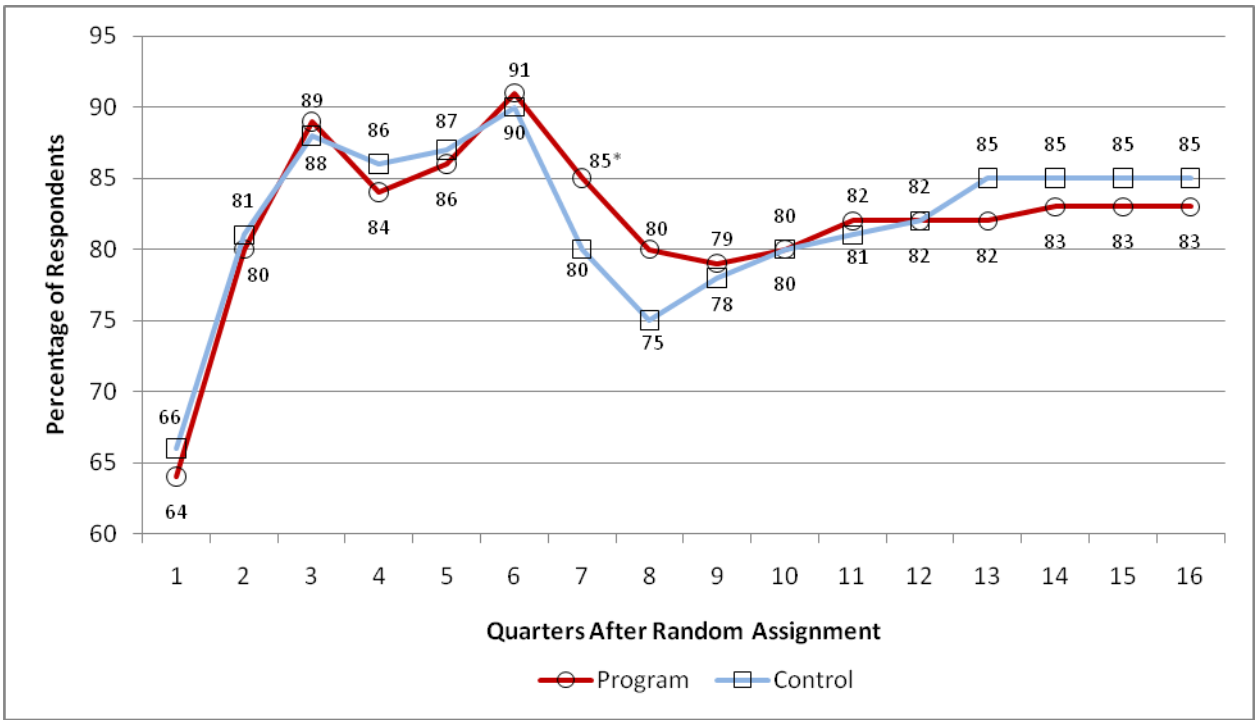


Source: Follow-up surveys (Waves 1, 2 and 3)
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level

As indicated in Figure VI.5, GATE had no impact on the likelihood of employment for individuals considered to be employed if they are either self-employed and/or employed in a wage and salary job. Following an initial increase in Q1-Q6, the employment rate declined for both the program group and the control group, settling at approximately 80 percent. The difference between the two groups was statistically significant only in Q7.

Project GATE had no impact on the likelihood of overall employment for UI recipients at random assignment. [Figure VI.6]

Figure VI.6: Overall Employment Rate (UI Recipients at Random Assignment)



Source: Follow-up surveys (Waves 1, 2 and 3)
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level

An analysis of the overall employment rate for individuals receiving UI benefits at random assignment (Figure VI.6) shows that the program group and the control group exhibited similar overall employment patterns. Thus, the results on total employment for those receiving UI at random assignment are similar to the results for the full sample.

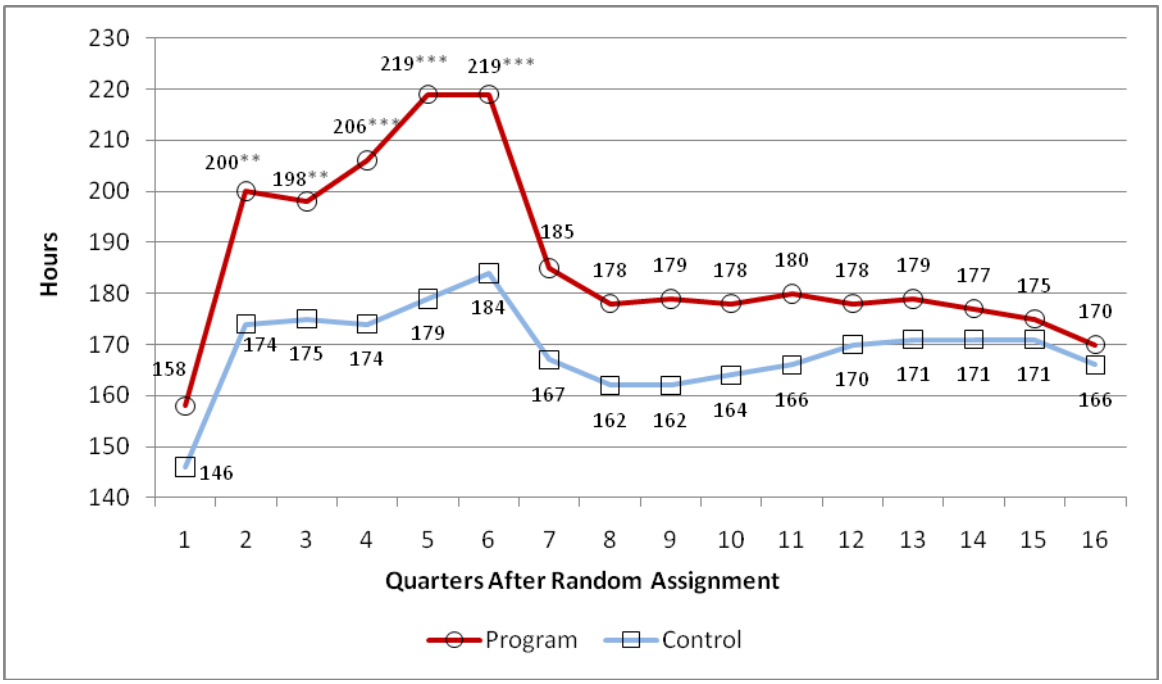
6.3 Hours Worked

In previous sections, we examined the employment rates of program and control group members in each quarter. In this section, we examine the hours worked in each quarter.

6.3.1 Hours Worked at Self-Employment

During the early quarters following random assignment, Project GATE significantly increased the number of hours spent in self-employment. [Figure VI.7]

Figure VI.7: Self-Employment Hours (Full Sample)



Source: Follow-up surveys (Waves 1, 2 and 3)

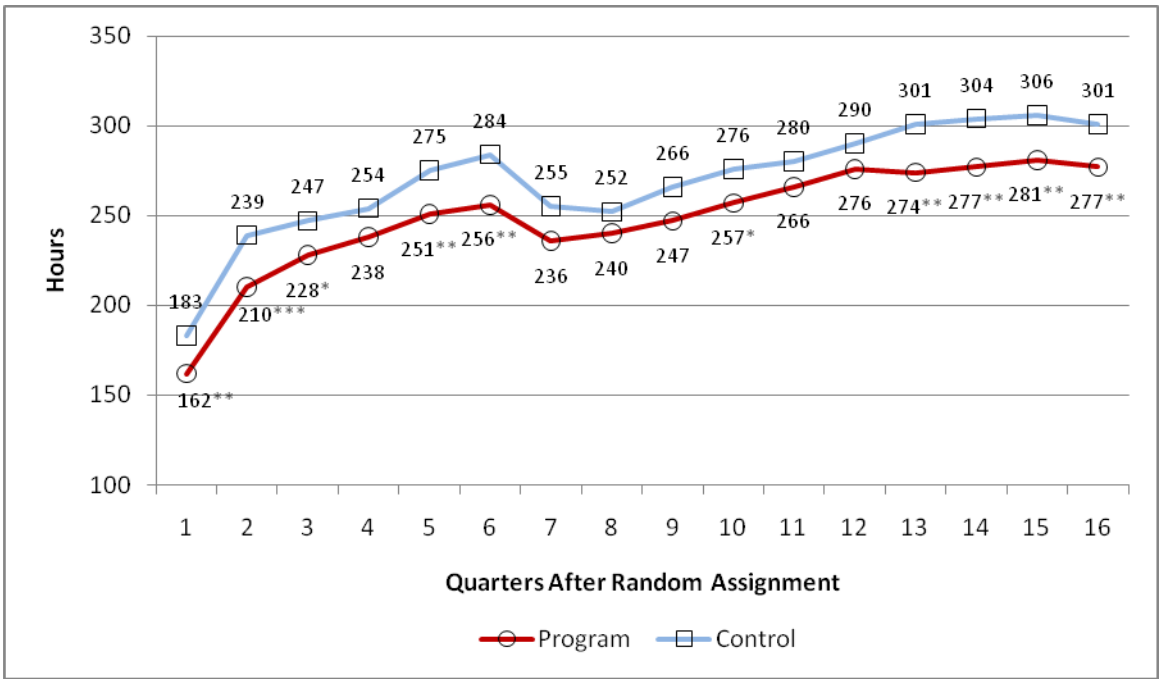
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level

From the second through sixth quarters after random assignment, Project GATE significantly increased the number of hours spent in self-employment. The impact ranged from 23 hours to 40 hours per quarter (see Figure VI.7). For example, in Q6, the program group spent an average of 219 hours in self-employment compared to 179 hours for the control group (a difference of 40 hours in the quarter). Over the entire four-year study period, Project GATE increased the time spent in self-employment by 297 hours. This additional time was concentrated in the earlier quarters of the follow-up period.

6.3.2 Hours Worked at Wage and Salary Jobs

Project GATE reduced the number of hours spent in wage and salary employment. [Figure VI.8]

Figure VI.8: Wage and Salary Employment Hours (Full Sample)



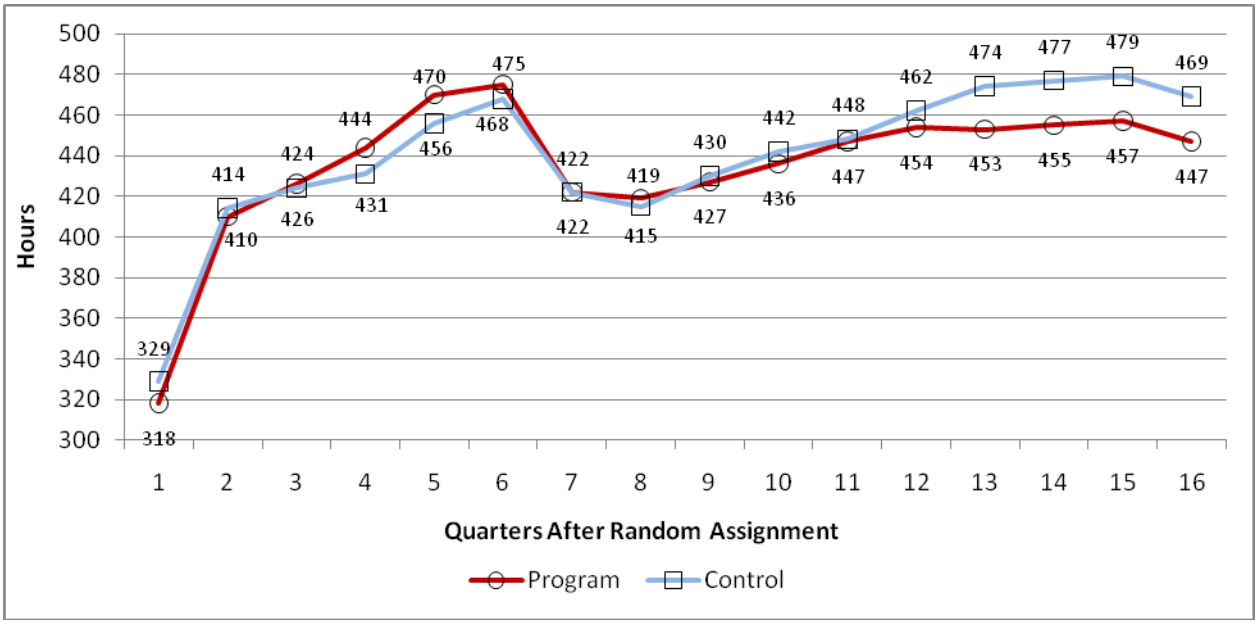
Source: Follow-up surveys (Waves 1, 2 and 3)
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level

In five of the first six quarters after random assignment and in the last four quarters of the follow-up period, Project GATE reduced the number of hours employed in wage and salary jobs. The impact averaged 23 hours per quarter, as seen in Figure VI.8. Over the entire 16-quarter follow-up period, GATE reduced the total number of hours employed in wage and salary jobs by 275 hours. This mirrors the 291-hour increase in hours employed in self-employment.

6.3.3 Total Hours Worked

Project GATE had no impact on total employment hours. [Figure VI.9]

Figure VI.9: Total Employment Hours (Full Sample)



Source: Follow-up surveys (Waves 1, 2 and 3)
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level

Inasmuch as Project GATE increased the hours in self-employment and decreased the hours in wage and salary employment by approximately equal amounts, the impact on total employment hours is insignificant throughout the follow-up period, as indicated in Figure VI.9.

In summary, the results of the analysis on hours of employment suggest that Project GATE had a positive impact on self-employment hours and a negative impact on wage and salary hours. These two opposite impacts on hours worked resulted in a conclusion of no impact on total hours employed.

6.4 Employment in Businesses Started

Project GATE generated additional jobs for non-participants. [Tables VI.1 and VI.2]

The above analysis concluded that GATE had no impact on total employment of Project GATE participants. Even though program group members were more likely to start a business and to work more hours in self-employment than control group members, this positive impact was negated by the reduction in wage and salary employment.

When we examine employment, however, we should not overlook the potential additional employment generated by new businesses started as a result of Project GATE. Since GATE program members started more businesses than control group members, they may have also generated more additional jobs for non-participants. In this section, we investigate the impact of GATE on employment generation.

In Table VI.1 we present the number of businesses that were started after random assignment and were still operating at the time of each survey wave. Thus, if a business started after random assignment and was still operating at the Wave 1 survey, it was included in the Wave 1 count. If, on the other hand, a business started after random assignment but ceased operations prior to the Wave 1 survey the business was not included in the Wave 1 count. Similarly, if a business started after random assignment and was still operating at Waves 1, 2, and 3, it was included in all three wave counts.

The results indicate that most businesses started generated only a single job for the business owner. In Wave 1, for example, program group members started 200 sole businesses with one

employee while control group members started 120. There were also a number of somewhat larger businesses started prior to Wave 1. For example, control group members started 5 businesses with 4-5 full-time equivalent (FTE) jobs, while program group members started 9 such businesses.[27]

Table VI.1: Number of Businesses by FTE Size

FTE Employees in Business	Wave1		Wave2		Wave3	
	Program	Control	Program	Control	Program	Control
1	200	120	225	191	206	164
2-3	38	21	41	38	52	45
4-5	9	5	13	8	11	14
6-10	3	3	8	8	9	7
11-20	1	2	2	3	3	
21-30		3		1		1
31-40					1	1
41-50	1					1
51-60						
61-70						
Total number of businesses	252	154	289	249	282	233
IMPACT	98		40		49	

As indicated in Table VI.1, program group members started a total of 252 businesses of all sizes that were still operating as of the Wave 1 survey, while control group members started a total of 154 businesses. Thus, Project GATE impact was a total of 98 businesses as of Wave 1, 40 businesses as of Wave 2, and 49 businesses as of Wave 3. It should be noted, however, that these differences in the number of businesses started at each wave are not significant. Moreover, when taking into consideration that the program group was larger than the control group at each wave, the program group's advantage disappears.

In Table VI.2 we convert the number of businesses started after random assignment and still operating at each wave into FTE jobs generated. At the time of the Wave 1 survey, program group members' businesses generated a total of 416 FTEs; control group members' businesses

[27] For this analysis, 2 part-time employees were considered equivalent to 1 FTE.

generated 310 FTEs – a difference of 106 FTEs. At Wave 2 and Wave 3, program group members' businesses generated an additional 32 FTEs. As above, these differences are not statistically significant and the same caveats as above apply.

Table VI.2: Number of FTEs Generated by Business Size

Employees	Wave1		Wave2		Wave3	
	Program	Control	Program	Control	Program	Control
1	200	120	225	191	206	164
2-3	88	48	94	88	124	105
4-5	39	21	56	35	45	58
6-10	22	22	59	56	67	53
11-20	17	23	31	39	36	
21-30		76		24		22
31-40					31	33
41-50	50					42
51-60						
61-70						
Total number of jobs	416	310	465	433	509	477
IMPACT	106		32		32	

6.5 Earnings

In previous sections, we focused on the impact of Project GATE on business ownership and employment. We now turn to the question of whether Project GATE had an impact on earnings. We examine both earnings from self-employment and earnings from wage and salary jobs.

6.5.1 Earnings from Self-Employment

Earnings from self-employment may take a number of forms. The entrepreneur may decide to receive a regular salary from the business. This method of payment corresponds most closely to how earnings are received from wage and salary jobs. Many business owners, however, do not receive a regular salary–receiving, instead, irregular, variable-sized, lump-sum payments based on how well the business is doing. These non-salary payments are referred to as profit distributions, owner's draw, or bonuses.

Collecting accurate information on self-employment earnings is challenging for a number of reasons. First, as discussed above, payments to business owners are often irregular and, therefore, difficult to recall in a survey. Furthermore, since business owners can manipulate the timing of their earnings, they may choose to shift income from one year to another in order to minimize and/or adjust the timing of their tax liabilities. Finally, since some businesses are cash based, business owners have a greater opportunity than wage and salary workers to underreport their earnings.

A number of studies have found that business owners frequently underreport their earnings. A GAO study, for example, reported that IRS examiners found that most sole proprietorships underreported their net business income.[28] Other studies have used a variety of techniques and data to analyze underreporting of self-employment earnings. Herb Schutze of the University of Victoria analyzed self-employment underreporting in Canada.[29] Schutze compared family expenditure on food to impute the underreporting of self-employed relative to wage and salary earners. He found that, in 1990, underreporting by the self-employed in Canada was between 12 and 24 percent. Using a similar food consumption-based approach, Gibson, Kim and Chung analyzed underreporting of self-employment income in Korea. They found that 38 percent of the income of self-employed households in Korea is not reported.[30] Still another study, by Feldman and Slemrod, compared charitable giving of self-employed households with that of other households. They found substantial noncompliance on tax returns and underreporting of self-employment earnings.[31] These and other studies indicate that self-employment earnings reported in the survey are likely to be significantly understated.

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[28] GAO, TAX GAP: A Strategy for Reducing the Gap Should Include Options for Addressing Sole Proprietor (GAO-07-1014) www.gao.gov/cgi-bin/getrpt?GAO-07-1014.

[29] Herb Schutze, "Profiles of Tax Non-Compliance Among the Self-Employed in Canada," *Canadian Public Policy*, June 2002.

