



Growing America Through Entrepreneurship: Findings from the Evaluation of Project GATE

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EXECUTIVE SUMMARY

While many Americans dream about starting their own business and have the motivation to do so, lack of business expertise and access to credit often prevent them from realizing their dreams. Recognizing this untapped potential, 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 or expand their own business.

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.

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

- 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 starting 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 the state, and wished to start 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 their particular business idea or on their qualifications for starting a business.

Intake for Project GATE involved three steps. First, people interested in Project GATE registered at a GATE kiosk at a One-Stop Career Center, at 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.

Project GATE offered three basic services to program participants:

- **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 such topics as how to deal with legal and personnel issues; and specialized training courses on such topics as Quick Books.
- **Business Counseling.** Participants were given the opportunity to meet with business counselors for one-on-one assistance with their business, business idea, and/or applications for a business loan.

In order to receive training or business counseling, participants were required to have an initial needs assessment. However, Project GATE emphasized customer choice: individual participants were not required to use any of these services. Each participant could decide to receive none of the three services; only the assessment; the assessment but no training or business counseling; or the assessment plus training and/or business counseling.

Project GATE was implemented at seven sites:

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

The sites were selected to include both urban and rural ones. Three sites were in urban areas and the remaining four 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 offered GATE services.

Random assignment ensured that the applicants assigned to the program group would, on average, have 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.

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 categories of 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 for Project GATE to capture project-related data on all individuals who expressed an interest in participating in Project GATE.
- ▶ ***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.
- ▶ ***Two Follow-Up Surveys.*** The first telephone survey was conducted approximately 6 months after random assignment; a second survey was conducted approximately 18 months after random assignment. The sample frame included everyone who was randomly assigned to either the program group or the 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 out of 3,450 attempted, for a response rate of 88 percent. Combining both waves, the overall cumulative response rate was 72 percent.
- ▶ ***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.

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 those in the program group to the mean value of the outcome among those in the control group. Impacts were also estimated by site and by subgroup. Impact estimates for the full sample on the key outcomes are presented in detail in Chapters V, VI, and VII. Below is a summary of the findings from the first 18 months of Project GATE. Please note that to measure the permanent impacts of Project GATE, a longer observation period would be necessary.

- ***Business Ownership - Project GATE had a small but significant impact on business ownership.*** Project GATE increased the probability of owning a business during the 18-month period after random assignment. Both the program and control groups experienced a steep growth in business ownership very quickly after random assignment. By the third quarter after random assignment, 43 percent of the program group and 37 percent of the control group reported owning a business, a difference of 6 percentage points (statistically significant at the 1 percent level). By the sixth quarter after random assignment, 44 percent of the program group and 41 percent of the control group owned a business, a difference of 3 percentage points (statistically significant at the 10 percent level).
- ***Total Employment - Project GATE had no significant effect on total employment.*** Overall employment rates—including both working for oneself and working for someone else—increased from about 70 percent in the first quarter after random assignment to 85 percent by the end of the follow-up period, but there were no significant differences between the program and control groups in any of the six quarters. Project GATE did, however, affect the type of employment. Compared to the control group counterparts, Project GATE participants were more likely to be self-employed and less likely to be employed in wage and salary jobs.

- ***Earnings from Wage and Salary Jobs - Control group members earned more than participants from wage and salary jobs.*** Based on survey responses, over the entire 18-month follow-up period, Project GATE participants earned about \$1,800 less than the control group members, a difference that is significant at the 10 percent level. Based on administrative data, however, participants earned only \$200 less than control group members over the first year after random assignment, a difference that is not statistically significant.
- ***Earnings from Self-Employment - Project GATE had no impact on earnings from self-employment.*** As most businesses were fledgling ventures, it is not surprising that business earnings were low—on average both program and control group members received less than \$6,000 in total business earnings over the 18-month follow-up period. Average business earnings did not differ significantly between members of the program and control groups.
- ***Total Earnings - Project GATE had a negative impact on overall earnings during the follow-up period.*** Since Project GATE participants earned less from wage and salary jobs than control group members and earned approximately the same amount from self-employment, overall, Project GATE participants experienced significantly lower total earnings.
- ***Self-Sufficiency - Project GATE increased the receipt of UI benefits slightly.*** Project GATE increased the amount of time spent on UI by about one week and increased the amount of UI benefits received by about \$340 per person. The project also increased the amount of UI benefits received by those already receiving UI benefits when they applied to Project GATE by about \$605 per person.
- ***Project GATE had no impacts on the receipt of public assistance or other income.*** No impact on the likelihood of receiving public assistance, the amount of public assistance benefits received, household income, or the earnings of the entrepreneur’s spouse was detected.

SUBGROUP RESULTS

The results presented above reflect the impact of Project GATE on the full sample; that is, a comparison of key outcomes for the full program group with the same outcomes for the full control group. Program impacts for various subgroups were also examined. These subgroups included those who were not employed at the time of application, those who were collecting UI benefits at the time of application, and recent UI claimants. Moreover, since the design of Project GATE in Minnesota is similar in many respects to the design of the Self-Employment Assistance (SEA) program, the evaluation also examined in detail recent UI claimants in Minnesota. It should be noted, however, that the design of Project GATE in Minnesota did not incorporate one important feature of the SEA program: cost neutrality to the trust fund. That is, a requirement for the SEA program was that total expenditures for UI benefits would not change as a result of the SEA program; no such requirement was made for Project GATE. Furthermore, the sample size in Minnesota is relatively small (n=459). Below, is a summary of the main findings for this group.

- **Project GATE had a large and statistically significant impact on business ownership.** Among recent UI claimants in Minnesota, Project GATE dramatically increased the probability of owning a business during the 18-month period after random assignment.
- **Project GATE had a strong positive effect on total employment.** During the second half of the observation period (Q4 – Q6), recent UI claimants in Minnesota experienced strong and statistically significant employment gains relative to the control group (7 to 9 percentage points).
- **Control group members earned more than participants from wage and salary jobs.** During the early quarters following random assignment (Q1- Q3), control group members earned about \$350 per quarter more than participants. In later quarters (Q4 - Q6), there was no statistically significant difference in earnings from wage and salary jobs.
- **Project GATE had no impact on self-employment earnings.** Throughout the observation period, participants and control group members had similar self-employment earnings.

- **Project GATE increased the receipt of UI benefits significantly.** Project GATE increased by about three weeks the amount of time spent on UI over the follow-up period and increased the amount of UI benefits received by about \$1,240 per person.
- **Project GATE had no impacts on the receipt of public assistance or other income.** No impacts on the likelihood of receiving public assistance, the amount of public assistance benefits received, household income, or the earnings of the entrepreneur's spouse were detected.

In summary, the results for recent UI claimants in Minnesota indicate positive impacts on business formation and employment. With regard to earnings, however, the results are negative.

LESSONS LEARNED

The findings from this report suggest the following lessons:

1. 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.

2. 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 70 percent of control group members received some self-employment services.

3. Increased business ownership may not lead to increased self-employment earnings in the short run. Even though the program group was more likely to own a business, Project GATE had no statistically significant impact on business earnings. Project GATE may have an impact on business earnings later as the businesses mature.

4. 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. During the same period, the additional earnings from businesses begun by GATE participants did not yield enough revenue to offset this loss in earnings.

5. 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.

6. Eighteen months is too short to determine the effectiveness of Project GATE. The Project GATE evaluation followed the sample members for 18 months after random assignment—an extremely short period of time to receive services and build a successful business. A longer follow-up period is needed for a definitive assessment of the effectiveness of Project GATE.

CHAPTER I.

INTRODUCTION

While many Americans dream about starting their own businesses and have the motivation to do so, lack of business expertise and access to credit often prevent them from realizing their dreams. Recognizing this untapped potential, 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 assist people in creating or expanding their own businesses.

Funded by DOL, the Project GATE demonstration was implemented in seven sites in three states—Pennsylvania, Minnesota, and Maine—between Fall 2003 and Summer 2005. Almost anyone who was 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, and one-on-one business counseling in developing their businesses and applying to the SBA MicroLoan Program or other sources of 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 in One-Stop Career Centers, Project GATE intended to attract new and more diverse customers.

This report presents the findings of an evaluation of Project GATE. It addresses three main questions:

- (1) Can Project GATE be replicated?
- (2) Is Project GATE effective in increasing business ownership, employment, and self-sufficiency?

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

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 two waves of surveys and Unemployment Insurance (UI) administrative data, the outcomes of both the program and control group members were observed for about 18 months after random assignment.

This chapter begins with a discussion of the policy interest in self-employment programs. 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. The chapter ends with a description of the organization of the rest of the report.

1.1 Reasons to Support Self-Employment

Self-employment plays a key role in today's economy. About 11 percent of the nonfarm labor force work for themselves and this proportion has been growing since the 1970s (Fairlie and Meyer 2000). 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.¹ 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.

¹ Throughout this report, the term *wage and salary* is used to describe jobs in which people work for someone else.

For many, however, lack of both business knowledge and access to credit pose significant barriers to self-employment. This 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.

1.2 Availability of Assistance for Self-Employment

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 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 starting or expanding businesses. SBDCs, often associated with a college or university, offer one-on-one business counseling and training in business development. The Service Corps of Retired Executives (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.

The SBA has also developed loan programs for small businesses. The most relevant of these for small start-up businesses is the SBA MicroLoan Program. Under this program, loans of up to \$35,000 are made by nonprofit CBOs.

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 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 SEA 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.

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 passed enabling legislation, and 8 states implemented SEA programs: California, Delaware, Maine, Maryland, New Jersey, New York,

Oregon, and Pennsylvania. California, however, terminated its program in July 1998. Pennsylvania's funding for its SEA program has been intermittent.

1.3 The Entrepreneurial Population

Approximately 11 million individuals in the U.S. 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. 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 are 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 purposes, we also present the demographic characteristics of Project GATE applicants.

Approximately two-thirds (64%) of the entrepreneurial population in the U.S. are male and approximately two-thirds (65%) are white. The percentages are somewhat lower for the GATE sample with more than half (54%) male and more than half (57%) white. In the U.S., approximately one out of six people (16%) is Hispanic; among the GATE sample², a much smaller proportion

² In this report, "GATE sample" refers to the group of individuals who were randomly assigned to either the Program group or the Control group. "Participants" refers to the individuals who were randomly assigned to the Program group. "Respondents" refers to the individuals who were administered a follow-up survey.

(5%) is Hispanic. The vast majority of both groups (over 90%) have at least a high school diploma and a majority has some college education.

Table I.1. Demographic Characteristics of the Entrepreneurial Population

	U.S. Entrepreneurial Population*	GATE*
Gender		
Male	64%	54%
Female	36%	46%
Race		
White	65%	57%
Black	18%	31%
Other	16%	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), Project GATE PTS Data

* Percentages may not sum to 100 due to rounding or missing values.

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 were randomly assigned to either a program group or a control group. Members of the program group could participate in the UI Self-Employment program, while control group members could not. Approximately 1,200 sample members (in 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 in Massachusetts. 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 the impacts of the programs, although some followup of outcomes was conducted. Of the 1,300 people who enrolled in SEID, 408 started a business during the demonstration, and about half of the participants 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 nonexperimental evaluation of the effectiveness of the 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. They also, on average, received more UI benefits. 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 the eligible nonparticipants rather than to impacts of the program itself.

1.5 The Contribution of Project GATE

DOL contracted with IMPAQ International and its subcontractors³ to design a project 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 differs from the programs already available at the sites in the following ways:

- ***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 the 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.

³ Mathematica Policy Research, Inc., Battelle Memorial Institute, and the National Center on Education and the Economy.

- ***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 through 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 project in the form of posters and flyers at all One-Stop Career Centers.
- ***GATE Assessment Staff Matched and Referred Participants to 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 services were provided free of charge to participants.
- ***Project GATE Did Not Screen Out Applicants Based on Likelihood of Success*** – Many programs that provide self-employment services screen out, or strongly discourage, applicants 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—in order to be randomly assigned, an applicant was required to be at least 18 years old, lawfully able to work in the United States, and seeking to start or expand a business that was legal and appropriate for federal support. If these criteria were met, no applicant was prevented from being randomly assigned 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 assessment of Project GATE. The next chapter describes the evaluation design (Chapter II). A discussion of the implementation of Project GATE follows (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 impact of Project GATE on the unemployed is discussed in Chapter VIII. The report ends with a summary of the lessons learned (Chapter IX).

CHAPTER II.

EVALUATION DESIGN

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 in Project GATE.
- ***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 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 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, 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 cornerstone 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. Members of the program group were offered Project GATE services; members of the control group were not offered Project GATE services.

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 are a result of 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 provided only to GATE program group members after random assignment; 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 that 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 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 group or the control group and sent a list of new program group members to the service providers. After the orientation, applicants took an average of 2.0 weeks to complete an application and mail it to the evaluation contractor. On average, they were randomly assigned less than one week later.

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 were assigned to the control group.

Table II.1: Number of GATE Applicants by Site

Site	Number of Applicants		
	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

More than two-thirds of all applicants were in two sites—Philadelphia and Minneapolis/St. Paul. Less than one-fifth of the applicants were from the rural sites—northeast Minnesota and the three sites in Maine. This variation may be explained by various factors, including differences in density of population, 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 of 4,078 people 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 it was in the original sample.

2.3 Implementation Analysis

The goals of the implementation analysis are to describe how Project GATE was actually implemented in the demonstration and how it differed by site to derive lessons for other sites interested in implementing Project GATE or a similar program and to determine whether Project GATE could be successfully replicated elsewhere.

The analysis uses data collected from the following sources:

- ***GATE Application Package and Orientation Forms*** – All Project GATE applicants completed an application package before they were randomly assigned. The application package provided a rich source of 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 and the type and intensity of services the program group members received from Project GATE. These data were collected by the Participant Tracking System (PTS). 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 for the purpose of collecting 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 varied 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:

- ***Two 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 then attempted with respondents to the Wave 1 survey approximately 18 months after random assignment. These surveys provide detailed information on outcomes such as the receipt of services, the 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 respondents and 72 percent of all applicants. The response rates were slightly higher for the program group than for the control group. More details on the response rates are provided in Appendix A.
- ***UI Administrative Data***. – To supplement data collected through the follow-up surveys, state UI administrative records for all applicants were collected. Quarterly wage records and UI benefit data were collected for the time period covering the 12 months prior to random assignment and the 12 months following random assignment.

More information about data collected for the impact analysis is 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 the receipt of services. 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).

The report focuses mainly on overall differences in outcomes between program and control groups for all of 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 the results of this report to a larger scale implementation of Project GATE would require assuming that sites that are like the GATE Minneapolis/St. Paul and Philadelphia sites would have more participants than sites like the GATE Pittsburgh and rural sites. If instead each site were given an equal weight, the magnitudes of the impacts would change, but as discussed in Appendix D, the major findings of the report would remain unchanged.

To assess the variability of the impacts across sites and sample member characteristics, 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 because Project GATE changed the types of businesses formed or Project GATE could have led to different types of people starting businesses.

Survey data from Wave 1 are available for the 82% of the GATE sample who completed the Wave 1 interview. Survey data from both Wave 1 and Wave 2 are available for the 72% of GATE sample who completed both interviews. If those in the program group who respond to a survey differ from those in the control group who respond to the survey, impact estimates may be biased. To adjust for observable differences in the baseline characteristics of survey respondents and nonrespondents, 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 remember the date they began a job, for example). For those missing data items, standard imputation methods were used to impute a value. Appendix B provides more details of the weighting and imputation procedures.

In this chapter, the overall design of Project GATE was described. The next chapter addresses the implementation of Project GATE. It discusses project demonstration sites; GATE service providers; intake procedures; outreach and recruitment; services offered; and the Participant Tracking System.

CHAPTER III.

HOW WAS PROJECT GATE IMPLEMENTED?

Project GATE was designed to provide training and business counseling to a broad group of entrepreneurs. As Project GATE was a new demonstration program, an important goal of the evaluation was to document how Project GATE was actually implemented and to determine whether it could be replicated. Hence, if policymakers wish to replicate the program on a wider scale, they will know whether it is possible and, if so, how it should be implemented. This chapter describes the implementation of Project GATE in the individual sites. The key findings are presented in the box below.

Understanding the implementation of Project GATE is critical for three main reasons. First, it addresses whether Project GATE could be replicated on a wider scale. Further, if Project GATE is to be replicated, the implementation analysis provides a program blueprint for providers and policymakers. Second, the implementation analysis provides information to policymakers about who is served by Project GATE. Third, understanding the program's implementation assists in the interpretation of the impact findings—it can help explain the magnitude of impacts and the differences in impacts across sites or population subgroups.

Key Findings: Implementation of Project GATE

- 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.

This chapter discusses the main findings from the implementation analysis of Project GATE.⁴ 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 that were 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: Philadelphia, Pennsylvania; Pittsburgh, Pennsylvania; Minneapolis/St. Paul, Minnesota; northeast Minnesota; and three sites in Maine. The sites in Maine included the cities of Bangor, Portland, and Lewiston, and the counties of Penobscot, Androscoggin, and Cumberland.

These sites, chosen purposively, differ in several key ways. Some 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 (Philadelphia, Pittsburgh, and Minneapolis/St. Paul) and four sites are 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.

⁴ Bellotti et al. (2006) provides a detailed analysis of the implementation of Project GATE.

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

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

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. The unemployment rates are for 2004; all other data are for 2000.

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 are self-employed. 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.

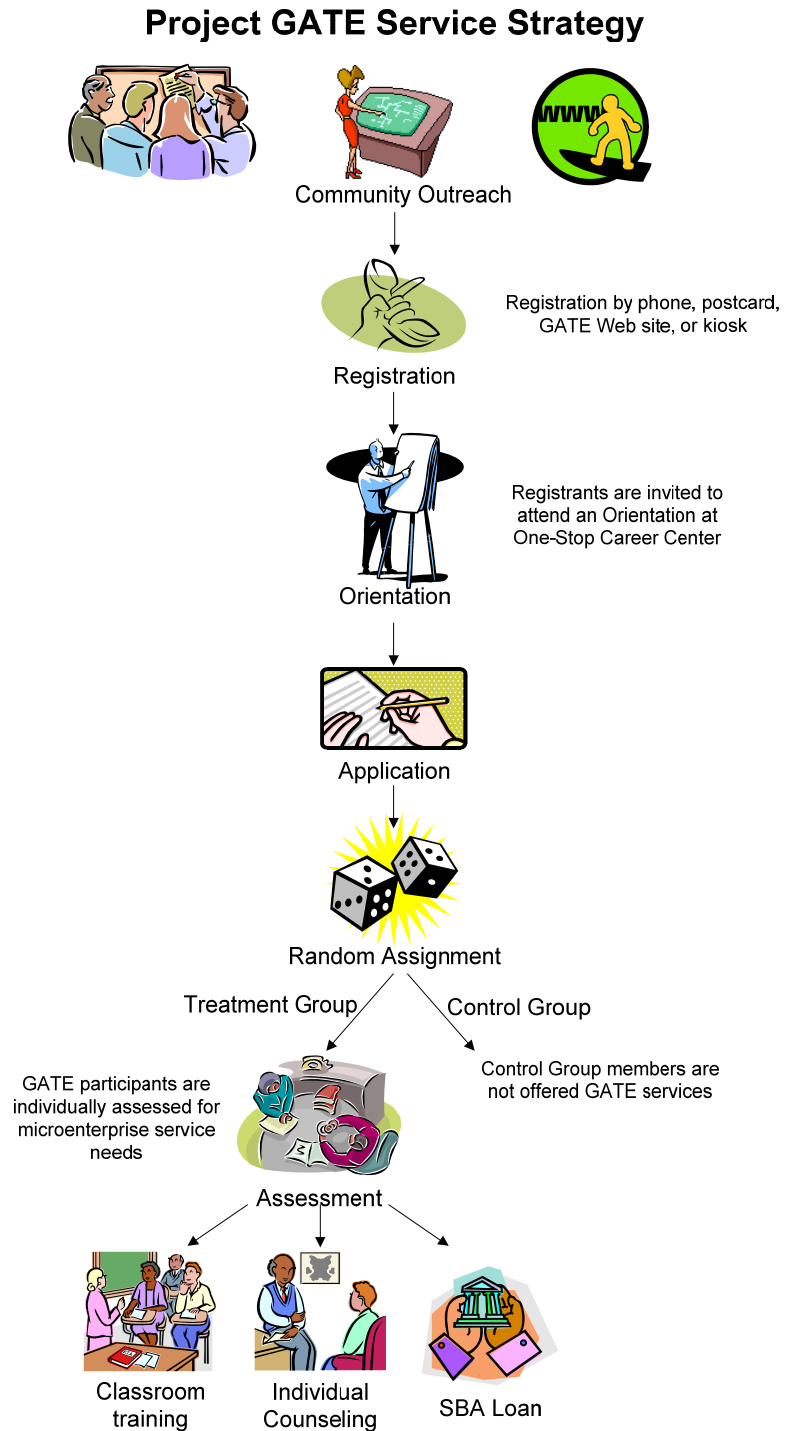
The GATE Experience

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% chance of being assigned to either group.
5. **Assessment.** All individuals who were 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, including classroom training as well as individualized business counseling, to the participant.

These are shown in Figure III.1 below.

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 a reasonable cost.

Table III.2: Organizations Involved in Project GATE

Site	Assessment	Training and Business Counseling
Philadelphia	IMPAQ International ⁵	Women’s Business Development Center (WBDC) Women’s Opportunity Resource Center (WORC) The Enterprise Center
Pittsburgh	Duquesne University, SBDC	Duquesne University, SBDC
Minneapolis /St. Paul	University of St. Thomas, SBDC Hmong American Mutual Assistance Association (HAMAA)	University of St. Thomas, SBDC WomenVenture Hmong American Mutual Assistance Association (HAMAA)
Northeast Minnesota	University of Minnesota at Duluth, SBDC	University of Minnesota at Duluth, SBDC Northeast Entrepreneur Fund (NEEF)
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

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.

⁵ 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.

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 typical client at the CBOs. 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, while 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 start or expand a business that was legitimate and appropriate for federal support.⁶ 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 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

⁶ Three GATE applications were rejected due to illegal or inappropriate business ideas.

sign up for an orientation, but did not provide any description of the length of the orientation session or the topics to be covered in the orientation session.

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 the negative aspects of self-employment, referred to as the “cold shower,” that 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 in Project GATE 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. 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 the form 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. 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.⁷

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 they 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.

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 Web site. 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, additional outreach was conducted in most sites (see Table III.4). Flyers describing Project GATE were periodically mailed with UI 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 visibility of the program. 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.

⁷ 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 One-Stop Career Centers Participating in Project GATE	Names of One-Stop Career Centers Participating in Project GATE
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
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
Maine	3	Portland CareerCenter Lewiston CareerCenter Bangor CareerCenter

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

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

^aThe 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 attracted substantial numbers of applicants (see Table III.5). The GATE website was a particularly effective and inexpensive recruiting tool that yielded 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

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

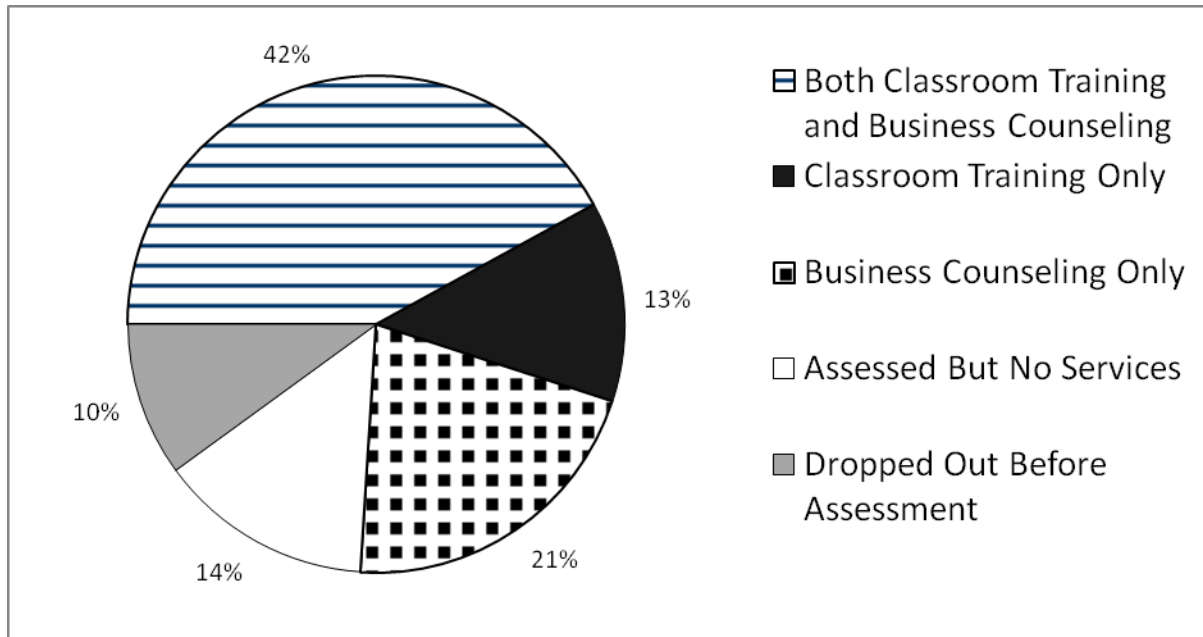
3.5 Services Offered

To help build the business knowledge of individuals interested in starting or expanding small businesses, Project GATE 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 services to receive. However, in order to receive classroom training or one-on-one business counseling, each member of the program group was required to meet with a counselor for an initial needs assessment.

