

***Process and Net Impact Evaluations of the  
Focus: HOPE Adult Training Programs and  
Student Loan Fund***

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## ACKNOWLEDGMENTS

Focus: HOPE provides valuable, practical occupational training in machinist or information technology (IT) occupations to young people who face barriers to the development of viable careers through postsecondary education and training because of low-income, basic skills deficiencies, incarceration, or parenting responsibilities. This report documents a study of the adult training programs provided by Focus: HOPE. Essentially two major strands of research comprise the study. The first strand is a study of the student loan fund that is used as a financing mechanism for students who enroll in the Machinist Training Institute (MTI) or Information Technologies Center (ITC). The second strand is a net impact evaluation of the training provided by these two entities. Note that the study omits from its purview training provided by the Center for Advanced Technologies, in which students continue their training beyond the MTI or ITC to pursue a formal associates or baccalaureate program.

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## I. CONTEXT OF STUDY

### FOCUS: HOPE HISTORICAL CONTEXT

Focus: HOPE, a Detroit-based civil and human rights organization committed to “intelligent and practical action to overcome racism, poverty and injustice,” was founded in 1968 by Fr. William T. Cunningham (1930–1997) and Ms. Eleanor M. Josaitis.<sup>1</sup> The 1967 riot left metropolitan Detroit sharply divided along racial lines. It was in this atmosphere that the Focus: HOPE cofounders felt compelled to make a difference.

In 1968, in response to a study by the *Detroit Free Press* and the Urban League, Focus: HOPE organized a search for evidence of widespread discrimination in food and prescription drug prices, enlisting a group of professionals from local universities, corporations, city departments, and major organizations. The Focus: HOPE study revealed that inner-city residents, principally black and poor, were paying much more for food and prescription drugs than their suburban neighbors.

In 1971, after gathering scientific evidence of the effects of hunger and malnutrition on the critical early development of infants, Focus: HOPE designed a supplemental food program for children up to age six, and for pregnant and postpartum women. The program, later expanded to senior citizens, was the first and remains one of the largest Commodity Supplemental Food Programs in the country, with food provided through the U.S. Department of Agriculture to 43,000 women, children, and senior citizens each month in the Detroit metropolitan area.

Focus: HOPE’s long-term objective is to eliminate the need for supplemental food programs by providing opportunities for all people to enter the economic mainstream. This objective led to the development of its highly respected education and training programs. In 1981, the organization opened its Machinist Training Institute (MTI) to provide skills development in precision machining and metalworking. More than 2,740 machinists have graduated from the program.

In 1989, Focus: HOPE developed a FAST TRACK program, and in 1997 the First Step program, to help students improve their reading and math skills in order to qualify for the Focus: HOPE training programs. Students can improve their skills by as much as two grade levels in the intensive four- and seven-week programs. More than 5,800 individuals have graduated from these programs, moving up to the MTI, the Information Technologies Center, or into the job market.

In 1993, a growing shortage of manufacturing engineers with hands-on skills—combined with a historical lack of access to engineering education among minorities—led Focus: HOPE to develop the Center for Advanced Technologies and to form a coalition of universities and

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<sup>1</sup> This introductory material came largely from the Focus: HOPE web site, [www.focushope.edu](http://www.focushope.edu), accessed on July 7, 2005.

corporations to design a twenty-first century curriculum for manufacturing engineering education. Students can earn associate's and bachelor's degrees through three of the university partners: Lawrence Technological University, Wayne State University, and University of Detroit Mercy. The program has graduated more than 100 students.

In 1999, the Information Technologies Center (ITC) was created to provide industry-certified training in network administration and desktop & server administration. The center provides training and education in the information technology area in collaboration with industry partners, including Cisco, Microsoft, and the Computer Technology Industry Association. More than 570 students have graduated from the ITC program.

## **EVALUATION STUDY**

This report documents an evaluation study of the adult training programs provided by Focus: HOPE. Essentially two major strands of research comprise the study. The first strand is a study of the student loan fund that is used as a financing mechanism for students who enroll in the Machinist Training Institute (MTI) or Information Technologies Center (ITC). The second strand is a net impact evaluation of the training provided by these two entities.<sup>2</sup> This chapter of the report lays out the hypotheses that are being tested by each substudy.

### **Loan Fund**

The training that students receive at Focus: HOPE, whether from MTI or ITC, has great value. In its initial years, the Machinist Training Institute provided instruction to students at no charge. Focus: HOPE was bearing the cost of providing the training through donations, grants, and proceeds from its manufacturing business. During the 1997–98 academic year, Focus: HOPE instituted tuition charges for its training and established a revolving loan fund to facilitate students' abilities to pay.<sup>3</sup> (Many students have been eligible for government grants-in-aid over the ensuing years, which defray a significant share of the costs.) Of course, student loans for postsecondary education or training are not a new idea. But this sort of financial arrangement is unique for training targeted on disadvantaged populations.

The loan fund has been a daunting enterprise. Loan repayment rates have been modest and default rates have not. Two characteristics about the loans may go a long way in explaining why the loan fund has been such a struggle: 1) the loans are unsecured, and 2) the loans are, by design, held by economically disadvantaged individuals. To inform our analyses and to help us provide useful advice to Focus: HOPE on how to improve the loan fund's performance, we reviewed literature on unsecured loans made for educational or other purposes.

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<sup>2</sup> Note that this study does not evaluate the Center for Advanced Technologies.

<sup>3</sup> A number of loan fund statistics, by year, are presented in this report. In analyzing these, it should be borne in mind that the initial year was just a partial year since the loan fund was implemented midyear.

## Literature on student loans

Several studies (Dynarski 1994; Volkwein and Szelest 1995; Gladieux and Hauptman 1995; Flint 1997; Volkwein et al. 1998; Monteverde 2000; Christman 2000; Woo 2002; Steiner and Teszler 2003; Texas Guaranteed Student Loan Corporation 2003) have estimated econometrically loan repayment behavior. That is, in these studies, the author(s) had individual-level data and attempted to estimate statistically models of who repaid (or defaulted). A consistent finding throughout this literature is that individual characteristics are much more important in explaining default behavior than are institutional characteristics. In other words, if one institution has a higher default rate than another, it is most likely because of the characteristics of the students—not the policies or practices of the institution. This rather common sense finding confirms one's intuition about Focus: HOPE: the loan default rates are far more likely to be a result of the disadvantaged, economic circumstances, and cultural norms of the students served than because of particular policies or practices instituted by Focus: HOPE.

What are the individual-level characteristics associated with default? The literature suggests that they fit into three categories: preloan characteristics, program performance, and postprogram circumstances. Most of the literature focuses on postprogram circumstances because it takes time for a default to occur, and by that time, the data collector or researcher has observed the individuals' characteristics. This may be best analytically, but from the point of view that we want to predict default/repayment, it is of lesser value. The postprogram characteristics that are correlated with defaults are low family income, filing for unemployment benefits, being a single parent, low wages/earnings, having dependent children, and age. The latter factor (being older increases the probability of default) was the only surprise among the group. And, in fact, it contradicts anecdotal evidence from the Focus: HOPE loan staff. The explanation given in the literature is that older students have weakened ties to their families and therefore are less likely to be able to tap into family resources for repayment purposes.

Many studies indicated that students' poor effort and poor performance while in their educational programs are strong indicators of default. In particular, the following variables are predictive of default: noncompletion of program or degree, number of courses failed, low GPA, and low attendance. An idea that came out of the literature that may be exportable to Focus: HOPE is provision of extra counseling when certain (negative) thresholds are reached. For example, if grades or attendance dropped below some level, then students would have to participate in mandatory budgeting or credit counseling. Christman (2000) was the only study reviewed that had qualitative evidence. She interviewed students in and not in default to ask for their perceptions about why students default on their loans. The key determinants were bad attitude, ignorance about repayment terms and conditions, dissatisfaction with the institution, and misperceptions of the consequences of defaulting.

A number of the studies looked at background (preloan) characteristics of students to analyze correlates of default. The studies identified the following: low family income, male, not having a high school diploma, ACT < 16, having a GED, and family size. Two credit history characteristics were found to correlate; neither result was very surprising. First, a prior default was found to be correlated with a student loan default. Second, Monteverde (2000) found that a student's credit score was (inversely) related to default. He used TransUnion's Empirica service

and found that these scores were predictive of default. Woo (2002) found that three-fourths of defaults went into default with the first three years of repayment.

Note that race (minority status) has not been consistently shown to be correlated with defaults. Knapp and Seeks (1992) found it to be correlated, but Steiner and Teszler (Texas Guaranteed Loan Corporation 2003) did not.