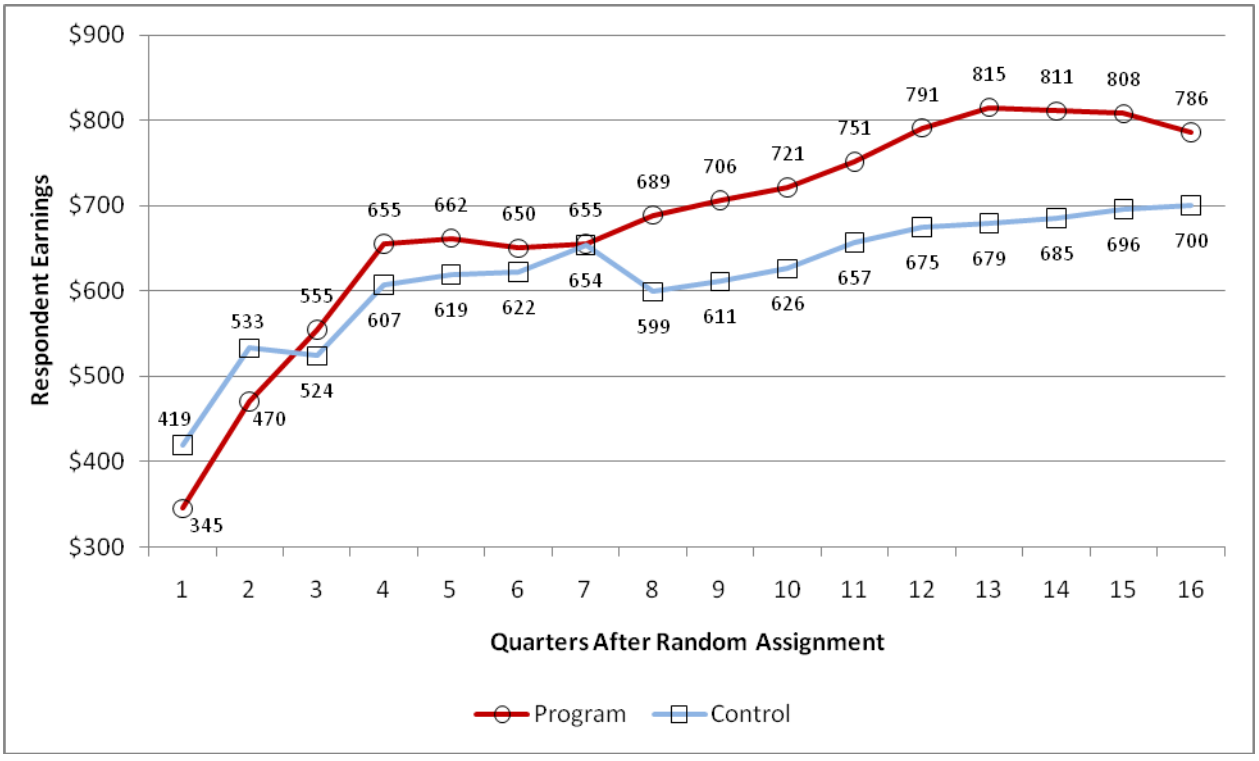
[30] John Gibson, Bonggeun Kim, and Chul Chung, "Using Panel Data to Exactly Estimate Under-Reporting by the Self-Employed," Working Paper in Economics 15/08, October 2008.

[31] Naomi E. Feldman and Joel Slemrod, "Estimating Tax Noncompliance with Evidence from Unaudited Tax Returns," Discussion Paper No. 05-15, Monaster Center for Economic Research, July 2005

In the GATE survey, we included a series of questions to determine regular self-employment earnings as well as other forms of income that a business owner might receive. For example, we asked about such non-salary income sources as bonuses, profit distributions, owner's draw, and other non-regular income paid from the business. The results from an analysis of GATE impacts on self-employment earnings follow.

Project GATE had no impact on regular self-employment earnings during any of the 16 quarters following random assignment. [Figure VI.10]

Figure VI.10: Regular Self-Employment Salary Earnings (Full Sample)

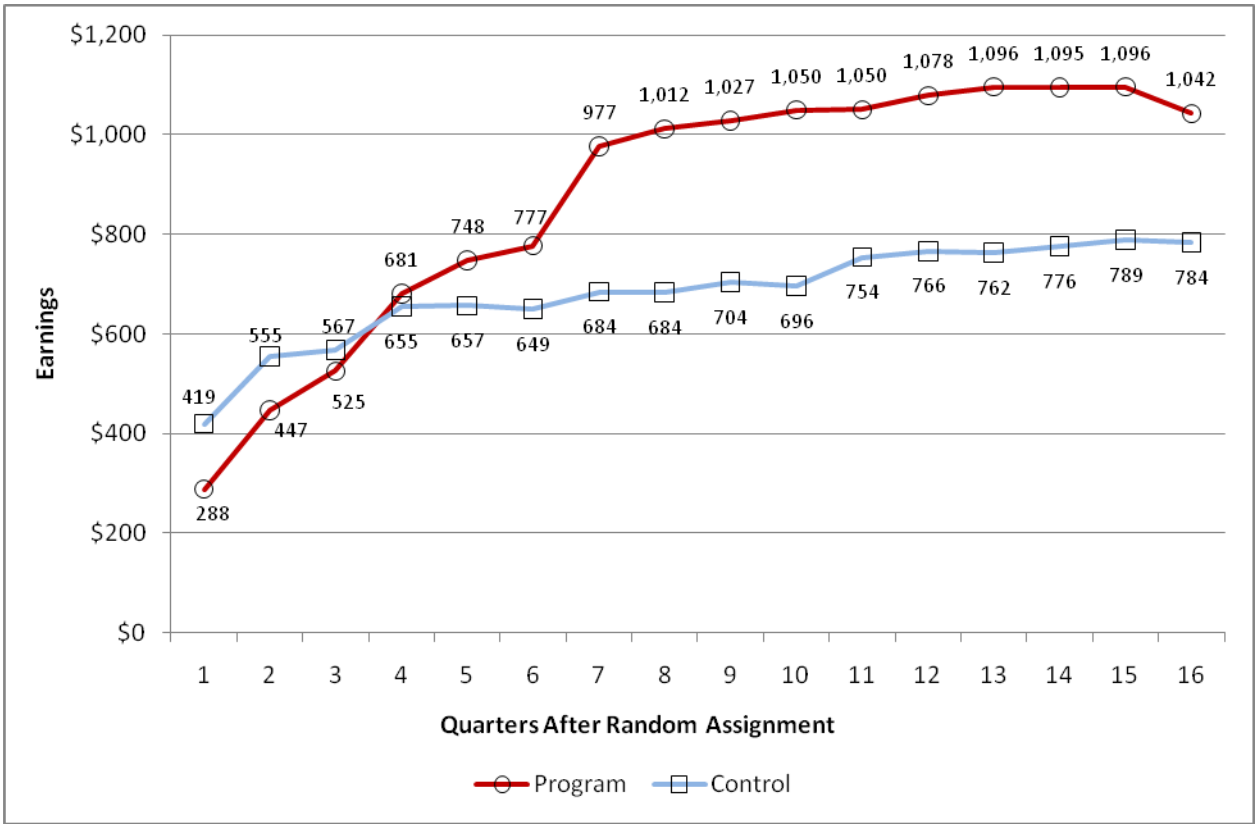


Source: Follow-up surveys (Waves 1, 2 and 3)
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level

As indicated in Figure VI.10, there was little difference in self-employment earnings between the program group and the control group. Indeed, there was no statistically significant difference in any of the sixteen quarters following random assignment.

An analysis of regular self-employment earnings for UI recipients in Figure VI.11 indicates that there was little difference between the earnings of the program and control group members in the early quarters. Later in the follow-up period, the gap in earnings increased. Over the entire 16-quarter observation period, program group members earned approximately $3,000 more in regular self-employment earnings than control group members.

Figure VI.11: Regular Self-Employment Salary Earnings (UI Recipients at RA)

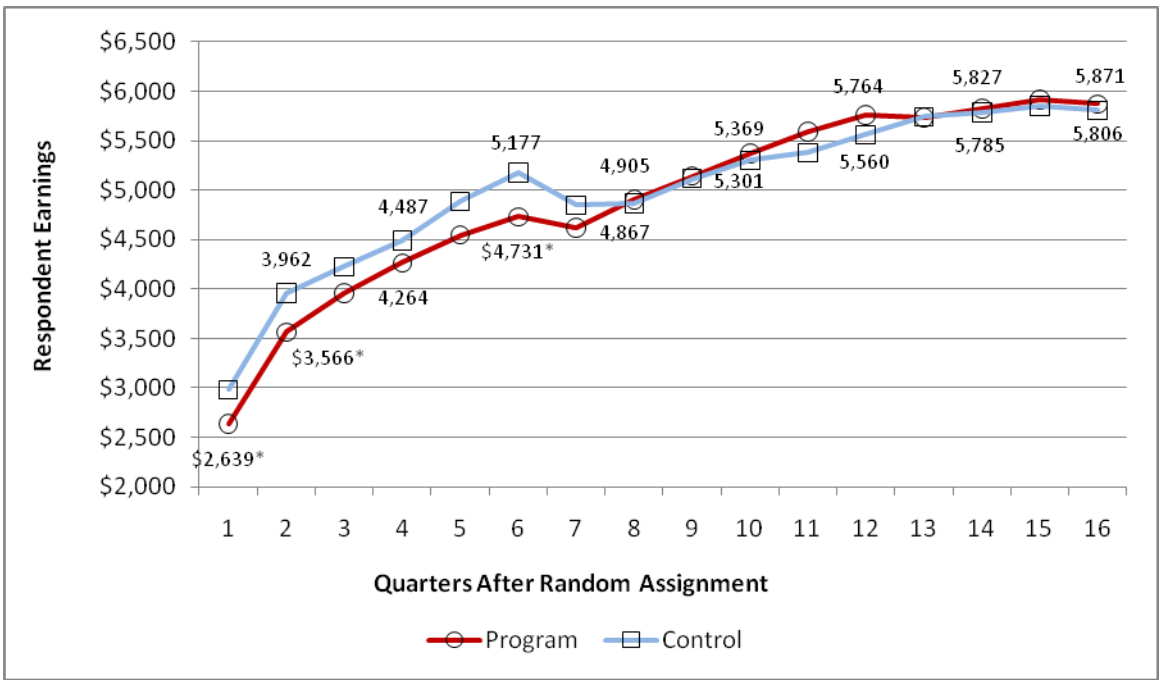


Source: Follow-up surveys (Waves 1, 2 and 3)
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level

6.5.2 Earnings from Wage and Salary Jobs

Project GATE had little impact on earnings from wage and salary employment. [Figure VI.12]

Figure VI.12: Wage and Salary Earnings (Full Sample)

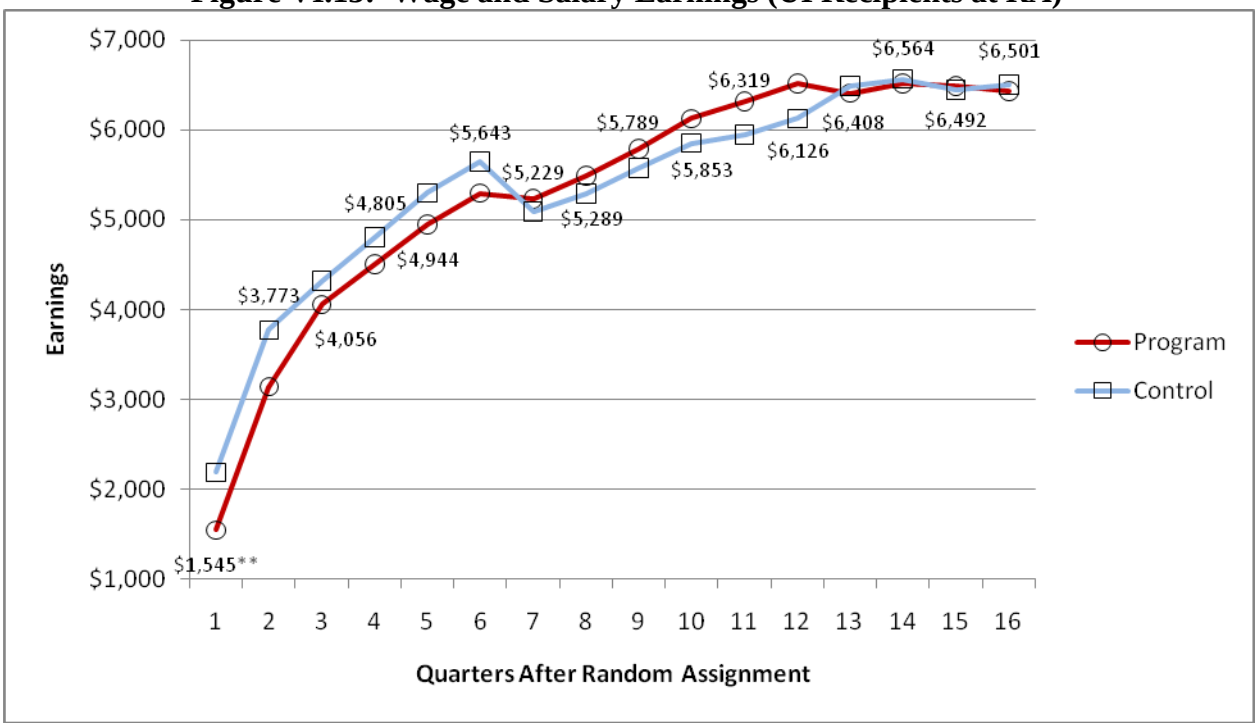


Source: Follow-up surveys (Waves 1, 2 and 3)

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level

With the exception of a few early quarters, Project GATE had no impact on wage and salary earnings (including bonuses, commissions, and tips). This finding of no impact holds for the study sample as a whole (Figure VI.12) as well as for UI recipients at random assignment (Figure VI.13).

Figure VI.13: Wage and Salary Earnings (UI Recipients at RA)



Source: Follow-up surveys (Waves 1, 2 and 3)

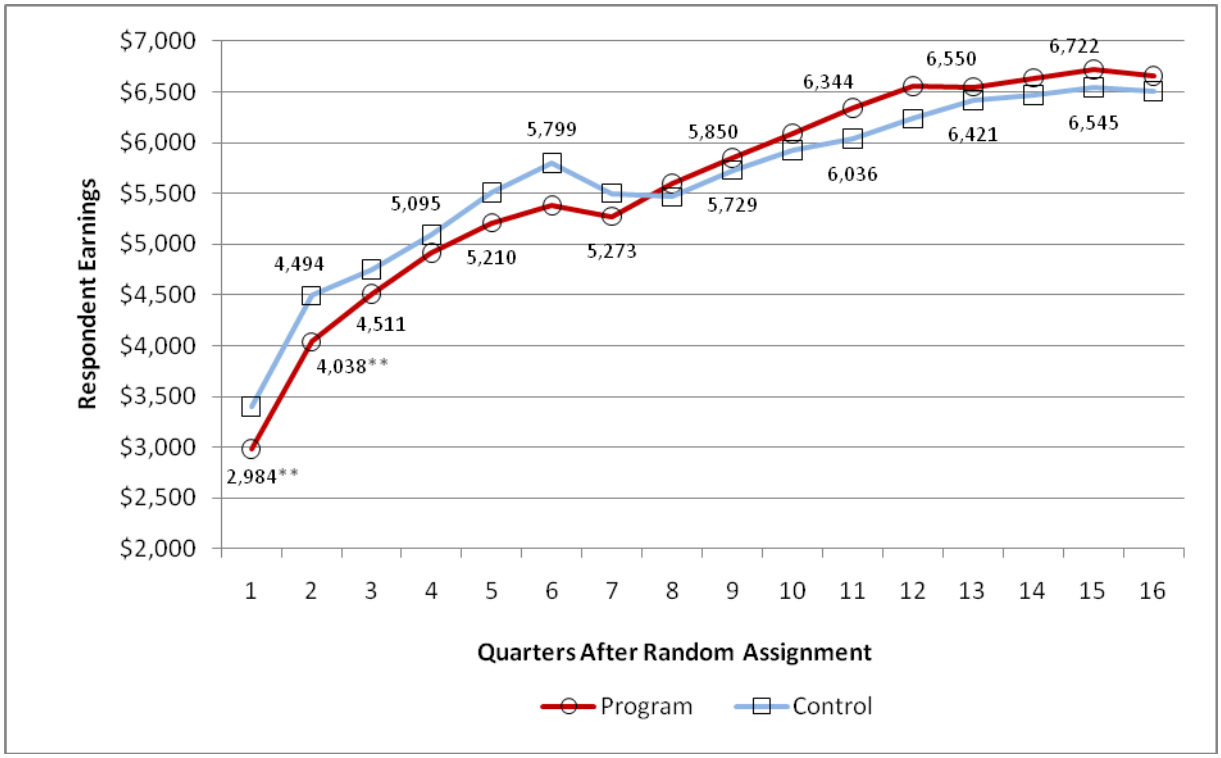
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level

6.5.3 Total Earnings

Earnings from both self-employment and from wage and salary employment contribute to the individual worker's financial well-being. Below, we combine these two income sources and analyze respondents' total earnings. The results show that GATE did not have an impact on total earnings for the full sample. Furthermore, while total earnings appear higher for participants after Quarter 6, the observed difference in earnings is not statistically significant.

With the exception of the first two quarters after random assignment, Project GATE had no impact on total earnings during the follow-up period. [Figure VI.14]

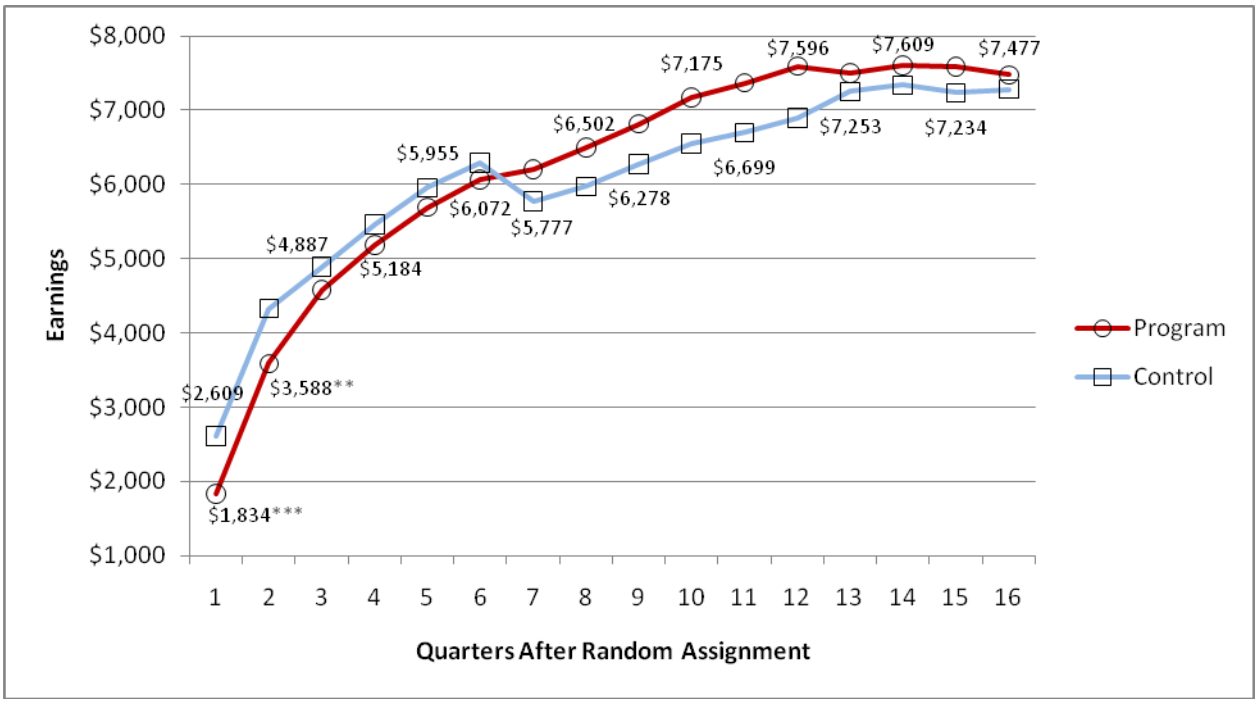
Figure VI.14: Total Earnings (Full Sample)



Source: Follow-up surveys (Waves 1, 2 and 3)
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level

Among UI recipients at random assignment, Project GATE had a brief initial negative effect on quarterly total earnings (Q1-Q2) but no impact in Q3-Q15. [Figure VI.15]

Figure VI.15: Total Earnings (UI Recipients at Random Assignment)



Source: Follow-up surveys (Waves 1, 2 and 3)
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level

As indicated in Figure VI.15, the impact of Project GATE on total earnings was negative in the first two quarters after random assignment. However, starting with Q3, there was no impact on total earnings.