The vast majority (90%) of GATE program group members received some services from GATE providers. About two-fifths (42%) received both training and business counseling, while 21 percent received business counseling but no training, and 13 percent received only training. About one-

quarter (24%) received neither training nor business counseling. On average, those GATE participants who received an assessment received about 15 hours of services.

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



Source: 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. On average, GATE participants who received an assessment spent four months in the program.

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 each 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 each participant's needs, and (2) in all but one site, to make a referral 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 as to whether a referral could be made to another organization or to multiple organizations. 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.

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

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 who they believed would not succeed.

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*** – General introductory courses 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*** – The intermediate courses 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 intermediate courses could be as long as 60 hours.
- ***General Advanced Courses*** – The advanced courses 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 was presented in the introductory courses. In addition, other topics might 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 QuickBooks), or assisting with specific types of businesses (such as starting a child care business).

These training programs were generally the same programs that 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 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.

This chapter has presented details about the implementation of Project GATE in the participating sites. 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 usefulness of services.

CHAPTER IV.

DID PROJECT GATE INCREASE THE RECEIPT OF SELF-EMPLOYMENT SERVICES?

Service providers affiliated with Project GATE offered GATE participants classroom instruction on starting or growing a business and the opportunity to receive advice from a trained business counselor. This chapter examines the impact of Project GATE on the types and amount of self-employment services received. The key findings are listed in the following box.

Key Findings: Impacts on Self-Employment Service Receipt

- About 70 percent of the control group received some self-employment services during the follow-up period compared to about 90 percent of the program group.
- During the follow-up period, Project GATE participants received 13 more hours of services than control group members—8 more hours of classroom training, 2 more hours of business counseling, and 3 more hours of other services.
- GATE participants spent on average \$131 less of their own funds 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 chapter first describes the services offered by Project GATE as well as the services available to the control group and it then describes the estimated impacts on the receipt of self-employment services (regardless of whether those services were part of Project GATE) during the follow-up period. The types of services received, the service providers, the number of hours of services received, and the 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 businessman or businesswoman. This differs from business counseling in that the mentor is a volunteer, not a professional business counselor. The Service Corps of Retired Executives (SCORE), for example, links new entrepreneurs with volunteer retired business executives.
- ***Peer Support or Networking*** – Some providers organize meetings for people who are interested in starting a business so that 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, and these funds 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 incubators or low-cost space with subsidized overhead costs 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.

Table IV.1 provides a list of self-employment service providers at each site during the demonstration; the GATE providers are indicated with an asterisk. While this list may not be exhaustive, it does include 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.

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.

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.

Two GATE sites—Pennsylvania and Maine—operated the SEA program prior to and during the implementation of 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—there were fewer than 100 SEA participants annually in Philadelphia and Pittsburgh and about 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, there were relatively few GATE applicants who were also eligible for SEA. In Maine, about one-quarter of GATE applicants were accepted in the SEA program. Eligibility for SEA was unaffected by random assignment—both program and control group members could participate in SEA.

Program group members were offered GATE services. They might also be offered additional services from the GATE providers, as well as from 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 self-employment services offered in the community. Hence, they could receive training and business counseling or other services. They could receive these services 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 that 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.

However, control group members may have been charged for an assessment. Moreover, due to competition between providers for clients and funding, the assessor would have been unlikely to refer the control group member to another organization.

- ***Provided Services Free of Charge*** – Program group members did not pay for their assessment, training, or business counseling. Control group members may have had to pay 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, however, always provided business counseling (though not training) free of charge.
- ***Not Refused Services*** – Program group members could not be denied GATE services for any reason. In contrast, some providers would screen out clients who they thought would not succeed in their business endeavors. Hence, some providers may have denied services to control group members.
- ***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 their experiences in the absence of Project GATE in three ways:

- ***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, and impact estimates on service receipt would be downwardly biased.
- ***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. 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 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 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 relatively small. It is possible that the estimates may be slightly downwardly biased in Maine because providers there increased their capacity to provide classes and most attendees at these new classes were not GATE participants. On the other hand, the estimates may be somewhat upwardly biased in Minneapolis/St. Paul because providers there served the most GATE participants and some providers noted that there were waiting lists for services.

As described 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% 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.

4.2 Receipt of Any Self-Employment Services

Nearly all program group members (91 percent) reported receiving some self-employment services—classroom instruction, business counseling, mentoring, peer-to-peer support, or some other service—between random assignment and the second survey (Wave 2 follow-up) (see Table IV.2). About 10 percent of program group members reported they did not receive any self-employment services from Project GATE or elsewhere. According to the data entered into the GATE Participant Tracking System (PTS) by service providers, 76 percent of program group members received training and/or business counseling through Project GATE, suggesting that at least 15 percent of program group members received other types of services or services from another source (Bellotti et al. 2006).

More than 70 percent of control group members found some self-employment services in the follow-up period after random assignment (see Table IV.2). Hence, the majority of control group members were able to obtain some type of self-employment services.

Program group members thus received more self-employment services than control group members. Over the entire follow-up period, Project GATE increased the probability of receiving some type of self-employment service by 20 percentage points, a statistically significant impact.

Project GATE had the largest impact on the receipt of services prior to the first survey or Wave 1 follow-up. Before the Wave 1 follow-up, program group members were 28 percentage points more likely than control group members to receive services, a statistically significant impact (see Table IV.2). In the year between the Wave 1 and Wave 2 follow-ups, program group members were 3 percentage points more likely to receive services—a difference that is not statistically significant. This is not surprising as Project GATE participants spent an average of four months in the program and most of the self-employment training that program group members received occurred in the first six months after random assignment.

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	87%	59%	28 ***
Between Wave 1 survey and Wave 2 survey	54	51	3
Between random assignment and Wave 2 survey	91	71	20 ***
Any Classes, Workshops, or Seminars			
Between random assignment and Wave 1 survey	68%	38%	30 ***
Between Wave 1 survey and Wave 2 survey	35	33	3
Between random assignment and Wave 2 survey	74	50	24 ***
Any One-on-One Business Counseling			
Between random assignment and Wave 1 survey	54%	20%	34 ***
Between Wave 1 survey and Wave 2 survey	18	14	4 ***
Between random assignment and Wave 2 survey	59	27	31 ***
Any Mentoring			
Between random assignment and Wave 1 survey	30%	28%	3
Between Wave 1 survey and Wave 2 survey	28	26	2
Between random assignment and Wave 2 survey	43	39	4 **
Any Peer Support/Networking			
Between random assignment and Wave 1 survey	15%	11%	4 ***
Between Wave 1 survey and Wave 2 survey	11	9	2 *
Between random assignment and Wave 2 survey	22	17	5 ***
Any Other Self-Employment Services			
Between random assignment and Wave 1 survey	7%	5%	2 **
Between Wave 1 survey and Wave 2 survey	3	3	1
Between random assignment and Wave 2 survey	10	7	3 ***
Number of Respondents	1,516	1,430	2,946

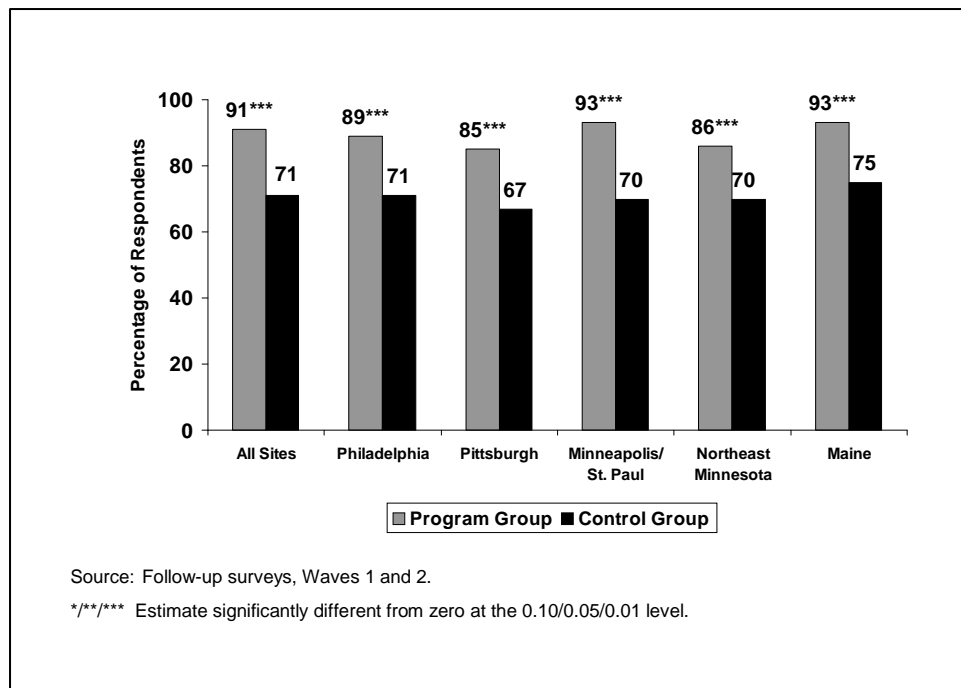
Source: Follow-up surveys, Waves 1 and 2.

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.

The impact of Project GATE on the receipt of services is similar across sites. The impact is smallest in northeast Minnesota (16 percentage points) and largest in Minneapolis/St. Paul (23 percentage points), although the differences across sites are not statistically significant (see Figure IV.1).

Figure IV.1: Receipt of Any Self-Employment Services Between Random Assignment and Wave 2 Follow-up



4.3 Types of Services Received

Each follow-up survey asked respondents if they had received any of the following four types of services: (1) classes, workshops, or seminars; (2) one-on-one counseling or business counseling; (3) mentoring; or (4) peer support or networking. Project GATE offered the first two types of services at all sites. While several service providers offered mentoring and formal peer support opportunities, these were not viewed as core GATE services and most providers did not offer them as part of Project GATE. The survey also asked whether respondents had received any other services.

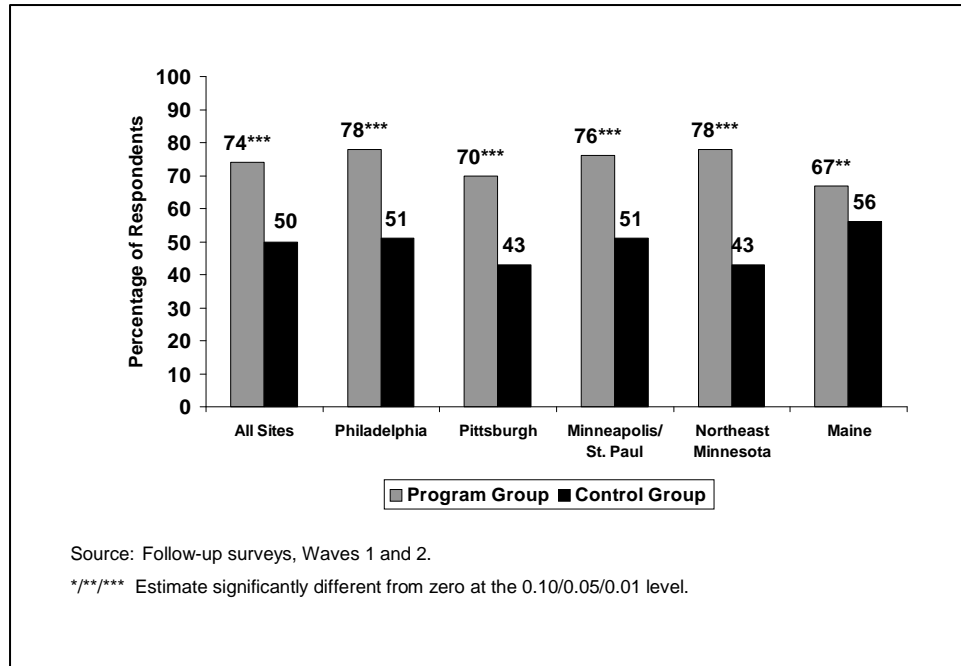
As expected, Project GATE had the largest impact on the receipt of services that it offered—classroom training and business counseling. About 74 percent of the program group received some classroom training over the follow-up period, compared with 50 percent of the control group, a

statistically significant difference (see Table IV.2). Most of this difference occurred soon after random assignment—the percentages of program and control group members who received any services between the first and second waves of the survey are similar. The impact on receipt of business counseling is larger—59 percent of the program group received business counseling compared with 27 percent of the control group. This is probably because it was relatively easier for control group members to find classroom instruction in starting a business than it was to obtain the more costly one-on-one business counseling. The impact on business counseling persisted after the Wave 1 follow-up, although it became much smaller.

Project GATE participants were also slightly more likely than control group members to receive mentoring and peer support—two services that were not specifically offered as part of Project GATE. About 39 percent of control group members received mentoring services over the follow-up period. This was not unexpected since mentoring services are usually free of charge, and a chapter of SCORE—a program that provides mentoring—was present in Pittsburgh, Minneapolis/St Paul, and Maine. Interestingly, however, program group members were 4 percentage points more likely than control group members to have received mentoring services. Similarly, program group members were 5 percentage points more likely than control group members to receive peer support. GATE had a positive impact on the receipt of these services in most sites (though the impacts were not all statistically significant), which implies that the impacts did not just occur in those sites in which these services were offered as part of Project GATE. This suggests that once connected with a GATE service provider, participants found it easier than control group members to access other services.

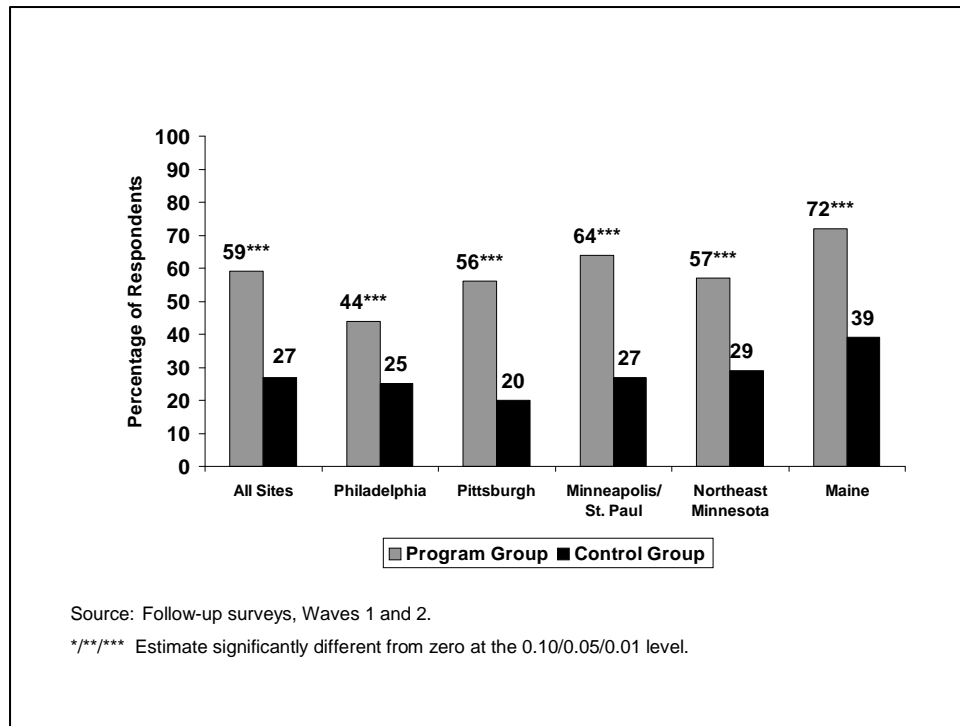
The impact of Project GATE on receipt of classroom training and business counseling varied somewhat by site. (The differences in the impacts as measured by an F-test were significant at the 5 percent level of significance.) The impact on classroom training was largest in northeast Minnesota (see Figure IV.2) where program group members were more likely to receive classroom training than were control group members. One possible reason is that the SBDC at the University of Minnesota at Duluth—one of the few providers in northeast Minnesota—offered many short courses on computer-related topics (such as using QuickBooks or developing a website). These courses were popular among, and free for, GATE participants but quite expensive for control group members. The impact on classroom training was smallest in Maine, where Project GATE may have increased the number of slots in classroom training for both program and control group members.

Figure IV.2: Participation in Classes, Workshops, or Seminars Between Random Assignment and Wave 2 Follow-up



The impact on receipt of business counseling was similar across sites with the exception of Philadelphia (see Figure IV.3). It was particularly low in Philadelphia because program group members there were less likely than program group members in other sites to receive business counseling.

Figure IV.3: Participation in Business Counseling Between Random Assignment and Wave 2 Follow-up



4.4 Hours of Services Received

Averaging over all participants, including those who did not receive services, GATE participants received an average of about 37 hours of services. By contrast, control group members received an average of about 24 hours of service (see Table IV.3). Hence, over the entire follow-up period, Project GATE led to participants receiving about 13 more hours of self-employment services than did control group members.

While program group members received more hours of services than control group members both before Wave 1 and between Waves 1 and 2 of the survey, most of the impact occurred in the months prior to Wave 1 (see Table IV.3). Between Wave 1 and Wave 2 of the survey, program group members received about one more hour of service than control group members—a difference that is not statistically significant.

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	25	14	11 ***
Between Wave 1 survey and Wave 2 survey	13	12	1
Between random assignment and Wave 2 survey	37	24	13 ***
Classes, workshops, or seminars			
Between random assignment and Wave 1 survey	14	6	8 ***
Between Wave 1 survey and Wave 2 survey	6	5	1
Between random assignment and Wave 2 survey	20	11	8 ***
One-on-one counseling/business counseling			
Between random assignment and Wave 1 survey	2	1	1 ***
Between Wave 1 survey and Wave 2 survey	1	1	0
Between random assignment and Wave 2 survey	3	2	2 ***
Mentoring			
Between random assignment and Wave 1 survey	7	6	1
Between Wave 1 survey and Wave 2 survey	6	5	1
Between random assignment and Wave 2 survey	12	9	3
Peer support/networking			
Between random assignment and Wave 1 survey	2	1	0
Between Wave 1 survey and Wave 2 survey	1	1	0
Between random assignment and Wave 2 survey	3	2	0
Number of Respondents	1,516	1,430	2,946

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

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.

Program group members received more hours of each type of service than did control group members. The difference was statistically significant for classroom training and business counseling (see Table IV.3). Program group members received about eight hours more of classroom training and one more hour of business counseling. Both of these impacts were statistically significant.

Both program and control group members spent more hours in the classroom than in other self-employment services (see Table IV.3). Of the 37 hours of self-employment services received by program group members, just over half were spent in the classroom. For control group members, just under half of the hours of self-employment services received were spent in the classroom.

In GATE, some service providers offered a mentoring service. Mentoring typically involved pairing a GATE participant with an individual in the community who was experienced in starting a small business, such as a retired individual. The mentor provided individualized assistance to the GATE participant outside the context of any GATE service provider. By contrast, business counseling involved one-on-one sessions between the GATE participant and a staff person in the service provider organization.

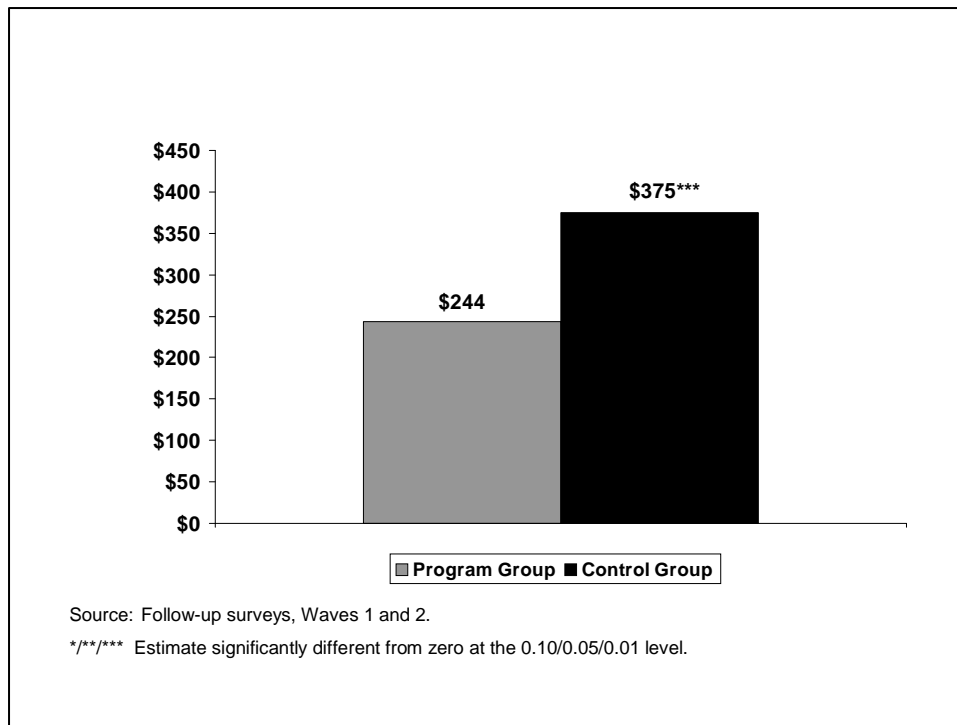
Sample members in both groups spent many more hours receiving mentoring than business counseling. The program group received on average 12 hours of mentoring and 3 hours of business counseling (see Table IV.3). In contrast, the control group received an average of 9 hours of mentoring and 2 hours of business counseling. One explanation is that one-on-one business counseling is much more costly to provide than mentoring, which is typically provided by volunteers.

4.5 Amount Spent on Services

While Project GATE offered services free of charge, many other providers charged for services. On average, members of the program group spent \$244 on self-employment services during the follow-up period compared with \$375 spent by members of the control group (see Figure IV.4). These are means taken over all members of the program and control groups, including those who received no services. Among those program group members who received and paid for non-GATE services, the average amount paid was about \$292. In contrast, control group members who received and

paid for such services, paid an average of \$528. The impact on the amount spent on self-employment services did not vary significantly by site or subgroup.

Figure IV.4: Amount Spent on Self-Employment Services Between Random Assignment and the Wave 2 Follow-up



4.6 Perceptions of Usefulness of Services

Those survey respondents who had received self-employment services were asked in each survey about the perceived usefulness of the services received. In general, services received by control group members were from service providers not affiliated with GATE, or were from GATE service providers but were not offered free of charge. Table IV.4 presents the responses to these questions at Wave 1, which occurred soon after program group members began to participate in Project GATE. The responses at Wave 2 were similar.

Project GATE participants were much more likely than control group members to respond that the self-employment services that they received were “very useful.” About 52 percent of program group members viewed the services as “very useful,” compared with 36 percent of control group members,

a statistically significant difference (see Table IV.4). Conversely, control group members were more likely to report the services were “not at all useful.” Among program group members, 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.

Survey respondents who said the services they received helped “a lot” or “somewhat” were asked about the ways in which the services helped. It is striking that program group members who were asked these questions were more likely than their counterparts in the control group to respond that the services helped in each specific way mentioned. All but 4 percent of program group members and all but 12 percent of control group members who said that services helped “a lot” or “somewhat” responded that the services helped them develop a business plan. Program group responders were particularly more likely than control group responders to report that the services were helpful in: (1) deciding whether to pursue self-employment, (2) refining a business idea, (3) dealing with credit issues, (4) developing a marketing strategy, and (5) dealing with accounting issues.

Although most program and control group members reported that the services they received were at least “somewhat useful,” the evidence suggests that program group members were more satisfied with the services they received. This suggests that the GATE program was able to offer better quality services than those attainable by the control group. This could have occurred for two reasons. First, only providers that were considered to be of good quality were chosen to participate in Project GATE, and these were the providers that GATE participants were directed to. Second, business counselors may have effectively steered GATE participants to the providers that best met the participants’ needs.

All survey respondents were asked whether there were services that they did not receive or did not receive enough of that could have helped them start or grow a business. Nearly two-thirds of both program and control group members responded that they would have liked additional services. The proportion was 61 percent among program group members and 64 percent among control group members (see Table IV.4).