A number of articles have looked at *student loan results at historically black colleges and universities* (HBCUs) because there was some concern that if the federal government “tightened” regulations, then these institutions would be hurt the most, given the relatively low-income status of their students (see Blakey 2000). According to the U.S. General Accounting Office, (1998)

HBCUs have enrolled a higher percentage of freshmen who, compared with their peers at all institutions, are less prepared academically and come from more disadvantaged socioeconomic backgrounds ... Students at HBCUs were twice as likely to come from a home where parents were divorced or separated, and their parents generally had lower education and income levels than parents of students at all colleges and universities. When the analysis is narrowed to only HBCUs the same pattern is found: In general, HBCUs with lower default rates enrolled students with more academic preparation and higher socioeconomic levels. (pp. 2–3)

An article that is often referenced in this literature is Galloway and Swail (1999). They analyzed the default rates at the HBCUs and found that student retention was the key factor to reducing default rates. They examined various institutional strategies intended to increase retention, which they lumped into five categories: 1) stiffer admissions criteria, 2) more proactive academic advising, 3) improved instruction (more one-on-one and practical instruction), 4) additional financial aid resources, and 5) enhanced student services, such as dormitory improvements and student counseling. Of these five strategies, this study found that instructional improvements and additional financial aid resources were the only strategies to be effective. Interestingly, stiffer entrance criteria and more proactive academic counseling were not effective in improving retention or decreasing default rates.

### **Other unsecured loans**

Microenterprise loans are a form of economic development used mainly in developing countries. Individuals are provided small loans, which generally are not collateralized, to start businesses. The most successful of these are programs using the Grameen Bank (see Yunus 1999), a program targeted on women loan recipients. This program is successful because prior loan recipients control loan approval and do not lend until sufficient repayments have been made. Programs in U.S. inner cities were reviewed by Servon (1997). In general, we found that while these loans were technically unsecured loans, their relevance to the Focus: HOPE student loans was not immediate. Principals were smaller, and in some cases, sources of collateral were used (office machines, inventories, etc.)

## **Loan Fund Hypotheses**

The following list of hypotheses will be the main issues that we analyze statistically. The list classifies the hypotheses by whether they pertain to preprogram characteristics of individuals, performance in Focus: HOPE programs, or postprogram characteristics.

### **Preprogram characteristics**

- H1: Loan repayment performance will not vary<sup>4</sup> by demographic characteristics of program applicants such as race, sex, or age.
- H2: Loan repayment performance will differ for individuals with and without a cosigner. Cosigners will increase the likelihood of more positive outcomes.
- H3: Loan repayment performance will be lower for individuals who had been incarcerated prior to program application.

### **Program characteristics**

- H4: Loan repayment performance will be better for individuals who completed all of the courses that they began. Stated conversely, loan repayment performance will lag for individuals who did not complete a course in which they enrolled.
- H5: Loan repayment performance will differ for individuals who enroll in First Step or FAST TRACK from individuals who don't. The former will have lower performance.
- H6: Loan repayment performance will not differ between MTI and ITC students.
- H7: Loan repayment performance will not vary by the size of the student responsibility.

### **Postprogram characteristics**

- H8: Loan repayment performance will differ across the marital and family status of applicants. The presence of a spouse or own children will increase the likelihood of more positive outcomes.
- H9: The strongest correlates of repayment behavior will be employment and earnings subsequent to attending Focus: HOPE. Higher levels of employment and earnings will be associated with higher levels of repayment.

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<sup>4</sup> Hypotheses will be tested statistically, so phrases like “will not vary” or “will differ” are meant to imply “in a statistically significant sense.” Also, the hypotheses are intended to hold all other factors constant.

H10: Individuals with a training-related placement will have higher levels of repayment.

H11: Loan repayment behavior will depend on the debt burden of program completers/ leavers. Debt burden will be inversely related to repayment behavior.

## **Training**

The economic opportunities for young, disadvantaged, undereducated individuals in Detroit are bleak. However, Focus: HOPE is confronting that bleakness by providing high-quality training to the young (and older) folks who come through its door. Its facilities and equipment are first rate. Instructors have considerable industry experience and are excellent mentors and teachers. For students whose basic academic preparation is lacking, Focus: HOPE offers the First Step and FAST TRACK programs. Employer advisory groups are used to ensure an up to date, relevant curriculum. One purpose of the evaluation study is to assess the effectiveness of the training in facilitating students' entry into stable and good-paying careers.

One way to form expectations about the likelihood of success for the Focus: HOPE students is to review the literature base on skill training for disadvantaged populations after high school.

### **Literature on skill training effectiveness for disadvantaged populations**

A large number of studies have weighed in on this topic, so we will primarily discuss articles that review and summarize other studies. Most of these studies focus on federally funded job training programs—most recently through the Job Training Partnership Act (JTPA) and its successor, the Workforce Investment Act (WIA).

LaLonde (1995) reviewed studies of the effectiveness of CETA, JTPA, and other federal training programs for disadvantaged adults and youth. His conclusions follow (excerpted from pp. 158–161):

- Various services raise the postprogram earnings of disadvantaged adult women but have mixed or no effects on those of adult men or youth. Moreover, earnings gains for women tend to be “modest in size, persist for several years, arise from a variety of training strategies, and are sometimes achieved at remarkably little expense.”
- There is less evidence on the value of classroom training and OJT, and the evidence that does exist is mixed.
- The results for adult males are less encouraging.

- The National JTPA study offers no evidence that disadvantaged youths benefited from the low-cost training provided.

Friedlander, Greenberg, and Robins (1997) agree and disagree with the LaLonde summary. The areas of agreement are for adult women and youth.

Consistently strong evidence has accumulated that government training programs have been effective for adult women ... Evidence has been accumulating for a number of years that training programs have been ineffective in producing lasting earnings effects for youth (pp. 1833–1834).

However for adult males, they write

Average earnings effects for adult men in JTPA were as large as those for women and also produced high rates of return even in the short run. The JTPA finding for men, therefore, represents a significant break with the results of past evaluations (p. 1834).

In perhaps the most rigorous study, Orr et al. (1996) find very modest impacts of JTPA services for youth ages 16–21. Using an experimental methodology, these researchers found no significant earnings impacts for females or males over 30 months of follow-up data. Female participants in the treatment group were more likely to complete their high school diploma or GED and females had increased hours of training plus employment. Virtually none of the outcomes were significant for males.

King, McPherson, and Long (2000) report starkly different findings. Using a different methodology, they report the following:

In contrast to the findings of the National JTPA Study (e.g., Bloom et al. 1997), participation in Occupational Skills Training (OST) is associated with employment and earnings success for both males and females, while participation in On the Job Training (OJT) and Job Search Assistance (JSA) seems to have such association only for males. Clearly, such results beg for validation using more rigorous experimental or quasi-experimental designs (p. 158).

Bartik and Hollenbeck (2004) reviewed a number of national evaluations of federal job training and many of sectoral training approaches as well. They suggest that an effective system for skills development has the following characteristics:

- The system offers training/educational opportunities that engender skills that are or will be in demand within the labor market area.
- The training/educational opportunities do not focus solely on specific technical skills.

- The training or education integrates basic skills, employability skills, and technical skills and delivers curriculum that is tailored to the learners' context.
- Adequate support mechanisms are available to enable participants to benefit fully.
- Caring, trained adult mentors are available when training and educational opportunities are targeted on youth (pp. 142–143).

### **Training Hypotheses**

The outcomes that are analyzed in this evaluation are mainly *labor market outcomes* such as earnings and employment (especially training-related employment). We recognize that the training at Focus: HOPE may have important *noneconomic outcomes* such as health status, mobility, self-efficacy, or family/marital status, but these outcomes are more difficult to measure rigorously. We do have some limited evidence about the noneconomic outcomes, but we would characterize this evidence as tentative. In general, the goal of the evaluation is to test the notion that completion of more training at Focus: HOPE will result in better labor market outcomes. Some specific hypotheses follow:

- H1: Enrolling in and attending Focus: HOPE programs will result in better labor market outcomes.
- H2: Course completers will have better outcomes than individuals who did not complete all of their courses.
- H3: Among MTI and ITC students, individuals who successfully complete a sequence of courses will have better outcomes.
- H4: Holding the number of and completion of courses constant, there should be no difference in outcomes between individuals who started in First Step or FAST TRACK and those who didn't.
- H5: Students who did not progress into a technical program in MTI or ITC, i.e., attended only First Step or FAST TRACK, will have poorer outcomes than students who did take machining or IT courses.

The next chapter of this report discusses the methodology and data sources upon which we have relied for the evaluation. That chapter is followed by a presentation of the statistical size and shape of the loan fund and the amount of training that is provided by Focus: HOPE. Chapters 4 and 5 present analyses of outcomes. In Chapter 4, we examine loan repayment behavior, and in Chapter 5, we examine employment and earnings outcomes. Finally, Chapter 6 presents our major findings and conclusions.