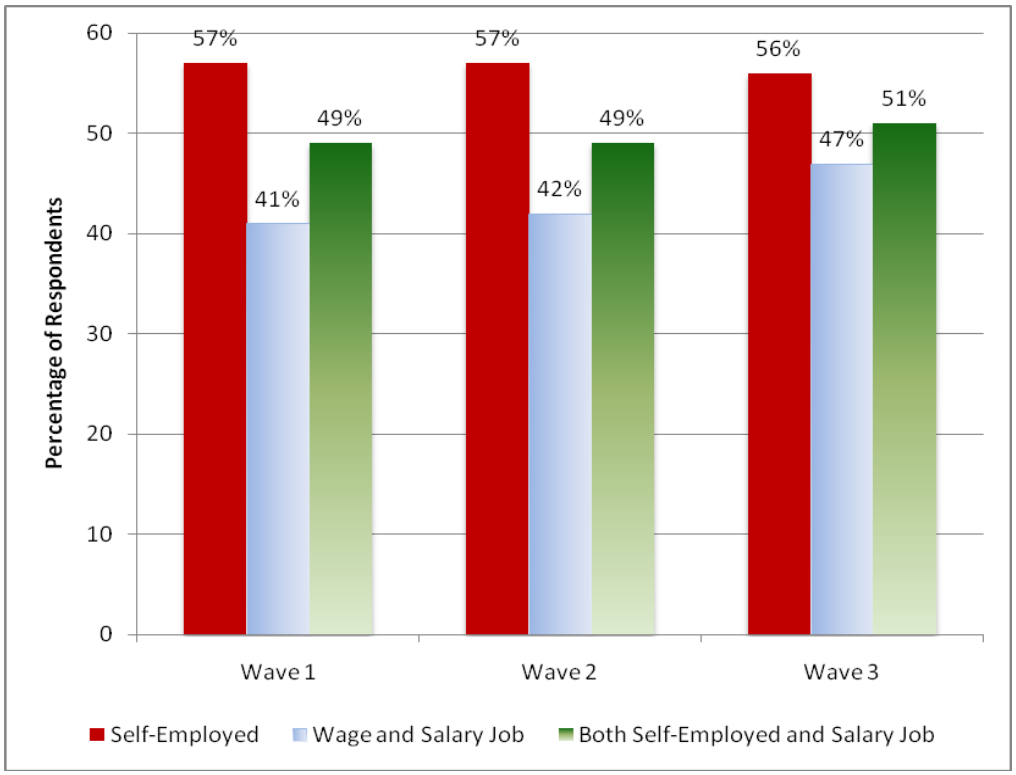
Among the unemployed, total earnings from self-employment and wage and salary employment over the entire 16-quarter study period were $1,981 higher for the program group than for the control group. However, this difference was not statistically significant.

6.6 Job Satisfaction

The self-employed have a higher level of satisfaction than those who work in wage and salary jobs. [Figure VI.20]

The fact that many people chose to own their own businesses rather than work as wage and salary earners suggests that self-employment may have non-pecuniary benefits that cannot be captured by measures of earnings alone (Hamilton, 2000). The results presented in Figure V.16 confirm that the self-employed from the Project GATE sample do indeed have a higher level of satisfaction than those who work in wage and salary jobs.

Figure VI.16: Proportion of Very Satisfied with their Employment by Wave



Source: Follow-up surveys (Waves 1, 2 and 3)
*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level

As indicated in the figure, in each of the three survey waves, those who were self-employed were substantially more satisfied than those who had a wage and salary job. The proportion of self-employed who were "very satisfied" with their work was 56 percent to 57 percent, whereas the proportion of those working in a wage and salary job who were "very satisfied" ranged between 42 percent and 47 percent. The proportion of "very satisfied" among those who were both self-employed and working in a wage and salary job at the same time fell in between the proportions of the other two groups.

In Table VI.3, we compare satisfaction between program and control group members. As indicated in the table, program group members and control group members had essentially the same level of satisfaction with their employment.

Table VI.3: Satisfaction With Employment at Wave 3

Outcome	Program Group Mean	Control Group Mean	Conditional Difference	
Self-Employed Only				
Very satisfied	56%	56%	0	
Somewhat satisfied	36	35	0	
Somewhat dissatisfied	7	5	1	
Very dissatisfied	2	3	-2	
Wage and Salary Jobs Only				
Very satisfied	48	47	0	
Somewhat satisfied	41	40	1	
Somewhat dissatisfied	9	8	1	
Very dissatisfied	2	4	-2	*
Both Wage and Salary Job and Self-Employed				
Very satisfied	51	51	0	
Somewhat satisfied	39	38	1	
Somewhat dissatisfied	8	7	1	
Very dissatisfied	2	4	-2	**
Number of Respondents	**1,274**	**1,176**	**2,450**	

Source: Follow-up survey, Wave 3.

Notes: Reported means and differences are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics. Means computed using only sample members who worked at a wage and salary job between Waves 2 and 3. As the means were computed over nonrandom samples of the program and control group, the differences should not be interpreted as impacts.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

6.7 Characteristics of Wage and Salary Jobs

The job characteristics of program and control group members who had a wage and salary job between Wave 2 and Wave 3 were similar. [Table VI.4]

This section reports on the characteristics of jobs among those who were employed in wage and salary jobs at some point during the follow-up period. It is important to bear in mind, however, that these differences are not experimental impacts—only individuals who were ever employed in the follow-up period are included. Hence, any differences between program and control groups may be either because Project GATE led to different jobs or because the characteristics of people with jobs differed between the two groups.

Project GATE extended the duration of unemployment by one week among those who were unemployed at random assignment. In Table VI.4, program group members who were unemployed at random assignment found their next wage and salary job 14 weeks after random assignment, on average. This was one week longer than control group members who were unemployed at random assignment. This finding is consistent with the expectation that GATE program group members may have tended to focus on starting a business instead of finding a job.

Among individuals who held a wage and salary job at some point between the Wave 2 and Wave 3 surveys, program and control group members worked a similar number of hours per week and had similar hourly wages. The proportions receiving specific fringe benefits (e.g., paid sick leave) were also similar for program and control group members.

Table VI.4: Characteristics of Current or Most Recent Wage and Salary Job (Wave 3 Survey)

Outcome	Program Group Mean	Control Group Mean	Conditional Difference
Weeks after Random Assignment Before First Job Began	14	13	1 *
Average Hours per Week Worked	38	37	0
Average Hourly Wage	$18.10	$18.59	-$0.49
Fringe Benefits Received			
Paid sick leave	58%	59%	-1
Paid vacation	65	65	1
Paid holidays	68	67	2
Health insurance or membership in an HMO or PPO plan	66	65	2
Retirement, pension benefits, or a 401K plan	61	61	0
Life insurance	54	54	0
Number of Respondents	**1,274**	**1,176**	**2,450**

Source: Follow-up survey, Wave 3.

Notes: Reported means and differences are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics. Means computed using only sample members who worked at a wage and salary job between Waves 2 and 3. As the means were computed over nonrandom samples of the program and control group, the differences should not be interpreted as impacts.

HMO = health maintenance organization; PPO = preferred provider organization.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

6.8 Conclusions

In this chapter, impacts of Project GATE on employment and earnings were examined. Key findings are:

- Project GATE increased the likelihood of self-employment during the first few quarters after enrollment. After Q9, the impact was not statistically significant.
- Project GATE reduced the likelihood of wage and salary employment in about half the quarters following random assignment. In the remaining quarters, the impact was insignificant.
- Combining self-employment and wage and salary jobs, Project GATE had no impact on the likelihood of total employment.
- Among individuals who were receiving UI benefits at random assignment, Project GATE substantially increased the likelihood of self-employment in the early quarters after random assignment.
- Project GATE generated additional jobs for non-participants.
- Project GATE had no impact on regular self-employment earnings during any of the 16 quarters following random assignment.
- Project GATE had little impact on earnings from wage and salary employment.
- With the exception of the first two quarters after random assignment, Project GATE had no impact on total earnings during the follow-up period.

CHAPTER VII.
IMPACT ON SELF-SUFFICIENCY

As described in Chapter VI, Project GATE shifted some work hours from wage and salary employment to self-employment. This shift resulted in no net impact on total earnings (defined as earnings from self-employment plus earnings from wage and salary employment) for the study group as a whole.

This chapter explores whether Project GATE had an impact on participants' reliance on UI and public assistance such as food stamps. It also explores the impacts of Project GATE on household income and the labor market participation of the entrepreneurs' spouses.

The chapter begins with a discussion of the impacts of Project GATE on the receipt of UI benefits. It then discusses the impact of Project GATE on the receipt of public assistance. The chapter ends with a discussion of the impact of Project GATE on total household income and the labor market participation of the participant's spouse.

7.1 Receipt of Unemployment Compensation and Other Benefits

Chapter VI provides evidence that Project GATE decreased wage and salary employment in about half the quarters in the observation period. The effect of this reduction in wage and salary employment on UI benefit receipt is ambiguous. On the one hand, reduction in wage and salary employment is likely to lead to an increase in UI benefits receipt in the short run. In the long run, however, a reduction in wage and salary employment and earnings may reduce eligibility for UI benefits, which may offset the short run increase.

The design of Project GATE in Minnesota adds a degree of complexity to the analysis of the impact of GATE on UI benefit receipt. Specifically, in Minnesota, the work search requirement was waived for Project GATE program group members – but not for GATE control group members. Thus, in Minnesota, GATE program group members were not required to search for a wage and salary job while they were working on starting a business (i.e., participating in GATE). This feature of the Minnesota design provided Minnesota GATE participants a benefit that was not available to other sample members, by enabling them to devote all their time to developing

their business while continuing to receive UI benefits. UI agencies in all the other demonstration states considered working more than 32 hours per week on a business as making the person "unavailable for work" and hence ineligible for benefits. Furthermore, in the states other than Minnesota, any earnings from self-employment could lead to a reduction in UI benefits. As a result of these differences between the GATE program in Minnesota and the GATE program in Pennsylvania and Maine, Minnesota program members had an incentive to remain on UI longer than control group members.[32]

7.2 Data Sources

In the previous GATE report (Benus 2008), the impact of Project GATE on UI receipt was estimated using two data sources: (1) administrative records collected from state UI agencies, and (2) two follow-up surveys. Both data sources include information on Trade Adjustment Assistance, Trade Readjustment Allowances, and Extended UI Benefits, as well as regular UI benefits.

The main advantages of the administrative data are that they are accurate and available for all sample members, not just the survey respondents. On the other hand, they provide information only on claims and total payments over the claim period, so it is not always possible to identify whether payments were made before or after random assignment. Furthermore, due to time lags in data availability, UI administrative data are only available with some delay (approximately six months).

The advantage of using survey data to measure UI benefits is that they are available for the entire follow-up period without delay. Their disadvantage is that they are subject to recall error. For the Wave 3 study, we rely only on survey data since, as noted elsewhere, state UI administrative data were not available at Wave 3.

[32]In Pennsylvania, there was no work search requirement for either program or control group members and in Maine the work search requirement was waived for both program and control group members who participated in the Self-Employment Assistance (SEA) program.

7.3 Receipt of UI Benefits

The results of the 2008 GATE study (based on the UI administrative data) indicated that Project GATE had at most a very modest impact on the probability of establishing a new UI claim. Furthermore, Project GATE increased the number of weeks paid by about three-quarters of a week and increased total payments by $335. Most of this effect came from claims established prior to random assignment. Hence, the impact was not from participants establishing new claims, but from their claiming more weeks of payments during the benefit year.

As expected, the impact on the amount of UI benefits received was larger—$605—for the subgroup of participants who were already receiving UI at the time they applied to Project GATE. The impact on UI receipt was especially large for the UI recipients in the Minnesota sites, as expected, given that the UI work search requirements were waived for Project GATE participants in that state.

In the follow-up surveys, three outcome variables on benefit receipt were collected at each wave: (1) whether household members had received benefits, (2) the number of weeks in which benefits were received, and (3) the total amount of benefits received. These outcomes were collected for the following periods: between random assignment and Wave 1, between Wave 1 and Wave 2, and between Wave 2 and Wave 3.[33]

In the previous report, findings from the survey data corroborate the findings from the administrative data. Over the follow-up period, Project GATE had no impact on the likelihood of receiving UI, but increased the length of time on UI benefits by just over 1 week and increased the amount of reported UI benefits received by $343 per program group member. Thus, the survey data yielded similar results to the results found using administrative data, suggesting that they may be an adequate substitute for administrative data on benefits.

[33] The survey questions did not ask specifically about the respondent's UI benefits. Rather, the survey questions referred to the household receipt of Unemployment Compensation, Trade Readjustment Allowances or Trade Adjustment Assistance. Since UI benefit payments represent the overwhelming portion of these benefits, we refer to these payments as UI benefits.

7.3.1 Full Sample

Over the 60-month follow-up period, Project GATE had no impact on the likelihood of benefit receipt, number of weeks of benefits, or amount of benefits received. [Table VII.1]

The results presented in Table VII.1 indicate that Project GATE did not have a statistically significant impact on the likelihood of benefit receipt. Fifty-four percent of the program group received benefits at some time during the study period, compared to 51 percent of the control group.

Similarly, Project GATE did not have a statistically significant impact on weeks of benefit receipt over the entire follow-up period. Specifically, during the 60-month follow-up period, on average, the control group received benefits for 14 weeks, compared to 16 weeks for program group (not statistically significant). In contrast, for the period between random assignment and Wave 2, Project GATE increased the number of weeks of benefits by approximately 1 week (statistically significant).

Project GATE had no impact on the total amount of benefits received over the study period. For the entire study period, on average, the program group received $4,846 in benefits while the control group received $4,329, yielding a difference of $517 in benefit receipt (not statistically significant). However, between random assignment and Wave 1, on average, program group members received $289 more in benefits than control group members (statistically significant).

Table VII.1: Impacts on Receipt of UI Benefits

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants	
Received UI, TRA, or TAA benefits				
Between random assignment and Wave 1 survey	40%	40%	0	
Between Wave 1 survey and Wave 2 survey	13	12	1	
Between Wave 2 survey and Wave 3 survey	19	18	1	
Between random assignment and Wave 3 survey	54	51	3	
Weeks of UI received				
Between random assignment and Wave 1 survey	7	6	1	**
Between Wave 1 survey and Wave 2 survey	2	1	0	**
Between Wave 2 survey and Wave 3 survey	8	7	1	
Between random assignment and Wave 3 survey	16	14	2	
Amount of UI, TRA or TAA benefits received				
Between random assignment and Wave 1 survey	$2,119	$1,831	$289	*
Between Wave 1 survey and Wave 2 survey	386	285	101	
Between Wave 2 survey and Wave 3 survey	2,340	2,209	131	
Between random assignment and Wave 3 survey	4,846	4,329	517	
Number of Respondents	**1,274**	**1,176**	**2,450**	

Source: Follow-up surveys, Waves 1, 2, and 3.

Notes: Reported means and impacts are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

In summary, the results of the analysis of the entire study period (random assignment to Wave 3 – approximately 60 months) yield different conclusions than were found in the earlier report, which analyzed the first 18-months after random assignment. In analyzing the shorter follow-up period we concluded that GATE increased the number of weeks of benefits and the amount of benefits. The results of the present analysis indicate that, for the entire 60-month period, GATE had no impact on the likelihood of benefit receipt, weeks of benefits, or amount of benefits.

7.3.2 UI Recipients

Over the 60-month follow-up period, Project GATE had no impact for UI recipients at random assignment on the likelihood of benefit receipt, number of weeks of benefits, or amount of benefits received. [Table VII.2]

Table VII.2: Impacts on Receipt of UI Benefits (UI recipients)

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants	
Received UI, TRA, or TAA benefits				
Between random assignment and Wave 1 survey	72%	69%	3	
Between Wave 1 survey and Wave 2 survey	14	14	1	
Between Wave 2 survey and Wave 3 survey	23	23	-1	
Between random assignment and Wave 3 survey	81	76	5	
Weeks of UI received				
Between random assignment and Wave 1 survey	12	11	1	**
Between Wave 1 survey and Wave 2 survey	2	1	1	*
Between Wave 2 survey and Wave 3 survey	9	10	-1	
Between random assignment and Wave 3 survey	23	21	1	
Amount of UI, TRA or TAA benefits received				
Between random assignment and Wave 1 survey	$3,837	$3,243	$594	**
Between Wave 1 survey and Wave 2 survey	404	345	59	
Between Wave 2 survey and Wave 3 survey	3,052	2,902	150	
Between random assignment and Wave 3 survey	7,294	6,500	794	
Number of Respondents	**1,274**	**1,176**	**2,450**	

Source: Follow-up surveys, Waves 1, 2, and 3.

Notes: Reported means and impacts are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

A comparison of the results presented in Table VII.2 with the results presented in Table VII.1 indicates that, on average, the UI recipient subgroup was more likely to receive UI benefits than the full sample. About 40 percent of the full sample received benefits and about 70 percent of the UI recipient subgroup received benefits. For the UI recipient as was found for the full sample, Project GATE did not have a statistically significant impact on the likelihood of benefit receipt. Eighty-one (81) percent of program group received benefits at some time during the study period, compared to 76% of the control group.

Similarly, Project GATE did not have a statistically significant impact on weeks of benefit receipt over the entire follow-up period. Specifically, during the 60-month follow-up period, on average, the control group received benefits for 21 weeks, compared to 23 weeks for program group (not statistically significant). In contrast, for the period between random assignment and Wave 1, Project GATE increased the number of weeks of benefits by approximately 1 week (statistically significant).

Project GATE had no impact on the total amount of benefits received over the study period. For the entire study period, on average, program group received $7,294 in benefits while the control group received $6,500 yielding a difference of $794 in benefit receipt (not statistically significant). However, between random assignment and Wave 1, on average, program group members received $594 more benefits than control group households (statistically significant).

7.4 Household Income and Earnings of Spouses

Household income is another key measure of the participant's well-being. While the previous chapter discussed the impacts of Project GATE on the respondent's earnings from self-employment and wage and salary jobs, this section describes the impact of Project GATE on total household income. Each survey asked respondents to report on their household income in the previous 12 months. Household income includes income from businesses, wage and salary employment, employment of other members of the household, as well as UI and public assistance.

Project GATE had no impact on household income or spousal earnings. [Table VII.3]

Project GATE did not have an impact on household income during any of the 12-month periods prior to the Wave 1, Wave 2, or Wave 3 surveys. In each survey, respondents were asked about household income only during the previous 12 months in order to minimize recall error. Household income is frequently underreported, especially when the respondent is asked about aggregate annual income (Moore et al. 2005). However, there is no reason to believe that program group members might have underreported their household income to a different degree than control group members.

Table VII.3: Impacts on Household Income and Spousal Earnings

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Household Income 12 Months Before Wave 1 Follow-up	$35,940	$37,726	-$1,786
Household Income 12 Months Before Wave 2 Follow-up	39,415	38,141	1,274
Household Income 12 Months Before Wave 3 Follow-up	56,786	56,020	767
Married at Wave 3 Follow-up	46%	45%	1
Spouse Works at Wave 3 Follow-up	37	37	0
Weekly Earnings of Spouse at Wave 3 Follow-up	$323	$348	-$25
Number of Respondents	**1,274**	**1,176**	**2,450**

Source: Follow-up surveys, Waves 1, 2, and 3.

Notes: Reported means and impacts are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

Project GATE had no impact on whether the spouse of the respondent was employed as of the Wave 3 survey. Also, GATE had no net impact on the weekly earnings of that spouse as of the Wave 3 survey. This could be the result of two opposing impacts. A reduction in the participant's earnings from wage and salary employment (due to work on starting a business) could have encouraged the spouse to work more. On the other hand, the spouse may have reduced his or her participation in wage and salary employment to help the GATE participant start his or her business.

7.5 Conclusion

This chapter examined the impact of Project GATE on self-sufficiency. Key findings are:

- Over the 60-month follow-up period, Project GATE had no impact on the likelihood of UI benefit receipt, number of weeks of benefits, or amount of benefits.
- For UI recipients, the impact on the receipt of UI benefits was only significant at Wave 1. Over the 60-month observation period, Project GATE had no impact on the likelihood of UI benefit receipt, number of weeks of benefits, or amount of benefits.
- Project GATE had no impact on the receipt of public assistance benefits.
- For the subgroup of UI recipients at random assignment, GATE increased Veterans' benefits.
- Project GATE had no impact on household income or the earnings of the entrepreneur's spouse.

CHAPTER VIII.
BENEFITS AND COSTS

An important criterion for determining whether a program is worth implementing is not just whether it is effective in improving outcomes, but whether it is effective *enough* to justify its costs. By placing a dollar value on the benefits and costs of a program, a benefit-cost analysis addresses whether the diverse impacts of a program are large enough to warrant the funds spent on it. This chapter presents a benefit-cost analysis of Project GATE.

The chapter begins by presenting the framework for the benefit-cost analysis. It then discusses the estimates of Project GATE's benefits and its costs. The chapter ends with a discussion of the relative size of the benefits and costs of Project GATE for the full sample and separately for the subgroup who were UI recipients at random assignment.

8.1 Benefit-Cost Analysis

Benefit-cost analyses of social programs use an accounting framework that itemizes all the benefits and costs of the program and places a dollar value on as many of these benefits and costs as possible. All benefits and costs are measured relative to the counterfactual—the situation in which Project GATE did not exist but the other self-employment services in the communities did (represented in this case by the experiences of the control group). Hence, the benefits and costs are measured using estimates of the *impacts* of Project GATE.

Policymakers generally view a program as cost-effective if all its benefits, summed over everyone in society, exceed all its costs. The magnitude of the benefits and costs to society indicate how the program affects net resources in the economy.

Policymakers may also consider the distributional implications for the program as well, for which they examine who gains and who loses from a program. The potential benefits of the program accrue mainly to participants, while the costs accrue to the government and taxpayers. Hence, we estimate benefits and costs from three perspectives: participants, nonparticipants, and society as a whole. Participants are the GATE program group members and their spouses. Nonparticipants include the government and taxpayers, as well as anyone else affected by the

program, such as other organizations offering self-employment services. The benefits and costs to society as a whole are equal to the sum of the benefits and costs to participants and nonparticipants.