Table IV.4: Perceptions of Usefulness of Services at the Wave 1 Follow-up

Outcome	Program Group Mean	Control Group Mean	Conditional Differences
Perceived Usefulness of Services^{a, b}			
Very useful	52%	36%	16 ***
Somewhat useful	33	40	-6 ***
Not very useful	9	11	-2
Not at all useful	6	14	-8 ***
Ways Services Viewed as Helping “A Lot” or “Somewhat”			
Developing a business plan	96%	88%	8 ***
Deciding whether to pursue self-employment	73	54	19 ***
Refining a business idea	71	54	17 ***
Developing a marketing strategy	69	52	17 ***
Networking	68	55	13 ***
Dealing with accounting issues	60	39	21 ***
Dealing with legal issues	55	40	14 ***
Dealing with clients	51	42	9 ***
Providing psychological support	48	38	10 ***
Dealing with credit issues	43	28	15 ***
Using computers and technology	41	35	6 **
Hiring and dealing with employees	37	25	12 ***
Applying for loans	35	24	11 ***
Were There Other Services Would Have Liked to Receive	61%	64%	-3 *
Types of Services they Would Have Liked to Receive^d			
Classroom Training	20%	16%	4 **
Business counseling	22	18	4 **
Peer Support/Networking	7	10	-3 **
Mentoring	13	15	-2
Loans/Finance/Credit	27	30	-4
Sales	6	7	-1
Accounting	5	3	2 **
Business Plan	5	5	-1
Legal Issues	4	2	2 ***
Other	18	37	-19 ***

Source: Wave 1 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.

^aMeans computed using only the 2,429 sample members who reported receiving services.

^bThe p-value for a chi-square test of distributional differences is 0.00.

^cMeans computed using only the 1,964 sample members who reported that the services they received helped “a lot” or “somewhat.”

^dMeans computed using only the 1,943 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.

Surprisingly, when asked about the types of services they would have liked to receive, program members were most likely to report that they would like to receive more classroom training and business counseling—the two services offered by Project GATE (see Table IV.4). The other services that many program and control group members desired were mentoring and help with obtaining financing for their businesses.

This chapter has described the impact of Project GATE on key measures of self-employment services received by nascent entrepreneurs. 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.

DID PROJECT GATE INCREASE BUSINESS OWNERSHIP?

Project GATE aimed to impart business knowledge, entrepreneurial skills, and access to resources that could help participants successfully move toward self-employment. Chapter IV presented evidence that Project GATE did lead 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. The key findings are summarized in the box below.

Key Findings: Impacts on Business Ownership

- Project GATE had a small but significant impact of 6 percentage points on the probability of owning a business at some time during the 18 months after random assignment.
- Impacts on business ownership peaked shortly after random assignment and then began to fade. By the Wave 2 survey, program group members were only 3 percentage points more likely to be self-employed than control group members, a difference that is statistically significant at the 10 percent level.
- The impact on business ownership was larger among individuals who were receiving Unemployment Insurance at random assignment, especially in Pittsburgh and the two Minnesota sites. Men were also significantly more likely to benefit from Project GATE than women.
- The businesses started by both program and control group members were very small and yielded little revenue as of the 18-month follow-up survey.
- Project GATE had no impact on earnings from self-employment during the 18-month follow-up period.
- The most common challenges to starting a business were lack of startup capital, finding customers, and becoming known or getting exposure.

This chapter presents the impacts on business ownership among the entire GATE sample, by site and by subgroup. It then discusses impacts on business preparation and start-up activities, business

openings and closures, and the number of businesses owned. These sections are followed up by a discussion of the impacts on business size and a discussion of the impacts on earnings from the businesses. The chapter then describes differences in the types of businesses owned 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

The ultimate success of Project GATE depends upon its ability to support participants' efforts toward self-employment. This section discusses the impact of Project GATE on patterns of business ownership over time, as well as differences in impacts across the participating sites and across key subgroups.

5.1.1 Overall Impacts on Business Ownership

Project GATE had a modest but statistically significant impact of 6 percentage points on the probability of owning a business at some time during the 18 months after random assignment (see Table V.1). About 20 percent of both the program and control groups reported owning a business at the time of their application to Project GATE. About 18 months later, 55 percent of the program group and 49 percent of the control group reported having ever owned a business during the follow-up period. The estimated impact of 6 percentage points is statistically significant at the 1 percent level.

As shown in Figure V.1, both groups experienced a steep growth in business ownership very quickly after random assignment. By the end of the first quarter after random assignment, the program group had nearly doubled its rate of business ownership to 37 percent, about 5 percentage points higher than the control group. Both groups experienced consistent but more modest growth in business ownership throughout the remainder of the follow-up period.

The impact of Project GATE peaked at 6 percentage points in the third quarter after random assignment with 43 percent of the program group and 37 percent of the control group reporting owning a business. This peak in impact three quarters after random assignment was likely caused by two related factors. First, the main dose of GATE services occurred within the first two quarters after random assignment. When accepted 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 likely sparked the larger surge in business ownership among program group

Table V.1: Impacts on Business Ownership

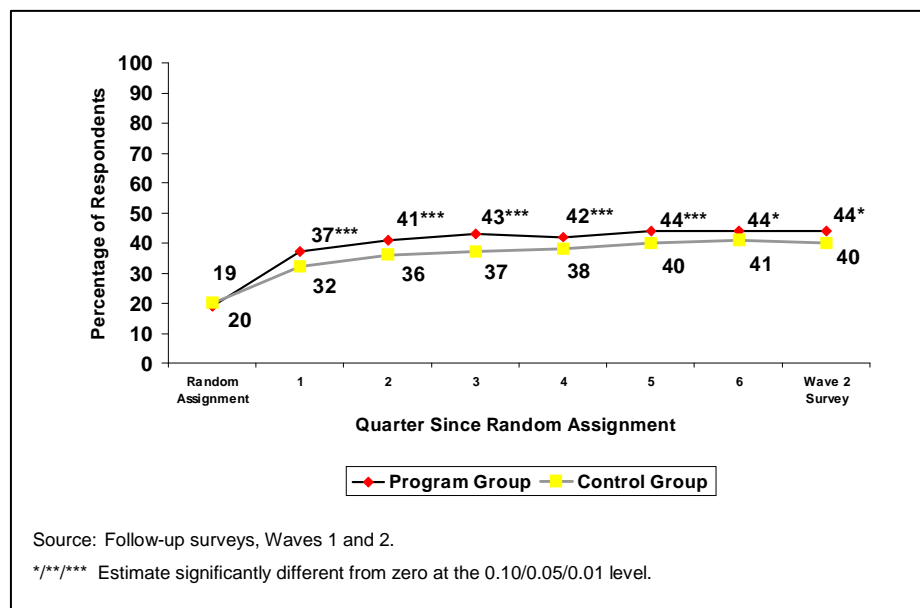
Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Owned a Business at:			
Random assignment	19%	20%	-1
Wave 1 survey	42	36	6 ***
Wave 2 survey	44	40	3 *
Owned a Business in Quarter After Random Assignment			
Quarter 1	37%	32%	5 ***
Quarter 2	41	36	5 ***
Quarter 3	43	37	6 ***
Quarter 4	42	38	4 ***
Quarter 5	44	40	4 ***
Quarter 6	44	41	3 *
Any quarter 1 to 6	55	49	6 ***
Number of Respondents	1,516	1,430	2,946

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

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.1: Business Ownership by Quarter



members. Second, and equally important, the control group experienced a slight delay in service receipt and the start-up of business activities after their rejection from Project GATE, but they ultimately caught up. As discussed in Chapter IV, many control group members eventually found self-employment services on their own. As a result, they began to close the gap in business ownership rates with their program group counterparts after the first few quarters following random assignment.

5.1.2 Impacts by Site

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.

The impact on business ownership within the 18 months after random assignment was largest and statistically significant, at 9 percentage points, in Minneapolis/St. Paul (see Figure V.2). This site also experienced among the highest levels of business ownership, with 64 percent among program group members and 55 percent among control group members. Northeast Minnesota and Pittsburgh experienced more modest impacts at 5 percentage points, but these impacts were insignificant. The impacts were 3 percentage points and 1 percentage point in Maine and Philadelphia, respectively, neither of which were significantly different from zero.

By the sixth quarter after random assignment, there remained a statistically significant impact of 6 percentage points on business ownership in Minneapolis/St. Paul (see Figure V.3). The impact in northeast Minnesota actually increased slightly to 6 percentage points, although it is not statistically significant, likely due to the small sample size in the site. Interestingly, however, the impact fell to near zero or was slightly negative within the three remaining sites.

Figure V.2: Impacts on Business Ownership in the 18 Months After Random Assignment By Site

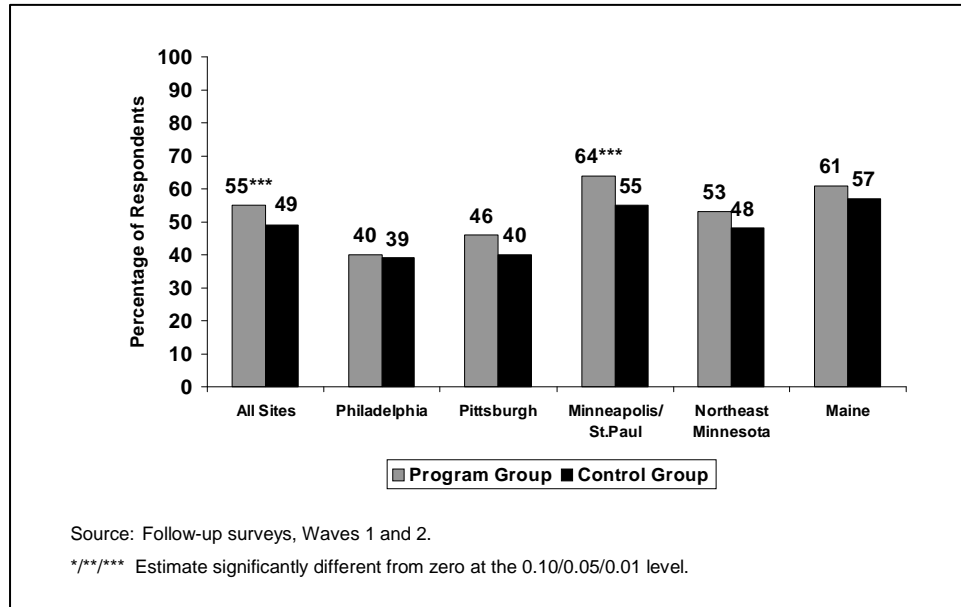
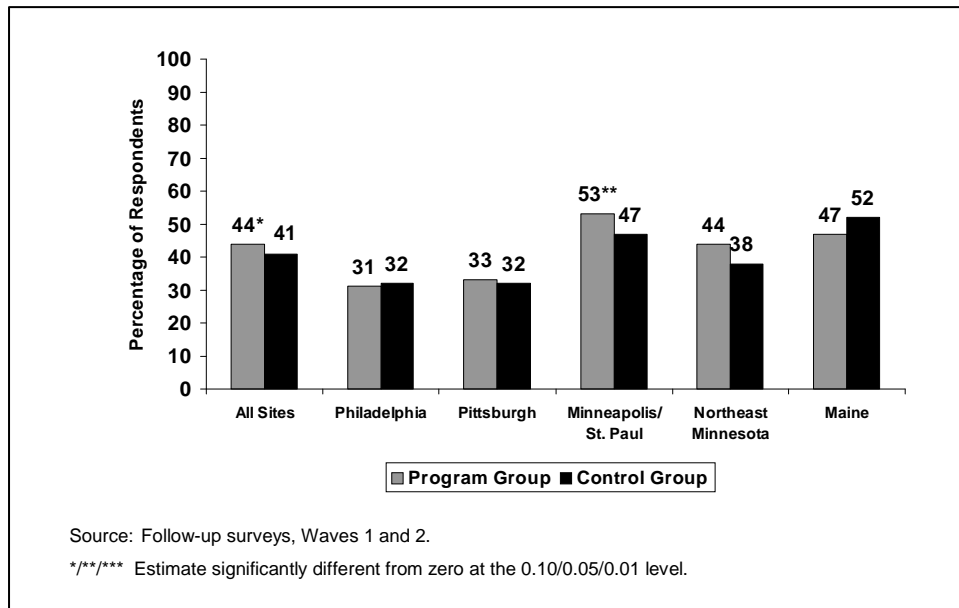


Figure V.3: Impacts on Business Ownership in the 6th Quarter After Random Assignment, By Site



5.1.3 Impacts by Receipt of Unemployment Insurance

The sample members who were receiving UI benefits at application are a subgroup of particular interest for several reasons. First, the UI Self-Employment Demonstration served UI recipients who were expected to exhaust their UI benefits and an evaluation of this demonstration found sizeable impacts on business ownership (Benus et al. 1995). Second, the SEA program serves UI recipients who are expected to exhaust their UI benefits. Third, UI recipients comprise about 40 percent of all GATE applicants.

In every quarter after random assignment, the impact on business ownership was larger among those individuals receiving UI at the time of their application to GATE than among those who were not (see Table V.2). Over the 18-months after random assignment, UI recipients experienced an impact of 9 percentage points on business ownership (statistically significant) while non-UI recipients experienced an impact of 3 percentage points (not statistically significant). An F-test found that these impacts differed between the two subgroups at the 10 percent level of significance. As in the full sample, the impacts on business ownership for UI recipients vary by site (see Table V.2 and Figure V.4). Statistically significant impacts were found in Minneapolis/St. Paul and Pittsburgh.

The pattern over time in the impacts seen in the full sample is mirrored in the UI sample. The impacts on business ownership peak in the third quarter after random assignment and then decline (see Table V.2). However, at the time of the Wave 2 interview, the impact on business ownership for UI recipients is still 5 percentage points, which is statistically significant, compared with the impact for those not receiving UI at random assignment of 2 percentage points, which is not statistically significant. However, the difference in the impacts between the subgroups was no longer significant by this time.

The impacts are larger for those applicants who had recently claimed UI benefits prior to random assignment. Table V.3 shows the impacts on business ownership for those GATE applicants who submitted a UI claim in the quarter prior to random assignment, about 63 percent of all UI recipients who applied to Project GATE. For these applicants, the impact at Wave 1 is 15 percentage points compared to 10 percentage points for all UI recipients and the impact is still 9

percentage points by the Wave 2 survey. The impact is statistically significant in Minneapolis/St. Paul for both waves, and in Philadelphia for Wave 1.

Table V.2: Impacts on Business Ownership for Those Receiving Unemployment Insurance at Random Assignment

	Impact on All Eligible Applicants					
	All Sites	Philadelphia	Pittsburgh	Minneapolis / St. Paul	Northeast Minnesota	Maine
Receiving UI at Application						
Owned a Business at:						
Wave 1 survey	10 ***	5	11 *	14 ***	4	7
Wave 2 survey	5 **	4	4	8 **	24 *	7
Owned a Business in Quarter After Random Assignment						
Quarter 1	7 ***	1	12 **	9 **	13	2
Quarter 2	9 ***	3	15 **	12 ***	8	5
Quarter 3	9 ***	5	13 *	14 ***	8	3
Quarter 4	7 **	5	9	12 ***	3	6
Quarter 5	8 ***	2	10	12 ***	13	7
Quarter 6	6 **	0	10	10 **	17	5
Any quarter 1 to 6	9 ***	-2	16 **	14 ***	13	1
Not Receiving UI at Application						
Owned a Business at:						
Wave 1 survey	4 *	5	-2	3	6	7
Wave 2 survey	2	4	-4	2	-6	7
Owned a Business in Quarter After Random Assignment						
Quarter 1	3 *	1	7	3	14 *	1
Quarter 2	3	3	1	4	1	3
Quarter 3	4 *	5	-3	3	3	9 *
Quarter 4	2	5	-10 *	3	-4	8
Quarter 5	2	2	-8	4	-2	8
Quarter 6	1	0	-5	2	-5	5
Any quarter 1 to 6	3	3	-2	5	-4	4
Number of UI Respondents	1,204	216	173	558	62	195
Number of Non-UI Respondents	1,742	522	243	649	83	245

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

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.4: Impacts on Business Ownership in the 18 Months After Random Assignment By Site For Those Receiving Unemployment Insurance at Application

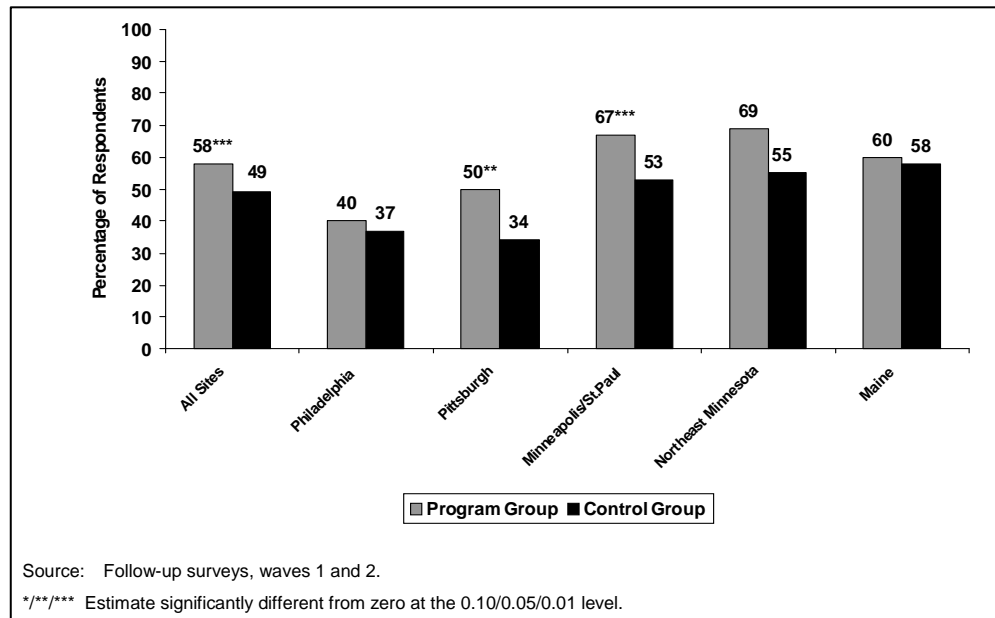


Table V.3: Impacts on Business Ownership for Those Who Claimed Unemployment Insurance Within One Quarter Prior to Random Assignment

	Impact on All Eligible Applicants					
	All Sites	Philadelphia	Pittsburgh	Minneapolis/ St. Paul	Northeast Minnesota	Maine
Owned a Business at:						
Wave 1 survey	15 ***	15 *	16	17 ***	5	9
Wave 2 survey	9 ***	6	0	14 ***	28	4
Whether Owned a Business in Quarter After Random Assignment						
Quarter 1	12 ***	7	11	13 **	29 **	8
Quarter 2	14 ***	10	18 **	15 ***	13	9
Quarter 3	14 ***	11	18 **	15 ***	12	7
Quarter 4	12 ***	8	11	16 ***	2	9
Quarter 5	11 ***	6	10	15 ***	12	8
Quarter 6	9 ***	1	8	14 ***	16	5
Any quarter 1 to 6	9 ***	2	10	14 ***	16	1
Number of Respondents	759	101	118	364	37	139

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

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.

Several factors may contribute to Project GATE having a larger impact on UI recipients. UI recipients may have fewer alternate opportunities in the regular labor market, making self-employment more attractive. Not having a wage and salary job provides them with more time to work on their business, and the receipt of UI benefits provides a regular income while they are doing so. Previous research has 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

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 9 percentage points on business ownership over the 18-month follow-up period compared to 1 percentage point for women (see Table V.4). An F-test found that the difference in impacts across the two groups was significant at the 10 percent level. Aronson (1991) shows that men are more likely to become self-employed, but to our knowledge, no other research suggests that self-employment services benefit men more than women.

Of the 16 subgroups examined, significant differences in the impacts on overall business ownership were found in 2 subgroups: those defined by UI receipt and gender. Given that the evaluation team tested many subgroups, these differences could be appearing by chance. However, the findings are consistent with other studies of entrepreneurship such as Benus et al. (1995), which showed that self-employment services targeted at UI recipients could yield large impacts.

Table V.4: Impacts on Business Ownership in the 18 Months after Random Assignment, By Subgroup

Subgroup ^a	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Receiving Unemployment Insurance at Random Assignment			
Yes	58%	49%	9 ***†
No	52	49	3
Submitted a UI Claim in Quarter Prior to Random Assignment			
Yes	62	53	9 ***
No	52	48	4 **
Working at Random Assignment			
Yes	43	41	2
No	59	52	7 ***
Self Employed at Random Assignment			
Yes	90	87	3
No	46	40	6 ***
Ever Self Employed Prior to Random Assignment			
Yes	74	67	8 ***
No	42	38	4 *
Gender			
Male	60	51	9 ***
Female	48	47	1
Age Greater Than or Equal to 40 Years			
Yes	56	50	6 ***
No	52	47	5 *
Education Greater Than 12th Grade			
Yes	63	57	6 **
No	49	44	5 **
Race is White			
Yes	62	55	6 ***
No	45	40	5 *
Past Credit Problems			
Yes	46	41	5 **
No	62	56	6 **
Minor Living in the Household			
Yes	53	49	4
No	56	49	7 ***
Have More than 5 Years of Managerial Experience			
Yes	61	56	5
No	51	46	5 **
Household Income			
Less than \$25,000	46	42	4
Greater than or equal to \$25,000	59	52	6 ***
Lacks A Car, Telephone, Computer, or Bank Account			
Yes	40	33	7 *
No	59	53	5 ***

Subgroup ^a	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Receiving TANF, Food Stamps, SSI, or General Assistance			
Yes	42	35	7
No	56	51	5 ***
Score on Personal Assessment of Suitability for Self Employment^b			
Less than 90	55	49	6 **
Greater Than or Equal to 90	54	49	5 **
Number of Respondents	1,516	1,430	2,946

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

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.

^aDefined by characteristics reported on the GATE application form prior to random assignment.

^bThe 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.

†/††/††† Estimates significantly different between subgroups at the 0.10/0.05/0.01 level.

While the differences in impacts were not significant between any other subgroups, as indicated in Table V.4, the analysis reveals some interesting findings about Project GATE’s effect on business ownership among some groups. Significant impacts at the 1 percent level were found for (1) those who were not self-employed at random assignment, (2) those who had been self-employed prior to random assignment, (3) those over 40 years of age, (4) those who reported their race as white/non-Hispanic, (5) those without minors living in their home, (6) those with a car, telephone, computer, and bank account, and (7) those who were not receiving public assistance at random assignment (see Table V.4). Many of these subgroups contain a higher percentage of UI recipients. Hence, it is not clear whether it is the receipt of UI benefits or these other characteristics that explain the differences between those who receive UI benefits and those who do not.

5.2 Impacts on Business Preparation and Start-up Attempts

Formal business plans help ensure that prospective entrepreneurs have considered a broad range of issues that could potentially affect their business operations. Lenders also often require these plans when entrepreneurs seek formal business financing. Project GATE significantly increased the proportion of participants who modified or developed a formal business plan. About 60 percent of GATE participants reported writing or revising a plan by the time of the Wave 2 survey, compared to 47 percent of control group members (see Table V.5). While the impact was larger in the first six months after random assignment, it remained significant between the Wave 1 and 2 surveys.

Table V.5: Impacts on Steps Taken to Begin a Business

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Developed or Revised a Written Business Plan			
Between random assignment and Wave 1 survey	50%	36%	13 ***
Between Wave 1 and Wave 2 survey	35	29	6 ***
Between random assignment and Wave 2 survey	60	47	13 ***
Applied for a Business Loan			
Between random assignment and Wave 1 survey	6%	6%	-1
Between Wave 1 and Wave 2 survey	6	5	2 *
Between random assignment and Wave 2 survey	10	9	1
Attempted but Did Not Own a Business			
Between random assignment and Wave 1 survey	20%	20%	-1
Between Wave 1 and Wave 2 survey	14	13	1
Between random assignment and Wave 2 survey	20	19	1
Number of Respondents	1,516	1,430	2,946

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

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.

Despite an increase in business plan development, a very small proportion of participants applied for business loans, and only a marginal difference between program and control group members was found. Approximately 6 percent of the program group, compared to 5 percent of the control group, applied for a loan between the Wave 1 and 2 surveys. This impact was significant at the 10 percent level. No significant impact between random assignment and Wave 1 or across the entire follow-up

period from random assignment to Wave 2 was found. While Project GATE originally aimed to support participants in identifying and applying for business loans, the implementation analysis revealed that very few participants qualified for traditional business financing. Service providers described most GATE participants as “not bankable” due to poor credit and limited assets. In addition, most businesses were at the early stages of business development and did not have an established business history.