## **II. METHODOLOGY AND DATA SOURCES**

### **METHODOLOGY**

In the development of a pharmaceutical, companies go through rigorous experimentation to determine efficacy and safety. In simplest terms, these companies will recruit a test population that has a range of characteristics and health conditions, and they will randomly assign a portion of the test population to the drug being tested (the treatment group). The remainder of the sample will get a placebo (the control group). After the drug regimen has been followed, the companies can compare the health status of the two groups and attribute any differences to the pharmaceutical being tested.

If it were feasible and ethical to do so, Focus: HOPE could follow a similar protocol. A heterogeneous population of young adults encounters Focus: HOPE. These individuals have a range of characteristics and skills. Focus: HOPE could give them a random number as they walk through the door, and serve only those whose random number was less than 0.50 (the treatment group) and deny services to the others (control group). An evaluator could follow both groups, and the differences in outcomes between the two groups would be the net impact of the Focus: HOPE treatment.

Such a random assignment experiment would provide the most rigorous estimate of the value-added of Focus: HOPE training programs, and it would provide excellent statistical estimators that could be used in a benefit-cost/return on investment framework.

But the issue of experimental design is moot because Focus: HOPE has a commitment to and tradition of serving all who come to its door. Given that a random assignment experiment is not feasible, the key question is how best to evaluate the Focus: HOPE training programs. The main issues to address are as follows (not necessarily in order of importance): definition of the treatment, comparison group, and outcomes that will be measured. These issues are discussed briefly in the following paragraphs.

#### **Definition of the Treatment**

In many ways, the education programs at Focus: HOPE for adults operate like a postsecondary educational institution. A high school diploma or General Equivalency Degree (GED) is required for entrance. Tuition is charged for each program. The Center for Advanced Technologies (CAT) awards academic degrees. Like some postsecondary institutions, Focus: HOPE offers its curriculum in an open-entry/open-exit (OE/OE) format. Like all postsecondary institutions, young adults enter with different abilities and skills. And like most postsecondary institutions, Focus: HOPE offers developmental courses to address basic skills deficiencies (First Step and FAST TRACK).

Of course, Focus: HOPE is unique and differs from other institutions in some major ways. First, the student body is composed almost exclusively of economically or educationally

disadvantaged young adults. Second, the curriculum is focused and fairly sequential. Students ideally proceed from First Step (optional, as needed) to FAST TRACK (optional, as needed) to either the Machinist Training Institute (MTI) or to the Information Technology Center (ITC). After completing the MTI program, students may proceed to the CAT. In the MTI, students move sequentially from Vestibule to Core 1 to Pre-Engineering (Core 2).

Thus, the “treatment” is a well-defined sequence of developmental and applied courses in the areas of machining or information technology. In this evaluation, the treatment group contains all individuals who enrolled in a Focus: HOPE course and were present for at least one class period during the analysis period. So defined, this group includes completers and noncompleters. We included both groups for two reasons. First, we wanted to analyze whether even a short-term exposure to Focus: HOPE would have value for a student. Second, we recognize that noncompletion may be a good outcome for some students if they find that they are not interested in a machining or IT career. We also realized that some students may complete their programs on an intermittent, interrupted basis.

### **Comparison Group**

The group against which the Focus: HOPE training participants are being compared is composed of applicants who take the placement tests and score at or above a 6th grade math ability and a 8th grade reading ability, but who do not participate in the training. Those grade equivalencies in math and reading are required of entering students. The advantages to using this group of individuals as a comparison group are severalfold. They are aware of the Focus: HOPE programs and interested enough in a potential career in machining or IT to complete an application and take the assessment tests. Since only the applicants who “pass” the test are selected, they are comparable to the participants in basic skills abilities. A disadvantage to using this group is that there may be systematic differences between them and the participants. The comparison group members chose not to participate in training for reasons such as they didn’t have the motivation, they couldn’t make appropriate arrangements, or they didn’t believe that it suited their needs/interests.

### **Outcomes**

The mission of Focus: HOPE is essentially to dignify the humanity of every person, so it is difficult to justify an evaluation of training programs that assesses success or failure based on their economic outcomes. Nevertheless, as a practical matter, we believe that the human capital framework captures the motivation of the trainees. These young adults want to achieve a high enough economic payoff in terms of earnings and stable employment to justify the time and expenses that they are investing in training. The two are not incompatible because Focus: HOPE sees as part of its mission moving people into the economic mainstream.

Therefore the primary evaluation focus will be on labor market outcomes. These include employment, training-relatedness of the employment, unemployment, labor force participation, hours worked, wage rates, earnings, nonwage benefits, job retention/turnover, promotion, and on-the-job training. Two sources of data are being used. Wage record data from the Michigan Unemployment Insurance system allow analyses of employment, turnover, and earnings.

Surveys of participants and comparison group members measure wage rates, nonwage benefits, promotions, and on-the-job training.

Other outcomes of interest include additional education/training, receipt of income assistance, credit worthiness, health status, family/relationship status, criminal/dangerous behaviors, asset ownership (cars, large-budget items), and psychosocial outcomes such as self-efficacy. These data are being collected by self-report through a survey of participants and comparison group members

## DATA SOURCES

The kernel of the evaluation is a longitudinal student data set, in Access, that has been constructed from documents, administrative records, and survey responses. The observations in the data set are categorized into eight cohorts. Six of the cohorts are defined by the date of first enrollment and by whether the individual is a treatment or comparison group member as shown in Table 2.1. The seventh cohort, which we actually refer to as cohort 0, are students who started their initial Focus: HOPE training prior to FY2002 and incurred a student loan. The eighth cohort, which we refer to as cohort 4, are individuals who were in the comparison cohorts and then became students at Focus: HOPE.

**Table 2.1 Definitions of Treatment and Comparison Cohorts**

Treatment cohorts	Comparison cohorts
0. All students who started their initial Focus: HOPE (FH) prior to fiscal year (FY) 2002, and incurred a tuition charge.	None
1. All students who started their initial Focus: HOPE (FH) class in fiscal year (FY) 2002 (10/01–09/02)	1. All individuals who tested between 07/01 and 06/02 and scored at a level high enough to be enrolled, but didn't <sup>a</sup>
2. All students who started their initial FH class in FY 2003 (10/02–09/03)	2. All individuals who tested between 07/02 and 06/03 and scored at a level high enough to be enrolled, but didn't
3. All students who start their initial FH class in FY 2004 (10/03–09/04)	3. All individuals who tested between 07/03 and 06/04 and scored at a level high enough to be enrolled, but didn't
4. Members of comparison groups who subsequently became students	None

<sup>a</sup>On average, approximately three months pass between testing date and date of first enrollment, so in the definition of the comparison cohorts, we deliberately offset the time period by three months.

A noteworthy aspect of the definitions presented in the table is that an individual will be assumed to have received the “treatment,” even if they only attended class for one day. That is, enrollment at the beginning of class is the key characteristic. In general, Focus: HOPE only counts students if they stay in class long enough to incur a loan liability, which is approximately at least 20 percent of the entire course. This means that our count of students will be slightly

larger than the official Focus: HOPE enrollments, and that some of the students in the analysis will not have loan liabilities.

The sample sizes of the eight cohorts are given in Table 2.2. Note that these are not samples; they represent the universe of individuals in these cohorts. Altogether, we have almost 7,300 individuals in the study. Of these, about 2,600 are individuals who incurred loans prior to 2002. About 1,850 are students who enrolled in the three fiscal years of interest, and about 2,700 are in comparison groups for the students. About 100 students who were in one of the comparison groups enrolled and took classes at Focus: HOPE since October 1, 2004.

**Table 2.2 Sample Sizes, by Cohort and Group**

Cohort	Treatment	Comparison	Total
0	2,603	—	2,603
1	785	998	1,783
2	570	928	1,498
3	502	782	1,284
4	104	—	104
Total	4,564	2,708	7,272

Information about the individuals comprising the analysis data set comes from six sources: 1) application data and test scores, 2) student records, 3) class rosters, 4) loan payments, 5) evaluation sample survey, and 6) wage record data. Not every individual will have information from each of these sources. For example, the comparison group does not, in general, have any student or loan information.<sup>5</sup> Table 2.3 presents the number of records that have valid information from each of these sources.

The first row of the table shows records for which we have test score and application data. We accessed this data for the purpose of identifying members of the comparison group, so we anticipated having records for most of the members of both treatment and comparison members of cohorts 1, 2, 3, and 4 (note that cohort 4 is comprised of individuals from the comparison groups for cohorts 1, 2, and 3). Indeed, we have test scores for over 96 percent of the cases (4,501 out of 4,669). Unexpectedly, we found that we had test score/application data for some of the cohort 0 individuals who entered program before our analysis period. The 137 cases in the first cell of the table must be cohort 0 individuals who “stopped out,” reapplied, and thus tested to reenter the program.