Some program impacts lead to a benefit to one group of people and an equal cost to another group. These impacts, often referred to as "transfers," redistribute resources between groups within society, but do not affect total benefits or costs. For example, an increase in taxes paid on increased earnings by participants would be a benefit to the government/taxpayers but a cost to the participants, and hence neither a benefit nor a cost to society as a whole. An increase in Unemployment Insurance (UI) receipt is a benefit to the participant and, as long as the administrative cost of providing the payments is ignored, an equal cost to the government.

The estimated benefits and costs of Project GATE are derived mainly from the estimated impacts presented in earlier chapters of this report. We include the benefit or cost even if it is based on an impact estimate that is not statistically different from zero, because that is still the best estimate, even if imprecise.

The benefits and costs are measured over the evaluation follow-up period—about 60 months after random assignment. This period is appropriate for an evaluation of entrepreneurship training programs, because many new businesses take several years to become successful. While the costs of Project GATE accrue mainly in the first year after random assignment, the benefits to the business owners and employees may develop only after a number of years.

The next two sections of this chapter discuss the benefits and costs of the program. For presentation purposes, we focus on the resources used to provide self-employment services as the "cost" of the program and call any other impacts of the program, even if they are negative, a "benefit." These definitions of benefits and costs do not affect the estimate of the net benefits (benefits minus costs) of the program.

8.2 Potential Benefits of Project GATE

The many potential benefits of Project GATE fall into three main categories: (1) business creation; (2) wage and salary employment; and (3) receipt of UI and public assistance. Throughout this report, we examined these benefits separately for (a) the full sample and (b) the subgroup who were receiving UI recipients at random assignment. Below, after presenting the potential benefits for the full sample, we present a comparison of the results for the UI recipient subgroup.

8.2.1 Business Creation

Successful businesses create many benefits for their owners and employees, and potentially for the communities in which they are located. The main benefit is the output produced by the business. Earnings from the business benefit the owner and also benefit employees who receive earnings from the newly created business. The government benefits from any taxes paid on earnings from the business. Even if the owner does not pay any business taxes, taxes are still paid on income earned from the business and paid in sales taxes when the income is spent. Businesses may also have positive spin-off effects in the community by, for example, providing employment, creating demand for other services, and improving the economic environment of the community. Finally, although difficult to value in dollars, to the extent that business owners may be happier working for themselves rather than for someone else, this increased happiness is appropriately considered a benefit.

Conversely, businesses that fail are costly to their owners and to society as a whole. Apart from the uncompensated time spent by the owners working on their businesses, closed businesses also often result in wasted expenditures. Many materials and equipment acquired for the business can be sold, but often with a large loss; other expenditures cannot be recovered at all. For example, much of the expenditure of renovating retail space to house a specific store is unlikely to be recovered. Loan defaults and bankruptcy are also costly to the business owner, the government, and others.

Over the follow-up period, the long-term benefits of Project GATE from business creation derive from a number of sources.

- **Business Ownership.** Program group members were more likely than control group members to start a business after random assignment. The impact was statistically significant in the early quarters after random assignment. By the end of the 60-month observation period, however, the percentage of program participants who were self-employed was similar to the percentage of control group members who were self-employed (Section 5.1). Over the entire 60-month period, program group members started 187 more businesses than control group members.

- **Business Earnings.** Data reported on the survey suggest that on average, program group members earned more than control group members from businesses over the 60-month follow-up period, although these results were not statistically significant (Section 5.7). The differences in earnings were $962 in regular salary income received from the business and $166 in non-salary income such as tips, bonuses, or commissions, for a total of $1,128.

- **Size and Profitability of Businesses.** Businesses begun by program group members were similar to those begun by control group members. While businesses started by program group members were similar in size and profitability (Section 5.4), over the 60-month follow up period, businesses started by program group members employed 170 more full time equivalent (FTE) employees than those started by control group members (Section 6.4).

- **Satisfaction with Employment Situation.** GATE participants were less likely to be "very dissatisfied" with their employment situation than members of the control group (Section 6.6).

8.2.2 Wage and Salary Employment

A potential cost (negative benefit) of Project GATE is the earnings forgone while GATE participants attended classes and counseling sessions and worked on starting their own business. Findings from the survey data suggest that Project GATE decreased earnings from wage and salary employment in the first few quarters after random assignment (Section 6.5.2). When income from wage and salary jobs over all 16 quarters of the study period is aggregated, program

group members earned on average $1,532 less than control group members, although this difference was not statistically significant (Section 6.5.2). For the UI recipient subgroup, program members earned $1,107 less than control group members (not statistically significant).

The cost of the reduced wage and salary employment is measured from the decrease in earnings at wage and salary jobs. We estimate the value of the fringe benefits on these earnings as 30 percent of earnings—the national average (U.S. Department of Labor 2006). We assume the sample members paid 17 percent of their earnings in taxes. This tax rate is derived from combining the effective federal income tax rates reported by the Congressional Budget Office (2004) with state income, consumption, and property taxes reported by the Institute on Taxation and Economic Policy (2003).

8.2.3 Receipt of UI and Public Assistance

UI and public assistance payments are transfers from the government to the recipients—and hence are a cost to the government and an equal benefit to the recipient. The costs of administering the UI and public assistance programs, however, represent a use of resources and hence are a cost to the government and to society as a whole.

For our estimates of benefit and costs, we use the impact estimates derived from the surveys, since UI administrative data were not yet available. Impacts on public assistance receipt were also obtained from the surveys. The administrative costs of the assistances programs are about 7 percent for UI, 16 percent for Food Stamps, 19 percent for cash assistance, 1 percent for Social Security benefits, and 10 percent for Veterans' benefits (U.S. House of Representatives Committee on Ways and Means 2004). These figures are percentages of total benefits.

As shown in Table VII.1, GATE program group members received, on average, a total of $517 more than control group members in UI benefits during the 16-quarter study period (Section 7.1.2); $64 less in Food Stamps; $124 less in cash welfare (TANF); $175 more in Social Security benefits; and $146 more in Veterans' benefits. None of these differences was statistically significant. The comparable benefits received by the subgroup of UI recipient are also shown in Table VIII.1.

Given the impact of Project GATE on each of these benefits, and the percentage of benefits spent on administrative costs, an administrative cost to the government associated with each benefit can be calculated. The total cost to the government is the amount of the benefit plus the amount of the administrative costs. These costs are shown for both the Full Sample and for UI Recipients at Random Assignment.

Table VIII.1: The Costs of Project GATE in Changes in UI and Public Assistance Receipt

UI or Public Assistance	Costs per Program Group Member	
	Full Sample	**UI Recipients**
UI		
Payments	$517	$794
Administrative Costs	36	56
Food Stamps		
Payments	31	-29
Administrative Costs	5	-5
Cash Welfare		
Payments	-124	162
Administrative Costs	-24	31
Social Security Benefits		
Payments	175	-441
Administrative Costs	2	-4
Veterans' Benefits		
Payments	146	414
Administrative Costs	15	41
Total	**779**	**1,019**

Source: Tables VII.1 and VII.3.

The negative of these costs can be considered to be the benefit of the GATE impact to the government. The sum of the benefit to the government and the benefit to the GATE participant is the benefit to society of Project GATE.

8.2.4 Comparison of Benefits: Full Sample and UI Recipients

Above, we examined (1) business creation; (2) wage and salary employment; and (3) receipt of UI and public assistance for the full sample. Inasmuch as many of the impacts reported in earlier chapters were larger and more often statistically significant for UI recipients than for the full sample, we present in Table VIII.2 a comparison of the benefits and costs for the full sample and for the UI recipient subgroup from the participants' perspective.

As indicated in the table, one of the major differences between these two groups is the earnings from the business during the observation period. The earnings impact for the UI recipient group was $4,743 as compared with $1,128 for the full sample (a difference of $3,615).

Table VIII.2: Comparison Benefit-Cost Analysis Participants' Perspective

	Participants' Perspective		
Benefits/Costs	**Full Sample**	**UI Recipients**	**Difference**
Business Ownership			
Earnings during the follow-up period	$1,128	$4,743	$3,615
Earnings after the follow up period	?	?	?
Increased satisfaction	?	?	?
Total	1,128	4,743	3,615
Wage and Salary Employment			
Earnings during the follow-up period	-1,532	-1,107	425
Fringe Benefits	-460	-332	128
Taxes	260	188	-72
Earnings after the follow-up period	?	?	?
Total	-1,732	-1,251	481
Receipt of UI and Public Assistance			
UI	517	794	277
Food Stamps	-64	-29	35
Cash welfare	-1,019	162	1,181
Social Security benefits	-2,620	-4,643	-2,023
Veterans' Benefits	146	414	268
After the follow-up period	?	?	?
Total	-3,040	-3,302	-262
Program Costs			
Amount spent by DOL	0	0	0
Amount spent by participants	131	131	0
Amount spent by others	0	0	0
Total	131	131	0

8.3 Costs of Project GATE

The costs of Project GATE are different when viewed from different perspectives. From DOL's perspective, the cost of Project GATE is the amount of funds used to implement the program. This is the cost relevant to those considering replicating the program. However, the cost to society is the cost of the *additional* self-employment services obtained by the program group. The cost of the additional self-employment services takes into account that the control group also receives self-employment services that are costly to society. Hence, from society's perspective the relevant cost of Project GATE is the cost of the services received by the program group minus the cost of the services received by the control group. After discussing the sources of cost data, we discuss each of these cost estimates in turn.

8.3.1 Sources of Cost Data

We collected cost data from two sources: invoices and service provider reports.

Invoice Data. The first source of data on GATE costs is the record of payments made by IMPAQ International to GATE service providers, One-Stop Career Centers, and marketing agencies in each site. The payments to service providers and One-Stop Career Centers were based on contracts agreed to before the start of the demonstration. In all sites but Maine, the payments were based on the number of participants served, irrespective of the number of hours of services received. In Maine, payments for counseling were based on the number of participants served but payments for classes were based on the number of new classes, not enrollment. Payments to marketing agencies were a function of the marketing these agencies were required to conduct, and were decided on during the demonstration.

A major advantage of the invoice data is that they are accurate. They also represent the market price of the services—the amount required for the providers to agree to provide services. However, we suspect that if Project GATE had not been part of a demonstration, and there was flexibility in the sites in which it could be implemented, the providers might have had less market power and might have agreed to receive less for the services provided. Moreover, the payments made were based on expected costs at the time the contract was signed rather than actual costs. Actual costs may differ from expected costs if, for example, GATE participants did

not spend as much time as expected in the program. Another drawback of the invoice data is that we are not able to estimate the costs of the separate components of Project GATE—assessments, technical assistance, and classroom training.

Data Collected from Service Providers. Data on the components of costs were also collected from service providers in each site.[34] These data included:

- The number of hours of services received by each program participant, which were entered by service providers into the GATE Participant Tracking System (PTS).
- Data on wages, salaries, and fringe benefits of business counselors, instructors, and other staff involved in Project GATE, along with overhead rates and administrative costs.
- The number of hours, on average, that counselors worked preparing for, or following up on, assessments and counseling sessions; and the average number of hours classroom instructors spent preparing for the class or conducting other tasks outside the classroom related to the course.
- Any costs for manuals or other supplies needed for a class.
- Average class size.

The cost of an assessment and counseling session was estimated from the number of hours staff spent on each participant and the cost per hour of the business counselor (inflated to account for fringe benefits, overhead costs, and administrative costs). The cost of training was calculated by the total cost of the instructors' time (inflated to account for fringe benefits, overhead costs, and administrative costs) and any needed supplies. The cost of the training was divided equally among class attendees.

[34]Maine was unable to provide cost data in an easily usable form. To estimate costs in Maine, we used average estimates of costs by CBO and SBDC in the other sites.

The main advantages of the service provider cost data are that they allow an understanding of the components of costs and also represent the actual use of resources. However, because they are based on provider reports, we suspect they are much less accurate than the invoice data.

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The main advantages of the service provider cost data are that they allow an understanding of the components of costs and also represent the actual use of resources. However, because they are based on provider reports, we suspect they are much less accurate than the invoice data.

8.3.2 Cost of Project GATE to DOL

IMPAQ International spent just over $3 million on Project GATE, which represents just over $1,400 per program group member. Some of these costs, however, included activities that were only needed because the program was part of an evaluation. In particular, in order to fill a control group, twice as many applicants were recruited and attended orientations as were needed to fill program slots. Hence, in our estimates of the cost of Project GATE, we included only half the marketing, orientation, and other One-Stop Career Center costs. With this adjustment, the estimated cost of Project GATE per program group member based on the invoice data comes to $1,321 (Table VIII.3).

The estimated cost per program group member based on invoice data varied from $976 in Minneapolis/St. Paul to $2,342 in Maine (Table VIII.3). Minneapolis /St. Paul had relatively low costs for several reasons. It was relatively successful at recruiting and hence required fewer resources for marketing. It also included several nonprofit community-based organizations (CBOs) that provided services at low cost by using either relatively low-paid staff or volunteers. In contrast, in Maine and Pittsburgh, staff at Small Business Development Centers (SBDCs) provided all the technical assistance. Reflecting the higher average education and experience of

staff at SBDCs, SBDC staff was paid more than staff at CBOs. The average GATE counselor at an SBDC was paid about $31 per hour; in contrast, the average GATE counselor at a CBO was paid only $19 per hour. The invoiced costs were particularly high in Maine because Maine enrollment was lower than expected and payments for training were based on classes begun rather than on enrollment.

Table VIII.3: Project GATE Costs by Site Based on Invoice Data

Site	Marketing [a]	Orientation and Other One-Stop Costs [a]	Assessment, Technical Assistance, and Training	Total	Total Cost per Program Group Member
Philadelphia	$25,678	$34,839	$727,726	$788,242	$1,309
Pittsburgh	19,758	44,114	269,575	333,447	1,158
Minneapolis/St. Paul	9,599	51,298	754,220	815,117	976
Northeast Minnesota	6,606	6,340	127,185	140,131	1,445
Maine	17,152	32,843	643,951	693,946	2,342
Total	**$78,793**	**$169,434**	**$2, 522,657**	**$2, 770,883**	**$7,230**

Source: IMPAQ International.

[a] In order not to include the costs of recruiting and providing the orientation to the control group, only half of the marketing and orientation costs are included.

As expected, the estimated cost based on service provider reports was lower than the cost estimated from invoice data—only $859 per program group member (Table VIII.4). It was lower in all sites except Northeast Minnesota. The difference between the cost estimate based on invoice and provider data was largest in Maine.

The estimated proportion of costs accounted for by each component of Project GATE is shown in Figure VIII.1. The share of costs accounted for by marketing and One-Stop Career Centers was collected using the invoice data. The share of costs for assessments, technical assistance, and classroom training was estimated using data from the service providers.

As indicated in Figure VIII.1, just over half of all Project GATE costs were for classroom training, reflecting the greater number of hours spent in classroom training than in assessments or business counseling. Service providers reported in the PTS that participants who received an assessment spent an average of 1.2 hours in assessment, 1.2 hours receiving technical assistance, and 10.5 hours receiving classroom instruction (Bellotti 2006). As discussed below, the cost per

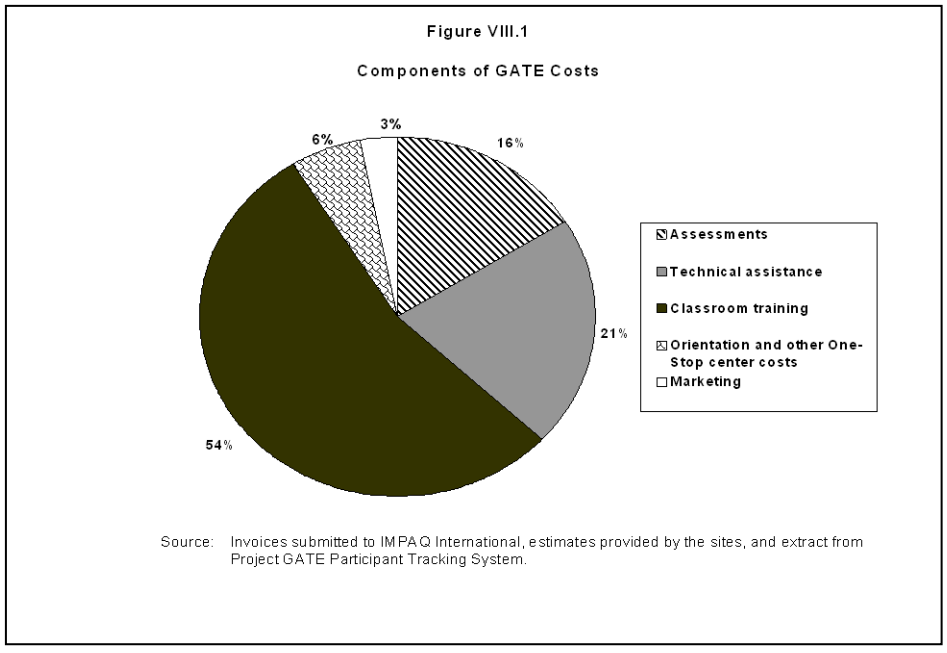
person-hour for training is actually much lower than the cost per person-hour for assessments or counseling, because the cost of the instructor is divided among all class attendees and the median class size was 12.

Table VIII.4: Project GATE Costs by Site Based on Data from Service Providers

Site	Total Cost per Program Group Member
Philadelphia	$772
Pittsburgh	1,211
Minneapolis/St. Paul	663
Northeast Minnesota	1,836
Maine [a]	931
Average	**859**

Source: GATE service providers, GATE Participant Tracking System extract dated December 31, 2005.
[a] Maine did not provide cost data. We estimated the cost of staff and other staff by taking the average of the other sites.

Figure VIII.1: Components of GATE Costs



8.3.3 Costs of Project GATE to Society

The resource cost of Project GATE to society is the cost of the additional self-employment services used, rather than the cost of all Project GATE services received. While the receipt of GATE services is a cost, the reduced use of services under other programs by GATE participants is an offsetting benefit.

We estimated that Project GATE participants received a total of 13.3 more hours of self-employment services than control group members (Table VIII.6). Of these, 8.4 hours were spent in classroom instruction, 1.5 hours one-on-one with a business counselor, and the rest on a variety of other services.

As data on the cost of self-employment services are not readily available, we used data on the cost of GATE services to estimate the cost of self-employment services irrespective of whether they were provided under Project GATE. This is a reasonable assumption, as GATE involved a variety of providers including both SBDCs and CBOs.

The cost per participant-hour was calculated for two types of services: one-on-one meetings with a business counselor (which includes assessments) and classroom instruction. The calculation involved the following steps. First, we used data provided by the service providers to calculate the proportion of all costs that could be accounted for by one-on-one counseling and classroom instruction (Table VIII.5, column 1). Second, we took the average of the total cost from the invoices and the total cost from the data provided by the service provider (column 2). This calculation allocated the marketing and One-Stop Career Center costs to the two components in the same proportion as the other costs. Third, we estimated the cost per person-hour for counseling and classroom training (column 4), by dividing the total cost of each component (column 2) by the number of person-hours spent on the service calculated from the PTS (column 3).

The cost of spending an hour with a business counselor is estimated to be $182, while the cost of spending an hour in a class is only $61 (Table VIII.5). On average, we estimated that one person-hour of self-employment services costs about $84.

Based on these estimates of costs, the cost of the additional 13 hours of self-employment services received by Project GATE participants is $993 per program group member (Table VIII.6). Since DOL spent $1,321 per program group member on services and they received an additional $993 worth of services, in the absence of Project GATE some other funding source would have had to cover $328 of the cost of the services. Since survey data show that participants paid $131 less for services than they would have done in the absence of Project GATE, this suggests that other funders of self-employment services (including the SBA, other government grants, and foundations) paid about $197 per program group member more than they would have done in the absence of Project GATE.

Table VIII.5: Estimates of Cost per Person-Hour of Self-Employment Services

	1. Percent of Costs on Component (Provider Data)	2. Estimated Total Cost (Average from Invoice and Provider Data)	3. Person-Hours Spent on Component (PTS)	4. Estimated Cost per Person-Hour
One-on-one with counselor	40.8%	$931,725	5,111	$182
Classroom instruction	59.3	1,354,142	22,022	61
Total or Average	**100.0**	**2,285,867**	**27,133**	**84**

Source: Project GATE Participant Tracking System extract dated December 31, 2005; invoices paid by IMPAQ International; cost data provided by GATE service providers.