5.3 Impacts on Business Openings and Closures

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, approximately 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). While the GATE follow-up period is much shorter, this begs the question of how GATE may have affected new business openings and closures. The vast majority (about 95%) 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 to start a new business after random assignment. About 31 percent of GATE participants, compared to 27 percent of control group members, reported owning a business that was established after their application to the GATE program, a difference that is significant at the 5 percent level (see Table V.6). The bulk of this difference occurred within the first six months after random assignment.

Project GATE also had a marginal impact on the timing of new businesses. Program group members who started a business during the follow-up period took, on average, 5.5 months to begin their first business compared to 6.2 months for control group members who started a business, significant at the 10 percent level (see Table V.6). This is likely due to the fact that GATE participants entered self-employment programs more quickly than control group members (encouraging earlier business development) and that Project GATE led to different people starting businesses.

Given this, businesses owned by program group members had, somewhat surprisingly, been in operation for slightly shorter periods of time at the Wave 1 survey. Specifically, among those who owned a business between random assignment and Wave 1, control group businesses were operating for an average of about 34 months compared to 28 months for GATE participants, a difference that is statistically significant at the 5 percent level (see Table V.7).

Table V.6: Impacts on Business Openings and Closures

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Developed a New Business			
Between random assignment and Wave 1	24%	19%	5 ***
Between Wave 1 and Wave 2	12	11	0
Between random assignment and Wave 2	31	27	4 **
Business Closed			
Between random assignment and Wave 1	2%	2%	0
Between Wave 1 and Wave 2	10	8	1
Between random assignment and Wave 2	12	10	2 *
Number of Respondents	1,516	1,430	2,946

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

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.

Despite this slight increase in new business openings, Project GATE participants were also somewhat more likely, by 2 percentage points, to have owned a business that closed during the follow-up period (see Table V.6). Approximately 12 percent of program group members and 10 percent of control group members reported owning a business sometime during the follow-up period but were no longer self-employed at the time of the Wave 2 survey, a difference that is significant at the 10 percent level. Less than 1 percent of businesses were sold. The remainder were abandoned, failed, or closed for some other reason.

Table V.7: Timing of Business Development

Outcome	Program Group Mean	Control Group Mean	Conditional Difference
Number of Months After Random Assignment Until First Business Was Developed^a			
Average	5.5	6.2	-0.7 *
1 to 3	40%	40%	0
3 to 6	23	20	4
6 to 12	24	24	0
12 or more	12	16	-4 *
Average Number of Months That Most Recent Business Has Been in Operation Since Its Creation^b			
Wave 1	27.5	34.2	-6.7 **
Wave 2	36.1	38.3	-2.2

Source: Follow-up surveys, Waves 1 and 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. Means computed using only sample members who owned a business after random assignment. As the means were computed over nonrandom samples of the program and control group, the differences should not be interpreted as impacts.

^aMeans computed over 763 respondents who started a business since random assignment.

^bMeans computed over 1,558 respondents who ever owned a business between random assignment and the Wave 2 survey.

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

5.4 Number of Businesses Owned

As indicated in Table V.8, 39 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 1 percent level. However, when examining the period between random assignment and the Wave 2 survey, this difference diminished to 2 percentage points and was not statistically significant at the 10 percent level. 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), but this difference also disappeared when considering the period between random assignment and the Wave 2 survey.

Table V.8: 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			
Average	0.5	0.4	0.1 ***
0	56%	62%	-7 ***
1	39	33	6 ***
2	5	3	1 *
3 or more	0	0	0
Number of Businesses Operated Between Wave 1 and Wave 2			
Average	0.5	0.5	0.0
0	54%	57%	-3 *
1	40	38	2
2	5	4	1 *
3 or more	1	1	0
Number of Respondents	1,516	1,430	2,946

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

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.

5.5 Business Size

Businesses owned by both the program and control group members were generally very small. Given that the evaluation’s follow-up was only 18 months after random assignment, it is not surprising that most businesses were fledgling ventures with few employees and very small payrolls. Indicative of the start-up phase, most sample members reported very low levels of monthly sales and business expenditures, although the program group reported some growth over time. While there were very few statistically significant differences in the characteristics of businesses between the program and control groups, those started by control group members appeared to be slightly larger and more established in the early follow-up period.

Although the differences in the sizes of the businesses are 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 or a result of Project GATE leading to different types of people starting a business.

More than three-quarters of business owners in the sample reported at the Wave 2 survey that they worked alone on their current businesses with no full-time or part-time employees (see Table V.9). For both program and control groups, there appeared to be small increases in the prevalence of businesses employees between the Wave 1 and Wave 2 surveys, indicating modest business growth. However, the vast majority of businesses were still small in size, with only a handful reporting more than five employees (not shown).

Average payroll amounts were also small, and no significant differences in the size of payrolls between the program and control group were found at either follow-up. There was some growth, however, for both groups between Waves 1 and 2. For those who owned a business during the follow-up period, payrolls were on average \$3,100 per month for the program group and \$4,900 for the control group at Wave 1 (see Table V.9). These figures grew by 55 percent for GATE participants and 33 percent for control group members by the time of the Wave 2 survey, when the average monthly payrolls were \$4,900 and \$6,500 for the two groups, respectively. Very few businesses offered employee benefits, and there were very few differences in the types of benefits offered to employees of program and control group businesses.

Table V.9: Employees and Payroll of Current or Most Recent Businesses

Outcome	Program Group Mean	Control Group Mean	Conditional Difference
Has Any Employees			
Wave 1 ^a	21%	18%	3
Wave 2 ^b	23	23	0
Has Full-Time Employees			
Wave 1 ^a	9%	11%	-2
Wave 2 ^b	12	12	-1
Has Part-Time Employees			
Wave 1 ^a	17%	14%	3
Wave 2 ^b	16	16	0
Average Monthly Payroll			
Wave 1 ^a	\$3,076	\$4,945	-\$1,869
Wave 2 ^b	4,883	6,547	-1,664

Source: Follow-up survey, Waves 1 and 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.

^aMeans computed over 1,217 respondents who owned a business between random assignment and the Wave 1 survey.

^bMeans computed over 1,318 respondents who owned a business between the Wave 1 and 2 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 79 percent of all businesses discussed during the Wave 2 survey were operated out of the respondents' home (see Figure V.6). Another 16 percent were located in commercially available space. No differences in business location among the program and control groups were found.

Control group members' businesses appeared to be slightly more profitable during the Wave 1 follow-up period than businesses owned by program group members. When asked about their current or most recent business, both program and control group members reported relatively comparable expenses around \$1,100 per month (see Table V.10). However, control group members reported higher sales, at nearly \$2,200 per month compared to \$1,500 per month for the program group. When subtracting expenses from sales, significantly more control group members' businesses yielded a profit at Wave 1. This difference shrinks to insignificant by Wave 2, showing a pattern consistent with program group members operating more start-up ventures during the early follow-up period.

Figure V.5: Location of Current or Most Recent Business

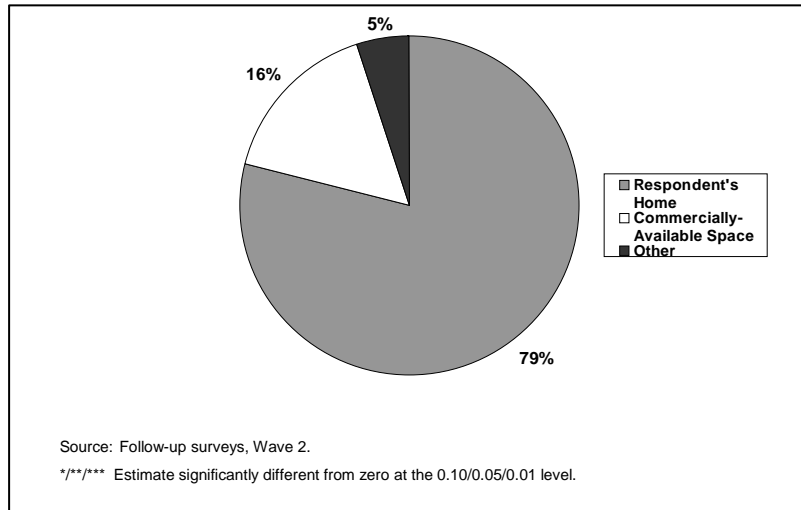


Table V.10: Sales, Expenses, and Salary Payments of Current or Most Recent Business

Outcome	Program Group Mean	Control Group Mean	Conditional Difference
Average Monthly Sales			
Wave 1 ^a	\$1,544	\$2,161	-\$616
Wave 2 ^b	2,289	2,249	39
Average Monthly Expenses			
Wave 1 ^a	\$1,063	\$1,121	-\$58
Wave 2 ^b	1,361	1,386	-25
Sales Exceed Expenses			
Wave 1 ^a	54%	61%	-7 **
Wave 2 ^b	61	61	-1

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

^aMeans computed over 1,217 respondents who owned a business between random assignment and the Wave 1 survey.

^bMeans computed over 1,318 respondents who owned a business between the Wave 1 and 2 surveys.

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

5.6 Earnings from Businesses

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, with two out of every five individuals having ever owned a business, very few people reported receiving wages or salaries through self-employment. Over the entire 18-month follow-up, the program group earned about \$3,200 on average in wages and salary from self-employment, while the control group earned an average of about \$3,400 (see Table V.11). This difference between the program and control groups was not statistically significant.

Table V.11: Impacts on Business Earnings

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Earnings from Businesses in Quarter After Random Assignment			
Quarter 1	\$360	\$405	-\$44
Quarter 2	463	526	-63
Quarter 3	505	543	-38
Quarter 4	600	608	-8
Quarter 5	634	639	-5
Quarter 6	631	643	-11
All quarters 1 to 6	\$3,193	\$3,364	-\$170
Total Non-Salary Income from Businesses	\$2,357	\$2,511	-\$154
Number of Respondents	1,516	1,430	2,946

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

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.

Earnings from businesses were very low. Specifically, earnings from businesses were \$5,600 for the program group members and \$7,000 for the control group members (not shown) when conditioned upon owning a business in the 18 months after random assignment.

Besides wages and salaries, self-employed individuals could have other sources of income through their businesses, such as bonuses, profit distribution, or owners' draw from revenues. Such sources

of non-salary income through self-employment were also low for both the program and control groups, averaging about \$2,500.⁸

5.7 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.

5.7.1 Ownership Structure

The ownership structure of respondents' businesses did not differ significantly between the program and control group at the Wave 2 survey. Over 60 percent of respondents reported that their current or most recent business was a sole proprietorship (see Table V.12). Another 25 percent reported owning corporations, and about 5 percent had partnerships. The control group was more likely to report a sole proprietorship during the first follow-up, but that difference disappeared by the second follow-up.

⁸ 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.12: Ownership Structure of Most Recent Business at the Wave 2 Follow-up

	Program Group Mean	Control Group Mean	Conditional Difference
Sole proprietorship	61%	64%	-3
Corporation	27	25	2
Partnership	5	5	0
Cooperative	1	0	1
Other	6	5	1
Number of Respondents	694	624	1,318

Source: Follow-up survey, Wave 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. 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.

^aThe p-value of a chi-square test of distributional differences equals 0.58.

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

5.7.2 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 with personal resources. About 75 percent of both program and control group members used their own savings to support their businesses (see Table V.13). Just over 11 percent took out personal loans, 6 percent received business loans, and 9 percent used other sources of capital.

No significant differences between the program and control groups in whether individuals borrowed funds overall or from any particular source were detected. Personal loans came from a wide range of sources, including home equity lines of credit, credit cards, family members, and friends.

Business loans were most often drawn from banks or credit unions. Six GATE participants and two control group members reported receiving a loan from the SBA's Microloan program. As discussed earlier, very few GATE participants had enough personal assets to qualify for traditional business loans, and their businesses were often not mature enough to show solid earnings histories to satisfy lenders.

Table V.13: 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	75%	76%	-1
Personal loans	11	12	-1
Business loans	6	5	1
Grants	1	1	0
Other capital	9	8	1
Average Amount of Investments in the Business at Wave 2^{a,c}			
Total	\$13,391	\$15,655	-\$2,264
Participant's own money	\$7,296	\$8,009	-\$713
Personal loans	\$2,484	\$3,701	-\$1,216
Business loans	\$3,245	\$2,568	\$677
Grants	\$80	\$595	-\$515
Other capital	\$479	\$513	-\$35
Family Member Owned Part of the Business			
Wave 1 ^d	9%	5%	4 ***
Wave 2 ^a	10	7	3 *
Percent of Business Owned at Wave 1^d			
By participant	91%	93%	-2 *
By family member	4	2	2 ***
Percent of Business Owned at Wave 2^a			
By participant	92%	92%	0
By family member	5	3	2 **

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

^aMeans computed over 1,318 respondents who owned a business between the Wave 1 and 2 surveys.

^bPercentages do not add to 100 because categories are not mutually exclusive.

^cAmounts do not add to the total due to missing values in some categories.

^dMeans computed over 1,217 respondents who owned a business between random assignment and the Wave 1 survey.

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

It appears, however, that program group members relied more heavily on immediate family members to invest in their businesses, while control group members invested slightly more of their own money.

5.7.3 Industry of Businesses

Respondent businesses spanned a very broad spectrum of industries. The most common businesses included professional services, construction, retail trade, and other services. Individuals who started professional services businesses were most often consultants in areas such as engineering, marketing, human resources, computers and information technology, web design, graphic design, legal services, and accounting. Construction businesses often involved home remodeling, basic carpentry, plumbing, electrical, and other trades. Most retail businesses involved sales of jewelry, women's clothing, gift items, home décor, and other personal items, but some entrepreneurs sold items as diverse as organic vegetables, firewood, and cremation urns. Massage therapy was the single largest trade within the other services category, although this group included businesses such as pet grooming, spiritual consulting, and laundry services.

Project GATE may have affected the types of industries in which participants chose to pursue their businesses. Classes and business counseling that address issues related to marketing, local competition, regulations, and other factors could help participants understand whether entering certain markets was feasible and potentially profitable. Despite this, Project GATE had very little impact on the types of industries selected by participants for their businesses (see Table V.14).

5.8 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.15). The challenges reported in the Wave 2 survey were generally similar for the two groups.

Table V.14: Industry of Most Recent Business at the Wave 2 Follow-up

	Program Group Mean	Control Group Mean	Conditional Difference
Professional, Scientific, and Technical Services	17%	14%	2
Construction	10	10	0
Retail Trade	10	11	-2
Other Services (except Public Administration)	10	8	2
Manufacturing	6	4	2 *
Administrative and Support	6	7	-1
Information	5	3	1
Health Care and Social Assistance	5	7	-2
Finance and Insurance	4	3	0
Real Estate and Rental and Leasing	4	5	0
Education Services	4	4	0
Transportation and Warehousing	3	3	1
Arts, Entertainment, and Recreation	2	4	-2 *
Accommodation and Food Services	2	2	1
Wholesale Trade	1	1	0
Agriculture, Forestry, Fishing and Hunting	0	1	-1 *
Other	11	13	-2
Number of Respondents	694	624	1,318

Source: Follow-up survey, Wave 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. 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.

^aThe p-value of a chi-square test of distributional differences equals 0.42.

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

Table V.15: Challenges to Starting a Business

Challenge	Program Group Mean	Control Group Mean	Conditional Difference
Lack of capital or start-up funds	23%	26%	-3
Finding clients	18	20	-3
Becoming known or getting exposure	17	18	-1
Insufficient cash flow	9	9	0
Amount of time and work involved	7	9	-2
Regulations or licenses	5	3	2
Insurance	4	5	0
Problems with Supply or Product or Material Availability	4	4	0
Uncertainty or changing economy	3	2	2 *
Personal or Family Barriers	3	2	1
Insufficient sales	2	1	1
Difficulties hiring qualified staff	2	3	0
Dealing with clients	2	1	1
Finding a location	2	1	1
Local competition	1	1	1
Taxes	1	3	-2 *
Other	23	22	1
Number of Respondents	694	624	1,318

Source: Follow-up surveys, Wave 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. Means computed using only sample members who owned a business between Waves 1 and 2. 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.16 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. Finding a location was a barrier for significantly more respondents who were not able to become self-employed. 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.16: 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	51%	25%	-26 ***
Becoming known or getting exposure	11	17	6 ***
Finding clients	11	19	8 ***
Amount of time and work involved	7	8	1
Regulations or licenses	6	5	-1
Finding a location	4	2	-2 *
Insufficient cash flow	3	9	6 ***
Insurance	3	4	1
Problems with supply or product or material availability	3	4	1
Taxes	2	2	1
Uncertainty or changing economy	2	2	1
Personal or family barriers	2	3	0
Insufficient sales	1	1	0
Local competition	1	1	0
Dealing with clients	1	1	0
Difficulties hiring qualified staff	0	2	2 ***
Other	27	23	-4
Number of Respondents	418	1,318	1,736

Source: Follow-up surveys, Wave 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.

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

This chapter has examined the impact of Project GATE on business ownership and the dynamics of business start-up. 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 the total employment rate, the number of months worked, the number of hours worked, earnings, and job satisfaction. Characteristics of wage and salary jobs held by GATE sample members are also described.

CHAPTER VI.

DID PROJECT GATE INCREASE TOTAL EMPLOYMENT AND EARNINGS?

While the primary objective of Project GATE was business development, the project was also viewed as a workforce development tool. The hope was that Project GATE would increase employment and self-sufficiency by providing another avenue for employment—working for oneself. This chapter explores how Project GATE affected employment and earnings from wage and salary jobs and thus affected total employment—whether working for oneself or for someone else. The key findings are summarized in the box below.

Key Findings: Impacts on Employment and Earnings

- Project GATE had no significant impact on the likelihood of participants being employed, either from self-employment or from working for someone else, at any point during the follow-up period.
- Project GATE did, however, affect the type of employment. GATE participants were less likely to be employed in wage and salary jobs during the first six months after random assignment and more likely to be self-employed compared to their control group counterparts. There were no significant differences later in the follow-up period.
- Project GATE did not increase earnings from employment and may have significantly decreased them. Project GATE had no impact on self-employment earnings. On the survey, GATE participants reported earning about \$1,800 less from wage and salary jobs over the follow-up period, and hence, their total earnings were significantly lower than the control group's earnings. However, no impacts on earnings from wage and salary jobs were found using the administrative data.
- Individuals who were UI recipients at the time of application to Project GATE suffered less of a fall in wage and salary earnings from participating in Project GATE than non-UI recipients.

The findings presented in Chapter V suggest that Project GATE increased self-employment but had no impacts on self-employment earnings. Project GATE could still affect *total* employment and earnings, however, if the program affected employment in wage and salary jobs.

Hypothetically, Project GATE could affect employment at wage and salary jobs in several different ways. If GATE participants mainly start small-scale businesses that they operate in addition to their regular jobs, it might have no effect on employment in wage and salary jobs. More likely, though, some GATE participants will elect to stop working or cease searching for jobs in favor of pursuing self-employment opportunities. Conversely, GATE may help participants to recognize sooner the challenges of owning a business, in which case some participants may be *less* inclined to start a business and will instead be more likely to seek employment at a wage and salary job. Furthermore, GATE participants may also increase employment in wage and salary jobs if GATE participants who do not start businesses still develop skills or contacts that can help them find wage and salary jobs.

If Project GATE leads to more people starting a business rather than taking wage and salary jobs or more people starting businesses concurrently with wage and salary jobs, total employment would remain unchanged. But total employment could in fact increase if Project GATE helps people who would struggle to find employment or who would not have chosen to work at a wage and salary job to start their own businesses. This 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 of this. The Massachusetts program increased the number of months in self-employment and employment in wage and salary jobs, 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 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 months and hours worked. Next, it discusses the impacts on 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 Sources of Data on Employment and Earnings

Two sources of data are available on employment and earnings: survey data and UI administrative data. The survey data was collected in two waves (at approximately 6 months and approximately 18 months after random assignment). At each wave of the survey, respondents were asked about all the wage and salary jobs they had held since either random assignment (at the Wave 1 survey) or the previous wave of the survey (at the Wave 2 survey). Specifically, the respondents were asked about “full and part-time jobs (including military service) you may have held since random assignment or the date of last interview where you were working for someone else.” If they reported that they had worked at a wage and salary job, they were asked about the beginning and end date of each job. These data were then used to construct a history of employment over each week of the follow-up period.

The UI administrative data consist of total quarterly earnings reported by employers to state UI agencies. By law, most employers are subject to a state UI tax and must report what is paid to each employee, including regular earnings, overtime, tips, and bonuses. Excluded workers include railroad employees, workers in service for relatives, most agricultural labor, some domestic service workers, part-time employees of nonprofit organizations, and some workers who are casually employed “not in the course of the employer’s business” (Federal Unemployment Tax Act, Section 3306). They also exclude workers whose employers (illegally) do not report their earnings to the UI agency. As these data are collected by each state UI agency, they cover only jobs in that state. Perhaps most importantly for this study, self-employed workers are not included, so this data source can only be used for wage and salary jobs.

UI administrative data were collected from each of the three demonstration states for four quarters before and four quarters after random assignment. Due to lags in the availability of UI administrative data, data for the fifth and sixth quarters after random assignment were not obtained.

The UI records only provide data on earnings by quarters. These quarters are defined as calendar quarters, and so they cannot be cleanly mapped into 13-week periods relative to the date of random assignment. In an attempt to line up the calendar quarters with time since random assignment, the first quarter after random assignment is defined as the calendar quarter in which a customer was

randomly assigned if random assignment for that person happened during the first half of the quarter, or the following calendar quarter if random assignment was in the latter half of a calendar quarter.

Each data source has its advantages and disadvantages. The advantages of the survey data source are that it includes all employment—irrespective of whether the job was covered by the UI data or which state it was in—and the exact timing of the employment is known. In addition, it provides data on self-employment. The advantages of the administrative data are that it is free of survey recall error and is available for all sample members, not just those who responded to the survey. However, the data cover only wage and salary employment and information is only available by calendar quarter.

6.2 Employment Rate

This section examines the impact of Project GATE on the probability of being self-employed, the probability of being employed in a wage and salary job, and the probability of total employment—defined as either self-employment or working for someone else.

6.2.1 Self-Employment Rate

Project GATE participants were more likely to report owning a business in each quarter, an effect that is especially pronounced in the early quarters after random assignment (see Table VI.1). The impact is 5 percentage points for the first two quarters after random assignment and 6 percentage points in the third quarter, but falls to 3 percentage points by the end of the follow-up period.

Also, as reported earlier, the impact on the self-employment rate was larger for those sample members who were receiving UI when they applied to Project GATE. The impact was 7 and 9 percentage points in the first two quarters after random assignment and fell to 6 percentage points by the end of the follow-up period (see Table VI.2).

6.2.2 Employment Rate at Wage and Salary Jobs

While administrative data are not available on self-employment, data on employment in wage and salary jobs are available from both the follow-up surveys and the UI administrative data.

Survey Data. In the survey data, the positive impact on the probability of being self-employed was mirrored by a correspondingly negative impact on being employed in a wage and salary job. In the first quarter after random assignment, 45 percent of GATE participants were employed in a wage and salary job compared with 50 percent of the control group (see Table VI.1 and Figure VI.1). The impact on the wage and salary employment rate was negative in each quarter. At the time of the Wave 2 survey, the impact was only 2 percentage points and was not statistically significant.

The percentage of sample members in wage and salary jobs grew over the follow-up period in both groups, and in the final quarter, three out of every five individuals in each group were employed in a wage and salary job. Over the entire follow-up period, 77 percent of control group members had been employed at a wage and salary job compared to 74 percent of program group members, a statistically significant difference at the 5 percent level.

This general employment pattern holds for all the sites and most subgroups but is especially pronounced in the largest site, Minneapolis/St. Paul, as well as in Pittsburgh (see Figure VI.2)—the two sites with the largest impact on the probability of self-employment. The point estimate for northeast Minnesota is large and positive, but due to the small sample in this site, it is not precisely estimated.

The impacts on employment for participants who received UI at application are shown in Table VI.2. As expected, UI recipients in both the program and control groups are less likely than non UI-recipients to be employed in wage and salary jobs in the first quarter after random assignment. However, the difference is larger for the program group. Hence, the negative impact on employment in the first quarter is larger for the UI recipients—10 percentage points, which is significant at the 1 percent level, compared with 3 percentage points for non UI-recipients (not shown), which is not statistically significant. By the end of the follow-up period, the impact on employment was not statistically significant for either UI recipients or non-UI recipients.