The second row of data shows the counts of records from the Focus: HOPE student record data system. This is one of our primary sources of data about students. Again, we received data for almost all of the students, including cohort 0, as would be expected (4,545 out of 4,564). Having records for 38 comparison group cases (1.4 percent) is somewhat problematic. Some of these cases might be Focus: HOPE students who took classes prior to the implementation of the loan fund so they are not in cohort 0, “stopped out,” reapplied and tested, but did not reenroll.

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<sup>5</sup> As described below, some “contamination” occurred so that some of the comparison group members did attend Focus: HOPE classes and have some student and loan information.

Because they tested but did not reenroll, they would have been classified as a comparison group student for the evaluation purposes. These cases may be considered “contaminated” in the classical experimental lingo because they received the “treatment.”

**Table 2.3 Record Counts, by Data Source**

Data Source	Cohort/Group							
	Cohort 0	Cohort 1/ Comp.	Cohort 1/ Treat.	Cohort 2/ Comp.	Cohort 2/ Treat.	Cohort 3/ Comp.	Cohort 3/ Treat.	Cohort 4/ Treat.
Application/Test score	137	998	759	927	557	782	376	102
Student records	2,599	16	781	16	567	6	497	101
Class rosters	2,600	1	785	0	570	0	497	104
Loan payments								
Info. from UAS/FH	834	0	189	0	137	0	89	7
Info. from Shermeta	1244	1	197	0	107	0	31	11
Info. from both	382	0	54	0	19	0	1	1
Evaluation survey								
Wave 1	15	85	122	99	123	0	11	4
Wave 2	0	72	98	99	96	142	150	36
Wave 3	0	91	88	109	78	126	106	38
Wave 1&2	0	24	53	27	48	0	6	1
Wave 1&3	0	21	38	33	39	0	5	3
Wave 2&3	0	31	42	39	34	55	59	18
Wave 1&2&3	0	9	28	10	19	0	3	0
Wage record								
Wave 1	1,895	777	614	713	421	1	34	16
Wave 2	2,022	747	628	714	472	599	404	74
Wave 3	1	706	612	670	458	575	416	82
Total sample	2,603	998	785	928	570	782	502	104

The third row of data provides information from class rosters. These data were supplied to us after the fiscal year, and were used to identify individuals who actually attended at least one session of a class. These data were also a primary source of information for us because they provide information about loan liabilities, government payments, and student payments. Again, as would be expected, coverage is quite high (4,557 out of 4,564).

The next set of record counts displays information about cases that have made loan repayments or were expected to have made loan payments. That is, the record counts may include defaulters. The first row of entries comes from University Accounting Service (UAS) or Focus: HOPE, if payments were made directly there. These are records for which at least \$1 in repayments had been made as of September 2005. The second row of counts reflects the cases that have been referred to collection by that date. Note that the two rows overlap, the extent of which is shown in the third row. About 460 cases that had been active in UAS have been referred to collections.

Three waves of a sample survey have been conducted by the survey unit at Wayne State University. The first wave was conducted in March/April 2004, the second was conducted about a year later in April/May 2005, and the third wave took place in Spring/Summer 2006. The

universe of the first wave was the first two cohorts of treatment and comparison cases, and the number of completions was 460. The universe for the second and third waves was all three cohorts of treatment and comparison group members. The number of completions was 700 and 640 in the second and third wave, respectively. A fair number of individuals were in more than one of the survey waves as shown in the last four rows of this section of the table. These rows double- or triple-count individuals. For example, if a former Focus: HOPE student was a respondent to the second and third wave of the survey, then they would be counted in the Wave 2 row, the Wave 3 row, and the Wave 2&3 row. If an individual was in all three waves, they would be counted in every single row of this section of the table. Altogether, a total of 1,281 individuals were interviewed at least once, about 27 percent of the total number of individuals in the three cohorts.

The final rows of data show the counts of records for which we have accessed wage record earnings data. Altogether, we have earnings information for 18 quarters from Q1:2002 to Q2:2006. These data came in three waves covering three (somewhat overlapping) periods of time: Q1:2002–Q3:2003; Q2:2003–Q2:2005; and Q3:2005–Q2:2006. The first request included the first two cohorts (treatment and comparison groups) plus cohort 0, and we received matched data for 4,471 out of a possible 5,913 cases (just over 75 percent). The second request was made for the entire analysis sample, and we again received matched data for about three-quarters (5,660 of 7,272). The third request was made for just the three cohorts, not the students with loan fund balances prior to FY2001. We received matched data for 3,519 cases out of 4,669—again a match rate of approximately 75 percent.

Table 2.4 provides some descriptive statistics relating to the cohorts. The race and sex data come from the student records data, so the table does not display these data items for the comparison groups. The data show that, by far, the largest share of the students are African American, and that a little over two-thirds of them are males. The last two items in the table are age at the time of testing into the program and average test score. We obtained these data from the application/testing files, of which we only got fiscal years 2002–2004 because our purpose in getting these data was to identify the comparison groups of individuals. The biggest difference in age between students and the comparison group is that a larger share of the former are aged 23–36 at the time of testing. The comparison group has larger percentages of individuals less than 23 and over 36. Finally, the mean test scores, which are grade equivalents, are about 0.5 grade equivalents higher for the treatment cases (enrolled students) than for the comparison group in both math and reading.

Table 2.5 displays the descriptive statistics, by program. The first column in the table shows the characteristics of students who enrolled in First Step or FAST TRACK and did not go on to enroll in either MTI or ITC. The second column shows data for individuals who attended MTI. They may have taken First Step or FAST TRACK before enrolling. The third column shows descriptive statistics for the ITC students; again, these students may have been in First Step or FAST TRACK prior to their enrollment. The data show that the ITC enrolled a larger share of females—still a minority, but 13 percentage points larger than in the MTI. The ITC students also tended to be older at the time of entrance testing. Almost 50 percent of them were

**Table 2.4 Descriptive Statistics, by Cohort/Group**

Characteristic	Cohort/Group							
	Cohort 0	Cohort 1/ Treat.	Cohort 2/ Treat.	Cohort 3/ Treat.	Cohort 4/ Treat.	Cohort 1/ Comp.	Cohort 2/ Comp.	Cohort 3/ Comp.
Race <sup>a</sup> (%)								
African American	83.6	93.2	94.9	91.7	93.1	—	—	—
White/Caucasian	2.9	3.3	2.3	3.4	4.0	—	—	—
Other	1.4	1.8	2.0	2.4	2.0	—	—	—
Unknown, incl. mixed	12.1	1.7	0.9	2.4	1.0	—	—	—
Sex <sup>a</sup> (%)								
Male	66.9	69.9	76.7	69.8	68.0	—	—	—
Female	33.1	30.1	23.4	30.2	32.0	—	—	—
Age at testing <sup>b</sup> (%)								
< 18	—	4.0	4.5	2.8	6.2	3.2	2.0	3.1
18–22	—	30.4	26.6	32.0	36.1	34.3	32.4	34.6
23–26	—	20.0	24.7	19.1	12.4	19.3	21.8	17.3
27–36	—	28.7	29.8	31.8	22.7	25.9	27.5	27.1
> 36	—	16.8	14.3	14.4	22.7	17.4	16.4	17.9
Mean, test score <sup>b</sup>								
Reading comp.	—	11.3	11.5	11.6	11.9	11.1	11.1	11.3
Math	—	9.8	9.7	10.0	10.2	9.2	9.2	9.1
Total sample	2,603	785	570	502	104	998	928	782

<sup>a</sup>Data come from student records, so comparison cases have missing information, denoted by —.

<sup>b</sup>Data come from application/testing records, so cohort 0 cases have mostly missing information, denoted by —.

**Table 2.5 Descriptive Statistics, by Focus: HOPE Program**

Characteristic	Program			
	First Step/ FAST TRACK only	MTI	ITC	Total
Race (%)				
African American	95.6	91.5	70.5	87.6
White/Caucasian	1.0	4.4	1.9	3.0
Other	0.5	2.0	2.0	1.7
Unknown, incl. mixed	2.9	2.0	25.6	7.7
Sex (%)				
Male	67.9	72.6	58.7	69.1
Female	32.1	27.4	41.3	30.9
Age at testing (%)				
< 18	4.2	5.0	1.6	3.7
18–22	39.0	31.3	25.4	30.9
23–26	17.2	20.7	23.7	21.0
27–36	25.2	29.1	30.4	28.9
> 36	14.4	13.9	18.9	15.5
Mean, test score				
Reading comp.	10.1	11.4	12.4	11.4
Math	7.7	10.5	10.4	9.9
Total sample	1,099	2,249	785	4,133

over 26, compared to only about 40 percent for the MTI and First Step/FAST TRACK students. As would be expected, the MTI and ITC test scores were much higher than those for the First Step/FAST TRACK students; after all, the reason that the latter were in the developmental classes was because their test scores were low. The entry requirement in reading comprehension is higher for the ITC than the MTI. It is a 12th grade equivalent instead of an 8th grade equivalent. Thus, on average, the ITC students had higher reading comprehension test scores than the MTI students, but the math scores were about the same, on average.