Table VIII.6: Costs of Additional Services Received by GATE Participants

Type of Self-Employment Service	Additional Hours	Cost per Person-Hour	Cost of Additional Services Received by GATE Participants
Classroom instruction	8.4	$61	$512
One-on-one counseling	1.5	182	273
Other	3.4	61	207
Total	**13.3**	**n.a.**	**992**

Source: Tables IV.4 and VIII.4.
n.a. = Not applicable

8.4 Summary of Benefits and Costs of Project GATE

Policymakers are interested in the bottom line—the net benefits of Project GATE. This section presents our estimates of Project GATE's net benefits and discusses the robustness of our findings to alternative assumptions.

Our estimates of the benefits and costs of Project GATE for the full sample are summarized in Table VIII.7; the net benefits for the UI recipient subgroup are summarized in Table VIII.8. A positive number indicates a benefit; a negative number indicates a cost. The benefits and costs estimated are those that accrued during the 60-month follow-up period. Benefits and costs of business ownership, wage and salary earnings, and receipt of UI and public assistance may extend after the observation period. Rather than attempting to estimate these benefits and costs, we simply list them in the tables along with the unmeasured benefit of additional satisfaction from self-employment. The net benefits from each perspective shown in the bottom row of the table are the sum of all the benefits and costs. The estimates of the benefits and costs are all presented as a benefit or cost *per program group member*.

Table VIII.7: Benefit-Cost Analysis (Full Sample)

	Perspective		
Benefits/Costs	**Participants**	**Non-Participants**	**Society**
Business Ownership			
Earnings during the follow-up period	$1,128	?	$1,128
Earnings after the follow up period	?	?	$0
Increased satisfaction	?	?	$0
Total	1,128	0	1,128
Wage and Salary Employment			
Earnings during the follow-up period	-1,532	0	-1,532
Fringe Benefits	-460	0	-460
Taxes	260	-260	0
Earnings after the follow-up period	?	?	0
Total	-1,732	-260	-1,992
Receipt of UI and Public Assistance			
UI	517	-553	-36
Food Stamps	31	-36	-5
Cash welfare	-124	148	24
Social Security benefits	175	-177	-2
Veterans' Benefits	146	-161	-15
After the follow-up period	?	?	?
Total	745	-779	-34
Program Costs			
Amount spent by DOL	0	-1,321	-1,321
Amount spent by participants	131	0	131
Amount spent by others	0	197	197
Total	131	-1,124	-993
Measured Net Benefit	**272**	**-2,163**	**-1,891**

Source: Tables VIII.1, VIII.2.
? = unknown.

Table VIII.8: Benefit-Cost Analysis (UI Recipients)

	Perspective		
Benefits/Costs	**Participants**	**Non-Participants**	**Society**
Business Ownership			
Earnings during the follow-up period	$4,743	?	$4,743
Earnings after the follow up period	?	?	0
Increased satisfaction	?	?	0
Total	4,743	0	4,743
Wage and Salary Employment			
Earnings during the follow-up period	-1,107	$0	-1,107
Fringe Benefits	-332	0	-332
Taxes	188	-188	0
Earnings after the follow-up period	?	?	0
Total	-1,251	-188	-1,439
Receipt of UI and Public Assistance			
UI	794	-850	-56
Food Stamps	-29	34	5
Cash welfare	162	-193	-31
Social Security benefits	-441	445	4
Veterans' Benefits	414	-455	-41
After the follow-up period	?	?	?
Total	900	-1,019	-119
Program Costs			
Amount spent by DOL	0	-1,321	-1,321
Amount spent by participants	131	0	131
Amount spent by others	0	197	197
Total	131	-1,124	-993
Measured Net Benefit	**4,523**	**-2,331**	**2,192**

Source: Tables VIII.1, VIII.2.
? = unknown.

Tables VIII.7 and VIII.8 yield mixed results for the cost-benefit analysis. The results in Table VIII.7 indicate that, for the full sample, Project GATE is cost-effective from the participant's point of view, but not from the perspective of non-participants or society. Table VIII.8 indicates that for the UI recipient subgroup, Project GATE is cost-effective from the perspective of participants and society. Project GATE was not cost effective from the non-participant (government) perspective partly due to increased UI benefits collected by participants and the amount spent by DOL on providing GATE services.

For Project GATE to be cost-effective from society's perspective for the full sample, society must accrue additional net benefits from Project GATE amounting to more than $1,891 per person (Table VIII.7). This may not be out of reach, however, since we almost certainly underestimated a number of the inputs to the cost-benefit analysis, as discussed immediately below, resulting in a very conservative estimate of the value of a program such as GATE to society.

First, as discussed in the analysis of business earnings in Chapter VI, the self-employed are prone to underreport their earnings. Since the program group was more likely to be self-employed than the control group, the earnings impacts are likely to be underestimated. Second, job creation was not incorporated into the cost-benefit calculations. That is, the impact on non-participants' earnings resulting from business creation was not incorporated into the cost-benefit estimates. In Chapter VI we reported that the program group created 187 more businesses than the control group. Furthermore, program group members employed 170 more full time equivalent (FTE) employees than control group members. Using a conservative figure of $15,110 for annual wages (BLS 10^{th} percentile annual wage for 2005) for these 170 FTEs yield an additional potential benefit to non-participants and society of approximately $2,000 from this element of the analysis alone.

As in most benefit-cost analyses, we had to deal with uncertainties in estimating benefits and costs, which we chose to resolve in a very conservative manner. Our overall conclusion is that, taking into account the conservative nature of our estimates, GATE is cost effective from society's perspective.

8.5 Conclusion

Using impact estimates from previous chapters, in this chapter we presented the benefit-cost analysis of Project GATE. Key findings are:

- During the follow-up period, program group members earned more, on average, from businesses than control group members. The full sample earned on average, approximately $1,100 more; the UI recipient subgroup earned, on average, $3,100 more.
- The cost to the Department of Labor (DOL) of providing GATE services was approximately $1,300 per program group member.
- The main cost of Project GATE was the loss of wage and salary earnings while starting a business. The full sample earned on average, approximately $1,500 less; the UI recipient subgroup earned, on average, $1,100 less.
- For the full sample, the measured benefits of Project GATE exceeded its measured costs from the perspectives of participants.
- For the UI recipient subgroup, the measured benefits of Project GATE exceeded its measured costs from the perspectives of participants and society.
- Since our methodology of dealing with estimation uncertainty was uniformly conservative, our overall conclusion is that the actual benefits of Project GATE most likely exceeded its costs from the perspective of society.

CHAPTER IX.
LESSONS LEARNED AND POLICY IMPLICATIONS

The evaluation of Project GATE was designed to address (1) whether Project GATE works, (2) whether it could be replicated on a broader scale, and (3) whether it is cost-effective. The evidence presented in this report suggests that Project GATE works and that it could be replicated on a wider scale. The answer to whether it is cost-effective is more complex. In this report, based on a 60-month follow-up period, we find that, for the full sample, Project GATE is cost-effective from only the participants' perspective. For those who were UI recipients at random assignment, Project GATE is cost-effective from both participants' and society's perspectives.

The remainder of this chapter discusses a number of general lessons learned from the evaluation of Project GATE and implications for future policy and research in regard to self-employment.

1. Self-employment service programs could be offered at One-Stop Career Centers. Project GATE could be replicated on a wider scale. During the demonstration, Project GATE was implemented successfully across a wide variety of sites. While One-Stop Career Centers are not traditionally known as places to go for self-employment services, Project GATE was able, with some marketing, to draw entrepreneurs and prospective entrepreneurs into the centers. As long as local training and business counseling providers with a reputation for providing good quality services are willing to participate in the program, Project GATE, or a similar program, could be offered as an additional service at One-Stop Career Centers.

2. Project GATE increased receipt of self-employment services by an average of 13 hours per participant. The evaluation was designed to examine the impact of adding Project GATE to the array of self-employment programs already available in the communities. Hence, control group members were not prevented from receiving other services in the community. During the first 18 months after random assignment, about 60 percent of control group members received some self-employment services, compared with 88 percent of the program group. Project GATE led to an average increase of 13 hours of services, which consisted of 8 more hours of classroom

training, 2 more hours of business counseling, and 3 more hours of other self-employment services.

3. The Project GATE service model appears to have several advantages over the existing self-employment services available within participating communities. As well as receiving more hours of self-employment services, Project GATE participants reported higher levels of satisfaction with the services received than did control group members. Offering a one-on-one assessment with a trained business counselor and a choice of quality local service providers appears to have added value to the existing service network within these local communities.

4. GATE participants started businesses at a higher rate than control group members. Over the 60-month follow-up period, participation in Project GATE led to an increase in business ownership. While the increase in business ownership was statistically significant in the first few quarters after random assignment, the impact dissipated over time. By the time of Wave 3, the business ownership percentage was the same for the program and control groups. However an analysis of the impact of Project GATE on UI recipients found more substantial program impacts.

5. Increased business ownership did not lead to a statistically significant increase in self-employment earnings. Reported earnings from businesses for both program and control group members were small. Even though program group members were more likely to own a business, Project GATE did not have a statistically significant impact on business earnings in any quarter. Over the 16-quarter observation period, however, the program group members earned approximately $3,000 more than control group members (not statistically significant).

6. Measured Net Benefits of Project GATE. DOL spent about $1,300 per program group member to provide Project GATE services. In addition, while working on their businesses, GATE participants worked less in wage and salary jobs than control group members, especially in the first few quarters after applying to the program. Throughout the 16-quarter follow-up period, earnings from wage and salary jobs fell, on average, by about $1,500 for the full sample; and by about $1,100 for the UI recipient subgroup. The additional earnings from businesses begun by GATE participants increased, on average, by about $1,100 for the full sample and about $4,700 for the UI recipient subgroup. For the full sample, the increase in self-employment

earnings was not sufficient to make GATE cost effective from the perspective of non-participants or society. However, for those who were UI recipients, the increase in self-employment earnings was sufficient to make GATE cost-effective from the perspective of participants and society.

7. Policy Implications. Project GATE was designed to test the effectiveness of self-employment services. Almost anyone, whether employed or unemployed, who was interested in starting or expanding a business was eligible to participate in Project GATE. More than half of the applicants to Project GATE were not working when they applied to Project GATE. Thus, the unemployed represent a very important subgroup of the GATE sample.

Impact results presented in this report indicate that Project GATE was more effective for the UI recipient subgroup than for the broader population of GATE participants. These findings are particularly important because they corroborate the findings of the evaluation of a similar self-employment training program (the UI Self-Employment Demonstration). Thus, DOL policy makers now have results from two different rigorous experimental design evaluations. Both studies conclude that self-employment training programs are an effective policy tool for assisting the unemployed.

Thus, the results of this report suggest that DOL should initiate a new self-employment training program similar to Project GATE in all states. The currently available SEA program is operating in only nine states and is only available to individuals who are profiled as likely to exhaust their benefits. The new GATE-like program should differ from the SEA program in a number of important respects. Specifically, the new program should be available nationwide and should be accessible to all UI claimants who are interested in self-employment irrespective of their profiling score. Clearly, an important change of this type would require new Federal legislation.

Such a GATE-like program may be especially effective in recessionary periods when few wage and salary jobs are available. During difficult economic times, the opportunity cost for engaging in self-employment training is significantly decreased. Since employment opportunities are scarce, the individual can dedicate more time to starting their business. In this case, self employment training is a win-win proposition because it promotes both workforce development for the unemployed individual and economic development for the local economy. A program of

this nature should be acted on soon rather than waiting for the next recession as by then it may be too late to gather support for enacting a new program.

8. Future Research. Since the completion of the initial Project GATE demonstration, DOL awarded four state grants to test the effectiveness of extending the GATE model to two special dislocated worker populations: rural workers and older workers. These four state grants (Alabama, North Carolina, Minnesota, and Virginia) are collectively known as GATE II. A rigorous impact evaluation of these grants is currently underway to determine the effectiveness of the GATE model for these two dislocated worker groups.

While older dislocated workers and rural dislocated workers may represent important target populations for self-employment training services, they are by no means the only groups who may benefit from such services. There are many other target groups that could potentially benefit from self-employment training services: veterans, individuals with disabilities, and military spouses are such possible subgroups. Future GATE grants, combined with rigorous evaluation of their effectiveness, would provide DOL with information that can further improve the targeting of GATE services.

DOL may also wish to revisit the two original UI Self-Employment Demonstrations to test a potentially promising variation in the program design. The original demonstrations in Washington State and Massachusetts tested two approaches to providing unemployment benefits to UI claimants wishing to start their own business. In Washington State, a lump-sum payment model was tested, while in Massachusetts a periodic payment model was tested. History shows that the model tested in Massachusetts was the more promising and later evolved into the SEA program.

What DOL did not test, however, was a combination of the two approaches. One possible variation of the original design is to provide UI claimants smaller periodic payments in combination with milestone bonus payments upon completion of, for example, their business plan and establishment of their business.

During each wave of the Project GATE survey, respondents consistently stated that a major impediment to starting a business was lack of access to capital. In the proposed new

demonstration, the successful periodic payment approach would be maintained while providing prospective entrepreneurs access to capital to start their business. Program participants would still receive a weekly unemployment check, albeit a smaller amount, while remaining eligible to receive lump-sum bonus payments at critical stages in their business development. While many design details remain, the authors believe that a demonstration program incorporating a combination of (a) self-employment training, (b) periodic payments, and (c) lump-sum payments would be an important next research step in this area.

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APPENDIX A. DATA COLLECTION FOR IMPACT ANALYSIS

This appendix describes the collection of data used in the analysis of the impacts of Project GATE. The data come from three sources:

- The GATE application packet
- Three waves of a follow-up survey
- State Unemployment Insurance (UI) agencies

We discuss each data source in turn.

A.1 GATE Application Packet

All persons who attended a GATE orientation were offered a GATE application packet. To apply to Project GATE, persons were required to complete the application package and send it to IMPAQ International. If IMPAQ International found that the applicant was eligible for Project GATE, had completed most of the package, and had not previously applied to Project GATE, he or she was randomly assigned to the program or control group.

The application package collected detailed background information. This information included:

Demographic and Socioeconomic Characteristics – The package asked for information on age, gender, race/ethnicity, highest grade of education completed, marital status, household size, number of children, country of birth, primary language, U.S. citizenship, and whether the applicant had a health problem or disability that limited the type of work he or she could do.

- ***Income*** – The package asked for information on total household income over the previous year. It also asked whether the applicant was receiving Temporary Assistance for Needy Families (TANF), Supplemental Security Income, General Assistance, food stamps, Social Security benefits, or other benefits. The application

package also asked whether the applicant was receiving UI benefits and the number of weeks the applicant received UI over the past 12 months.

- ***Previous Self-Employment Experiences*** – The package asked whether the applicant had ever been self-employed, whether he or she was currently self-employed, the number of years the applicant was self-employed, the date the previous business was begun and ended, the number of employees the business hired, and whether any close relatives or friends owned a business and whether the applicant worked for that business.

- ***Wage and Salary Work Experiences*** – The package asked whether the applicant was currently working for themselves and/or for someone else, unemployed, or out of the labor force. Detailed information about the current or last wage and salary job held by the applicant, such as wage rate was also requested.

- ***Business Idea –*** The application package asked for a short description of the business that the applicant wanted to start or grow. It also asked whether the applicant was already operating this business, and if so, how long he or she had been operating it. The package also asked whether the applicant ever operated a business similar to the one he or she proposed to start or grow, whether the business would build on skills or knowledge acquired while working for someone else or pursuing a hobby, whether the applicant planned to operate the business out of his or her home, whether the applicant had a location in mind, and whether the applicant had written a formal business plan for the business.

- ***Factors that May Affect Likelihood of Business Success –*** The application package collected information about the financial and emotional support provided by the applicant's family, and the applicant's access to a car, telephone, computer, and bank account. It also asked about 13 personal character traits that are thought to affect the likelihood of self-employment success, such as the ability to work independently. The package also asked about the reasons for the applicant's interest in self-employment.

Table A.1 compares selected background information across program and control groups.

In addition, the application package collected detailed contact information necessary to perform random assignment, notify the applicant about their assignment, and locate the applicant for follow-up surveys. The package also asked the applicant to consent to participate in the study.

Table A.1: Selected Background Characteristics of Program and Control Groups

	Program Group Mean	Control Group Mean	Difference
Male	0.53	0.54	-0.01
Age (average in years)	42.09	42.75	-0.65**
Race/Ethnicity			
White and not Hispanic/Latino[a]	0.54	0.53	0.00
Black and not Hispanic/Latino[a]	0.29	0.30	-0.01
Other	0.17	0.16	0.01
Born in the United States	0.90	0.90	0.00
United States Citizen	0.96	0.96	0.00
Highest Grade Completed (average in years)	14.39	14.51	-0.13*
Household Income			
Less than $10,000	0.12	0.10	0.02**
$10,000 to $24,999	0.24	0.24	-0.01
$25,000 to $49,999	0.33	0.34	-0.01
$50,000 to $74,999	0.18	0.17	0.01
$75,000 to $99,999	0.07	0.07	0.00
$100,000 or more	0.06	0.07	-0.01
Status if Neither Employed Nor Owned a Business			
Looking for work	0.72	0.75	-0.02
Trying to become self-employed	0.30	0.29	0.01
Attending school or training	0.15	0.13	0.02
Taking care of a family member	0.07	0.06	0.01
Retired	0.03	0.02	0.01
Disabled	0.03	0.03	0.00
Other	0.06	0.05	0.00
Months Since Last Job Ended[b] (Average)	14.73	16.88	-2.15
Currently Receiving Unemployment Insurance (UI)	0.40	0.38	0.02
Received UI in Past Year	0.48	0.49	-0.01
Number of Weeks Received UI in Past Year	11.93	13.42	-1.49***
Ever Self Employed	0.35	0.38	-0.03**
Total Years of Self Employment[b]	5.71	5.64	0.07
Weeks Self-Employed During Past Year[b] (Average)	19.20	18.44	0.76
Currently Self Employed	0.18	0.20	-0.01
Years in Current or Most Recent Business[b] (Average)	5.14	4.99	0.14

	Program Group Mean	Control Group Mean	Difference
Typical Hours Per Week Worked at Business	34.74	35.21	-0.47
Business Considered a Financial Success	0.54	0.53	0.01
Largest Number of Employees, Excluding Self	6.08	9.06	-2.99
Family or Close Relatives Ever Self Employed	0.71	0.72	0.00
Ever Work for Self-Employed Relative[c]	0.46	0.46	0.00
Ever Worked in Wage and Salary Job	0.99	0.99	0.00
Currently Working in Wage and Salary Job	0.30	0.30	0.00
Typical Hours Worked Per Week (Average)	39.49	39.65	-0.16
Hourly Wage (Average)	16.87	17.23	-0.36
Ever Worked in Managerial Capacity	0.63	0.63	-0.01
Years Worked in Managerial Capacity[d] (Average)	7.25	7.85	-0.60**
Credit			
Have a credit history	0.96	0.96	0.00
Have had credit problems in the past[e]	0.48	0.47	0.01
Household Income			
Someone else will work to support family while applicant works on business	0.45	0.46	-0.01
Average weekly earnings of family member[f]	776.38	785.11	-8.73
Health Insurance Coverage			
Currently have health insurance	0.70	0.69	0.01
Level of Family Support for Self Employment			
Very supportive	0.76	0.75	0.01
Fairly supportive	0.14	0.15	-0.01
Neither supportive or unsupportive/fairly unsupportive/unsupportive	0.10	0.10	0.00
Applicants' Assessment of their Personalities			
I enjoy working independently	1.18	1.20	-0.02
I finish projects even if they involve a great deal of work	1.22	1.20	0.01
I am willing to work long hours for my business	1.28	1.28	0.00
I have innovative ideas	1.36	1.32	0.04**
I often take the initiative to start things	1.27	1.27	0.00
If something "can't be done," I find a way	1.39	1.43	-0.04*
I'm willing to take a risk even if I am sure everything will work out[g]	2.89	2.89	0.00
I can handle challenges and persist during difficult times	1.26	1.24	0.02
I communicate easily with people who have different types of personalities	1.36	1.36	-0.01
I take advice from others	1.49	1.49	0.00
I'm a good motivator	1.46	1.46	0.00
I have clearly defined long and short term goals	1.76	1.76	0.00

	Program Group Mean	Control Group Mean	Difference
I do not often miss deadlines[g]	1.63	1.68	-0.05
I am an organized person	1.64	1.63	0.01
I do not have a difficult time making up my mind[g]	2.10	2.12	-0.03
I work well under pressure	1.52	1.50	0.02
I have a sense of humor	1.28	1.28	0.00
I am prepared to risk my savings for my business[g]	2.37	2.38	0.00
I am willing to lower my standard of living while my business gets started	1.70	1.70	0.00
I do not get sick often[g]	1.38	1.39	-0.01
I often find more than one solution to a problem	1.48	1.47	0.01
Total Score on Personality Assessment			
Mean	93.02	92.97	0.05
Reasons for Starting a Business			
Be Own Boss	0.83	0.84	-0.01
Use Talents	0.77	0.77	0.00
More Income	0.76	0.77	-0.01
Realize Dream	0.76	0.75	0.01
Pursue Interest	0.70	0.69	0.01
Flexible Schedule	0.58	0.59	-0.01
Avoid Unemployment	0.44	0.43	0.01
Work at Home	0.33	0.32	0.01
To help others/community	0.09	0.10	-0.01
Number of Applications	2,094	2,103	4,197

Source: Project GATE Application Forms.