Table VI.1: Impacts on Employment Using The Survey Data

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants	
Self-Employed in Quarter After Random Assignment				
Quarter 1	37%	32%	5 ***	
Quarter 2	41	36	5 ***	
Quarter 3	43	37	6 ***	
Quarter 4	42	38	4 ***	
Quarter 5	44	40	4 ***	
Quarter 6	44	41	3 *	
Any quarter 1 to 6	55	49	6 ***	
Currently Self-Employed at Wave 2 Follow-up	44%	40%	3 *	
Worked for Someone Else in Quarter After Random Assignment				
Quarter 1	45%	50%	-5 ***	
Quarter 2	55	59	-4 ***	
Quarter 3	57	60	-2	
Quarter 4	56	59	-3	
Quarter 5	58	62	-4 **	
Quarter 6	60	63	-2	
Any quarter 1 to 6	74	77	-3 **	
Currently Employed in Wage and Salary Job at Wave 2 Follow-up	56%	59%	-2	
Worked for Self or Someone Else in Quarter After Random Assignment				
Quarter 1	71%	70%	1	
Quarter 2	80	80	0	
Quarter 3	83	82	2	
Quarter 4	82	81	1	
Quarter 5	85	84	0	
Quarter 6	86	85	1	
Any quarter 1 to 6	94	93	1	
Number of Respondents		1,516	1,430	2,946

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

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 non-respondents in baseline characteristics.

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

Table VI.2: Impacts on Employment Using The Survey Data For Sample Members Who Were Receiving Unemployment Insurance at GATE Application

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Self-Employed After Random Assignment			
Quarter 1	38%	31%	7 ***
Quarter 2	45	36	9 ***
Quarter 3	46	37	9 ***
Quarter 4	46	39	7 **
Quarter 5	47	40	8 ***
Quarter 6	47	41	6 **
Any quarter 1 to 6	58	49	9 ***
Currently Self-Employed at Wave 2 Follow-up	44%	41%	5 **
Worked for Someone Else After Random Assignment			
Quarter 1	33%	43%	-10 ***
Quarter 2	49	57	-7 **
Quarter 3	56	59	-3
Quarter 4	56	62	-7 **
Quarter 5	60	65	-6 **
Quarter 6	63	65	-2
Any quarter 1 to 6	74	78	-4
Currently Employed in Wage and Salary Job at Wave 2	59%	61%	-2
Worked for Self or Someone Else After Random Assignment			
Quarter 1	63%	64%	-2
Quarter 2	79	80	-0
Quarter 3	85	82	3
Quarter 4	84	85	-1
Quarter 5	88	87	1
Quarter 6	91	89	2
Any quarter 1 to 6	96	95	1
Number of Respondents	642	562	1,204

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

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 non-respondents in baseline characteristics.

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

Figure VI.1: Wage and Salary Job Employment by Quarter

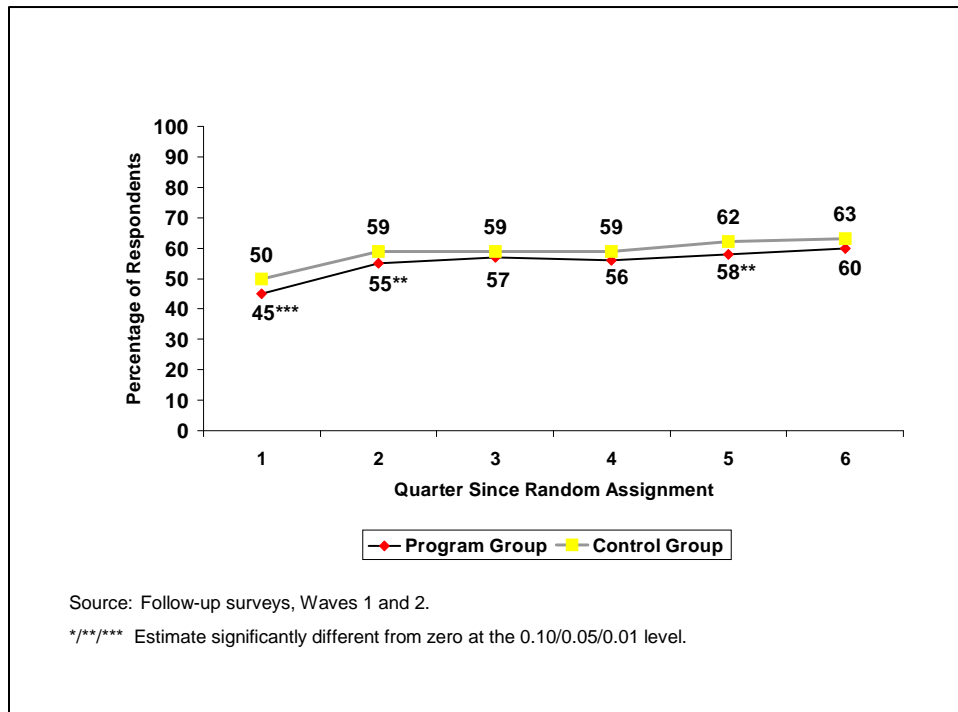
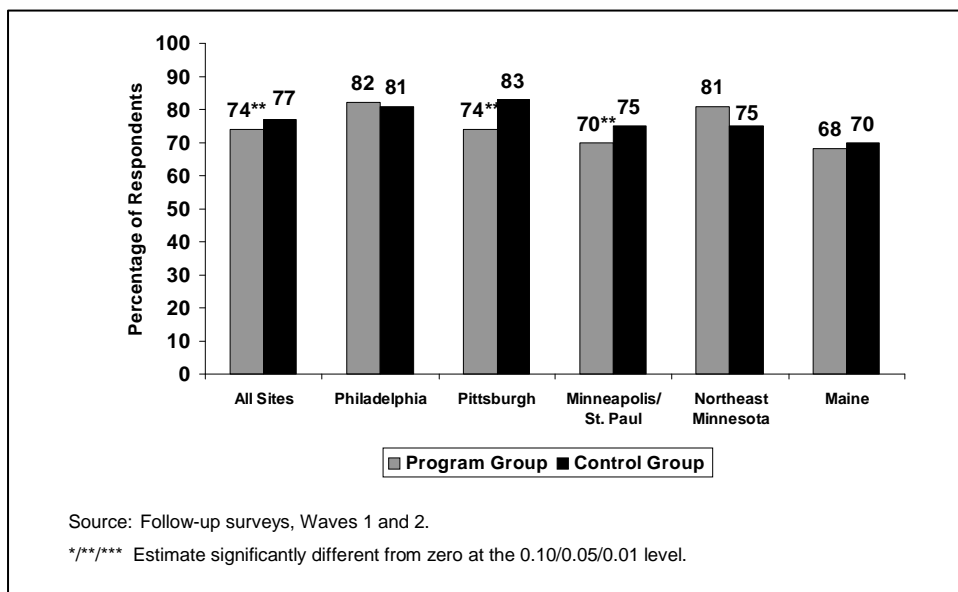


Figure VI.2: Impacts on Whether Employed at a Wage and Salary Job In the 18 Months After Random Assignment, By Site



Administrative Data. The estimated impacts on the employment rate from the administrative and survey data were qualitatively similar, and the mean employment rates for the program and control groups were also similar (see Table VI.3). The employment rate was 51 and 52 percent in the first quarter after random assignment (for the program and control group, respectively) and rose to 57 and 58 percent in the fourth quarter after random assignment. In each of the first three quarters after random assignment, the impacts were negative whether estimated using the survey or administrative data. However, unlike the findings from the survey data, the UI administrative data yielded no significant impacts on employment in the first four quarters after random assignment, with the exception of the second quarter after random assignment, when the three percentage point impact was significant at the 10 percent level. This finding was consistently observed for each site and subgroup, including those who were receiving UI at application.

Table VI.3: Impacts on Wage and Salary Employment Using Administrative Data

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Worked for Someone Else in Quarter After Random Assignment			
Four quarters before random assignment	74%	72%	2
Three quarters before random assignment	73	71	2
Two quarters before random assignment	69	68	1
One quarter before random assignment	60	58	2
Quarter 1	51	52	-1
Quarter 2	54	57	-3 *
Quarter 3	57	58	-1
Quarter 4	57	58	0
Any quarter 1 to 4	73	74	-1
Full Sample Size	2,034	2,044	4,078

Source: UI administrative earnings records.

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

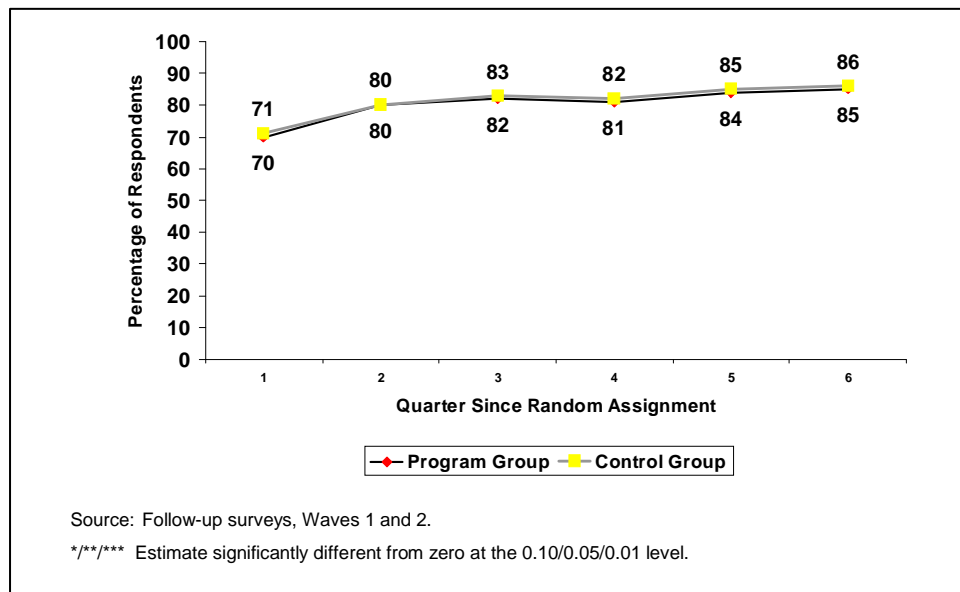
*/**/** Estimate significantly different from zero at the 0.10/0.05/0.01 level.

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. Combining these measures permits a more formal exploration of whether Project GATE is causing prospective entrepreneurs to stop working in wage and salary jobs in favor of starting their own businesses or if Project GATE is generating a net gain in overall employment, combining self-employment and wage and salary jobs.

Overall employment rates increased from about 70 percent in the first quarter after random assignment to 85 percent by the end of the follow-up period, but there were no significant differences between the program and control groups in any of the six quarters or in the six quarters combined (see Table VI.1 and Figure VI.3). At some point in the six quarters after random assignment, 94 percent of GATE participants and 93 percent of the control group were employed in some form. This finding was generally similar across all sites and subgroups.

Figure VI.3: Total Employment by Quarter



As some people work in the same quarter on their business and have a wage and salary job, the sum of the self-employment rate and the wage and salary employment rate exceeds the total employment rate.

For example, in the sixth quarter after random assignment, 26 percent of the program group only worked for themselves and 42 percent only worked at a wage and salary job, 18 percent worked for themselves and someone else, and only 14 percent did not work at all.

6.3 Months Worked

The employment rate only indicates whether the sample member worked at all during the quarter. Another indication of the extent of employment is the number of months worked. Data on the number of months in self-employment and wage and salary employment are available from the survey, but not from the UI administrative data.

6.3.1 Months Worked at Self-Employment

The number of months that sample members worked for themselves follows the pattern of the self-employment rate. In the first three-month quarters after random assignment, program group members worked 1 month and control group members worked 0.9 of a month (see Table VI.4). The impact of 0.1 of a month (about 3 days) is statistically significant. The impact peaks at 0.2 of a month in quarters 2 and 3 and then declines back to 0.1 of a month.

6.3.2 Months Worked at Wage and Salary Jobs

The number of months that sample members worked at a wage and salary job mirrors the number of months sample members worked for themselves. In each quarter program group members work about 0.1 of a month less than control group members, a difference that is statistically significant in four out of the six quarters (see Table VI.4).

6.3.3 Total Months Worked

The impacts on total months employed followed a similar pattern to the impacts on total employment rates (see Table VI.4). In the first quarter after random assignment, sample members worked—in either self-employment or wage and salary employment—about 1.8 out of the 3 months in the quarter. This increased to about 2.4 months out of the 3 months in the final quarter of the follow-up period, but in none of the quarters were there any differences between the program and control group members.

Table VI.4: Impacts on Months Employed

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Months Self-Employed in Quarter After Random Assignment			
Quarter 1	1.0	0.9	0.1 **
Quarter 2	1.2	1.0	0.2 ***
Quarter 3	1.3	1.1	0.2 ***
Quarter 4	1.2	1.1	0.1 ***
Quarter 5	1.3	1.1	0.1 ***
Quarter 6	1.2	1.2	0.1 *
All quarters 1 to 6	7.1	6.3	0.8 ***
Months Working in Wage and Salary Jobs in Quarter After Random Assignment			
Quarter 1	1.1	1.2	-0.1 ***
Quarter 2	1.4	1.5	-0.1 **
Quarter 3	1.6	1.6	-0.1
Quarter 4	1.6	1.6	-0.1
Quarter 5	1.6	1.7	-0.1 **
Quarter 6	1.6	1.7	-0.1 *
All quarters 1 to 6	8.8	9.4	-0.5 **
Months Either Self-Employed or Working in Wage and Salary Jobs in Quarter After Random Assignment			
Quarter 1	1.8	1.8	0.0
Quarter 2	2.2	2.2	0.0
Quarter 3	2.4	2.3	0.1
Quarter 4	2.4	2.3	0.1
Quarter 5	2.4	2.4	0.0
Quarter 6	2.4	2.4	0.0
All quarters 1 to 6	13.5	13.3	0.2
Number of Respondents	1,516	1,430	2,946

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

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.

6.4 Hours Worked

Employment rates and months worked are informative about *whether* individuals worked, but they do not address *how much* people worked. A related measure that more directly addresses the intensity of employment is hours worked in a given time period, the focus of this section. Project GATE could have affected hours worked either through employment rates or by increasing the number of hours worked by individuals who were employed, or both. As hours worked are not tracked in the UI administrative data, the results in this section come exclusively from the survey data.

6.4.1 Hours Worked at Self-Employment

Consistent with their employment rates, Project GATE participants also worked more total hours in self-employment during this period. The program group spent 205 hours in self-employment during the sixth (final) quarter of the follow-up period compared to 176 for the control group (see Table VI.5). The impact on hours worked is especially notable because in percentage terms, the 30-hour impact is larger than the difference in the self-employment rate in quarter 6 and is statistically significant at the 5-percent level, whereas the impact on self-employment rates is only marginally significant. This occurred because Project GATE increased the hours worked per week among the self-employed as well as the self-employment rate.

6.4.2 Hours Worked at Wage and Salary Jobs

Consistent with the pattern of employment rates and months worked found in the survey data, Project GATE participants worked fewer hours at wage and salary jobs in each quarter (see Table VI.5). While the positive impacts on hours of self-employment were largest in the third to sixth quarters, the negative impacts on hours in wage and salary employment were only statistically significant in the first three quarters. In the first quarter after random assignment, the program group worked 27 hours less at wage and salary jobs than did the control group (169 compared with 196), and over the full follow-up period, the program group worked an average of 1,419 hours, or 121 hours less than the control group.

Table VI.5: Impacts on Hours Worked

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Hours Worked at Own Businesses in Quarter After Random Assignment			
Quarter 1	152	138	13
Quarter 2	191	165	25 ***
Quarter 3	205	171	34 ***
Quarter 4	201	170	31 ***
Quarter 5	212	175	37 ***
Quarter 6	205	176	30 ***
All quarters 1 to 6	1,162	992	170 ***
Hours Worked at Wage and Salary Jobs in Quarter After Random Assignment			
Quarter 1	169	196	-27 ***
Quarter 2	220	249	-29 ***
Quarter 3	248	272	-25 **
Quarter 4	256	265	-8
Quarter 5	271	285	-13
Quarter 6	270	284	-14
All quarters 1 to 6	1,419	1,540	-121 ***
Hours Worked at Both Wage and Salary Jobs and Self-Employment in Quarter After Random Assignment			
Quarter 1	321	334	-13
Quarter 2	411	415	-4
Quarter 3	455	446	10
Quarter 4	458	434	23 **
Quarter 5	484	459	24 **
Quarter 6	475	459	16
All quarters 1 to 6	2,594	2,543	51
Number of Respondents	1,516	1,430	2,946

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

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.

GATE participants and control group members were equally likely to work in part-time wage and salary employment during the follow-up period (see Table VI.6).⁹ In each quarter, about one in five of the GATE sample was employed in at least one part-time job, with no significant differences between the program and control groups. Thus, the negative impact of GATE participants' hours worked was driven primarily by participants forgoing full-time employment rather than stopping part-time employment to pursue business ownership.

Table VI.6: Impacts on Part-Time Employment

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Worked in Part-Time Wage and Salary Job			
Quarter 1	19%	20%	-2
Quarter 2	23	24	-1
Quarter 3	23	25	-1
Quarter 4	21	22	-1
Quarter 5	22	22	0
Quarter 6	23	22	0
All quarters 1 to 6	36	38	-2
Number of Respondents	1,516	1,430	2,946

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

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.

⁹Individuals were considered to work part-time if, during the time period, they worked at any jobs where the usual weekly hours were less than 35.

6.5 Earnings

From a benefit-cost perspective, the most important employment outcome is the impact of Project GATE on participants' earnings. This impact not only informs the extent to which Project GATE increased participants' overall income, but is also a measure of the additional output produced in society as a whole. Measures of participants' earnings from wage and salary jobs are available through both the survey and UI administrative data; however, self-employment is not covered by UI law, and consequently, measures of earnings from self-employment must rely on the follow-up surveys alone.

6.5.1 Earnings from Self-Employment

As discussed in the previous chapter, earnings from businesses were extremely low in every quarter. Moreover, even though program group members were slightly more likely to start a business, their earnings from self-employment were no higher than the control group members' earnings from self-employment (see Table VI.7).

Even among UI recipients, for whom the impacts on business ownership were largest, Project GATE had no significant impact on earnings from self-employment (see Table VI.8). The impacts on earnings from businesses in each quarter after random assignment were negative, but small and not statistically significant.

6.5.2 Earnings from Wage and Salary Jobs

Survey Data. Given that GATE participants were less likely to be employed in wage and salary jobs and worked fewer total hours, it is not surprising that their earnings were also lower. GATE participants reported on the surveys earning less than the control group from wage and salary jobs in each of the six quarters after random assignment, a difference that was statistically significant in the first three quarters (see Table VI.7). While the differences were not statistically significant in quarters 4 through 6, over the six quarters combined, GATE participants earned on average \$1,798 less than their control group counterparts (\$24,337 versus \$26,135), a difference that was statistically significant at the 10 percent level.

Table VI.7: Impacts on Earnings Using Survey Data for the Full Sample

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Earnings from Businesses in Quarter After Random Assignment			
Quarter 1	\$360	\$405	-\$44
Quarter 2	\$463	\$526	-\$63
Quarter 3	\$505	\$543	-\$38
Quarter 4	\$600	\$608	-\$8
Quarter 5	\$634	\$639	-\$5
Quarter 6	\$631	\$643	-\$11
All quarters 1 to 6	\$3,193	\$3,364	-\$170
Total Non-Salary Income from Businesses	\$2,357	\$2,511	-\$154
Earnings from Wage and Salary Jobs in Quarter After Random Assignment			
Quarter 1	\$2,712	\$3,063	-\$351 **
Quarter 2	\$3,586	\$3,943	-\$357 *
Quarter 3	\$4,126	\$4,471	-\$345 *
Quarter 4	\$4,441	\$4,545	-\$104
Quarter 5	\$4,730	\$4,996	-\$266
Quarter 6	\$4,745	\$5,098	-\$353
All quarters 1 to 6	\$24,337	\$26,135	-\$1,798 *
Total Earnings from All Jobs and Businesses in Quarter After Random Assignment^a			
Quarter 1	\$3,072	\$3,468	-\$396 **
Quarter 2	\$4,049	\$4,469	-\$420 **
Quarter 3	\$4,632	\$5,014	-\$381 *
Quarter 4	\$5,044	\$5,153	-\$110
Quarter 5	\$5,366	\$5,635	-\$270
Quarter 6	\$5,279	\$5,741	-\$362
All quarters 1 to 6	\$27,543	\$29,504	-\$1,960 *
Number of Respondents	1,516	1,430	2,946

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

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 Does not include non-salary income from businesses

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

Table VI.8: Impacts on Earnings Using Survey Data for Sample Members Who Received UI at Application

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Earnings from Businesses in Quarter After Random Assignment			
Quarter 1	\$290	\$438	-\$148
Quarter 2	\$421	\$574	-\$152
Quarter 3	\$494	\$630	-\$136
Quarter 4	\$587	\$658	-\$72
Quarter 5	\$671	\$752	-\$82
Quarter 6	\$651	\$724	-\$73
All quarters 1 to 6	\$3,114	\$3,776	-\$662
Total Non-Salary Income from Businesses	\$3,033	\$2,410	\$623
Earnings from Wage and Salary Jobs in Quarter After Random Assignment			
Quarter 1	\$1,659	\$2,285	-\$626 **
Quarter 2	\$3,123	\$3,759	-\$636 *
Quarter 3	\$4,166	\$4,493	-\$326
Quarter 4	\$4,784	\$4,608	\$176
Quarter 5	\$5,279	\$5,000	\$278
Quarter 6	\$5,384	\$5,185	\$198
All quarters 1 to 6	\$24,404	\$25,340	-\$936
Total Earnings from All Jobs and Businesses in Quarter After Random Assignment^a			
Quarter 1	\$1,949	\$2,724	-\$775 ***
Quarter 2	\$3,544	\$4,334	-\$789 **
Quarter 3	\$4,660	\$5,124	-\$464
Quarter 4	\$5,371	\$5,266	\$105
Quarter 5	\$5,951	\$5,752	\$198
Quarter 6	\$6,036	\$5,909	\$127
All quarters 1 to 6	\$27,522	\$29,123	-\$1,601
Number of Respondents	642	562	1,204

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

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 Does not include non-salary income from businesses

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

The impacts on earnings could conceivably be driven by a handful of individuals with unusually high earnings. To check the extent to which the impacts hold across the earnings distribution—not just for the highest earners in the sample—impacts for the *median* participant were separately estimated and then compared to the reported average impacts. These results used quantile regressions to control for baseline characteristics, analogous to the main set of results. The findings corroborated both the statistical significance and the magnitude of the results reported here; the impacts were somewhat smaller in the first two quarters after random assignment, but still negative.

As with employment rates, the impacts were most pronounced in Minneapolis/St. Paul (not shown). The impacts on wage and salary earnings were negative in all sites except Maine. The decrease in earnings was largest in the Minnesota sites, although an F-test could not reject that the impacts were the same in all sites.

The impacts on wage and salary earnings for those who received UI at application follow a similar pattern to the impacts for the full sample (see Table VI.8). In the first few quarters, the impact is negative and statistically significant. However, unlike the full sample, the impacts on wage and salary earnings for UI recipients become positive in quarter 4, although they are not statistically significant. Over the entire follow-up period, program group members in this subgroup earn about \$900 less than the control group members in this subgroup, although this impact is not statistically significant.

Table VI.9 presents the impacts on wage and salary earnings for a number of subgroups. The negative impact on earnings was largest for those who were less than 40 years old at GATE application. However, the difference in the impacts between those in the subgroup and those not in the subgroup was not statistically significant for any of the subgroups in Table VI.9.

Administrative Data. The earnings in the UI administrative data were lower than the earnings reported on the survey in each quarter. For example, in the first quarter after random assignment, the average control group member earned \$3,063 according to the survey data (see Table VI.7) and \$2,871 according to the administrative data (see Table VI.10)—a 7 percent difference.

Table VI.9: Impacts on Survey-Reported Wage and Salary Earnings in the 18 Months After Random Assignment, By Subgroup

Subgroup ^a	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Receiving Unemployment Insurance at Random Assignment			
Yes	\$24,404	\$25,340	-\$936
No	24,304	26,607	-2,302 *
Submitted a UI Claim in Quarter Prior to Random Assignment			
Yes	22,693	25,296	-2,603
No	24,959	26,370	-1,412
Working at Random Assignment			
Yes	37,733	40,604	-2,870
No	18,934	20,226	-1,292
Self-Employed at Random Assignment			
Yes	18,759	18,971	-212
No	25,759	27,880	-2,122 *
Ever Self-Employed Prior to Random Assignment			
Yes	20,058	20,294	-237
No	27,137	29,802	-2,665 *
Gender			
Male	25,767	26,835	-1,068
Female	22,789	25,347	-2,558 *
Age Greater Than or Equal to 40 Years			
Yes	23,373	23,734	-361
No	26,439	30,341	-3,902 **
Education Greater Than 12th Grade			
Yes	30,443	30,388	55
No	20,226	23,080	-2,854 **
Race is White			
Yes	24,060	25,602	-1,542
No	24,763	26,785	-2,021

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

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.