### III. STATISTICAL PICTURE OF LOAN FUND AND TRAINING

This chapter provides some general statistics about the loan fund and training enrollments to give the reader a sense of the scope of the Focus: HOPE training operation and loan fund. Since the loan fund originated until the end of fiscal year 2005 (September 30, 2005), it appears as if there are approximately 3,800 students with loans (loan accounts). Note that some of these loans may be deferred or not activated.<sup>6</sup> The total loan principal is on the order of \$14.8 million, which is the total tuition liability of students net of government payments, copayments, scholarships, or private support.

Enrollment has declined significantly over the past four years. In fiscal 2002, total enrollment was about 1,040 students who enrolled in a little over 1,800 courses. In 2003, total enrollment was about 830 in about 1,440 courses; in 2004, total enrollment was 720 in about 1,250 courses. In fiscal 2005, enrollment was about 560. More detail about these aggregate statistics is provided in the following sections.

#### LOAN FUND

Each of the courses offered by Focus: HOPE has a tuition. The schedule of tuition charges is shown in Table 3.1. As would be expected, the tuitions are determined by the length of the course and total hours of instruction.

**Table 3.1 Hours of Instruction and Tuition Charges, by Course**

Course	Total hours of instruction	Tuition (\$)
First Step (4 weeks)	160	1,000
FAST TRACK (7 weeks)	280	1,700
<u>MTI</u>		
Vestibule (5 weeks)	200	1,500
Core 1 (26 weeks)	1,080	7,750
Core 2 (Pre-engineering) (24 weeks)	660	4,000
<u>ITC</u>		
Initial skills (2 weeks)	40	500
Basic skills (5 weeks)	100	1,700
PC technology (18 weeks)	360	4,000
Network administration (27 weeks)	540	6,500
Desktop & server administration (27 weeks)	540	6,500

If a student drops out of class within the add/drop period (approximately the first two weeks), there is no financial liability. If a student drops out after that point in time, there is a

<sup>6</sup> Data from Focus: HOPE showed that a cumulative total of 2,795 loans had been activated by the end of the 2004 fiscal year.

sliding scale for the amount of tuition owed. Focus: HOPE uses the term *student responsibility* for the amount owed—either the full tuition or a prorated portion of it. While students are in their training program (with the exception of First Step, FAST TRACK, and Vestibule), they are required to make a nominal copay of \$10 per week. If the student is eligible for government (or private sources of) aid, then Focus: HOPE invoices the appropriate entity. The student's loan principal is *student responsible* less copayments, less government (or private) aid. This is referred to as the residual student responsibility.

After the course ends, loan repayments are deferred if the student enters another course, otherwise repayments are expected to begin on the first day of the month following the first full month after the last day the student attends class. For example, if a class ends on January 15, then repayments would be due on March 1. The loans carry a 5 percent annual interest rate starting one month after repayment begins. Late fees of \$15/month and any collection costs are added to the principal and interest. When repayment is received, it is applied sequentially to late fees, interest, and principal reduction, in that order.

The terms of loans and the means of collection on the loans have changed over the years since the loan program was implemented. Initially, Focus: HOPE administered all aspects of the loan including collection of payments. In these first years of the loan program, the loans were set up with a fixed repayment amount and a variable term. This allowed some flexibility in terms of changing the monthly payment obligation if economic circumstances warranted it. In 2003, Focus: HOPE started using University Accounting System (UAS) as its billing service. Since then, the loans have become fixed term (48 months). The difference between the fixed- and variable-term loans may be significant. Suppose a student had a residual responsibility of \$3,500. With a fixed term of 48 months at an annual interest rate of 5 percent, monthly payments would be \$80.60. Under the earlier regime, a payment of \$100/month could have been established, and the term of the loan would have been 38 months. If a payment of \$50/month had been established, the term of the loan would have been 82 months. If an individual defaults on a loan, Focus: HOPE refers the individual to the firm of Shermeta, Adams & Von Allmen, P.C. (hereafter referred to as Shermeta) for legal judgments and collection.

## **Financial Statistics**

The purpose of this section is to give the reader a general statistical picture of the scope of the loan fund. It is difficult to be precise because the data constantly change with new loans or payments received, and because payment data came from three sources. Furthermore, the time stamping of the data was prone to some error. We have tried to validate the statistics that we have generated against internal (i.e., Focus: HOPE) memoranda. Fortunately, we have not found major discrepancies. Generally, the data we have tabulated are within +/- 5 percent of comparable internal figures.

Like any financial entity, the loan fund can be characterized by its balances and by its annual inflows and outflows (payments received and loans disbursed). Balances depict situations as of a particular point in time. The inflows and outflows occur over a year. Table 3.2 shows tuition earned and residual student responsibility balances as of the end of the fiscal year, and it shows changes in those balances during the year. Note that the first and third column of

data are balances (cumulative totals); whereas the other two columns are flows, or annual changes in the cumulative totals.

**Table 3.2 Loan Fund Balances, by Academic Year** (in \$million, not adjusted for inflation)

Academic year	Tuition earned (\$)	Change in tuition earned (\$)	Residual student responsibility (\$)	Change in residual student responsibility (\$)
1997-98	0.887	0.887	0.160	0.160
1998-99	4.315	3.428	1.555	1.395
1999-00	7.643	3.328	3.232	1.677
2000-01	11.841	4.198	5.792	2.560
2001-02	16.093	4.252	8.287	2.495
2002-03	19.343	3.251	10.679	2.392
2003-04	22.308	2.965	13.244	2.565
2004-05	24.266	1.957	14.778	1.534

The table shows that the total tuition since the inception of the tuition policy has reached a cumulative total of over \$24 million by 2005. The largest years of growth in this figure were in 2001 and 2002, when over \$4 million in tuition was accrued by students. The third column of data, residual student liability, represents the cumulative total value of loan contracts made with students since the inception of the loan fund. The difference between tuition earned and student responsibility is copayments and governmental (or private) grants. Note that the third column reflects the total principal that is or ever has been due; it is not the same as the current outstanding principal.

Table 3.3 shows the trends in copays and grants. Total copays were about \$90-\$100 thousand in 2001 through 2003, but dropped off in 2004 and 2005 with enrollment drops. Grants have dropped off precipitously from almost \$2 million in 1999 to less than \$400 thousand in 2004 and 2005. The data in Table 3.3 are annual values.

**Table 3.3 Copays and Grants, by Academic Year** (in \$million, not adjusted for inflation)

Academic year	Change in tuition earned (\$)	Copays (\$)	Grant receipts (\$)	Change in residual student responsibility (\$)
1997-98	0.887	0.016	0.711	0.160
1998-99	3.428	0.066	1.967	1.395
1999-00	3.328	0.064	1.587	1.677
2000-01	4.198	0.094	1.544	2.560
2001-02	4.252	0.106	1.651	2.495
2002-03	3.251	0.091	0.768	2.392
2003-04	2.965	0.063	0.337	2.565
2004-05	1.957	0.052	0.371	1.534
Total	24.266	0.552	8.936	14.778

The next table of aggregate loan fund data, Table 3.4, shows among other things the net position of the loan fund after considering loans made and inflows of payments against principal, fees, and interest. The last column of data represents the net position of the loan fund. If we define viability as being at a break-even point, then this table entry should be \$0, representing loans disbursed (net of copays and grants) would equal inflows of payments against principal, interest, and fees. Since 2000, there is a downward trend in the net outflow despite a reduction

in grants. If other things were equal, the significant decline in grant receipts would mean a significant increase in loan disbursements. However, two factors probably explain the reduced net outflow. First, repayments are increasing, and second, overall enrollments are declining so that student loan obligations are staying about even despite reduced grant support.

**Table 3.4 Inflows and Outstanding Loan Balances, by Academic Year** (in \$million, not adjusted for inflation)

Academic year	Change in residual student responsibility (\$)	Payments against principal (\$)	Change in outstanding principal (\$)	Fees and interest payments (\$)	Loan fund net outflow (\$)
1997-98	0.160	0	0.160	0	0.160
1998-99	1.395	0	1.395	0	1.395
1999-00	1.677	0.036	1.641	0	1.641
2000-01	2.560	0.164	2.396	0	2.396
2001-02	2.495	0.177	2.318	0.075	2.243
2002-03	2.392	0.245	2.147	0.125	2.022
2003-04	2.565	0.319	2.246	0.087	2.159
2004-05	1.534	0.293	1.241	0.108	1.133
Total	14.778	1.233	13.545	0.395	13.149

### Repayment and Default Rates

As described above, we have about 4,460 students in our database plus some of the comparison cases seemed to have been students at one point in time. If we define repayment or default rates in terms of students who have loan obligations, the denominator will be considerably smaller than the number of students in the data set. This is because some students did not stay in any class long enough to incur a tuition charge. Some students had tuition fully paid by grants, and some students have had their loans deferred.