[a]Excludes those who reported multiple races.[b]For those who were ever self employed.

[c]For those who had a family member who was self employed.

[d]For those who ever worked in a managerial capacity.

[e]For those with a credit history.

[f]For those with a family member who will support family.

[g]The percent who believe the negative statement is "very untrue."

*/**/***Estimate significantly different from zero at the 0.10/0.05/0.01 level.

In Table A.1, the total number of applicants is 4,197. Elsewhere in this report, as well as in the earlier report prepared after Wave 2 of the follow-up survey was completed; the total number of applicants was reported as 4,198. The difference is due to one individual who was found to be non-randomly assigned and who was removed from the analysis conducted for this report. Because removing this individual changes the weights only very slightly, no conclusions of this report were affected by this change.

A.2 Three Waves of a Follow-Up Survey

A telephone survey was first attempted with all sample members at about 6 months after random assignment (Wave 1) and then again with all respondents to the first survey at about 18 months after random assignment (Wave 2). The third telephone survey was conducted with respondents to the second survey about 60 months after random assignment (Wave 3).

A.2.1 Content of Questionnaires

The three follow-up surveys collected a similar set of information. However, the first follow-up survey was used to collect information about the sample members' experiences over the first six months after random assignment, and the second and third surveys were used to collect information about the time since they were last surveyed—approximately 12 and 60 months, respectively.

The information collected by the surveys included:

- ***Receipt of Self-Employment Services from Project GATE and Other Providers*** – The surveys provided data on self-employment services that the sample members received from Project GATE and other programs; this included training classes, one-on-one counseling, mentoring, and peer support. Comparable data on self-employment services were collected for both program and control group members. The surveys also collected information on the intensity and duration of the services, satisfaction with the services, and the perceived usefulness of different components of the services.

- ***Completion of Business Plans and Loan Applications –*** The surveys asked whether the sample member had completed a business plan. They also asked about any loan

applications and other sources of business financing. The sample member was also asked whether he or she received assistance in developing the plan or applying for a loan from a self-employment service provider.

- ***Business Development –*** The surveys collected detailed information about whether the sample member was operating a business. They asked about the development or growth of businesses owned by the sample member since random assignment. Information collected included the start and end date of the business, earnings from the business, the product or service produced by the business, how the business was acquired, how much capital was put into the business, where it was ***located, the*** amount of sales and expenses, the number of employees, and if a business ended, whether the business was closed or sold.

- ***Employment –*** Together, the surveys collected a complete 60-month history of all employment since random assignment, including both self-employment and working for someone else. Data collected included earnings, hours worked, and fringe benefits received. The surveys also asked about satisfaction with employment, be it from working for oneself or someone else.

- ***Household Income and Receipt of Public Assistance –*** Each survey collected household income data for the past 12 months. Information was also collected on the earnings and fringe benefits of other household members. The surveys collected information on the receipt of retirement benefits, welfare benefits, and other public assistance.

In addition to the bulleted list above, the surveys collected some information about the perceived barriers to starting a business. The surveys also collected information on some demographic and socio-economic characteristics that may change over time, such as marital status.

A.2.2 Survey Response Rates

Of the 4,197 GATE applicants, 82 percent responded to Wave 1 of the survey, 72 percent responded to Wave 2 of the survey and 58 percent responded to Wave 3 of the survey. Table A.2

presents the overall response rates and the response rates by site and by program and control group.

Table A.2: Response Rates

Site	Program or Control Group	# of Sample Members	Wave 1 Survey		Wave 2 Survey		Wave 3 Survey	
			# of Respondents	Response Rate	# of Respondents	Response Rate	# of Respondents	Response Rate
All	Both	4,197	3,450	82.2%	3,039	88.1%	2,450	80.6%
All	Program	2,094	1,759	84.0	1,564	88.9	1,274	81.5
All	Control	2,103	1,691	80.4	1,475	87.2	1,176	79.7
Philadelphia	Both	1,178	905	76.8	747	82.5	553	74.1
Pittsburgh	Both	595	482	81.0	428	88.8	354	82.7
Minneapolis/St. Paul	Both	1,654	1,383	83.6	1,257	90.9	1,053	83.8
Northeast Minnesota	Both	203	167	82.3	148	88.6	121	81.8
Maine	Both	567	513	90.5	459	89.5	369	80.4
Philadelphia	Program	600	472	78.5	393	83.3	294	75.0
Philadelphia	Control	578	433	74.9	354	81.8	259	73.2
Pittsburgh	Program	288	240	83.3	218	90.8	185	84.9
Pittsburgh	Control	307	242	78.8	210	86.8	169	80.5
Minneapolis/St. Paul	Program	834	722	86.6	661	91.6	559	84.6
Minneapolis/St. Paul	Control	820	661	80.6	596	90.2	494	82.9
Northeast Minnesota	Program	97	81	83.5	73	90.1	63	86.3
Northeast Minnesota	Control	106	86	81.1	75	87.2	58	77.3
Maine	Program	275	244	88.7	219	89.8	173	79.0
Maine	Control	292	269	92.1	240	89.2	196	81.7

The overall response rate for Wave 3 of the survey was higher for the program group than the control group (82 percent compared with 80 percent). The response rate for the program group was higher than the control group in each site except Maine. A similar pattern occurred for the Wave 1 and Wave 2 surveys.

The response rates differed quite substantially by site. The response rate was highest in Minneapolis/St. Paul (76 percent for Wave 2 and 84 percent for Wave 3) and lowest for Philadelphia (63 percent for Wave 2 and 74 percent for Wave 3).

Given the slightly higher response rates for program group members in all three waves, there may be some concern regarding differential attrition rates between the program and control groups. However, the results in Table A.3 should alleviate this concern. That is, the results in Table A.3 reveal that the characteristics of program and control group members at the five-year follow-up (i.e., at wave 3) were very similar.

Table A.3: Selected Background Characteristics of Program and Control Groups

Wave 3 Respondents

	Program Group Mean	Control Group Mean	Difference
Male	0.52	0.53	-0.01
Age (average in years)	43.91	44.15	-0.24
Race/Ethnicity			
White and not Hispanic/Latino[a]	0.61	0.62	-0.01
Black and not Hispanic/Latino[a]	0.24	0.25	-0.01
Other	0.15	0.13	0.02
Born in the United States	0.93	0.92	0.01
United States Citizen	0.97	0.98	0.00
Highest Grade Completed (average in years)	14.75	14.78	-0.03
Household Income			
Less than $10,000	0.08	0.08	0.00
$10,000 to $24,999	0.22	0.24	-0.01
$25,000 to $49,999	0.32	0.35	-0.03
$50,000 to $74,999	0.20	0.17	0.03*
$75,000 to $99,999	0.08	0.07	0.01
$100,000 or more	0.09	0.09	0.00
Status if Neither Employed Nor Owned a Business			
Looking for work	0.74	0.75	-0.01
Trying to become self-employed	0.32	0.32	0.00
Attending school or training	0.13	0.11	0.02
Taking care of a family member	0.06	0.06	0.00
Retired	0.03	0.02	0.01
Disabled	0.02	0.03	0.00

	Program Group Mean	Control Group Mean	Difference
Other	0.05	0.06	-0.01
Months Since Last Job Ended[b] (Average)	14.99	18.23	-3.24
Currently Receiving UI	0.43	0.41	0.02
Received UI in Past Year	0.50	0.52	-0.02
Number of Weeks Received UI in Past Year	11.89	14.00	-2.11***
Ever Self Employed	0.37	0.42	-0.05**
Total Years of Self Employment[b]	6.07	5.79	0.28
Weeks Self-Employed During Past Year[b]	19.92	18.79	1.13
Currently Self Employed	0.20	0.22	-0.02
Years in Current or Most Recent Business[b]	5.24	5.09	0.15
Typical Hours Per Week Worked at Business	32.70	34.48	-1.79
Business Considered a Financial Success	0.51	0.55	-0.04
Largest Number of Employees, Excluding Self	5.72	12.58	-6.86
Family or Close Relatives Ever SE	0.74	0.74	0.00
Ever Work for Self-Employed Relative[c]	0.43	0.43	-0.01
Ever Worked in Wage and Salary Job	0.99	0.99	0.00
Currently Working in Wage and Salary Job	0.29	0.28	0.00
Typical Hours Worked Per Week (Average)	39.36	39.62	-0.26
Hourly Wage (Average)	18.24	17.96	0.29
Ever Worked in Managerial Capacity	0.66	0.66	0.00
Years Worked in Managerial Capacity[d]	7.87	8.45	-0.59
Credit			
Have a credit history	0.97	0.97	0.01
Have had credit problems in the past[e]	0.41	0.41	-0.01
Household Income			
Someone else will work to support family while applicant works on business	0.47	0.46	0.00
Average weekly earnings of family member[f]	832.48	780.76	51.73
Health Insurance Coverage			
Currently have health insurance	0.73	0.71	0.02
Level of Family Support for Self Employment	0.74	0.73	0.02
Very supportive	0.16	0.16	0.00
Fairly supportive	0.10	0.11	-0.01
Neither supportive or unsupportive/fairly unsupportive/unsupportive	0.73	0.71	0.02
Applicants' Assessment of their Personalities			
I enjoy working independently	1.20	1.21	-0.01
I finish projects even if they involve a great deal of work	1.23	1.23	0.00
I am willing to work long hours for my business	1.35	1.32	0.03
I have innovative ideas	1.37	1.33	0.04
I often take the initiative to start things	1.29	1.28	0.01

	Program Group Mean	Control Group Mean	Difference
If something "can't be done," I find a way	1.43	1.45	-0.01
I'm willing to take a risk even if I am sure everything will work out[g]	2.86	2.89	-0.03
I can handle challenges and persist during difficult times	1.28	1.25	0.03
I communicate easily with people who have different types of personalities	1.38	1.38	0.00
I take advice from others	1.50	1.52	-0.02
I'm a good motivator	1.51	1.50	0.01
I have clearly defined long and short term goals	1.84	1.85	-0.01
I do not often miss deadlines[g]	1.63	1.70	-0.07*
I am an organized person	1.69	1.67	0.02
I do not have difficult time making up my mind[g]	2.14	2.18	-0.03
I work well under pressure	1.56	1.52	0.04
I have a sense of humor	1.28	1.28	0.01
I am prepared to risk my savings for my business[g]	2.41	2.47	-0.07
I am willing to lower my standard of living while my business gets started	1.75	1.71	0.04
I do not get sick often[g]	1.37	1.39	-0.01
I often find more than one solution to a problem	1.49	1.49	0.00
Total Score on Personality Assessment			
Mean	92.40	92.37	0.03
Reasons for Starting a Business			
Be Own Boss	0.83	0.84	-0.01
Use Talents	0.77	0.78	-0.01
More Income	0.74	0.75	-0.01
Realize Dream	0.76	0.75	0.01
Pursue Interest	0.71	0.70	0.01
Flexible Schedule	0.59	0.59	0.00
Avoid Unemployment	0.43	0.43	0.00
Work at Home	0.35	0.33	0.02
To help others/community	0.08	0.10	-0.02
Number of Applications	1,274	1,176	2,450

Source: Project GATE Application Forms.

[a]Excludes those who reported multiple races.

[b]For those who were ever self employed.

[c]For those who had a family member who was self employed.

[d]For those who ever worked in a managerial capacity.

[e]For those with a credit history.

[f]For those with a family member who will support family.

[g]The percent who believe the negative statement is "very untrue."

*/**/***Estimate significantly different from zero at the 0.10/0.05/0.01 level.

A.3 State Unemployment Insurance Agencies

Data on employment, earnings, and receipt of UI benefits were requested from the state UI agencies for all 4,198 GATE applicants who were randomly assigned.

A.3.1 Data Collection Strategy

UI wage records and UI benefits data were collected from the state UI agency in the three states—Pennsylvania, Minnesota, and Maine. A list of the social security numbers of all GATE applicants was sent to the state UI agency. The state agency matched UI wage and benefit records to each social security number and returned a dataset with UI wage records and benefits data for each social security number that was successfully matched. If an applicant's social security number did not match records on databases at the state UI agency, we assumed this meant that the customer did not receive UI-covered earnings (or did not establish a UI claim, depending on the database) during the time period covered by the evaluation.

A.3.2 UI Wage Records

Employers in most states are required to maintain and submit earnings records to the state's UI system for workers in jobs covered by UI. These records, which are maintained in machine-readable format, are used to determine workers' eligibility for UI if they are laid off.

The UI wage records include most, but not all, earnings. UI wage records consist of total quarterly earnings reported by employers to state UI agencies for each employee. By law, most employers are subject to a state UI tax and must report what is paid to each employee, including regular earnings, overtime, and tips and bonuses. In most states, the Federal Unemployment Tax Act (FUTA) applies to employers who (1) paid wages of $1,500 or more during any calendar quarter in the current or preceding calendar year, or (2) employed at least one worker for at least one day in each of the 20 weeks during the current or preceding calendar year.

Most workers are covered under FUTA, but there are some excluded categories. In particular, UI wage records do not cover federal workers, military staff, or self-employed people. Other workers excluded from coverage under the FUTA provisions include railroad employees, workers in service for relatives, most agricultural labor (except workers on large farms), domestic service

workers whose employers paid less than $1,000 in wages in any calendar quarter, part-time employees of nonprofit institutions, some students employed by their schools, insurance and real estate agents on commission, and workers performing "casual labor" not in the course of the employer's business (U.S. Department of Labor 2004).

We received quarterly wage records from each state for the third quarter of 2001 to the second quarter of 2006. As the applicants were randomly assigned between September 2003 and July 2005, we have at least two years of data prior to random assignment and one year of data after random assignment for nearly all sample members.

The earnings data received from each state contain quarterly earnings data for each reported job. For each state and calendar quarter available, we constructed total quarterly earnings for each sample member by summing reported earnings from each of the customer's employers.

For the analysis, we needed a measure of earnings for quarters measured in relation to random assignment rather than calendar quarters. To do this, we defined "the first quarter after random assignment" as the calendar quarter during which the customer was randomly assigned if he or she were randomly assigned in the first half of the calendar quarter, and as the calendar quarter after the customer was randomly assigned if he or she was randomly assigned in the second half of the calendar quarter. For example, if a sample member was randomly assigned on November 14, 2004, the fourth quarter in 2004 was designated as the first quarter after random assignment; if the customer was randomly assigned on November 16, 2004, the first quarter of 2005 was designated as the first quarter after random assignment. We also experimented with counting the first calendar quarter that does not include random assignment as the "first quarter after random assignment" and obtained similar findings.

A.3.3 Benefits

The UI benefits data cover all claims filed between July 2000 and July 2006. Hence, we have information about all claims established in the three years prior to random assignment and the year after random assignment. The data provided by the states included the date the benefit year began, the maximum benefit amount (the total benefits amount awarded to the customer), the remaining balance (the total amount of the award *not* yet paid to the customer), the weekly benefit amount

(the maximum amount the customer could receive per week), the claim type, and the first and last compensable weeks (weeks that the customer could receive benefits).

APPENDIX B. SURVEY NONRESPONSE AND MISSING VALUES

This appendix describes our approach to dealing with missing data. We begin by describing our approach to dealing with missing data that occurs because a sample member did not respond to a survey at all. Then we discuss our approach to dealing with missing data that occurs because a sample member did not respond to a specific question on the survey.

B.1 Treatment of Survey Nonresponse

The evaluation design for Project GATE included three follow-up telephone surveys, one about 6 months after random assignment (Wave 1), one about 18 months after random assignment (Wave 2), and one about 60 months after random assignment (Wave 3). Of the 4,197 GATE applicants, 3,450 responded to the Wave 1 survey (an 82 percent response rate), 3,039 responded to the Wave 2 survey (a 72 percent overall response rate) and 2,450 responded to the Wave 3 survey (a 58 percent overall response rate). Response rates, by site and research group (program and control), are presented in Table A.2.

Although response rates were fairly high, impact estimates could be biased if survey respondents differed from nonrespondents in ways that are correlated with outcomes of interest. To adjust for differences in observed characteristics between respondents and nonrespondents, we created weights for each respondent for the Wave 1, Wave 2 and Wave 3 surveys.

The first step to creating weights for nonresponse was estimating logistic regression models of the probability that a sample member responded to the survey. The models were estimated using the full sample of 4,197 applicants. The dependent variable was whether the sample member had responded to the survey. Any characteristic of the GATE applicant that may be correlated with survey response and was reported on the GATE application package was a candidate to be a covariate in the model.

For each wave of the survey, the best set of covariates for the nonresponse model was chosen by comparing the following measures of predictive ability and goodness of fit: the R-squared statistic, Akaike's Information Criterion (Akaike 1974), the percentage concordant and

discordant (Agresti 1996), and the Hosmer-Lemeshow goodness-of-fit test (Hosmer and Lemeshow 1989). It also involved reviewing the statistical significance of the coefficients of the covariates in the model and avoiding any unusually large adjustment factors.

For the Wave 1, 2 and 3 survey nonresponse models, the following characteristics were important indicators of response propensity: age, gender, race/ethnicity, income level, primary language, education, and indicators of whether the applicant had a bank account, was currently self employed, had a relative who was self employed, was disabled, had managerial experience, had problems with credit history, had ever received unemployment benefits, was ever married, was currently responsible for care of family members during the day, family was very supportive of the business endeavor, had ever worked for a relative, had health insurance, household size, number of children in household, was ever self-employed, had ever worked, had a telephone, and had a computer.

The second step in creating nonresponse weights was to use the predicted values from the response propensity models to create weighting cells. Twenty broad groups were defined by the 20 possible combinations of three categorical variables: site (five categories, counting the three sites in Maine as a single site), research group (program/control) (two categories), and whether the sample member was in a business partnership with another sample member (two categories). Within each of these twenty broad groups, five weighting cells were created that were determined by the size of the predicted likelihood that the sample member responded to the survey. This resulted in a total of 100 (5 x 20) weighting cells. The same nonresponse weight was assigned within each of these 100 cells.

The third step was to create the nonresponse weight for each cell. The nonresponse weight was calculated by dividing the total number of sample members in each cell by the total number of survey respondents in each cell. For example, consider an applicant in Maine who was assigned to the control group and was part of a business partnership with another GATE applicant. Suppose that this applicant had a response propensity based on the logistic model of 0.75. This would put her in the lowest of the five ranked cells within her broad group. There were only five applicants within this cell (including the applicant described above). Of those five applicants,

three responded to the Wave 1 survey. Hence, if the applicant responded to the Wave 1 survey, her Wave 1 nonresponse weight would be 5/3 = 1.67.

As described in Chapter II, some GATE applicants were business partners with other GATE applicants. If GATE applicants in the same business partnership were assigned to different research groups (one to the program group and one to the control group, for example), there was potential for contamination of the control group member(s). To remove this potential source of contamination, sample members in business partnerships with members in both research groups were given a weight of zero. This effectively removed these business partnerships from the analysis sample. To ensure that business partnerships were not, however, underrepresented in the analysis file, the weights of other business partnerships in the same site and research group were adjusted upwards.

As a final step, because the outcomes for applicants in business partnerships are not independent, the weights for applicants within business partnerships were adjusted so that the sum of the weights for members in each business partnership was equal to the weight for one non-partnered applicant. For example, three business partners applied to Project GATE in Minneapolis/St. Paul, were all assigned to the program group, and all responded to the Wave 1 survey. The nonresponse weight for each of these applicants was 1.08. The weight was adjusted to 2.38 because of other business partners in Minneapolis/St. Paul who were assigned a weight of zero due to concerns about contamination described earlier. To account for the fact that the outcomes for applicants in business partnerships are not independent, the weight for each of these three sample members were divided by three (2.38/3 =0.79). The sum of all the nonresponse weights is equal to 4,071, which is the number of applicants who applied to Project GATE without a business partner (3,953) plus the number of businesses represented by the applicants who applied with a business partner (118).