^aDefined by characteristics reported on the GATE application form prior to random assignment.

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

†/††/††† Estimates significantly different between subgroups at the 0.10/0.05/0.01 level.

Unlike the survey data, the UI administrative earnings records revealed a very small negative impact on wage and salary earnings of \$196 over the first year after random assignment, a difference that is not statistically significant.

The impact on wage and salary earnings over the first four quarters among UI recipients (not shown) was positive in the administrative earnings data (\$633) and negative in the survey data (-\$1,412), although it was not statistically significant using either source of data.

Table VI.10: Earnings from Wage and Salary Jobs After Random Assignment Using Administrative Data

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Earnings from Wage and Salary Jobs in Quarter After Random Assignment			
Quarter 1	2,892	2,871	22
Quarter 2	3,282	3,412	-130
Quarter 3	3,727	3,807	-80
Quarter 4	3,921	3,929	-8
All quarters 1 to 4	13,823	14,019	-196
Full Sample Size	2,034	2,044	4,078

Source: UI administrative earnings records.

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

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

Differences Between the Two Sources of Data. The earnings reported on the survey are higher than the earnings reported in the administrative data for both the program and control groups (except in the first quarter). However, the differences in the impacts occur because the differences in earnings between the two data sources are larger for the control group. In quarter 2, for example, the survey-reported earnings are higher than the administrative-reported earnings by 9 percent for the program group and 16 percent for the control group.

Conceivably, the two sources of data could have yielded different estimates because the survey data was restricted to survey respondents whereas the UI administrative data is available for the full sample. However, the findings on employment rates and earnings were similar when the analysis of UI administrative data was restricted to survey respondents, suggesting that survey nonresponse was not biasing the estimates based on survey data.

The survey data and UI administrative data could have differed for other reasons. As mentioned above, UI administrative data come from the records filed by employers with their states' UI agencies, and thus, these records will not include jobs in which the employer does not report earnings because the earnings are not covered by the UI system. In other cases, the UI administrative data for a given individual may be missing if the person moved out of state or the employer did not have the correct Social Security Number, in which case the person would be incorrectly categorized as non-employed (Hotz and Scholz 2001).

Employers could also understate earnings or pay workers in cash to avoid taxes. On the other hand, the survey respondents may not have accurately recalled when jobs started and ended. For the overall *impacts* to deviate so strongly in the first two quarters of the follow-up period would require that the discrepancies were systematically different for the program and control groups.

In the survey, the program and control groups were equally likely to have reported working but not have any record of employment in the administrative data (and vice versa). The main discrepancy is in reported earnings among those who were employed according to both sources of data—on average, the gap between earnings according to the survey data compared to the administrative data is positive for both the program and control groups, but it is larger for the control group. This finding remains a puzzle, and consequently, the negative impacts on earnings reported in the survey must be interpreted with caution. Nonetheless, both sources of data confirm that GATE did not increase earnings.

Earnings Prior to Random Assignment. Administrative data on the earnings of program and control group are also available for the four quarters before random assignment. As expected, because the two groups were chosen randomly, there were no significant differences in earnings

prior to random assignment. For both the program and control group, the average quarterly earnings fell during the year before random assignment. For the control group, for example, earnings four quarters prior to random assignment are about \$6,300 compared to \$4,000 in the quarter prior to random assignment (see Table VI.11). This is consistent with people deciding to apply to Project GATE after a loss of employment. This downward trend in earnings prior to entering an employment and training program is frequently observed and is known as the “Ashenfelter dip” (Ashenfelter 1978). While there was an upward trend for both program and control group members in earnings from wage and salary employment after random assignment, earnings did not regain their pre-GATE levels within the first year after random assignment.

Table VI.11: Earnings from Wage and Salary Jobs Before Random Assignment Using Administrative Data

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Earnings from Wage and Salary Jobs in Quarters Before Random Assignment			
Four quarters before	\$6,546	\$6,307	\$239
Three quarters before	6,510	6,271	239
Two quarters before	5,787	5,668	119
One quarter before	4,126	3,971	155
Full Sample Size	2,034	2,044	4,078

Source: UI administrative earnings records.

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

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

6.5.3 Total Earnings

Overall, the total earnings of the sample were relatively low, but GATE participants earned significantly less in total, because their earnings from self-employment during the 18-month follow-up period did not compensate for the loss of earnings from wage and salary jobs. According to the survey data, GATE participants earned an average of \$24,337 from wage and salary employment in the six quarters after random assignment, and the control group members earned \$26,135 in total, a statistically significant difference at the 10 percent level of \$1,798 (see Table VI.7). Moreover, as reported previously, this was not offset by an increase in income from businesses. Even if the

administrative earnings data are used instead of the survey data, compared with the control group, the program group had both lower earnings from wage and salary jobs (though only by \$196) and lower earnings from businesses.

For those sample members who were receiving UI when they applied to Project GATE, total earnings from wage and salary jobs over the follow-up period were \$936 lower for the program group compared with the control group and this was not offset by an increase in business earnings (see Table VI.8). However, over the entire follow-up period, none of the impacts on earnings for this subgroup, whether from businesses or wage and salary jobs, were statistically significant.

6.6 Job Satisfaction

The fact that many people chose to own their own businesses rather than work as wage and salary earners implies that self-employment may have non-pecuniary benefits that cannot be captured by measures of earnings alone, as hypothesized by Hamilton (2000). However, Table VI.12 reveals that GATE participants were not much more satisfied in their employment positions than the control group members. Just under half of both groups reported being very satisfied with their employment situations and an additional 37 percent were somewhat satisfied. Although GATE participants were significantly less likely than control group members to be very dissatisfied, few people in either group were dissatisfied. Among those who were exclusively self-employed, GATE participants were less likely to be very satisfied (58 compared to 65 percent) but equally likely to be at least somewhat satisfied (92 versus 93 percent). GATE participants who worked exclusively in wage and salary jobs also had similar levels of satisfaction to their control group counterparts.

6.7 Characteristics of Wage and Salary Jobs

This section turns to 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 group may be either

because Project GATE led to different jobs or because the characteristics of people with jobs differ between the two groups.

Table VI.12: Satisfaction With Employment at the Wave 2 Follow-up

Outcome	Program Group Mean	Control Group Mean	Conditional Difference
For Those Employed in Either Wage and Salary Job or for Themselves^a			
Very satisfied	49%	48%	1
Somewhat satisfied	37	36	1
Somewhat dissatisfied	11	10	1
Very dissatisfied	4	6	-3 ***
For Those Working for Themselves Only^b			
Very satisfied	58%	65%	-7 *
Somewhat satisfied	34	27	8 **
Somewhat dissatisfied	6	6	0
Very dissatisfied	2	3	-1
For Those Employed in Wage and Salary Jobs Only^c			
Very satisfied	41%	38%	3
Somewhat satisfied	40	41	-2
Somewhat dissatisfied	14	12	2
Very dissatisfied	5	8	-4 **
Number of Respondents	1,276	1,176	2,452

Source: Follow-up survey, Wave 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. Means computed using only sample members who worked at a wage and salary job between Waves 1 and 2. As the means were computed over nonrandom samples of the program and control group, the differences should not be interpreted as impacts.

^aThe p-value on a chi-square test of distributional differences equals 0.04.

^bThe p-value on a chi-square test of distributional differences equals 0.11.

^cThe p-value on a chi-square test of distributional differences equals 0.20.

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

Consistent with the finding that employment at wage and salary jobs was lower for GATE participants in the two quarters immediately after random assignment, GATE participants took longer before starting their first jobs. It was about 14 weeks after random assignment on average before unemployed GATE participants began their first jobs compared with 12 weeks for the control group (see Table VI.13). This was especially prominent in Philadelphia and Minneapolis/St. Paul.

Among those who had worked in at least one job, both groups worked 36 hours per week on average at their current or most recent jobs as of the Wave 2 survey (see Table VI.13). Both the program and control group earned about \$16 to \$17 per hour.

Both program and control group members who worked at wage and salary jobs were equally likely to have received fringe benefits through their most recent jobs as of the Wave 2 survey. About 50 percent of the full sample received paid sick leave, and this was similar for paid vacation, paid holidays, health insurance, and retirement benefits (see Table VI.13).

Both groups also worked at jobs across a wide range of industries and occupations, but the distributions of each were strikingly similar. A chi-square test confirms the similarity of these distributions. Overall, there is little evidence that Project GATE affected the characteristics of wage and salary jobs, with the exception that participants' wages at their most recent jobs were somewhat lower.

Table VI.13: Characteristics of Current or Most Recent Wage and Salary Job at the Wave 2 Follow-up

Outcome	Program Group Mean	Control Group Mean	Conditional Difference
Weeks after Random Assignment Before First Job Began	14	12	2 **
Average Hours per Week Worked	36	36	0
Average Hourly Wage	\$16.31	\$17.42	-\$1.11
Fringe Benefits Received			
Paid sick leave	50	49	1
Paid vacation	57	56	1
Paid holidays	57	59	-2
Health insurance or membership in an HMO or PPO plan	59	58	0
Retirement, pension benefits, or a 401K plan	51	51	0
Life insurance	48	49	-1
Number of Respondents	1,162	1,109	2,271

Source: Follow-up survey, Wave 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. Means computed using only sample members who worked at a wage and salary job between Waves 1 and 2. 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.

In this chapter, impacts of Project GATE on total employment and earnings were examined. The following chapter describes how Project GATE affected self-sufficiency. Topics include receipt of unemployment insurance based on both administrative data and survey data; receipt of public assistance; and household income and earnings of spouses.

CHAPTER VII.

HOW DID PROJECT GATE AFFECT SELF-SUFFICIENCY?

By providing an alternative to wage and salary employment, one of Project GATE's objectives was to increase employment and hence participants' self-reliance. However, Project GATE did not increase employment and may have even decreased earnings at the beginning of the follow-up period. This chapter explores whether Project GATE led to an increase in participants' reliance on UI and public assistance such as food stamps as they began working on their businesses. It also explores the impacts of Project GATE on household income and the labor market participation of the entrepreneurs' spouses. The key findings are presented in the box below.

Key Findings: Impacts on Self-Sufficiency

- Project GATE increased by about one week the amount of time spent on UI over the follow-up period and increased the amount of UI benefits received by about \$300 per program group member.
- The impact on the receipt of UI benefits was larger for those who were receiving UI when they applied for Project GATE.
- Project GATE had no impact on the receipt of public assistance benefits, household income, or the earnings of the entrepreneur's spouse.

This chapter begins with a discussion of the impacts of Project GATE on UI receipt, using both administrative and survey data. 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 Insurance

While a long-run goal of Project GATE was to increase self-sufficiency and hence decrease UI receipt, the expected direction of any effect on UI receipt in the short-run is unclear. While GATE participants focus on starting or growing a business, they may be less likely to work in a wage and salary job. Chapter VI provides some evidence that Project GATE decreased wage and salary employment in the first months after random assignment. All else being equal, the decreased wage and salary earnings would increase the likelihood that Project GATE participants were eligible for UI. In addition, in the Minnesota sites, the work search requirement was waived for Project GATE program group members – but not for GATE control group members. Hence Project GATE may have increased the time that program group members could stay on UI and still work on their business, relative to control group members.¹⁰ On the other hand, UI agencies in all three demonstration states consider working more than 32 hours per week on a business as making the person “unavailable for work” and hence ineligible for benefits. Any earnings from self-employment could also lead to a reduction in UI benefits.

The impact of Project GATE on UI receipt was estimated using two data sources: (1) administrative records collected from the state UI agencies, and (2) the 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 and so it is not always possible to identify whether payments were made before or after random assignment. Due to time lags in data availability, the administrative data are also available for only four quarters after random assignment.

¹⁰In 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 there.

The advantages of the survey data are that they are available for six quarters after random assignment and provide data on the receipt of benefits over the follow-up period. However, the survey data are subject to recall error and are only available for survey respondents.

7.1.1 Impacts Estimated Using the Administrative Data

According to the administrative data, Project GATE had at most a very modest impact on the probability of establishing a new UI claim (see Table VII.1). The program group members were slightly less likely to establish a claim in the first quarter after random assignment, but the impact was only about 1 percentage point and statistically significant at the 10 percent level. No statistically significant impact on the probability of establishing a claim was found in any subsequent quarter or in the full year after random assignment.

Table VII.1: Impacts on Employment Receipt of Unemployment Insurance Benefits Using Administrative Data

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Established a New Unemployment Insurance (UI) Claim			
Quarter 1	3%	3%	-1 *
Quarter 2	2	1	1
Quarter 3	3	3	0
Quarter 4	4	3	1
Any quarter 1 to 4	11	11	0
Number of Weeks Paid over 24 Months			
New claim established before random assignment	10.5	9.9	0.6 **
New claim established after random assignment	1.9	1.7	0.2
New claim established either before or after random assignment	12.4	11.6	0.8 **
Total UI Payments			
New claim established before random assignment	\$3,800	\$3,521	\$280 ***
New claim established after random assignment	584	529	55
New claim established either before or after random assignment	4,385	4,050	335 ***
Sample Size	2,034	2,044	4,078

Source: State Unemployment Insurance records.

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

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

As the UI data provided only total benefits paid during the entire claim, all payments made on a claim were considered, whether the payments were made before or after random assignment. As the program and control group were chosen randomly, few differences between the two groups in UI receipt should exist prior to random assignment. Measures of UI receipt prior to random assignment collected from the GATE application form are also included in the regression models to adjust for the differences that do exist. Hence, the difference between UI payments made to program and control group members should reflect the impact of the program after random assignment.

The number of weeks of UI receipt and total UI payments were examined for three different time periods: (1) the 12 months prior to random assignment, (2) the 12 months after random assignment, and (3) the 24 months that include the 12 months before and 12 months after random assignment.

Project GATE had small positive impacts on the number of weeks of UI paid and the total UI payments made (see Table VII.1). For any claim established within the 12 months before or 12 months after random assignment, 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 them claiming more weeks of payments during the claim 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 (see Table VII.2). The impact was even larger—\$1,045—for those who submitted a UI claim in the quarter prior to random assignment. The impact on UI receipt is especially large for the UI recipients in the Minnesota sites, where the UI work search requirements were waived for Project GATE participants.

Table VII.2: Impacts on UI Benefits Received, Using Administrative Data, by Subgroup and Site

Outcome ^a	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Receiving UI at GATE Application			
Yes	\$8,539	\$7,934	\$605 ***†††
No	\$1,549	\$1,710	\$161
Submitted a UI Claim in Quarter Prior to Random Assignment			
Yes	\$8,433	\$7,387	\$1,045 ***†††
No	\$3,126	\$2,975	\$151
Receiving UI at GATE Application, By Site			
Philadelphia	\$8,519	\$7,848	\$671
Pittsburgh	\$9,475	\$8,665	\$810
Minneapolis/St. Paul	\$9,139	\$8,358	\$781 ***
Northeast Minnesota	\$8,637	\$6,921	\$1,716 **
Maine	\$5,798	\$6,375	-\$578

Source: State Unemployment Insurance records.

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

^a All payments from claims established either in the year prior to random assignment or in the year after random assignment

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

†/††/††† Estimates significantly different between subgroups at the 0.10/0.05/0.01 level.

7.1.2 Impacts Estimated Using Survey Data

Three outcome variables on UI receipt were collected at each wave of the survey: (1) whether the sample member had received UI benefits, (2) the number of weeks in which UI was received, and (3) the total amount of benefits received. These outcomes were collected for the period between random assignment and the Wave 1 survey and between Waves 1 and 2 of the survey.

Findings from the survey data corroborate the findings from the administrative data (see Table VII.3). 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.

Table VII.3: Impacts on Receipt of Unemployment Insurance Benefits Using Survey Data

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Received Unemployment Insurance			
Between random assignment and Wave 1 survey	38%	38%	0
Between Wave 1 survey and Wave 2 survey	12	11	1
Between random assignment and Wave 2 survey	44	43	1
Weeks of UI received			
Between random assignment and Wave 1 survey	7	6	0
Between Wave 1 survey and Wave 2 survey	2	1	1 **
Between random assignment and Wave 2 survey	9	7	1 **
Amount of UI received			
Between random assignment and Wave 1 survey	\$2,114	\$1,926	\$188 *
Between Wave 1 survey and Wave 2 survey	525	388	137 *
Between random assignment and Wave 2 survey	2,622	2,279	343 **
Number of Respondents	1,516	1,430	2,946

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

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.

7.2 Receipt of Public Assistance

A key measure of self-sufficiency is the extent to which participants need to rely on public assistance. The 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). The respondents were asked whether they had received the benefits and, if so, for how many months over the follow-up period, and how much they received on average per month.

Project GATE had no statistically significant impact on the likelihood of the participant receiving any benefit or on the amount of benefits received (see Table VII.4). This was true for both the full sample and the subgroup of sample members who were receiving UI when they applied to Project GATE. The majority of members of both the program and control groups received no benefits.

Food stamps were the most common type of assistance received, but over the entire follow-up period, only 17 percent of the sample members received them.

Table VII.4: Impacts on Receipt of Public Assistance

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Received Benefit			
Food stamp benefits	17%	17%	0
Temporary Assistance for Needy Families (TANF) or cash welfare	9	10	-1
Social Security Retirement (SSR), Social Security Disability (SSD), or Social Security Survivors (SSS) benefits	14	15	-1
Veterans' benefits	3	3	0
Months Received Benefits			
Food stamp benefits	1.6	1.7	-0.2
TANF or cash welfare	0.7	0.9	-0.2
SSR, SSD, or SSS benefits	1.9	1.8	0.0
Veterans' benefits	0.4	0.3	0.0
Amount of Benefits Received			
Food stamp benefits	\$331	\$374	-\$43
TANF or cash welfare	268	347	-78
SSR, SSD, or SSS benefits	1,788	1,587	201
Veterans' benefits	171	155	16
Number of Respondents	1,516	1,430	2,946

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

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.

7.3 Household Income and Earnings of Spouses

Household income is another important key measure of the participant's well-being. While the previous chapter discussed the impacts of Project GATE on earnings from self-employment or 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 a small, but not significant, negative impact on average household income. In the year prior to the Wave 1 survey, average annual income was \$41,800 for the program group members and \$43,000 for the control group members (see Table VII.5). By Wave 2 of the survey, average household income had risen to \$46,200 for the program group and \$45,900 for the control group. This negative impact on household income of about \$1,200 at the first wave is smaller than would be expected from the negative impact on wage and salary earnings of about \$2,700 in the first two quarters after random assignment. A small amount of this discrepancy can be explained by the increase in the amount of UI received. It is possible that the rest of the discrepancy reflects measurement error. Household income is frequently underreported, especially when the respondent is asked about aggregate annual income (Moore et al. 2005).

Table VII.5: Impacts on Household Income and Spousal Earnings

Outcome	Program Group Mean	Control Group Mean	Impact on All Eligible Applicants
Household Income During 12 Months Before Wave 1 Follow-up	\$41,782	\$43,022	-\$1,240
Household Income During 12 Months Before Wave 2 Follow-up	\$46,162	\$45,924	\$238
Married at Wave 2 Follow-up	45%	45%	-1
Spouse Works at Wave 2 Follow-up	34	34	0
Weekly Earnings of Spouse at Wave 2 Follow-up	\$231	\$215	\$16
Number of Respondents	1,516	1,430	2,946

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

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.

The fact that GATE participants were more likely to have worked on starting a business than control group members during the follow-up period could have affected their husbands and wives in one of two opposing ways. A reduction in the participant's earnings 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. Reports from the Wave 2 survey suggest that Project GATE had no lasting effect on whether the GATE participant was married, whether his or her spouse worked, and the amount of his or her spouse's earnings from wage and salary employment.

This chapter presented findings on the impact of Project GATE on receipt of UI, receipt of public assistance, and spouse and household income. In the next chapter, impacts of Project GATE on the unemployed are analyzed.

CHAPTER VIII. IMPACTS OF PROJECT GATE ON THE UNEMPLOYED

Previous chapters presented the impact of Project GATE on business ownership (Chapter V), earnings (Chapter VI), and self-sufficiency (Chapter VII). Each of these chapters focused on measuring program impacts by comparing outcomes of all program group members with the outcomes of all control group members. This chapter focuses on measuring program impacts for an important subgroup of interest – the unemployed.

The unemployed are of particular interest because self-employment has been shown to be a promising reemployment strategy for some unemployed individuals. For example, the UI Self-Employment Demonstration study found that self-employment assistance programs are viable policy tools to promote the rapid reemployment of unemployed workers (Benus, et al. 1995). Currently, a number of states (Delaware, Maine, Maryland, New Jersey, New York, Oregon and Pennsylvania) operate SEA programs, providing self-employment assistance for UI recipients.

The remainder of this chapter is organized as follows. It begins by describing two important subgroups: (1) individuals not employed at the time of application to GATE, and (2) UI claimants. The description of these groups is followed by a discussion of why these groups are important for the analysis of Project GATE impacts. Next, impact estimates for the full sample are summarized followed by impact estimates for the two unemployed subgroups. The chapter concludes with a discussion of the implications of the findings. The key findings are presented in the box below.

Key Findings: Impacts on the Unemployed

- Project GATE increased business ownership of those who were not employed by more than it increased business ownership of those who were employed prior to random assignment.
- Among recent UI claimants in Minnesota, Project GATE increased the probability of owning a business (12 to 15 percentage points).
- During the second half of the observation period, recent UI claimants in Minnesota experienced strong and statistically significant employment gains (7 to 9 percentage points).
- Increased likelihood of business ownership and increased employment gains, however, did not result in an increase in earnings.

8.1 Analysis Samples

DOL programs serve the entire labor force, both the employed and unemployed. DOL programs that are designed to serve unemployed workers generally help these workers gain new skills, find productive employment, and provide support during brief periods of unemployment. Thus, the unemployed represent a key constituency group for DOL.

One DOL program which focuses on self-employment, the SEA program, enables unemployed workers to create their own jobs by starting their own small businesses. SEA is a voluntary program for States and, currently, only Delaware, Maine, Maryland, New Jersey, New York, Oregon and Pennsylvania operate SEA programs.

While the GATE demonstration was designed to serve anyone interested in self-employment (i.e., employed, unemployed, and out-of-the-labor-force individuals), the following groups are of special interest: (1) individuals not employed at the time of application, and (2) UI claimants. These two groups are described below.

8.1.1 Not Employed

The “not employed” group includes both the unemployed and those who are out of the labor force. Since self-employment is a potential path into the labor force for those who are out of the labor force (e.g., homemakers) and since self-employment is a potential path into employment for the unemployed, it is important for DOL to determine whether Project GATE helped individuals who were not employed at the time of their application to GATE.

Another reason for analyzing the not employed group is to determine if the observed GATE impacts for the not employed group differ from the full sample impacts. That is, one may expect differential impacts for this group vis-à-vis the full sample since the opportunity cost of working full time towards self-employment is lower for this group than for employed individuals. Previous research has 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).

Still another reason for analyzing the not employed group is that GATE appears to have been highly attractive to this group. That is, even though Project GATE targeted anyone interested in self-employment – working or not working – Project GATE attracted mostly individuals without jobs. Over half (56 percent) of GATE applicants did not have a job at the time of application.

8.1.2 UI Claimants

Among the group that is not employed, there is an important subgroup – UI recipients. UI recipients who participate in self-employment training programs represent an important group since this group is currently served by DOL’s SEA program. Below, features of the SEA program are described.

SEA program

Under the SEA program, states can pay a self-employment allowance instead of regular UI benefits, to help unemployed workers while they are establishing businesses and becoming self-employed. SEA participants receive weekly allowances while they are getting their businesses off the ground. These allowances are the same weekly amounts as the worker's regular UI benefits.

In addition to the financial support provided by the allowances, the SEA program incorporates another interesting feature: a work search waiver. That is, SEA participants may work full-time on starting their business instead of looking for wage and salary jobs (as is typically required when collecting UI benefits). In effect, participants in SEA are exempt from work search while participating in the SEA program.

The design of the GATE demonstration in Minnesota resembles the design of the SEA program. That is, like the SEA program, the Minnesota GATE demonstration incorporates self-employment training and a job search waiver (while collecting UI benefits). It should be noted, however, that the design of Project GATE in Minnesota differed from the SEA program in one important respect: cost neutrality to the trust fund. That is, the SEA program was required to not increase the total amount of UI benefits paid out to recipients, while the design of Project GATE did not incorporate this feature. Thus, while an analysis of the impacts of Project GATE on the Minnesota UI may shed some light on the effectiveness of DOL's SEA program, it does not represent a rigorous evaluation of the SEA program.