The 2004 audit by Focus: HOPE indicated that a cumulative total of about \$7.325 million in loan principal had been declared in default. Based on a trend analysis, we estimate that approximately \$0.15 million would have been declared in default in 2005, for an estimated cumulative default of about \$7.475 million. Table 3.4 notes that the total loan principal for students was about \$14.778 million. The 2004 audit indicates that about \$11.38 million in loan contracts were in repayment. Our trend analysis suggests that approximately \$1.0 million more would have been put into repayment in 2005, so the total loans for which some repayment was expected was about \$12.4 million. So, on a dollar basis, the default rate is approximately 60 percent ( $\$7.475/\$12.4$ ). Note that the numerator and denominator of this fraction include the “loans” made to students from the Detroit Enterprise Zone (EZ). Private communication with Ken Kudek suggested that the principal for these loans may have totaled \$0.68 million. If we subtract this figure from the numerator and denominator, the default rate drops to about 58 percent. These percentages likely underestimate the default rate because they essentially assume that none of the recent loans will go into default.

Another way to estimate the default rate on a dollar basis comes from the 2004 audit. According to those figures, the cumulative principal in loans that were making payment was about \$1.78 million and the cumulative principal in loans that were in default was \$7.325

million. In other words, the default principal was about four times as large as the repayment principal. This implies a default rate of 0.80. So our estimate of the default rate is between \$0.60 to \$0.80 on the dollar, which implies that the repayment rates calculated on a dollar basis would be between \$0.20 and \$0.40.

The default rates on a dollar basis are quite high such that the loan fund has a net outflow shown in Table 3.4 of over \$1–\$2 million per year. As a *business model*, this is not viable. However the sum of total payments shown in Tables 3.3 and 3.4 is about \$2.2 million.<sup>7</sup> That may represent a significant source of revenue to Focus: HOPE, especially as public grant dollars recede. Furthermore, it may be argued that such a level of payments from an economically disadvantaged population exceeds expectations.

The previous discussion examines default and repayment rates on a dollar basis. Repayment rates can be calculated on a person basis from the information on the number of individuals with loans, making payments, and receiving grants provided in Table 3.5. Note that we have eliminated duplicates in each of the columns, but there is double counting across the columns because, for example, an individual may have received a grant or incurred a loan for courses taken in two or more years. Also, an individual may have made some repayments, but then stopped and was declared in default. To be precise, we found just about 70 percent (1,521/2,180) of the individuals who received a grant also incurred a loan, and about 50 percent (592/1,222) of the individuals who ever made a payment were eventually declared a default.

Calculation of repayment and default rates from Table 3.5 data is complicated by the significant overlap between the last two columns. Of the 3,796 individuals who incurred a loan (column 2), apparently 760 have neither made a repayment nor been declared in default. These individuals must have loans that have been deferred, are in process, or are in nonpayment status, but not long enough to be declared in default. Eliminating these 760 cases from the denominator yields a repayment rate, defined as making at least one payment, of 40.3 percent and a default rate (on a person basis) of 79.3 percent (these percentages add up to more than 100 because some persons make a partial repayment before going into default). Altogether, the tables of financial information show us that the average student loan is \$3,893. About 4 students in 10 make any repayment, and their average total repayment has been about \$1,332, of which \$1,009 has been used to reduce principal.

## **TRAINING**

The education program at Focus: HOPE has three major “departments” with students in the loan fund—First Step/FAST TRACK, MTI, and ITC.<sup>8</sup> The purpose of this section is to provide aggregate data on enrollments, courses taken, and course completions for these departments. The data pertain only to the last four full years.

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<sup>7</sup> These data are through September 2005. Recently, Focus: HOPE celebrated passing the \$3 million mark in payments received.

<sup>8</sup> Again, the Center for Advanced Technologies (CAT) is not included in this evaluation.

**Table 3.5 Individuals with Loans, Grants, Repayments, and in Default, by Academic Year**  
(Columns are unduplicated counts)

Academic year	Received grant	Incurred loan	Made repayment of at least \$1	Declared in default
1997-98	196	105	0	0
1998-99	443	639	0	0
1999-00	323	473	104	168
2000-01	508	582	251	546
2001-02	313	672	225	442
2002-03	160	533	183	228
2003-04	138	429	251	682
2004-05	99	363	208	280
Unknown year				60
Total	2,180	3,796	1,222	2,406

### Enrollments, by Program

In the last four years, annual enrollment averaged 788 students; however, there has been a downward trend in enrollment from 1,042 to 830 to 722 to 559 in 2002, 2003, 2004, and 2005, respectively. (These counts reflect some duplication from year to year, although duplication within a year has been eliminated. Specifically, this is the number of individuals who were enrolled in a course that met at least one day during the fiscal year. So if an individual was in a course that crossed fiscal years, or if the individual took one course in one fiscal year and then another course in another fiscal year, they would have been counted in each year.) Concomitant with the reduction in enrollments over this four-year period has been a reduction in the number of class offerings. There were 110 classes in 2002, but this dropped to 76, 73, and 71 in 2003, 2004 and 2005, respectively.

Enrollment in First Step/FAST TRACK has trended downward. It has averaged 264 students per year; with 357, 281, 247, and 170 in the last four years, respectively. The MTI enrollment had been relatively stable, although it dropped significantly in 2005. Its enrollments were 435, 386, 403, and 292, respectively. That averages 379 students per year. The ITC enrollment declined fairly drastically from 2002 to 2004, but then held fairly constant in 2005. Its enrollments were 366, 258, 185, and 173, respectively. That averages 246 students per year.

### Completions

During the last four years, each student enrolled in 1.70 classes, on average. The total number of students in all of the courses offered was 1,816, 1,385, 1,234, and 965 in the four years, respectively. As would be expected, not all of the courses were completed. In 2002, there were 1,146 completions out of the 1,816 students on the rolls (63.1 percent), and in 2003, the completion rate was 62.1 percent (860 out of 1,385). In 2004 and 2005, the rates were 58.6 percent and 58.3 percent, respectively. The completion rates for First Step and FAST TRACK were 83.7, 78.2, 82.2, and 79.4 percent in 2002, 2003, 2004, and 2005, respectively. The ITC and MTI had lower completion rates. For MTI, the course completion rates over the four years were 44.3, 49.5, 47.4, and 49.4 percent. Finally, the completion rates for ITC courses showed a fairly significant downward trend at 73.4, 68.2, 62.1, and 60.0 percent. This downward trend in the ITC may be an indicator to watch.

It should be noted that some of the noncompletion occurred because students transferred between sections. A student may start in one class but then encounter a problem (such as an illness or transportation difficulty), “drop” the class, and reenroll in a later class. MTI classes had the highest number and rate of transfers. Over the four years, MTI had total enrollments of 2,577. It had 1,220 course completions (47.3 percent), and it had 343 transfers (13.3 percent). To compare, the transfer rate for the ITC was 7.9 percent, and the transfer rate for First Step/FAST TRACK was 5.0 percent.

### Student Evaluations of the Training

As a final descriptive source of data about training, we provide student evaluation data that were collected as part of the evaluation survey. This survey asked respondents who had been Focus: HOPE students, i.e., the treatments, some evaluative questions about their experiences at Focus: HOPE. Table 3.6 presents these data. In all, the students had very positive opinions about different aspects of the training that they received, and about how much job knowledge had been given to them.

**Table 3.6 Student Evaluations of Focus: HOPE**

Training characteristic	Percent dissatisfied or very dissatisfied	Percent satisfied or very satisfied	Sample size
Day(s) and time(s) of the Focus: HOPE classes	16.8	83.2	303
Class materials and equipment	6.3	93.7	301
Knowledge of the instructor	5.3	94.7	303
Clarity of the instructor	9.2	90.8	303
Location of Focus: HOPE	5.3	94.7	303
How the instructor tried to understand yours needs and meet them	8.6	91.4	304
Training gave you a good idea about the following aspects of the jobs being trained for:	Percent No	Percent Yes	
How much you could earn	23.3	76.7	301
Benefits you could get	23.9	76.1	301
Type of people you would work with	17.2	82.8	302
Type of problems/challenges you might face	17.8	82.2	303
Things you need to do to meet your boss’s expectations.	13.0	87.0	300

SOURCE: Wave 3 of Evaluation Survey.

In short, the status of the Focus: HOPE education programs seems to be one of a sharp downward trend in enrollment and some reduction in the percentages of students who complete their courses. The loan fund has made almost \$15 million in loans to about 3,800 individuals. Default rates are substantial although the loan fund’s annual net outflow has decreased over time. Also on the more positive side, the students who receive the training seem quite satisfied with almost every aspect of their Focus: HOPE experiences.