B.2 Treatment of Item Nonresponse

Some respondents responded to most of a survey but refused to answer particular questions or responded to questions by saying “I don’t know.” This is referred to as item nonresponse and can lead to a bias in impact estimates, and also reduce the statistical power if such cases were

deleted. To alleviate this source of bias, we imputed values for most variables that had missing values.

Table B.1 presents the variables for which we imputed values when they were missing and the percentage of nonresponse for the variable. The level of nonresponse to the question is calculated only over sample members who were eligible to answer the question, based on the skip pattern in the survey instrument. For example, in the Wave 3 survey instrument, the percent of nonresponse to the question in the survey about the number of businesses owned since random assignment (question C3) was calculated only over those respondents who answered that they had been self-employed since the last interview (question C1).

Table B.1: Rate of Nonresponse for Variables for Which Missing Values Were Imputed

	Levels of Item Nonresponse Among Eligible Cases (in %)		
Description	**Wave 1 Survey**	**Wave 2 Survey**	**Wave 3 Survey**
Self-employed since random assignment (RA)	0.09	0.14	0.12
Number of businesses owned since RA	0.14	0.29	0.00
Month of start of first business (wave 1, 2 only)	5.66	11.28	n/a
Year of start of first business (wave 1, 2 only)	0.64	1.10	n/a
Date of start of first business (wave 3 only)	n/a	n/a	9.83
Month of start of 2nd business (wave 1, 2 only)	8.33	16.37	n/a
Year of start of 2nd business (wave 1, 2 only)	1.38	3.00	n/a
Date of start of second business (wave 3 only)	n/a	n/a	7.80
Monthly receipts/sales for first business	17.27	18.80	12.91
Monthly expenses for first business	15.84	16.44	13.16
Hours per week worked at first business	2.51	2.65	2.00
Hours per week worked at 2nd business	4.86	10.18	3.55
Percent of household income from first business	2.62	6.71	5.25

Description	Levels of Item Nonresponse Among Eligible Cases (in %)		
	Wave 1 Survey	Wave 2 Survey	Wave 3 Survey
Percent of household income from 2nd business	4.96	7.19	9.93
Salary to self from first business	1.07	1.62	0.83
Salary to self from 2nd business	0.71	1.80	2.13
Weekly earnings from first business	21.45	27.30	15.28
Weekly earnings from 2nd business	30.00	17.86	15.79
Other income payments from first business	2.22	2.28	1.08
Other income payments from 2nd business	0.71	2.40	2.13
Amount other income payments, first business	27.40	31.57	17.43
Amount other income payments, 2nd business	21.88	25.00	19.23
Spouse/relative gets regular salary from first business	0.43	1.18	0.42
Spouse/relative gets regular salary from 2nd business	0.71	1.80	2.13
Weekly regular salary earnings received by spouse/relative from first business	18.33	25.00	14.29
Weekly regular salary earnings received by spouse/relative from 2nd business	25.00	25.00	33.33
Spouse/relative gets other income payments from first business	0.71	1.18	0.42
Spouse/relative gets other income payments from 2nd business	0.71	1.80	2.84
Weekly other income earnings received by spouse/relative from first business	33.33	35.00	20.45
Weekly other income earnings received by spouse/relative from 2nd business	33.33	28.57	50.00
Invested own money in business since RA	0.71	0.96	0.33
Amount of own money invested in business	10.85	15.76	11.52
Borrowed money for business since RA	0.71	0.74	0.50
Amount of money borrowed for business	7.62	9.40	8.91
Currently working for someone else	0.00	0.00	0.00
Had a job that lasted at least 2 weeks since RA	0.06	0.15	0.20

Description	Levels of Item Nonresponse Among Eligible Cases (in %)		
	Wave 1 Survey	Wave 2 Survey	Wave 3 Survey
Gave employer name, first job lasting 2 wks +	2.85	4.15	1.25
Gave employer name, second job lasting 2 wks+	4.50	6.05	0.00
Month of start of first job (wave 1, 2 only)	6.81	9.31	n/a
Year of start of first job (wave 1, 2 only)	4.90	6.56	n/a
Date of start of first job (wave 3 only)	n/a	n/a	4.67
Month of start of 2nd job (wave 1, 2 only)	5.88	9.74	n/a
Year of start of 2nd job (wave 1, 2 only)	4.08	5.98	n/a
Date of start of 2nd job (wave 3 only)	n/a	n/a	7.63
Month of stop of first job (wave 1, 2 only)	4.77	6.46	n/a
Year of stop of first job (wave 1, 2 only)	4.59	6.13	n/a
Date of stop of first job (wave 3 only)	n/a	n/a	5.62
Month of stop of 2nd job (wave 1, 2 only)	4.41	6.49	n/a
Year of stop of 2nd job (wave 1, 2 only)	3.92	5.98	n/a
Date of stop of end job (wave 3 only)	n/a	n/a	6.59
Hours worked per week at first job	5.36	7.04	1.14
Hours worked per week at 2nd job	6.70	9.74	3.61
Weekly regular salary earnings from first job	11.27	13.98	18.05
Weekly regular salary earnings from 2nd job	12.90	14.53	17.50
Total household income past 12 months	9.80	13.52	17.49
Household member received unemployment assistance	1.83	1.48	1.23
Respondent indicates still receiving unemployment compensation or will provide the amount of time he/she received unemployment in either weeks or months	7.03	17.96	n/a
Number of weeks or months received unemployment compensation, if not still receiving it	7.02	17.30	8.09
Respondent answers amount of unemployment compensation in weeks (1) or months (2)	9.65	19.89	17.75

Description	Levels of Item Nonresponse Among Eligible Cases (in %)		
	Wave 1 Survey	Wave 2 Survey	Wave 3 Survey
Amount of unemployment compensation	9.65	19.89	17.75
Received income from Social Security	1.36	1.09	1.14
Number of months received Social Security	4.11	4.44	7.21
Amount of money received from Social Security	23.08	19.77	18.94
Received income from food stamps	1.01	1.05	0.98
Number of months received food stamps	4.58	9.60	4.90
Amount of money received from food stamps	7.50	7.63	9.15
Received income from pensions	1.59	1.51	1.47
Number of months received pensions	4.26	11.22	12.56
Amount of money received from pensions	17.58	23.96	24.89
Received income from welfare	1.54	1.22	1.47
Number of months received welfare	5.26	5.36	4.35
Amount of money received from welfare	9.88	3.88	12.23
Received income from veterans' benefits	1.04	1.05	0.94
Number of months received veterans' benefits	3.08	7.82	12.24
Amount of money received from veterans' benefits	20.00	20.32	26.53
Attended any classes, workshops, or seminars on topics related to your business since RA [2]	0.12	0.59	0.04
Number of individual sessions of these classes, workshops, or seminars attended.	1.05	4.10	1.04
Length of individual sessions, workshops, or seminars, on average	0.00	0.10	1.39
Received any one-on-one counseling or technical assistance on starting or expanding your business since RA	0.06	0.30	0.00
Number of counseling or technical assistance sessions attended	0.96	6.40	0.40
Length of counseling/technical assistance sessions, on average	0.96	7.02	0.00
Attended peer support group for self-employed persons or persons interested in	0.06	0.10	0.00

Description	Levels of Item Nonresponse Among Eligible Cases (in %)		
	Wave 1 Survey	Wave 2 Survey	Wave 3 Survey
self-employment since RA			
Number of support group sessions attended	1.53	8.08	0.00
Length of support group sessions, on average	2.63	8.75	0.00
Worked with an experienced business-owner or someone else who could act as your mentor since RA	0.14	0.30	0.04
Number of meetings with mentor	8.02	18.01	3.19
Length of sessions with mentor	5.02	16.54	1.24
Received any other types of self-employment services since RA	0.20	0.20	0.04
Constructed variable: B3=1 or B6=1 or B9=1 or B12=1 or B15=1	0.17	0.53	0.53
Amount paid in total for self-employment services	0.76	1.81	2.00

In the survey instrument, some questions are "feeder" questions. These are questions which are branching points for the respondent's pathway through the survey instrument, where the response to the question determines which question is asked next. For example, one question asks whether the respondent has been self-employed at any time since the previous interview (or since random assignment, in the case of the Wave 1 survey). If the respondent answers "yes", then additional questions about the businesses which the respondent owned are asked. However, if the respondent answers "no", then no such additional questions about businesses owned are asked.

In some cases, a response was missing to a feeder question. In these situations, we imputed a response, as appropriate, depending on the nature of the question.

We imputed the missing values using a hot-deck procedure. We chose this approach because it enables imputation of values given a set of constraints. These constraints would be difficult to implement using other imputation approaches, such as a model-based or mean-imputation procedure (Little and Rubin 2002).

The hot-deck procedure randomly selects a "donor" with the same values on a set of classing variables for each respondent with a missing value (the "recipient"). The donor's observed value on the variable of interest is then used to replace the missing value for the recipient. A sequential (with-replacement) nearest-neighbor hot-deck procedure was used, implemented using a SAS macro described in Carlson et al. (1995). The number of recipients per donor was generally limited to two; in a few cases there were three recipients per donor if the pool of donors eligible for the match was small.

Classing variables were selected that were highly correlated with the variable requiring imputation. They were always categorical; continuous variables were converted to categorical variables before they could be used as classing variables. Each level of the classing variables is referred to as an "imputation class." When an imputation class had a recipient but no potential donors, we collapsed levels of the classing variables so that a donor could be made available to the recipient.

Within each imputation class, donors and recipients had to have similar values for "sorting" variables. Sorting variables could either be variables that were less closely related to the variable (such as age) requiring imputation than the classing variables, or they could be the continuous form of variables that were used as classing variables.

Research group was the most basic classing variable that used. To ensure no contamination occurred across research groups, donors and recipients were nearly always both in the program group or both in the control group. The preserve the integrity of the data, we choose classing and sorting variables that reflect the most fundamental characteristics of the sample. The classing variables include research group, sex and site, and the sorting variable includes age. The variables were ordered in terms of the relationship to the variable requiring imputation. Variables chosen as classing variables, but lower in this order, were the first to be collapsed when it was necessary to collapse imputation classes. Research group was always the first variable in this hierarchy, and was collapsed only once across all variables, for both surveys.

We implemented a series of checks to ensure that the imputations were reasonable. These checks involved examining the individual imputations as well as examining their relationship to other variables. They included:

- Comparing the distribution of (1) raw data, excluding ineligible and missing cases; (2) imputed data only, excluding ineligible and noninputed data; and (3) imputed and raw data, excluding only ineligible cases. Any unusual differences in these distributions had to be explainable.

- Comparing variables (both imputed and raw) with preexisting nonmissing data to ensure no inconsistencies were apparent.

Variance estimates obtained using imputed data will be underestimates of the true variance. As the findings with and without the imputations are similar (see Appendix D) and the methods necessary to correct the variance estimates are complex and time-consuming, we did not adjust the standard errors. Readers should bear this in mind when examining estimates based on imputed values that differ from those based on nonimputed values.

APPENDIX C.
ESTIMATION OF IMPACTS AND STANDARD ERRORS

This appendix describes how we estimated the impacts of Project GATE. Because GATE applicants were randomly assigned to the program and control groups, a simple difference in the mean outcome measures for individuals in the two groups provides an unbiased estimate of the impact of Project GATE. However, estimating impacts using a regression model increases statistical precision and can adjust for chance differences in the baseline characteristics of applicants assigned to the program and control groups. (Appendix D presents results from a sensitivity analysis that estimates impacts using differences-in-means rather a regression model). The model used is described in detail below.

C.1 Regression Model for Estimating Overall Impacts of Project Gate

Our estimates of the impacts of Project GATE are based on a comparison of applicants randomly assigned to the program group with applicants randomly assigned to the control group. To compute impacts, we estimated a statistical model that predicts the outcome of interest as a function of program/control status, site, and a set of background characteristics detailed below. The basic form of the model is:

$$(C.1) \qquad y_i = \sum_{S=1}^{5} \lambda_S S_i + \sum_{S=1}^{5} \beta_S S_i P_i + \delta' X_i + \varepsilon_i,$$

where

y_i is the outcome of interest

S_i equals 1 if applicant i was in site S and 0 if not

P_i equals 1 if applicant i was in the program group, 0 if the applicant was in the control group

X_i is a vector of baseline characteristics of individual i

ε_i is a random, mean-zero error term that captures the impacts of unobserved factors that influence the outcome

λ, β, and δ are parameters (or vectors of parameters) to be estimated.

The regression models were estimated using weights to account for survey nonresponse business partnerships that were necessarily excluded (Appendix B).

C.1.1 Estimation of Impacts

The parameters of greatest interest are the β_S for each site, because they represent the impact on applicants of being assigned to the program group rather than the control group in site *S*. To obtain the average impact across all sites, we computed a weighted average β_{Pool} of the impacts in each site, where the weight is denoted by W_S:

$$\beta_{Pool} = \sum_{S=1}^{5} W_S \beta_S$$

The site weight, W_S, used in the above formula is the proportion of all respondents that are from site *S*. As a sensitivity check, Appendix D compares the results from our main specification to an alternative where the five sites are each given equal weight in the regression, that is, $W_S = 1/5$.

C.1.2 Choice of Linear Regression

For all outcomes we estimated the parameters in Equation C.1 using ordinary least squares, which models the outcome as a linear function of the predictors. An alternative would have been to use logistic regression (or probit models) for binary outcomes such as employment status. Logistic regression models the "log odds of success" as a linear function of the predictors:

$$g(\pi_i) = \log(\frac{\pi_i}{1-\pi_i}) = \beta X_i + e_i, \text{ where } \pi_i = E(y_i).$$

We chose to use linear regression rather than a logistic regression for all outcomes for a few reasons. The first reason was simplicity, both of analysis and presentation. There is not a standard way of estimating or presenting standard error estimates for pooled impacts estimated

using logistic regression, whereas the calculation and presentation is very straightforward using linear regression.

Second, in previous research conducted by two of the authors of this study (McConnell et al. 2006), a series of sensitivity analyses indicated that the linear and logistic regressions led to very similar results for this analysis. In particular, results from linear regression were compared with a bootstrap approach for estimating standard errors in logistic regression. The bootstrap approach yields correct standard errors, but is computationally intensive and was not feasible for this study because of its very large number of outcome measures. They generated impact estimates for a set of key binary outcomes (with a range of mean values, from 0.1 to 0.9) using both approaches and compared the results. The bootstrap and linear regression led to remarkably similar results; the impact estimates were generally identical and the standard errors (and associated p-values) were very similar as well. There were very few instances where the methods would lead to different conclusions regarding the significance of an estimated impact. We thus chose to use linear regression for all outcomes, as was done in several other large-scale evaluations, including Kling (2006), McConnell et al. (2006), and Trenholm et al. (2007).

C.1.3 Regression Predictors

The predictors included in the regression model (the *X* variables in Equation C.1) were: age, sex, race/ethnicity, whether disabled, marital status, household size, education level, born in the United States, whether receiving UI benefits at application, weeks of UI benefits received over the previous year, employment at the time of random assignment, prior self-employment experience (either oneself or a relative), prior managerial experience, family support for pursuing self-employment, another family member employed, household income, credit problems, relevant skills developed in a job or hobby, and outside health insurance coverage. Data to define these predictors were obtained from the GATE application package.

C.2 Calculation of Standard Errors

To determine whether impact estimates were statistically significant, we computed standard errors that account for the nonresponse weights (described in Appendix B) and the correlation of the outcomes of business partners. Models were estimated in Stata 10.1, incorporating weights as probability weights and clustering standard errors by business partnerships. For outcomes based on the full sample—such as from the UI wage records—we used the same procedures, but the weights were not adjusted for survey nonresponse because the full sample was included in the analysis.

APPENDIX D.
SENSITIVITY ANALYSES

To assess the sensitivity of our impact estimates to different estimation procedures or assumptions, we conducted a series of sensitivity analyses. This appendix describes these analyses and presents a summary of the results. The sensitivity analyses included:

- Estimating impacts with sites weighted equally
- Including all business partners in the analysis
- Excluding imputed outcome values from the analysis
- Conducting an unweighted analysis
- Estimating impacts without using regression adjustment

We examined the impact estimates for the key outcome measures under each of these five alternative specifications and compared the results to the benchmark results presented in the text. As reported in Table D.1, the results are fairly robust across all specifications. The following sections describe the alternative specification in more detail.

D.1 Weighting Sites Equally

The first sensitivity analysis we conducted was to weight sites equally in computing the overall impacts, rather than weighting by the number of GATE applicants in each site. The Minneapolis/St. Paul and Philadelphia sites are large, while Northeast Minnesota has only a small fraction of the sample; consequently, the site weights change substantially depending on whether sites are equally or unequally weighted (see Table D.2).

Table D.1: Impacts on Key Outcomes Under Different Specifications

Outcome	Benchmark Results (1)	Sites Weighted Equally (2)	All Business Partners (3)	No Imputations (4)	No Sample Weights (5)	No Regression Adjustment (6)
Received any Services	14% ***	13% ***	14 ***	14%***	14% ***	14% ***
Attended Classes	18 ***	19 ***	18 ***	18 ***	19 ***	17 ***
Attended Counseling	29 ***	28 ***	28 ***	29 ***	30 ***	27 ***
Owned a Business						
Quarter 1	3 *	4 *	3 *	3 *	3 **	2
Quarter 2	5 ***	5 **	5 ***	5 ***	6 ***	4 ***
Quarter 3	5 ***	5 **	5 ***	5 ***	6 ***	5 ***
Quarter 4	3 *	3	3 *	3 *	4 **	2
Quarter 5	3	4	3 *	3	3 *	2
Quarter 6	3	3	3	3	3	1
Quarter 7	3	2	3	3	3 *	3
Quarter 8	3	2	3 *	3	4 **	3 *
Quarter 9	3	1	3	3	3 *	2
Quarter 10	2	2	3	2	3	3
Quarter 11	3	2	3	3	3	3
Quarter 12	2	1	2	2	2	2
Quarter 13	2	2	2	2	2	1
Quarter 14	2	2	2	2	2	1
Quarter 15	2	2	2	2	2	2
Quarter 16	2	2	2	2	2	1
Any quarter 1-16	2 *	2	2	2 *	2	2
Employed in Wage and Salary Job						
Quarter 16	-4% **	-5%*	-4% *	-4% **	-4% *	-4% *
Any quarter 1-16	-2	-2	-1	-2	-2	-2
Employed for Self or Someone Else						
Quarter 16	-1%	-1%	-1%	-1%	-1%	-1%
Any quarter 1-16	0	0	0	0	0	0
Earnings from Businesses in Q1-Q16	$962	$2,612	$728	$466	$142	$1,112
Earnings from Jobs in Q1-Q16	-1,532	-626	-552	19	-326	-983
Earnings from Businesses or Jobs in Q1-Q16	-570	1,985	176	741	-184	129

Source: Follow-up surveys, waves 1, 2 and 3.

Notes: See Appendix C for a discussion of the regression model used for the main results. Each column of this table uses the same specification as the main results, changing only the aspect labeling each column. The exception is column (3), which includes all business partners but does not include sample weights.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

Table D.2: Site Weights Under Alternative Specifications (updated)

	Sites Weighted by Size (Main Analysis)	Sites Weighted Equally (Sensitivity Analysis)
Philadelphia	23%	20%
Pittsburgh	14	20
Minneapolis/ St. Paul	43	20
Northeast Minnesota	5	20
Maine	15	20
Total	100	100

In spite of the potential differences introduced by these weighting schemes, the impact estimates are very similar with either weighting scheme (see Table D.1, Column 2). Some of the estimates become less statistically significant, however, which arises largely because of the small sample in Northeast Minnesota, because imprecise impact estimates for that site have disproportionately large effects on the precision of the pooled impact estimate.

D.2 Including All Business Partners

As described in Chapter II, some people applied for Project GATE at the same time as a partner in the same business. If one partner was assigned to the program group while the other was assigned to the control group, the impact estimates could be susceptible to contamination. For this reason, the benchmark specification excludes partnerships that are split between the program and control group and reweights the remaining partnerships appropriately. However, the impact estimates are very similar when these potentially contaminated partnerships are included (see Table D.1, Column 3).

D.3 Excluding Imputed Values

As described in Appendix B, values of some outcomes are imputed. The variables most affected by the imputations are the earnings from businesses and wage and salary jobs. Column 4 of Table D.1 shows the estimates of earnings impacts when sample members with missing

information on these outcomes are dropped from the sample. As expected, without the imputations, the levels and impact estimates of earnings are smaller. The impact on earnings from wage and salary jobs over the whole follow-up period is -$326 when observations with missing earnings data are dropped, compared with -$1,532 when earnings are imputed when the data are missing. This is because when an observation is dropped, it is equivalent to assuming that the sample member will effectively be assigned the average value of the outcome. Yet because we know the sample member does have a job/business, while the average is taken over sample members who may or may not have a job/business, the average value is likely to be an underestimate of their earnings from the job or business. This is especially an issue for the control group because a higher proportion of the control group was employed, especially in the first quarters of the follow-up period.