Project GATE and UI Claimants

The major program features of Project GATE in Minnesota, Pennsylvania, and Maine are presented in Table VIII.1. As indicated in this table, in Minnesota, GATE UI recipients received a work search waiver, self-employment training, and business counseling; control group members did not receive these services. As a result, in Minnesota it is possible to measure the impact of self-employment services combined with the work search waiver by comparing program group members who are also UI claimants with similar control group members.

In Pennsylvania, there was no work search requirement for either program or control group members. As a result, comparing program group members who are also UI claimants with similar control group members, only measures the effect of self-employment training and business counseling (since both program and control groups have similar work search requirements). Thus, the GATE demonstration in Pennsylvania cannot shed much light on the effectiveness of a program that includes both training and a work search waiver.

In Maine, some GATE program group members received a work search waiver while others did not; the same was true for control group members (some did and others did not receive a work search

waiver). In Maine, only individuals who participated in the Maine SEA program received a work search waiver - whether they were in the program or the control group. As a result, the GATE demonstration in Maine also cannot shed much light on the effectiveness of a program that combines self-employment training and business counseling with a work search waiver. In summary, only the Minnesota design can shed light on the effectiveness of the SEA program.

Table VIII.1: Program Features of Project GATE for UI Recipients

State	Program Group Members	Control Group Members
Minnesota	Work search waived for GATE participants	No work search waiver
	Self-employment training	No self-employment training
Pennsylvania	No work search requirements	No work search requirements
	Self-employment training	No self-employment training
Maine	Work search waived only if participate in the Maine SEA program	Work search waived only if participate in the Maine SEA program
	Self-employment training	No self-employment training

Minnesota UI Claimant Analysis Sample

An analysis of GATE program impacts for UI claimants in Minnesota is interesting for a number of reasons. First, an analysis of program impacts for this group can shed light on SEA program impacts. Another important reason for analyzing GATE program impacts for UI claimants in Minnesota is to assess whether the GATE impact results corroborate the findings of an earlier self-employment training experimental design demonstration. That is, the GATE impact estimates for the full sample (presented in earlier chapters) are substantially smaller than the impacts found in an earlier study - the UI Self-Employment Demonstration study. To reconcile the difference in impact estimates from the two studies, it is important to measure the impacts of GATE on a similar sample as was used in the previous study. Since the previous study analyzed program impacts on

unemployed workers, for comparability, it is important to also analyze GATE program impacts for the unemployed.

The UI Self-Employment Demonstration targeted only recent UI claimants. Therefore, to make the two analyses even more comparable, it is necessary to identify only the recent UI claimants in Minnesota. Thus, the final analysis sample includes only GATE applicants who filed a UI claim within one quarter (13 weeks) prior to random assignment.

8.2 Analysis of GATE Impacts on the Unemployed

This section presents the impacts of Project GATE on the unemployed subgroups and discusses how these impacts differ from the impacts for the full sample. First, a brief summary describes the impacts of GATE on key outcomes for the full sample. Next, these findings are compared with the findings for the unemployed groups.

In the following discussion, business earnings include only wages and salaries that business owners pay themselves. Business earnings thus exclude such non-salary items as bonuses and profit. As a result of these exclusions, business earnings may understate the true income of the self-employed.

8.2.1 Recap of Impacts on the Full Sample

This section briefly reviews the impacts estimated in earlier chapters for the full sample. Specifically, findings on the following key outcomes are summarized: business ownership, wage and salary employment, overall employment, earnings, and receipt of UI benefits and other public assistance.

- ***Business Ownership*** – As discussed in Chapter V, Project GATE had a small and declining impact on the likelihood of self-employment over the follow-up period.
- ***Wage and Salary Employment*** – The positive impact on the probability of being self-employed was mirrored by a corresponding negative impact on being employed in a wage and salary job.
- ***Overall Employment*** – GATE participants were about as likely to be employed (whether for themselves or someone else) as those who did not participate in Project GATE.

- **Earnings** – Project GATE decreased earnings from wage and salary jobs by about \$1,800 over the follow-up period. Earnings from self-owned businesses did not make up for this loss. Hence, Project GATE had a negative overall impact on total earnings.
- **Unemployment Insurance Benefits and Other Public Assistance** – Project GATE had small positive impacts on the number of UI benefit weeks and the total amount of UI payments. Specifically, GATE increased the duration of UI benefits by about one week. It also increased the amount of UI benefits collected by about \$300.

Project GATE did not have an impact on other kinds of public assistance benefits, such as Food Stamps, TANF, Social Security Retirement, Disability, and Survivors benefits, and Veterans' benefits.

8.2.2 Impacts on Unemployed Subgroups

The following subsections present regression-adjusted impacts of Project GATE on a number of key outcomes. The impact estimates are presented in graphical form for the following three groups:

- Full program and control group;¹¹
- Non-working group; and
- Recent UI Claimants in Minnesota.¹²

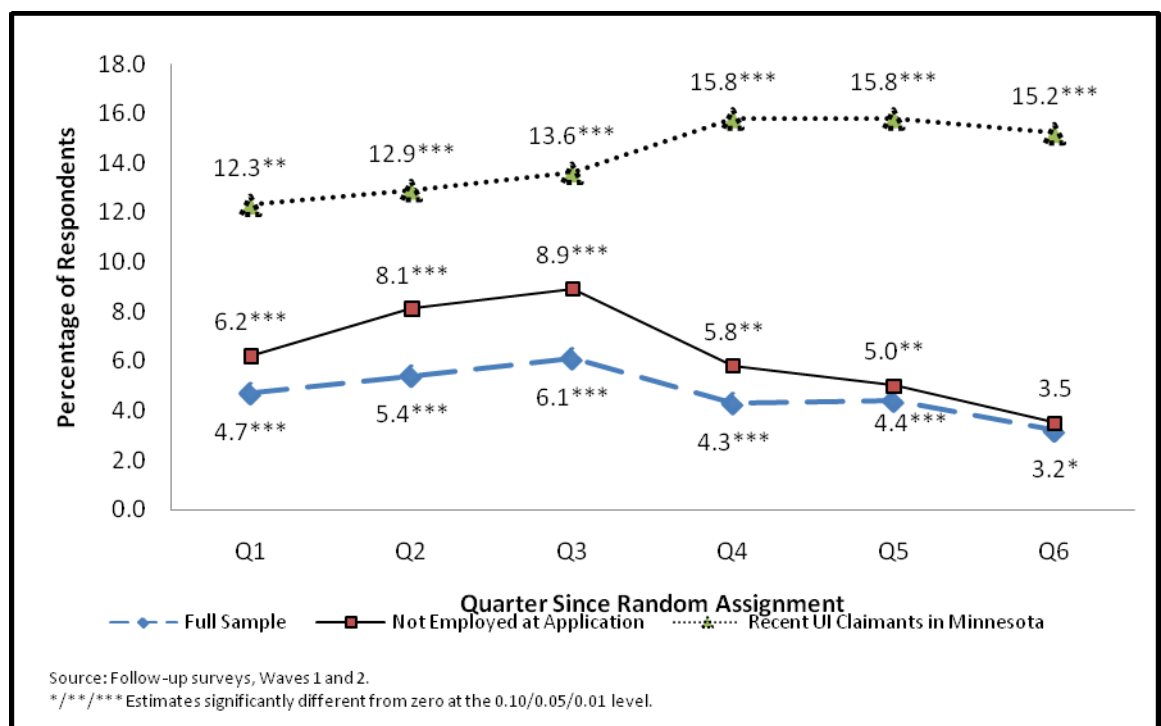
¹¹ The impact estimates for the full program and control group were presented earlier. These results are repeated here to simplify the comparison of program impacts across the three groups.

¹² Recent UI claimants are defined as applicants whose first UI claim week was during the 90 days prior to random assignment.

Employment

Business Ownership – For the full sample, the impact of Project GATE on business ownership is depicted in Figure VIII.1 by a dashed line. As indicated in the figure, program impact peaked in the third quarter (Q3) when GATE program group members were 6.1 percentage points more likely to be self-employed than control group members. The impact of Project GATE on business ownership among those who were not employed at the time of random assignment is higher than the impact for the full sample in every quarter (as indicated by the solid line). In the first quarter after random assignment (Q1), for example, program group members were 6.2 percentage points more likely to be self-employed than members of the control group. This impact peaked during the third quarter after random assignment at 8.9 percentage points; after Q3, the impact declined to 3.5 percentage points in the sixth quarter (not significant). This pattern of peaking and then declining closely resembles the trends of the full sample.

Figure VIII.1: Impacts on Business Ownership after Random Assignment



Among the three groups from Project GATE, the recent UI claimants in Minnesota exhibited the highest program impact (dotted line). Moreover, unlike the two other groups where impacts

declined in later quarters, the impact on business ownership among recent UI claimants in Minnesota remained strong and statistically significant. Specifically, this group experienced strong and persistent impacts throughout the observation period, starting at about 12 percentage points and increasing to and stabilizing at over 15 percentage points.

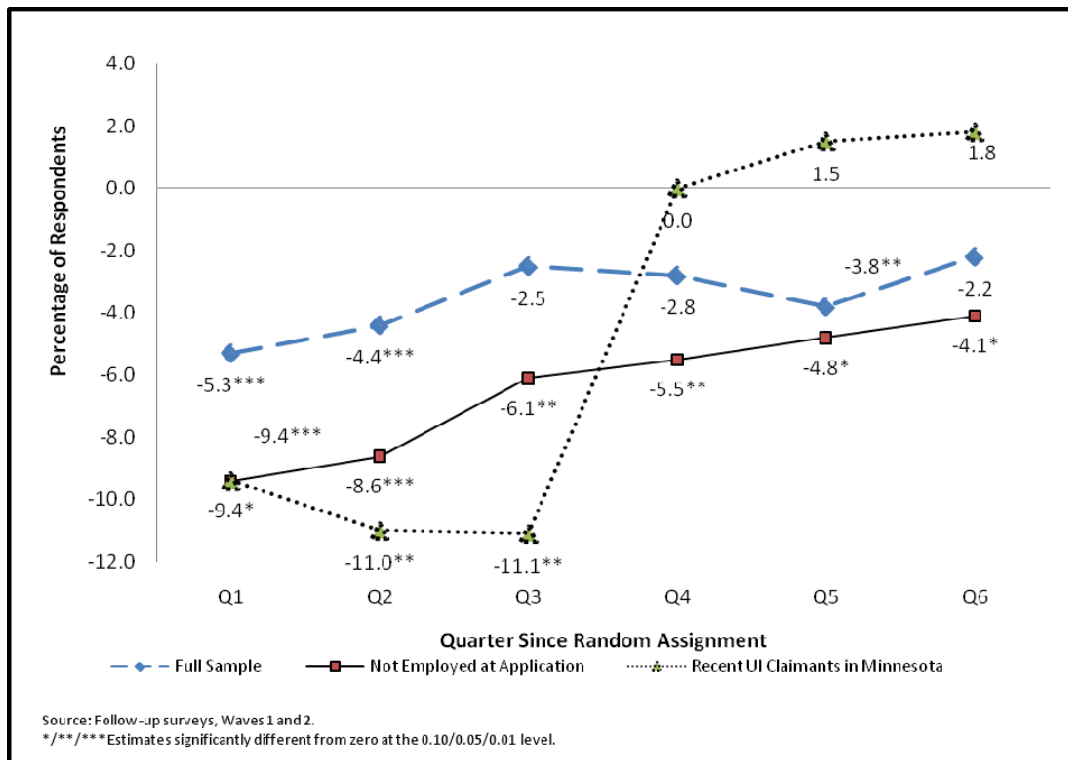
It is interesting to note that the magnitude of the effect of Project GATE for this group is comparable to the impacts found earlier in the UI Self-Employment Demonstration. Thus, the findings from this evaluation help to corroborate the findings from the evaluation of the UI Self-Employment Demonstration. In addition, the finding that recent UI claimants in Minnesota experienced significant impacts on business ownership provides additional indication that SEA type programs may be effective in assisting people move out of unemployment and into self-employment.

Wage and Salary Employment – As indicated in Figure VIII.2, GATE reduced the likelihood of wage and salary employment for the full sample and for the non-working group throughout the follow-up period. It is interesting to note that for recent UI claimants in Minnesota, the reduction in early quarters (Q1 - Q3) was even greater. In later quarters (Q4 – Q6), however, Project GATE had no significant impact on the likelihood of wage and salary employment for this group.

Total Employment – Combining wage and salary employment together with self-employment yields a measure of total employment. As indicated in Figure VIII.3, the impacts on overall employment for the full sample and for GATE participants who were not working at random assignment were similar. Both groups did not experience any overall employment impacts. In effect, the gains experienced in self-employment (see Figure VIII.1) were offset by declines in wage and salary employment (see Figure VIII.2).

In strong contrast, however, recent UI claimants in Minnesota registered strong overall employment gains. Throughout the second half of the follow up period (Q4 – Q6), this group experienced strong and statistically significant employment gains (7.1 to 8.7 percentage points). Two factors contributed to the overall employment gains for this group: (1) the impact on the likelihood of self-employment increased over the observation period, and (2) the negative impact on the likelihood of wage and salary employment decreased over the observation period. These two forces combined to yield improved overall employment impacts for recent UI claimants in Minnesota.

Figure VIII.2: Impacts on Working for Someone Else after Random Assignment



Earnings

Earnings from Businesses – Project GATE did not have any impact on business earnings.

As indicated in Figure VIII.4, all three groups experienced small and insignificant business earnings impacts. Thus, even though the three groups experienced significant business ownership impacts (see Figure VIII.1), this did not translate into significant impacts on business earnings. As described in Chapter V, many of these businesses were in their infancy and therefore unable to generate significant business earnings.

Figure VIII.3: Impacts on Working for Self or Someone Else after Random Assignment

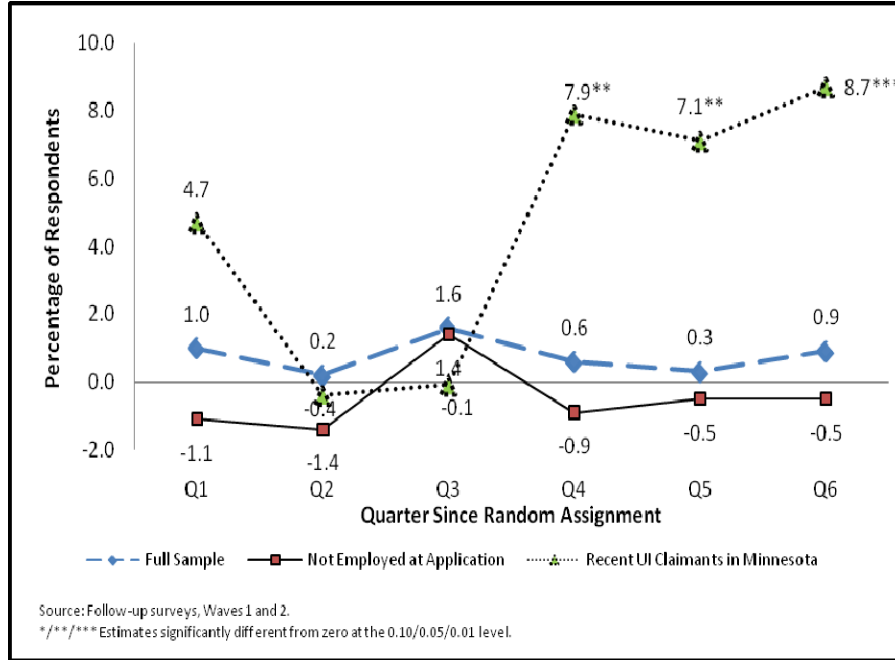
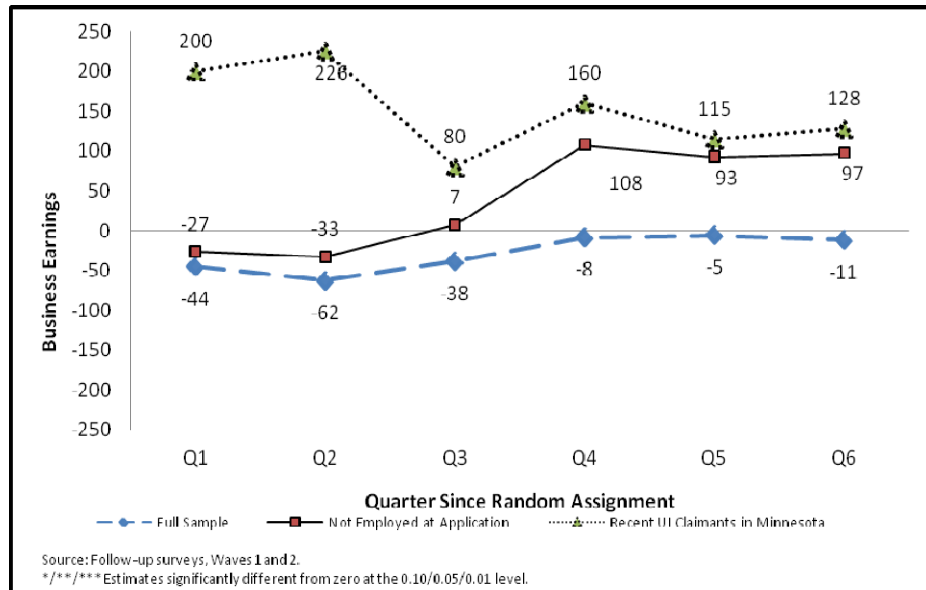


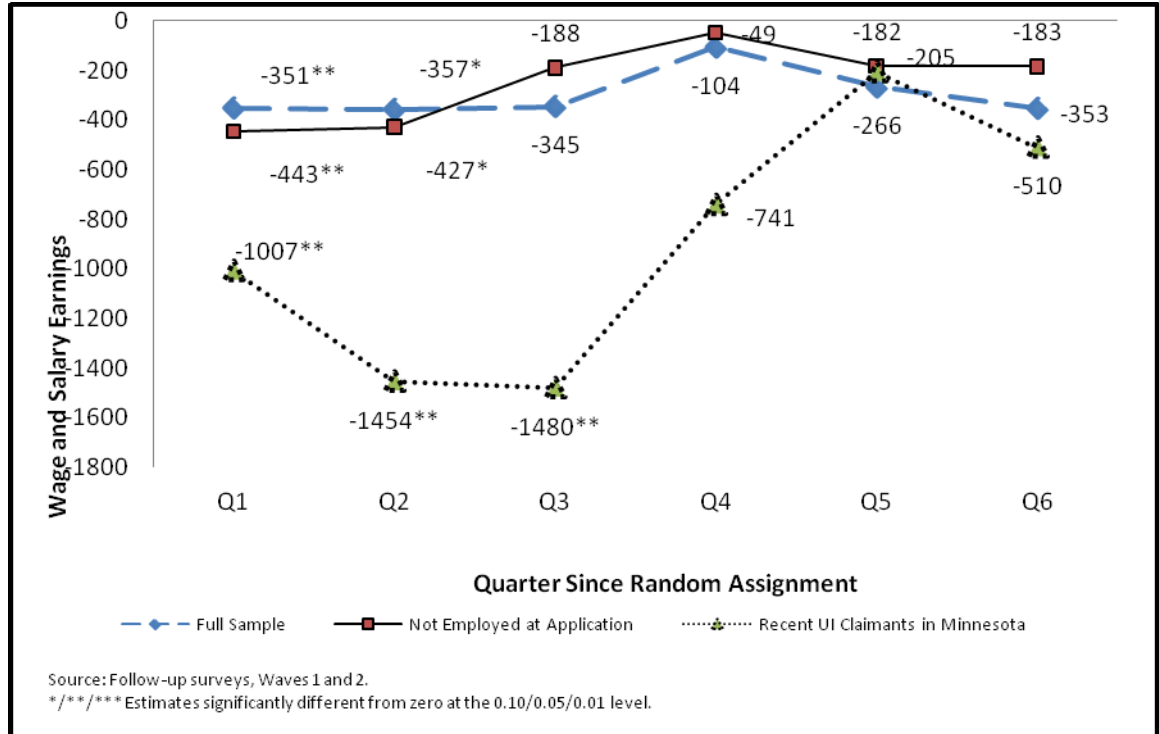
Figure VIII.4: Impacts on Earnings from Businesses after Random Assignment



Earnings from Wage and Salary Jobs – As indicated in Figure VIII.5, among all three groups, Project GATE had a negative and statistically significant impact on earnings from wage and salary jobs during the first few quarters after random assignment. In the first three quarters after random assignment, this impact was substantially larger in magnitude for

recent UI claimants in Minnesota than for the other two groups. In all three groups, the impact of GATE on wage and salary earnings diminished and was not statistically significant in later quarters.

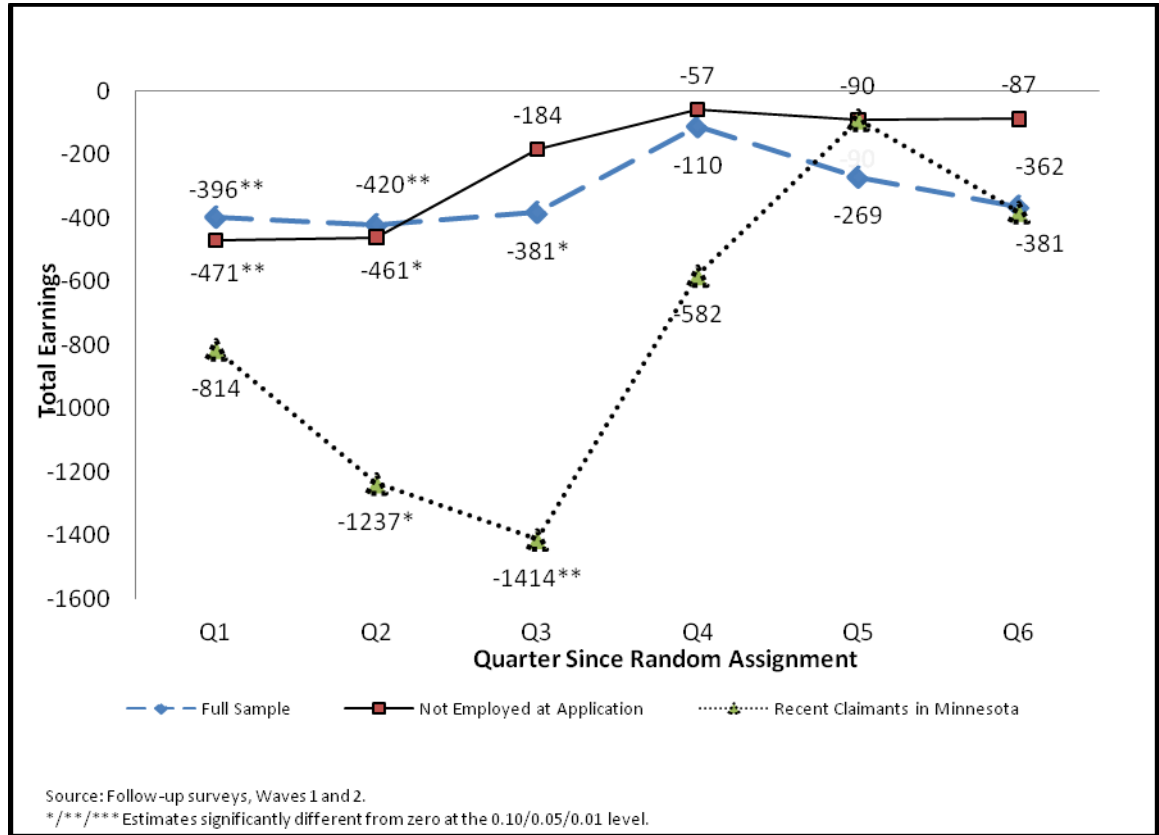
Figure VIII.5: Impacts on Earnings from Wage-and-Salary Jobs after Random Assignment



Total Earnings – Combining earnings from wage and salary jobs and earnings from businesses yields a measure of total earnings. The results presented in Figure VIII.6 indicate that all three groups experienced a negative impact from Project GATE in total earnings. The negative impact was similar for the full sample and for the not-working group. In contrast, the negative impact in total earnings was substantially larger for the recent UI claimants in Minnesota. This group experienced a large and statistically significant negative impact during the early quarters (Q1 – Q3). In later quarters (Q4 – Q6), however, the negative impact in total earnings was substantially smaller and statistically insignificant. The cumulative negative impact in total earnings by the end of the follow-up period was less than \$2,000 for the full sample and for the not-employed group, and it was about \$4,600 for the recent UI claimants in Minnesota.

The results on total earnings suggest that even though Project GATE had significant positive impacts on the likelihood of business ownership, this impact did not lead to sufficiently increased earnings from businesses to offset the strong negative impacts on earnings from wage and salary jobs.