The next two chapters of the report will turn to an analysis of loan repayment behavior and net outcomes for Focus: HOPE students.

## IV. STUDENT LOAN REPAYMENT BEHAVIOR<sup>9</sup>

Tuition has been established for each of the Focus: HOPE programs, and every student who enrolls agrees to repay their tuition through a combination of government funding sources and loan repayments. The loans represent contractual obligations between the students and Focus: HOPE to pay the residual balance between tuition and grant payments such as Pell grants, Work First grants, WIA training grants, and dual enrollment over an extended period of time after training completion. Like most student loans, the Focus: HOPE loans are unsecured. Students are required to make modest copays while they are attending classes (approximately \$10 per week). The balances are deferred as long as the students are enrolled at Focus: HOPE, and then the repayments that are captured are applied to late fees, interest, and principal in that order.

We analyzed the repayments made by individuals to Focus: HOPE by examining three outcome variables. None of these variables include copayments. The outcomes were as follows:

- *Amount repaid.* This variable constructed from the loan payment data from Focus Hope, UAS, and Shermeta is the sum of all repayments made by an individual student.
- *Payment status.* This variable is constructed from the loan payment data. If the student made at least one payment, then this variable is set to 1; otherwise it is a 0.
- *Default status.* This variable is set to 1 if Focus: HOPE has formally set the status of a loan to default; otherwise it is a 0. This information originated in the Audit Repay file supplied by Focus: HOPE.

Each of these outcome variables measure a different dimension of repayment behavior, and therefore has a distinct statistical distribution. While a continuous variable can (at least conceivably) take on an infinite number of values, a binary variable may only take on two values.

Different statistical techniques are required for these two types of data. For the continuous variable, amount repaid, we use tobit regressions. Tobits are a specialized form of linear regression that are most appropriate when a large number of observations are clustered at zero. In our case, there are a large number of students who have “amount repaid” equal to zero. The coefficient of tobit regressions can be interpreted as the slope of a line. A one-unit change in the explanatory variable will produce an expected change in the outcome variable equal to the coefficient estimate for this linear function.

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<sup>9</sup> The appendix to this report has a copy of text from Hollenbeck and DeRango (2005) that describes simulation modeling of the student loan fund.

The probit regression technique is a method that compresses the effects of all control variables in such a way as to restrict all predicted values of the outcome variable between zero and one. However, unlike the coefficients in a tobit, interpreting the economic meaning of a coefficient estimate in a probit regression is difficult because the underlying function is nonlinear. Thus, compared to the linear tobit, a one-unit change in the control variable in a probit regression may cause a larger or smaller change in the predicted value depending on the slope of the nonlinear function at that particular value.

Population means for *Amount repaid* and *Payment status* for program type, cosigner status, and number of courses completed are displayed in Table 4.1. For students who have exited Focus: HOPE and have a student loan liability, the average amount paid back is \$449.38. That average is deflated considerably by a large number of students who have not made any repayment. In fact, only about one-third have made a repayment on their loans (i.e., about two-thirds have not made any repayment). Among the individuals who had made a repayment, the average amount repaid was \$1,362.

The last column in the table shows that there is little difference among program types in the percentage of students who had made a repayment; it was around 35 percent for all three groups. Students who took only First Step or FAST TRACK would have much smaller loans than students who took courses in the MTI or ITC. Thus, the data show that their repayments, on

**Table 4.1 Repayment Amounts and Status through 2005, by Program, CoSigner Status, and Number of Courses Completed**

Variable name	Average repayments for total sample (\$)	Average repayments for individuals who had made a repayment (\$)	Percent of students with at least one payment (%)
Overall	449.38	1,361.79	33.0
First Step/FAST TRACK only	287.88 <sup>a</sup>	854.68 <sup>a</sup>	33.7 <sup>a</sup>
ITC	611.31	1,699.49	36.0
MTI	535.42	1,460.15	36.7
Cosigner	520.49	1,243.40 <sup>b</sup>	41.9 <sup>b</sup>
No cosigner	427.62	1,411.84	30.3
Completed courses			
0	159.07 <sup>c</sup>	699.91 <sup>c</sup>	22.7 <sup>c</sup>
1	318.97 <sup>d</sup>	1,113.41 <sup>d</sup>	28.6 <sup>d</sup>
2	625.07	1,611.33	38.8
3 or more	726.31	1,691.11	42.9

SOURCE: Audit Control File spreadsheet.

NOTE: <sup>a</sup>Statistically significantly different from ITC or MTI. (Note ITC and MTI not statistically significantly different.)

<sup>b</sup>Statistically significantly different from no cosigner.

<sup>c</sup>Statistically significantly different from one or more completed courses.

<sup>d</sup>Statistically significantly different from two or more courses.

average, are much smaller. For students who had made some repayments, the averages were about \$850, \$1,460, and \$1,700 for First Step/FAST TRACK only, MTI, and ITC students, respectively. Whether a student had a cosigner made a big difference in terms of making any payment. Over 40 percent of individuals with a cosigner had made a payment, whereas only about 30 percent without a cosigner have made a payment. On the other hand, the average amount repaid for individuals who had made some payment was slightly lower for individuals with a cosigner.

The last panel of data in the table shows a cross-tabulation of repayments by the number of courses completed. Loan balances increase with the number of courses, so the increase in average payments as number of courses increases is expected. However, the increase in the payment percentage as number of courses increase is less tautological. Completing a second course or more than two classes is associated with an increase in the payment propensity of over 10 percentage points, and three or more courses has a higher percentage than just two.

So an examination of simple cross-tabs of the repayment data suggests that program does not influence heavily whether an individual will repay, but it does affect how much they repay if they make any payment. Having a cosigner seems to affect both repayment propensity and amount, as does the number of completed classes. The next section looks at these and other factors in a multivariate regression framework.

## **MULTIVARIATE ANALYSIS OF REPAYMENT BEHAVIOR**

First, we present the tobit regressions of the *Amount repaid* variable and analyze what they reveal about the eleven hypotheses enumerated in the first chapter regarding preprogram, in-program, and postprogram characteristics. Tables 4.2 and 4.3 present estimates from tobit models in which *Amount repaid* is the dependent variable. In the first table, the models were estimated for the full sample of students, and the second table uses data from the third wave of the evaluation survey. The first table shows coefficients from two specifications. The first specification categorizes students as having enrolled in First Step or FAST TRACK classes or not (reference case.) The second specification categorizes students as having enrolled in MTI, ITC, or neither (reference case). The second table replicates these specifications, but includes variables that are only on the evaluation survey—family status, training-related placement, felon status, and debt.

The coefficient column in the tables shows the estimated increase or decrease in total student repayments to Focus: HOPE of a one-unit change in the explanatory variable. The p-value indicates the probability that the true coefficient is actually zero and the estimate derived for the sample is merely due to random variation in the data. A p-value near zero indicates strong evidence against the randomness interpretation. A p-value near one indicates that randomness is likely the cause of the nonzero result.

The preprogram characteristics are shown first. Table 4.2 shows that age and race are statistically significant negative explainers of the amount repaid, contrary to our hypothesis. Note that in Table 4.3, these effects are still negative, but the small sample size has attenuated the statistical precision of the estimates. Holding other things constant, older individuals and

**Table 4.2 Tobit Estimates of a Model of Amount Repaid Using Full Sample**

Characteristic	Coefficient	P> t	Coefficient	P> t
Preprogram characteristics				
H1: Demographics				
Age	-33.8***	0.000	-31.4***	0.000
Male	9.7	0.935	-61.9	0.603
African American	-1,113***	0.000	-1,026***	0.000
H2: Did loan have cosigner	490.4***	0.000	514.9***	0.000
In-program characteristics				
H4: Effect of course completion				
Number classes completed	304.7***	0.001	333.4***	0.000
Has at least one class not completed	-343.5***	0.002	-483.5***	0.000
H5: Student attended FS/FT	216.2*	0.088	—	—
H6: MTI students	—	—	336.4**	0.026
ITC students	—	—	-159.6	0.385
H7: Loan size	0.041*	0.069	0.036	0.101
Amount of grants received	-0.004	0.883	-0.032	0.165
Postprogram characteristics				
H9: Average quarterly earnings	0.194***	0.000	0.191***	0.000
Have wage data	461.4***	0.001	448.7***	0.001

NOTE: Number of observations = 2,903; pseudo R-squared = 0.0150 for specification 1 and 0.0155 for specification 2. — indicates variable was not included in the specification. \* = statistically significant at the 10% level; \*\* = statistically significant at the 5% level; \*\*\* = statistically significant at the 1% level.