D.4 Unweighted Analyses

For all outcomes constructed using the survey data, the main impacts presented in the text are estimated using weights that adjust for survey nonresponse as described in Appendix B. To assess the effect of this weighting, we also estimated impacts for the survey-based outcomes without any weights. Those results are presented for key outcomes in Column 5 of Table D.1. Again, the results are very similar to the benchmark specification.

D.5 Difference-in-Means Analyses

Lastly, we estimated impacts without any covariates in the regression models. This is equivalent to calculating simple differences-in-means of the outcomes between the approaches, with no adjustments for covariates. The results from this analysis are presented for key outcomes in Column 6 of Table D.1. The results again are very similar to those in the main analyses, indicating that the regression adjustment did not dramatically affect the estimates. The primary exception is for business ownership in quarters 1 after random assignment; it is precisely estimated under the benchmark specification, but less so without regression adjustment, as would be expected.

APPENDIX E.
Tables for Figures

Table E.1: Table For Figure V.2: Business Ownership by Quarter

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants	
Random Assignment	20	21	-1	
Quarter 1	37	34	3	*
Quarter 2	42	37	5	***
Quarter 3	42	37	5	***
Quarter 4	42	38	3	*
Quarter 5	44	41	3	
Quarter 6	46	43	3	
Quarter 7	30	27	3	
Quarter 8	34	31	3	
Quarter 9	35	33	3	
Quarter 10	36	34	2	
Quarter 11	38	35	3	
Quarter 12	37	36	2	
Quarter 13	38	36	2	
Quarter 14	38	36	2	
Quarter 15	38	36	2	
Quarter 16	38	36	2	

Table E.2: Table for Figure V.4: Impacts on Business Ownership For Those Receiving and Those Not Receiving UI Benefits at Random Assignment

Owned a Business in Quarter After Random Assignment	UI	No UI
Quarter 1	3.4	2.9
Quarter 2	8.7	2.7
Quarter 3	8.9	2.7
Quarter 4	5.7	2.5
Quarter 5	6.3	1.6
Quarter 6	5.1	2.1
Quarter 7	3.1	2.4
Quarter 8	5.1	1.6
Quarter 9	3.6	2.1
Quarter 10	2.6	2.9
Quarter 11	2.8	3.4
Quarter 12	1.5	2.1
Quarter 13	1.3	2.5
Quarter 14	3	1.8
Quarter 15	3	1.2
Quarter 16	2.3	1.4

Table E.3: Table for Figure V.10: Impacts on Earnings

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Earnings from Business in Quarters After Random Assignment			
Quarter 1	$345	$419	-$74
Quarter 2	471	533	-62
Quarter 3	555	524	31
Quarter 4	655	607	47
Quarter 5	662	619	43
Quarter 6	649	622	27
Quarter 7	655	654	1
Quarter 8	689	599	90
Quarter 9	706	611	95
Quarter 10	721	626	95
Quarter 11	751	657	94
Quarter 12	791	675	116
Quarter 13	815	679	136
Quarter 14	811	685	126
Quarter 15	808	696	111
Quarter 16	786	700	86

Table E.4: Table for Figure VI.1: Self-Employment Rate by Quarter (Full Sample)

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Owned a Business at:			
Random Assignment	20	21	-1
Quarter 1	37	34	3 *
Quarter 2	42	37	5 ***
Quarter 3	42	37	5 ***
Quarter 4	42	38	3 *
Quarter 5	44	41	3
Quarter 6	46	43	3
Quarter 7	30	27	3
Quarter 8	34	31	3
Quarter 9	35	33	3
Quarter 10	36	34	2
Quarter 11	38	35	3
Quarter 12	37	36	2
Quarter 13	38	36	2
Quarter 14	38	36	2
Quarter 15	38	36	2
Quarter 16	38	36	2

Table E.5: Table for Figure VI.2: Self-Employment Rate (UI Recipients at Random Assignment)

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants	
Owned a Business at:				
Quarter 1	38	34	3	
Quarter 2	46	38	9	***
Quarter 3	46	37	9	***
Quarter 4	45	39	6	*
Quarter 5	48	42	6	**
Quarter 6	48	43	5	*
Quarter 7	32	29	3	
Quarter 8	36	31	5	*
Quarter 9	37	33	4	
Quarter 10	37	34	3	
Quarter 11	38	35	3	
Quarter 12	38	36	2	
Quarter 13	38	37	1	
Quarter 14	39	36	3	
Quarter 15	39	36	3	
Quarter 16	38	36	2	

Table E.6: Table for Figure VI.3: Wage and Salary Employment Rate (Full Sample)

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Worked for Someone Else at:			
Quarter 1	44	47	-3 *
Quarter 2	53	56	-4 *
Quarter 3	59	62	-3
Quarter 4	55	57	-2
Quarter 5	55	59	-4 **
Quarter 6	60	64	-4 *
Quarter 7	55	56	-1
Quarter 8	51	52	-1
Quarter 9	51	55	-4 *
Quarter 10	53	56	-3
Quarter 11	55	56	-1
Quarter 12	55	58	-2
Quarter 13	56	60	-4 *
Quarter 14	56	61	-4 **
Quarter 15	57	61	-4 **
Quarter 16	58	62	-4 **

Table E.7: Table for Figure VI.4: Employment in Wage and Salary Jobs (UI Recipient at Random Assignment)

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Quarter 1	32	41	-9 ***
Quarter 2	48	56	-8 **
Quarter 3	58	64	-6 *
Quarter 4	53	63	-10 ***
Quarter 5	56	64	-9 ***
Quarter 6	64	68	-4
Quarter 7	58	58	0
Quarter 8	54	55	-1
Quarter 9	54	57	-4
Quarter 10	56	58	-3
Quarter 11	59	59	0
Quarter 12	59	60	-1
Quarter 13	60	64	-5
Quarter 14	61	64	-3
Quarter 15	61	65	-4
Quarter 16	62	65	-3

Table E.8: Table for Figure VI.5: Overall Employment Rate (Full Sample)

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Worked for Self or Someone Else:			
Quarter 1	72%	70%	2
Quarter 2	80	80	0
Quarter 3	87	85	1
Quarter 4	83	81	2
Quarter 5	84	83	1
Quarter 6	88	87	1
Quarter 7	80	77	3
Quarter 8	76	74	2
Quarter 9	76	76	0
Quarter 10	77	77	0
Quarter 11	79	78	1
Quarter 12	79	79	0
Quarter 13	79	80	-1
Quarter 14	80	81	-2
Quarter 15	80	82	-2
Quarter 16	80	82	-1

Table E.9: Table for Figure VI.6: Overall Employment Rate (UI Recipients at Random Assignment)

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Quarter 1	64	66	-2
Quarter 2	80	81	-1
Quarter 3	89	88	2
Quarter 4	84	86	-2
Quarter 5	86	87	-1
Quarter 6	91	90	1
Quarter 7	85	80	5 *
Quarter 8	80	75	4
Quarter 9	79	78	1
Quarter 10	80	80	0
Quarter 11	82	81	1
Quarter 12	82	82	1
Quarter 13	82	85	-2
Quarter 14	83	85	-2
Quarter 15	83	85	-2
Quarter 16	83	85	-1

Table E.10: Table for Figure VI.7: Self-Employment Hours (Full Sample)

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Quarter 1	158	146	12
Quarter 2	200	174	26 **
Quarter 3	198	175	23 **
Quarter 4	206	174	32 ***
Quarter 5	219	179	40 ***
Quarter 6	219	184	35 ***
Quarter 7	185	167	19
Quarter 8	178	162	16
Quarter 9	179	162	17
Quarter 10	178	164	15
Quarter 11	180	166	13
Quarter 12	178	170	8
Quarter 13	179	171	7
Quarter 14	177	171	6
Quarter 15	175	171	4
Quarter 16	170	166	3

Table E.11: Table for Figure VI.8: Wage and Salary Employment Hours (Full Sample)

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Quarter 1	162	183	-21 **
Quarter 2	210	239	-28 ***
Quarter 3	228	247	-19 *
Quarter 4	238	254	-16
Quarter 5	251	275	-24 **
Quarter 6	256	284	-27 **
Quarter 7	236	255	-19
Quarter 8	240	252	-12
Quarter 9	247	266	-19
Quarter 10	257	276	-20 *
Quarter 11	266	280	-14
Quarter 12	276	290	-15
Quarter 13	274	301	-28 **
Quarter 14	277	304	-27 **
Quarter 15	281	306	-25 **
Quarter 16	277	301	-24 **

Table E.12: Table for Figure VI.9: Total Employment Hours (Full Sample)

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Quarter 1	318	329	-11
Quarter 2	410	414	-4
Quarter 3	426	424	2
Quarter 4	444	431	14
Quarter 5	470	456	14
Quarter 6	475	468	7
Quarter 7	422	422	-1
Quarter 8	419	415	4
Quarter 9	427	430	-3
Quarter 10	436	442	-6
Quarter 11	447	448	-1
Quarter 12	454	462	-7
Quarter 13	453	474	-21
Quarter 14	455	477	-22
Quarter 15	457	479	-22
Quarter 16	447	469	-21

Table E.13: Table for Figure VI.10: Regular Self-Employment Salary Earnings (Full Sample)

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Earnings from Businesses:			
Quarter 1	$345	$419	-$74
Quarter 2	470	533	-$62
Quarter 3	555	524	$31
Quarter 4	655	607	$47
Quarter 5	662	619	$43
Quarter 6	650	622	$27
Quarter 7	655	654	$1
Quarter 8	689	599	$90
Quarter 9	706	611	$95
Quarter 10	721	626	$95
Quarter 11	751	657	$94
Quarter 12	791	675	$116
Quarter 13	815	679	$136
Quarter 14	811	685	$126
Quarter 15	808	696	$111
Quarter 16	786	700	$85

Table E.14: Table for Figure VI.11: Regular Self-Employment Salary Earnings (UI Recipients at RA)

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Quarter 1	$288	$419	-$131
Quarter 2	447	555	-$108
Quarter 3	525	567	-$42
Quarter 4	681	655	$26
Quarter 5	748	657	$91
Quarter 6	777	649	$128
Quarter 7	977	684	$293
Quarter 8	1,012	684	$328
Quarter 9	1,027	704	$324
Quarter 10	1,050	696	$354
Quarter 11	1,050	754	$296
Quarter 12	1,078	766	$312
Quarter 13	1,096	762	$333
Quarter 14	1,095	776	$319
Quarter 15	1,096	789	$307
Quarter 16	1,042	784	$258

Table E.15: Table for Figure VI.12: Wage and Salary Earnings (Full Sample)

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Earnings from Wage and Salary Jobs:			
Quarter 1	2,639	2,981	-$343 *
Quarter 2	3,566	3,962	-$395 *
Quarter 3	3,956	4,226	-$270
Quarter 4	4,264	4,487	-$224
Quarter 5	4,547	4,887	-$339
Quarter 6	4,731	5,177	-$447 *
Quarter 7	4,618	4,848	-$230
Quarter 8	4,905	4,867	$38
Quarter 9	5,144	5,118	$27
Quarter 10	5,369	5,301	$68
Quarter 11	5,593	5,379	$214
Quarter 12	5,764	5,560	$203
Quarter 13	5,734	5,742	-$8
Quarter 14	5,827	5,785	$43
Quarter 15	5,914	5,848	$66
Quarter 16	5,871	5,806	$65

Table E.16: Table for Figure VI.13: Wage and Salary Earnings (UI Recipients at RA)

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Quarter 1	$1,545	$2,189	-$644 **
Quarter 2	3,141	3,773	-632 *
Quarter 3	4,056	4,320	-264
Quarter 4	4,502	4,805	-302
Quarter 5	4,944	5,298	-354
Quarter 6	5,294	5,643	-349
Quarter 7	5,229	5,093	137
Quarter 8	5,491	5,289	202
Quarter 9	5,789	5,574	215
Quarter 10	6,125	5,853	272
Quarter 11	6,319	5,945	374
Quarter 12	6,517	6,126	391
Quarter 13	6,408	6,491	-83
Quarter 14	6,514	6,564	-50
Quarter 15	6,492	6,446	46
Quarter 16	6,435	6,501	-66

Table E.17: Table for Figure VI.14: Total Earnings (Full Sample)

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Total Earnings from All Jobs and Businesses:			
Quarter 1	$2,984	$3,401	-$417 **
Quarter 2	4,038	4,494	-458 **
Quarter 3	4,511	4,750	-238
Quarter 4	4,918	5,095	-176
Quarter 5	5,210	5,506	-296
Quarter 6	5,380	5,799	-420
Quarter 7	5,273	5,502	-230
Quarter 8	5,594	5,465	128
Quarter 9	5,850	5,729	122
Quarter 10	6,090	5,927	163
Quarter 11	6,344	6,036	308
Quarter 12	6,555	6,236	319
Quarter 13	6,550	6,421	129
Quarter 14	6,638	6,470	169
Quarter 15	6,722	6,545	177
Quarter 16	6,656	6,506	151

Table E.18: Table for Figure VI.15: Total Earnings (UI Recipients at Random Assignment)

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Quarter 1	$1,834	$2,609	-$775 ***
Quarter 2	3,588	4,328	-740 **
Quarter 3	4,581	4,887	-306
Quarter 4	5,184	5,460	-276
Quarter 5	5,692	5,955	-263
Quarter 6	6,072	6,293	-221
Quarter 7	6,206	5,777	429
Quarter 8	6,502	5,973	530
Quarter 9	6,816	6,278	539
Quarter 10	7,175	6,549	626
Quarter 11	7,369	6,699	671
Quarter 12	7,596	6,892	703
Quarter 13	7,504	7,253	251
Quarter 14	7,609	7,340	269
Quarter 15	7,588	7,234	353
Quarter 16	7,477	7,285	192

Table E.19: Table for Figure VI.17: Wage and Salary Earnings – Age Less than 40 at Random Assignment

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Quarter 1	$3,310	$3,917	-$607 *
Quarter 2	4,235	4,920	-685 *
Quarter 3	4,368	5,087	-719 *
Quarter 4	4,581	5,492	-911 *
Quarter 5	4,695	5,770	-1,074 **
Quarter 6	4,677	5,902	-1,225 ***
Quarter 7	4,060	5,232	-1,172 ***
Quarter 8	4,222	4,998	-777 *
Quarter 9	4,419	5,057	-639
Quarter 10	4,652	5,218	-566
Quarter 11	4,893	5,164	-271
Quarter 12	5,032	5,255	-223
Quarter 13	5,118	5,454	-336
Quarter 14	5,314	5,637	-323
Quarter 15	5,448	5,739	-292
Quarter 16	5,503	5,688	-185

Table E.20: Table for Figure VI.18: Wage and Salary Earnings – Education No Greater than 12th Grade

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Quarter 1	$2,416	$2,869	-$453 *
Quarter 2	3,148	3,737	-589 **
Quarter 3	3,387	3,726	-338
Quarter 4	3,628	3,977	-349
Quarter 5	3,831	4,313	-482 *
Quarter 6	3,935	4,430	-495 *
Quarter 7	3,734	4,085	-351
Quarter 8	3,848	4,064	-216
Quarter 9	4,083	4,304	-221
Quarter 10	4,288	4,457	-169
Quarter 11	4,530	4,548	-18
Quarter 12	4,678	4,726	-48
Quarter 13	4,597	4,911	-314
Quarter 14	4,683	4,960	-277
Quarter 15	4,741	4,991	-251
Quarter 16	4,659	4,858	-199

Table E.21: Table for Figure VI.19: Self-Employment Earnings – Not Working at Random Assignment

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants	
Quarter 1	$269	$243	$26	
Quarter 2	421	373	48	
Quarter 3	527	392	135	
Quarter 4	656	433	224	*
Quarter 5	707	442	265	*
Quarter 6	676	444	232	*
Quarter 7	740	493	246	*
Quarter 8	815	488	327	**
Quarter 9	836	514	321	**
Quarter 10	850	510	340	**
Quarter 11	871	556	315	**
Quarter 12	916	576	339	**
Quarter 13	950	568	383	**
Quarter 14	944	564	380	**
Quarter 15	944	583	362	**
Quarter 16	909	584	325	**

Table E.22: Table for Figure VI.20: Self-Employment Earnings – Non-Whites

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Quarter 1	202	243	-$41
Quarter 2	239	299	-$60
Quarter 3	299	255	$44
Quarter 4	390	310	$80
Quarter 5	444	320	$124
Quarter 6	471	332	$139
Quarter 7	383	262	$121
Quarter 8	412	184	$228 **
Quarter 9	425	201	$224 **
Quarter 10	456	217	$239 **
Quarter 11	520	257	$263 **
Quarter 12	557	301	$256 **
Quarter 13	591	314	$277 **
Quarter 14	595	317	$278 **
Quarter 15	598	328	$270 **
Quarter 16	591	353	$238 *

APPENDIX F.
Receipt of Public Assistance

A key measure of self-sufficiency is the extent to which participants rely on public assistance. The three follow-up surveys asked about the receipt of food stamps, cash welfare (such as Temporary Assistance for Needy Families-TANF), Social Security benefits, and veterans' benefits. Respondents were asked whether they had received benefits and, if so, for how many months over the follow-up period, and how much they received on average per month. Table F.1 and Table F.2 show impact estimates when these outcome variables are aggregated over all three waves of the survey. For example, the proportion of program group members who received Food Stamp benefits at any time between random assignment and the Wave 3 survey is compared to the proportion of control group members who received Food Stamp benefits at any time between random assignment and Wave 3.

F.1 Full Sample

For the sample as a whole, GATE reduced the likelihood of receiving TANF; GATE had no impact on other Public Assistance benefits. [Table F.1]

The results in Table F.1 indicate that Project GATE reduced the likelihood of receiving TANF by 2 percentage points, from 12 percent to 10 percent. However, GATE had no impact on receipt of Food Stamps, Social Security benefits, or Veterans' benefits. GATE had no impact on the months of receipt of any of these benefits (including TANF), or the amounts received.

Table F.1: Impacts on Receipt of Public Assistance

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Received Benefit			
Food stamp benefits	20%	20%	0
Temporary Assistance for Needy Families (TANF) or cash welfare	10	12	-2 *
Social Security Retirement (SSR), Social Security Disability (SSD), or Social Security Survivors (SSS) benefits	21	24	-2
Veterans' benefits	3	3	0
Months Received Benefits			
Food stamp benefits	3.4	3.4	0.0
TANF or cash welfare	1.7	1.7	-0.1
SSR, SSD, or SSS benefits	5.8	5.9	-0.1
Veterans' benefits	0.9	0.6	0.3
Amount of Benefits Received			
Food stamp benefits	$790	$759	$31
TANF or cash welfare	822	946	-124
SSR, SSD, or SSS benefits	6,677	6,501	175
Veterans' benefits	466	320	146
Number of Respondents	**1,274**	**1,176**	**2,450**

Source: Follow-up surveys, Waves 1, 2, and 3.

Notes: Reported means and impacts are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

F.2 UI Recipients

For the subgroup of UI recipients at random assignment, GATE increased the likelihood of receiving Veterans' benefits, as well as the duration and amount of these benefits. [Table F.2]

Table F.2: Impacts on Receipt of Public Assistance (UI Recipients)

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants	
Received Benefit				
Food stamp benefits	15%	15%	0	
Temporary Assistance for Needy Families (TANF) or cash welfare	7	10	-2	
Social Security Retirement (SSR), Social Security Disability (SSD), or Social Security Survivors (SSS) benefits	19	22	-3	
Veterans' benefits	3	1	2	*
Months Received Benefits				
Food stamp benefits	2.3	2.2	0.1	
TANF or cash welfare	1.1	1.0	0.1	
SSR, SSD, or SSS benefits	4.8	5.4	-0.6	
Veterans' benefits	0.9	0.2	0.7	**
Amount of Benefits Received				
Food stamp benefits	$559	$529	$29	
TANF or cash welfare	685	523	162	
SSR, SSD, or SSS benefits	5,939	6,380	-441	
Veterans' benefits	452	39	414	***
Number of Respondents	**545**	**477**	**1,022**	

Source: Follow-up surveys, Waves 1, 2, and 3.

Notes: Reported means and impacts are regression-adjusted to control for differences between the program and control group members in baseline characteristics. Estimates were obtained using weights to adjust for differences between survey respondents and nonrespondents in baseline characteristics.

*/**/*** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

For the subgroup of sample members who were UI recipients at random assignment, Project GATE increased the likelihood of receiving Veterans' benefits, the number of months that Veterans' benefits were received, and the amount of Veterans' benefits received.