Figure VIII.6: Impacts on Total Earnings in Quarter after Random Assignment



Unemployment Insurance Benefits

Project GATE increased the duration and the amount of UI benefits collection for all three groups (see Table VIII.2). The full sample and the not-working group experienced impacts of similar magnitudes. Both groups collected about one more week of UI benefits (0.8 week) and the full sample received \$335 more UI benefits than control group members and the not-employed group received \$405 more in UI benefits. In contrast, however, the recent UI claimants in Minnesota experienced more than three times these impacts. Specifically, this group collected 3.1 weeks and was paid \$1,239 more than the control group in UI benefits.

Table VIII.2: Impacts on Receipt of Unemployment Insurance Benefits

	Full Sample (All Sites)	Not Employed at Application (All Sites)	Recent UI claimants at Application (Minnesota)
Weeks Paid over 24 Months‡	0.8**	0.8*	3.1***
Total UI Payments‡	335***	405**	1,239***
Number of Observations	4,078	2,232	485
Program	2,034	1,112	284
Control	2,044	1,120	201

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

‡ New claim established either before or after random assignment.

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

A potential key factor causing this substantially larger impact on UI benefits of UI claimants in Minnesota is the work search waiver. As previously explained, GATE participants in Minnesota did not have to search for work while they were working on starting a business. In contrast, control group members were required to search for work while collecting UI benefits.

Further analysis of the data on UI claims and benefits (not shown) reveals that the impacts reported in Table VIII.2 are derived exclusively from UI claims that were already established before random assignment. Project GATE did not have an impact on the number of new UI claims established in any quarter after random assignment. In other words, Project GATE caused the existing UI claims to lengthen rather than causing new claims to be initiated.

Other Public Assistance

With a minor exception, Project GATE did not have any impacts on the collection of other public assistance by the unemployed subgroups, just as it did not have a significant effect on the full sample. As indicated by Table VIII.3, the exception is the small impact on collection of TANF benefits by the not-employed subgroup. Through the follow-up period, the program group members of the not-employed subgroup were 3 percentage points less likely to collect TANF benefits than the control group. This group also collected 0.4 months less and approximately \$170 in TANF benefits than control group members.

Table VIII.3: Impacts on Receipt of Public Assistance

Public Assistance Benefit	Full Sample (All Sites)	Not Employed at Application (All Sites)	Recent UI claimants at Application (Minnesota)
Received:			
Food Stamps	0 %	-1 %	-2 %
Temporary Assistance for Needy Families (TANF) or cash welfare	-1	-3**	1
Social Security Retirement (SSR), Social Security Disability (SSD), or Social Security Survivors (SSS)	-1	0	-1
Veterans' benefits	0	0	-1
Months Received Benefits:			
Food Stamp benefits	-0.2	-0.3	0.0
TANF or cash welfare	-0.2	-0.4**	0.0
SSR, SSD, or SSS benefits	0.0	0.2	0.2
Veterans' benefits	0.0	0.0	-0.2
Amounts of Benefits Received:			
Food stamp benefits	-43	-67	51
TANF or cash welfare	-78	-168**	-9
SSR, SSD, or SSS benefits	201	321	254
Veterans' benefits	16	-3	26
Number of Observations			
Program	2,946	1,598	401
Control	1,516	827	246
	1,430	771	155

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

8.3 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.

The impact results presented in this chapter indicate that Project GATE was more effective for the unemployed than for the broader population of GATE participants (on a number of outcomes);

GATE impacts were even greater for recent UI claimants in Minnesota. These findings are interesting for a number of reasons. First, the results of this chapter suggest that programs such as Project GATE may be most effective for recent UI claimants, especially if the program is accompanied by a work search waiver. Second, the results reported in this chapter for the group of recent UI claimants in Minnesota corroborate the results of the evaluation of the UI Self-Employment Demonstration, a similar program. Finally, the results reported for recent UI claimants in Minnesota provide insights on the effectiveness of cash supports and no job search requirements coupled with training and business counseling.

While the results of this chapter indicate that the increase in the likelihood of starting a business did not result in an increase in earnings, it is premature to expect such an increase in light of the short observation period (18 months). That is, many of the businesses have only recently begun to operate and, therefore, are not likely to generate significant earnings for the business owners. To investigate this issue, it is necessary to have a longer follow-up period. With a longer follow-up period, it is possible to assess whether these new businesses eventually result in increased earnings for GATE participants.

CHAPTER IX.

LESSONS LEARNED

The evaluation of Project GATE was designed to address whether Project GATE works, whether it could be replicated on a broader scale and 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. One important questions remains: whether it is cost-effective. Given the short follow-up period in this study (18 months) it is premature to attempt to answer this question.

To answer the cost-effectiveness question definitively, a longer follow-up period is necessary. Previous studies of entrepreneurship (e.g., Gartner et al. 2004) have 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 and the median amount of time between the first organizing activity and the time when monthly revenues exceeded monthly expenses was 38 months. These findings suggest that the present study should be viewed as preliminary. To measure the permanent impacts of Project GATE, a longer observation period is necessary.

The remainder of this chapter discusses ten general lessons learned from the evaluation of Project GATE.

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. In fact, about 70 percent of control group members received some self-employment services during the follow-up period, compared with 90 percent of the program group. Project GATE led to an average increase of 13 more 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 18-month follow-up period, participation in Project GATE led to an increase in business ownership. While the increase in business ownership was statistically significant, the magnitude of the impact was relatively modest—6 percentage points. It is important to note, however, that an analysis of the impact of Project GATE on the unemployed found more substantial program impacts for this subgroup.

5. Increased business ownership did not lead to increased self-employment earnings in the short run. Reported earnings from businesses for both program and control group members were small. Over the 18-month observation period, earnings from businesses were on average less than \$6,000 for members of both the program and control groups. Hence, even though program group members were more likely to own a business, Project GATE had no statistically significant impact on business earnings. However, because a portion of all businesses started do grow into successful businesses after a few years, a longer follow-up period would allow an estimate of the impact of Project GATE on long-term self-employment earnings.

6. Increased earnings from self-employment did not yet offset the cost of Project GATE, in the short run. 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. Depending on whether the administrative or survey data are used, earnings from wage and salary jobs fell by between about \$300 and \$1,800 per program group member throughout the follow-up period. During the same period, the additional earnings from businesses begun by GATE participants did not produce enough revenue to offset this loss in earnings.

7. Project GATE had larger impacts on business ownership among UI recipients. Over the entire follow-up period, the impact of Project GATE on business ownership among UI recipients was 9 percentage points (statistically significant), compared with no impact on those who did not receive UI. Project GATE may have had a larger impact on those who were receiving UI benefits when they applied because they had fewer alternate opportunities in the regular labor market. Moreover, not having a wage and salary job provided them with more time to work on their businesses, while the UI benefits provided a regular income.

8. Project GATE had much larger impacts on business ownership among recent UI recipients in Minnesota, where job search requirements were waived for GATE program group members. For the recent UI recipients in Minnesota, the impact of Project GATE on business ownership started at +12 percentage points in the first quarter of follow-up period and increased to +15 percentage points in the last quarter, all statistically significant. The impact on business ownership for the full sample, however, started at +6 percentage points in the first quarter and declined to +3 percentage points by the last quarter. One reason for larger impacts among recent UI recipients in Minnesota may have been that in the Minnesota sites, job search requirements that accompany the receipt of UI were waived for GATE participants, allowing them to continue receiving benefits while concentrating on their businesses, rather than looking for a wage and salary job. The results for this group may have implications for the effectiveness of the SEA program that is currently implemented in a number of states.

9. Findings from Project GATE differed from those of the UI Self-Employment Demonstration. The findings from the evaluation of Project GATE differed quite markedly from

those found from the evaluation of the UI Self-Employment Demonstration (Benus et al. 1995). Project GATE's impacts on business ownership were smaller than the impacts found in the UI Self-Employment Demonstration. Moreover, while Project GATE had no impacts on total earnings among UI recipients, the UI Self-Employment Demonstration had a positive impact on total earnings in Massachusetts, although it had no impact in Washington.

Several factors may contribute to the difference in impacts of the two programs. First, Project GATE targeted the general population whereas the UI Self-Employment Demonstration served only those individuals on UI. Second, the counterfactual experienced by the control group differed between the two interventions. Since the time of the UI Self-Employment Demonstration implementation, there has been tremendous growth in the number of self-employment service providers across the U.S. Thus, the control group in the Project GATE evaluation could access many more services than the control group in the UI Self-Employment Demonstration. Third, the UI Self-Employment Demonstration was implemented in different sites and in a different decade than Project GATE. Differences in the local economy in the UI Self-Employment Demonstration sites compared to the Project GATE sites may have affected the relative impacts of the two programs.

10. Eighteen Months is a Short Follow-Up Period. The GATE evaluation followed the sample members for 18 months after random assignment—an extremely short period of time to receive services and build a successful business. It is extremely difficult to predict the success of businesses after only 18 months. In contrast, the UI Self-Employment Demonstration followed sample members for approximately three years. For a definitive assessment of the cost-effectiveness of Project GATE, a longer follow-up period would be needed.

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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
- Two 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. It also asked detailed information about the current or last wage and salary job held by the applicant, such as wage rate.
- ***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
Typical Hours Per Week Worked at Business	34.74	35.21	-0.47
Business Considered a Financial Success	0.54	0.53	0.01

	Program Group Mean	Control Group Mean	Difference
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
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

	Program Group Mean	Control Group Mean	Difference
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	2,095	2,103	4,198

Source: Project GATE Application Forms.

^aExcludes those who reported multiple races.

^bFor those who were ever self employed.

^cFor those who had a family member who was self employed.

^dFor those who ever worked in a managerial capacity.

^eFor those with a credit history.

^fFor those with a family member who will support family.

^gThe percent who believe the negative statement is “very untrue.”

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

A.2 Two 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).

A.2.1 Content of Questionnaires

The first and second 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 survey was used to collect information about the time since the last survey—approximately 12 months.

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, amount of sales and expenses, number of employees, and if a business ended, whether the business was closed or sold.

- ***Employment*** – Together, the surveys collected a complete 18-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.

The surveys collected some information about the perceived barriers to starting a business. Both 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 4,198 GATE applicants, 82 percent responded to Wave 1 of the survey and 72 percent responded to Wave 2 of the survey. Table A.1 presents the overall response rates and the response rates by site and by program and control group.

The overall response rate for Wave 2 of the survey was higher for the program group than the control group (75 percent compared with 70 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 survey.

The response rates differed quite substantially by site. The response rate was highest in Maine (91 percent for Wave 1 and 81 percent for Wave 2) and lowest for Philadelphia (77 percent for Wave 1 and 63 percent for Wave 2).

Table A.2: Response Rates

Site	Program or Control Group	# of Sample Members	Wave 1 Survey		Wave 2 Survey	
			# of Respondents	Response Rate	# of Respondents	Response Rate
All	Both	4,198	3,450	82.2%	3,039	72.4%
All	Program	2,095	1,759	84.0	1,564	74.7
All	Control	2,103	1,691	80.4	1,475	70.1
Philadelphia	Both	1,179	905	76.8	747	63.4
Pittsburgh	Both	595	482	81.0	428	71.9
Minneapolis/St. Paul	Both	1,654	1,383	83.6	1,257	76.0
Northeast Minnesota	Both	203	167	82.3	148	72.9
Maine	Both	567	513	90.5	459	81.0
Philadelphia	Program	601	472	78.5	393	65.4
Philadelphia	Control	578	433	74.9	354	61.3
Pittsburgh	Program	288	240	83.3	218	75.7
Pittsburgh	Control	307	242	78.8	210	68.4
Minneapolis/St. Paul	Program	834	722	86.6	661	79.3
Minneapolis/St. Paul	Control	820	661	80.6	596	72.7
Northeast Minnesota	Program	97	81	83.5	73	75.3
Northeast Minnesota	Control	106	86	81.1	75	70.8
Maine	Program	275	244	88.7	219	79.6
Maine	Control	292	269	92.1	240	82.2

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.

TREATMENT OF 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

Each GATE applicant was given the opportunity to complete two follow-up telephone surveys, one about 6 months after random assignment (Wave 1) and one about 18 months after random assignment (Wave 2). Of the 4,198 GATE applicants, 3,450 responded to the Wave 1 survey (an 82 percent response rate) and 3,039 responded to the Wave 2 survey (a 72 percent overall response rate). Response rates by site and research group (program and control) are presented in Table A.1.

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 and Wave 2 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 4,198 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 both the Wave 1 and 2 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, provided three alternative names or addresses on the application, had problems with credit history, or had ever received unemployment benefits. Additional variables associated with response propensity for the Wave 1 survey were indicators of whether the applicant was ever married or was currently responsible for care of family members during the day. For Wave 2, additional variables associated with response propensity included indicators of whether the family was very supportive of the business endeavor, whether the applicant had ever worked for a relative, and whether the applicant had health insurance.

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), 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 other business partners in Minneapolis/St. Paul who were assigned a weight of zero because of the 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 did not apply to Project GATE with 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. 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. For example, the percent of nonresponse to the question in the survey about the number of businesses owned since random assignment (question C6) was calculated only over those respondents who answered that they had been self-employed since random assignment (question C4).

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

Description	Levels of Item Nonresponse Among Eligible Cases (in %)	
	Wave 1 Survey	Wave 2 Survey
Self-employed since random assignment (RA)	0.09	0.14
Number of businesses owned since RA	0.14	0.29
Month of start of first business	5.66	11.28
Year of start of first business	0.64	1.10
Month of start of 2nd business	8.33	16.37
Year of start of 2nd business	1.38	3.00
Monthly receipts/sales for first business	17.27	18.80
Monthly expenses for first business	15.84	16.44
Hours per week worked at first business	2.51	2.65
Hours per week worked at 2nd business	4.86	10.18
Percent of household income from first business	2.62	6.71
Percent of household income from 2nd business	4.96	7.19
Salary to self from first business	1.07	1.62
Salary to self from 2nd business	0.71	1.80

Description	Levels of Item Nonresponse Among Eligible Cases (in %)	
	Wave 1 Survey	Wave 2 Survey
Weekly earnings from first business	21.45	27.30
Weekly earnings from 2nd business	30.00	17.86
Other income payments from first business	2.22	2.28
Other income payments from 2 nd business	0.71	2.40
Amount other income payments, first business	27.40	31.57
Amount other income payments, 2 nd business	21.88	25.00
Spouse/relative gets regular salary from first business	0.43	1.18
Spouse/relative gets regular salary from 2 nd business	0.71	1.80
Weekly regular salary earnings received by spouse/relative from first business	18.33	25.00
Weekly regular salary earnings received by spouse/relative from 2 nd business	25.00	25.00
Spouse/relative gets other income payments from first business	0.71	1.18
Spouse/relative gets other income payments from 2 nd business	0.71	1.80
Weekly other income earnings received by spouse/relative from first business	33.33	35.00
Weekly other income earnings received by spouse/relative from 2 nd business	33.33	28.57
Invested own money in business since RA	0.71	0.96
Amount of own money invested in business	10.85	15.76
Borrowed money for business since RA	0.71	0.74
Amount of money borrowed for business	7.62	9.40
Currently working for someone else	0.00	0.00
Had a job that lasted at least 2 weeks since RA	0.06	0.15
Gave employer name, first job lasting 2 wks +	2.85	4.15
Gave employer name, second job lasting 2 wks+	4.50	6.05
Month of start of first job	6.81	9.31
Year of start of first job	4.90	6.56
Month of start of 2 nd job	5.88	9.74

Description	Levels of Item Nonresponse Among Eligible Cases (in %)	
	Wave 1 Survey	Wave 2 Survey
Year of start of 2nd job	4.08	5.98
Month of stop of first job	4.77	6.46
Year of stop of first job	4.59	6.13
Month of stop of 2nd job	4.41	6.49
Year of stop of 2nd job	3.92	5.98
Hours worked per week at first job	5.36	7.04
Hours worked per week at 2nd job	6.70	9.74
Weekly regular salary earnings from first job	11.27	13.98
Weekly regular salary earnings from 2nd job	12.90	14.53
Total household income past 12 months	9.80	13.52
Household member received unemployment assistance	1.83	1.48
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
Number of weeks or months received unemployment compensation, if not still receiving it	7.02	17.30
Respondent answers amount of unemployment compensation in weeks (1) or months (2)	9.65	19.89
Amount of unemployment compensation	9.65	19.89
Received income from Social Security	1.36	1.09
Number of months received Social Security	4.11	4.44
Amount of money received from Social Security	23.08	19.77
Received income from food stamps	1.01	1.05
Number of months received food stamps	4.58	9.60
Amount of money received from food stamps	7.50	7.63
Received income from pensions	1.59	1.51
Number of months received pensions	4.26	11.22
Amount of money received from pensions	17.58	23.96
Received income from welfare	1.54	1.22
Number of months received welfare	5.26	5.36

Description	Levels of Item Nonresponse Among Eligible Cases (in %)	
	Wave 1 Survey	Wave 2 Survey
Amount of money received from welfare	9.88	3.88
Received income from veterans' benefits	1.04	1.05
Number of months received veterans' benefits	3.08	7.82
Amount of money received from veterans' benefits	20.00	20.32
Attended any classes, workshops, or seminars on topics related to your business since RA ²	0.12	0.59
Number of individual sessions of these classes, workshops, or seminars attended.	1.05	4.10
Length of individual sessions, workshops, or seminars, on average	0.00	0.10
Received any one-on-one counseling or technical assistance on starting or expanding your business since RA	0.06	0.30
Number of counseling or technical assistance sessions attended	0.96	6.40
Length of counseling/technical assistance sessions, on average	0.96	7.02
Attended peer support group for self-employed persons or persons interested in self-employment since RA	0.06	0.10
Number of support group sessions attended	1.53	8.08
Length of support group sessions, on average	2.63	8.75
Worked with an experienced business-owner or someone else who could act as your mentor since RA	0.14	0.30
Number of meetings with mentor	8.02	18.01
Length of sessions with mentor	5.02	16.54
Received any other types of self-employment services since RA	0.20	0.20
Constructed variable: B3=1 or B6=1 or B9=1 or B12=1 or B15=1	0.17	0.53
Amount paid in total for self-employment services	0.76	1.81

In some cases, a response was missing to a “feeder” question—a question that acts as a gateway to other questions. For example, the question about whether the respondent has been self-employed since random assignment is a feeder question. Questions about business ownership since random assignment were asked only if they respond “yes” to this question. For most feeder questions, we imputed a response to the feeder question if it was missing.

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. This is important when imputing dates; we can ensure, for example, that the end date for a job must be after the start date. 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 requiring imputation than the classing variables, or they could be the continuous form of variables that were used as classing variables. For example, the variable “Monthly receipts/sales for first business” (C12) was highly correlated with “Monthly expenses for first business” (C13). Both are continuous. Hence, when imputing C12, a categorical form of C13 was used as a classing variable, and the continuous form was used as a sorting variable.

Research group was one classing variables 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 other classing variables were selected by: (1) reviewing cross-tabulations of the

variable requiring imputations with all possible covariates, and (2) reviewing a series of forward and backward stepwise regressions among eligible cases, with the variable requiring imputation as the response variable. If the variable requiring imputation was a categorical variable, logistic models were used for the forward and backward stepwise procedures. If the variable requiring imputation was continuous, a categorical version of the continuous variable was used as the response in stepwise multinomial logistic procedures, as well as the continuous form in ordinary least squares (OLS) stepwise procedures. 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.

Because the variables requiring imputation were sometimes closely related to each other, the best imputation often required including other variables with missing values. Variables were imputed sequentially, so that for variables early in the sequence, some classing variables had missing values. If a value of a classing variable was missing for only a few sample members, we tried to match donors and recipients so both had missing values on that classing variable. If that was not possible, a cross-classification of classing variables was implemented, and classing variables collapsed to allow an imputation class with sufficient donors for the recipient. If many recipients had missing values for the covariate in question, the hot-deck procedure was implemented separately for sample members who were not missing this classing variable. For sample members who were missing a classing variable, separate logistic models were run without the missing classing variable, and separate imputations were implemented using nonmissing classing variables.

Because of the complexities in imputing dates and maintaining consistency, dates were not imputed directly. Rather, a supplemental variable was created: a continuous variable with the year, with a decimal that represented the proportion of the year given by the month. When the imputation procedure on this variable was complete, the newly imputed variable was converted back to months and years.

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 nonimputed data; and (3) imputed and raw data, excluding only ineligible cases. Any unusual differences in these distributions had to be explainable.
- Comparing dates (both imputed and raw) to ensure no inconsistencies were apparent.
- 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:

$$(C.1) \quad y_i = \sum_{S=1}^5 \lambda_S S_i + \sum_{S=1}^5 \beta_S S_i P_i + \delta' X_i + \varepsilon_i,$$

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 customer 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 of the impacts in each site, β_{pool} 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 formulas 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:

$$g(\pi_i) = \log\left(\frac{\pi_i}{1-\pi_i}\right) = \beta X_i + e_i, \text{ where } \pi_i = E(y_i).$$

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.1.4 Estimating Subgroup Impacts

A slight simplification to the model was used when estimating impacts for subgroups of applicants. In particular, to allow efficient estimation of the parameters of key interest for subgroups—the overall impact across all sites for each subgroup—we do not include separate program indicators for each site when estimating subgroup impacts. Including the site interactions with the subgroup indicator would greatly increase the number of parameters in the model and may result in less precise estimation of the overall subgroup impacts. The model used for subgroups is thus:

$$(C.2) \quad y_i = \sum_{s=1}^5 \lambda_s S_i + \gamma_{G=1} P_i \times (G_i = 1) + \gamma_{G=0} P_i \times (G_i = 0) + \delta' X_i + \varepsilon_i,$$

where the variables are defined as above, and $G_i = 1$ if applicant i is in group G and equals 0 otherwise. So, for example, for the subgroup of UI recipients at application, $G_i = 1$ would equal 1 if the sample member received UI at application and 0 otherwise; and $G_i = 0$ would equal 1 if the sample member had *not* received UI at application and 0 otherwise. The impact for subgroup G is simply $\gamma_{G=1}$. Similarly, the impact for applicants not in subgroup G ($G_i = 0$) is $\gamma_{G=0}$. The variable defining the group G is also included as a predictor in X . Tests of whether the impacts differ by subgroup were conducted.

The subgroups for which we estimate the impacts of Project GATE are based on:

- Education: applicants with college degrees/applicants with less than a college degree
- Age: applicants over age 40/applicants under age 40
- Gender: female/male customers
- Race/ethnicity: nonminority applicants (white and non-Hispanic) and minority (black, Hispanic, Asian, or other) applicants
- Whether self-employed at some point before random assignment
- Whether self-employed at the time of completing the GATE application package
- Whether receiving UI benefits at the time of random assignment
- Whether employed at the time of random assignment

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 9.2, 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	20%***	18%***	19%***	20%***	19%***	19%***
Attended Classes	24%***	25%***	24%***	24%***	24%***	24%***
Attended Counseling	31%***	31%***	32%***	31%***	32%***	31%***
Owned a Business						
Quarter 1	5%***	6%***	5%***	5%***	5%***	4%**
Quarter 2	5%***	5%**	6%***	6%***	6%***	5%**
Quarter 3	6%***	6%***	6%***	6%***	6%***	5%***
Quarter 4	4%***	3%	4%**	4%***	4%**	3%*
Quarter 5	4%***	4%*	4%***	4%**	4%**	4%*
Quarter 6	3%*	3%	3%*	3%*	3%*	2%
Any quarter 1-6	6%***	5%**	5%***	6%***	5%***	5%**
Employed in Wage and Salary Job						
Quarter 6	-2%	-2%	-2%	-3%	-2%	-2%
Any quarter 1-6	-3%**	-2%	-2%*	-3%*	-3%*	-2%
Employed for Self or Someone Else						
Quarter 6	1%	0%	2%	0%	2%	1%
Any quarter 1-6	1%	0%	1%	1%	0%	1%
Earnings from Businesses in Q1-Q6	-\$170	-\$112	-\$378	-\$6	-\$350	-\$231
Earnings from Jobs in Q1-Q6	-\$1,798*	-\$678	-\$1,086	-\$1,369	-\$1,440	-\$1,777
Earnings from Businesses or Jobs in Q1-Q6	-\$1,960*	-\$771	-\$1,458	-\$1,182	-\$1,784	-\$2,012

Source: Follow-up surveys, waves 1 and 2.

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

	Sites Weighted by Size (Main Analysis)	Sites Weighted Equally (Sensitivity Analysis)
Philadelphia	25%	20%
Pittsburgh	14	20
Minneapolis/ St. Paul	41	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 statistically insignificant, 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 -\$1,369 when observations with missing earnings data are dropped, compared with -\$1,798 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 nearly identical 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 4, 5, and 6 after random assignment; these are very precisely estimated under the benchmark specification, but less so without regression adjustment, as would be expected. The magnitude of the impact estimates are similar with both approaches.