**Table 4.3 Tobit Estimates of a Model of Amount Repaid Using Evaluation Survey**

Characteristic	Coef.	P> t	Coef.	P> t
Preprogram characteristics				
H1: Demographics				
Age	-9.5	0.573	-5.9	0.724
Male	355.9	0.220	369.4	0.209
African American	-765	0.201	-556	0.348
H2: Did loan have cosigner	418.2	0.218	703.3**	0.034
H3: Felon	-1,072	0.132	-1,391*	0.060
In-program characteristics				
H4: Effect of course completion				
Number classes completed	-287.0	0.282	-57.7	0.799
Has at least one class not completed	-1,059***	0.000	-1,294***	0.000
H5: Student attended FS/FT	461.9	0.188	—	—
H6: MTI students	—	—	1,007**	0.022
ITC students	—	—	1,338***	0.002
H7: Loan size	0.049	0.388	-0.062	0.259
Amount of grants received	0.067	0.352	-0.038	0.580
Postprogram characteristics				
H8: Family status	-60.6	0.826	-7.0	0.980
H9: Average quarterly earnings	0.179***	0.002	0.191***	0.001
Have wage data	808.3**	0.030	719.7*	0.052
H10: Training-related placement	-756.0**	0.035	-760.9**	0.034
H11: Debt	0.003	0.529	0.001	0.789

NOTE: Number of observations = 202; pseudo R-squared = 0.0237 for specification 1 and 0.0291 for specification 2. — indicates variable was not included in the specification. \* = statistically significant at the 10% level; \*\* = statistically significant at the 5% level; \*\*\* = statistically significant at the 1% level.

African Americans have lower repayment amounts. Gender does not have a significant impact on repayment amount. A student with a cosigned loan has repaid about \$500 more than an otherwise identical student whose loan does not have a cosigner. In Table 4.3, we have added the variable of whether an individual self-reported have been convicted of a felony. The estimated coefficient is approximately  $-\$1,000$  to  $-\$1,400$ , which confirms our hypothesis.

The middle panel summarizes the estimated effects of in-program characteristics on amount repaid. Completing a course is associated with higher repayments in the full sample tobit specifications, but the coefficients are not statistically significant (nor even of the right sign) in the equations estimated from the evaluation survey. However, having at least one incomplete course is strongly negative in all of the tobits. Not completing a class reduces total payments by \$350 to \$500 in the full sample model, and by \$1,000 or more in the evaluation survey estimates.

Interestingly, the hypothesis that stated that First Step/FAST TRACK students would not pay back as much as students who were in MTI or ITC was not borne out by the estimates. The estimates are all positive, although not always statistically significant that attending First Step/FAST TRACK tended to increase the amount of repayment, holding other factors constant. The coefficients of the MTI and ITC variables compare payments to students who *only* took First Step/FAST TRACK. With the exception of one of the coefficients in Table 4.2, these estimates are all large and significant. In the evaluation survey estimates, the ITC students who repay are estimated to have paid about \$300 more in total repayments than the MTI students who paid.

One might expect loan size to have a positive correlation with the amount repaid given that an individual has made some payment, but this is, at best, weakly borne out in the coefficient estimates. In the full sample, the point estimates are positive and one of them is significant. In the evaluation survey, the signs are inconsistent, with one of the estimates being significantly negative. The total amount of grants received by the student does not seem to influence the amount of repayment.

The bottom part of the tables contains the Tobit results for postprogram characteristics. Average quarterly earnings are strongly associated with increased repayments in all specifications in both samples, as might be expected. For every additional dollar earned by a student per quarter after exiting Focus: HOPE, the estimates suggest that they will ultimately pay between \$0.13 and \$0.19, on average. In the evaluation survey data, we find that family status (being married or living with own children) and level of debt do not have a statistically significant impact on total repayments. Inexplicably, having a training-related placement has a negative impact on the total amount repaid.

Tables 4.4 and 4.5 summarize the results from estimating Probit models of the binary outcome variables: payment status and default status. These tables do not contain the coefficient estimates from the regressions because the magnitude of the numbers themselves is difficult to interpret. Instead, the tables display the sign and statistical significance of the coefficients. The first table shows the estimates of the models of payment status and default status estimated from

**Table 4.4 Signs and Significance of Probit Estimates of Payment and Default Status Using the Full Sample**

Characteristic	Payment status		Default status	
Preprogram characteristics				
H1: Demographics				
Age	(-)***	(-)***	(+)***	(+)**
Male	(+)	(-)	(-)	(-)
African American	(-)***	(-)***	(+)***	(+)***
H2: Did loan have cosigner	(+)**	(+)**	(+)***	(+)***
In-Program characteristics				
H4: Effect of course completion				
Number classes completed	(+)***	(+)**	(-)	(-)
Has at least one class not completed	(-)*	(-)**	(+)	(+)
H5: Student attended FS/FT	(+)	—	(-)	—
H6: MTI students	—	(+)	—	(+)***
ITC students	—	(-)	—	(+)***
H7: Loan size	(-)***	(-)***	(+)***	(+)***
Postprogram characteristics				
H9: Average quarterly earnings	(+)***	(+)***	(-)***	(-)***

NOTE: Number of observations = 2,903; pseudo R-squared = 0.0753 for specification 1 of payment status; 0.0769 for specification 2 of payment status; 0.0209 for specification 1 of default status; and 0.0286 for specification 2 of default status. — indicates variable was not included in the specification. \* = statistically significant at the 10% level; \*\* = statistically significant at the 5% level; \*\*\* = statistically significant at the 1% level.

**Table 4.5 Signs and Significance of Probit Estimates of Payment and Default Status Using the Evaluation Survey**

Characteristic	Payment status		Default status	
Preprogram characteristics				
H1: Demographics				
Age	(+)	(+)	(-)*	(-)*
Male	(-)	(-)	(+)	(-)
African American	(+)	(+)	—	—
H2: Did loan have cosigner	(+)**	(+)**	(-)***	(-)**
H3: Felon	—	—	(+)	(+)
In-program characteristics				
H4: Effect of course completion				
Number classes completed	(+)	(-)	(-)***	(-)
Has at least one class not completed	(-)*	(-)**	(+)*	(+)
H5: Student attended FS/FT	—	(+)**	—	(+)
H6: MTI students	—	(+)***	—	(+)
ITC students	(-)	(-)	(+)	(-)
H7: Loan size				
Postprogram characteristics				
H8: Family status	(-)	(+)	(-)	(-)
H9: Average quarterly earnings	(+)***	(+)***	(+)	(+)
H10: Training-related placement	(-)	(-)	(+)	(+)
H11: Debt	(-)	(-)	(+)*	(+)*

NOTE: Number of observations = 202; pseudo R-squared = 0.1029 for specification 1 of payment status; 0.1284 for specification 2; 0.1158 for specification 1 of default status; and 0.0616 for specification 2. — indicates variable was not included in the specification. \* = statistically significant at the 10% level; \*\* = statistically significant at the 5% level; \*\*\* = statistically significant at the 1% level.

the full sample of students. The second table, Table 4.5, has payment and default status model estimates from the evaluation survey.

In general, we would expect the independent variables in these models to have opposite signs for payment vis-à-vis for default. That is usually the case, but not always. Among the preprogram characteristics, age and race again seem to be negatively related to repayment propensity, and positively related to default.<sup>10</sup> Having a cosigner has the expected sign and is significant in the models estimated using the evaluation survey data (Table 4.5); however, in Table 4.4, having a cosigner is positively correlated to both payment and default. The behavior that this suggests is that having a cosigner results in students starting to repay, but ultimately defaulting at a higher rate. Because the number of (self-reported) felons is so small in the evaluation survey, the probit estimates were not stable (and not possible for payment status). The point estimate shows a tendency toward default.

Among the in-program characteristics, course taking and completing also seem to have the expected signs, although not all of the coefficients are significant. More completed courses are positively correlated with payment and negatively correlated with default; having at least one noncompleted course has exactly opposite effects. The size of the loan is a strong predictor of payment or default. In the earlier analyses, loan size did not seem to have a strong effect on the amount of repayments, but the models presented here indicate that larger loans clearly discourage payment and encourage default, other things equal. The program that the students pursued does not seem to have a strong influence on payment or default. None of the coefficients in the full sample estimates are significant. The evaluation survey suggests that individuals who enrolled in a First Step or FAST TRACK program are more likely to be in default, and MTI and ITC students are more likely to repay than students who took the remedial programs only.

Average quarterly earnings have a strong positive effect on payment and a strong negative effect on default in the full sample. Furthermore, they have a strong positive effect on payment in the evaluation design, but their impact on defaults is of the wrong sign and not significant in Table 4.5. In that table, students' debts are shown to be positively related to defaults; but other than that result the other postprogram characteristics—family status and training-related placements do not have statistically significant effects on payment or default.

## **SUMMARY**

The multivariate analyses shed light on the hypotheses that were stated in the introductory chapter. Specifically, we found the following:

- H1: Loan repayment performance will not vary by demographic characteristics of program applicants such as race, sex, or age.

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<sup>10</sup> Because of collinearity, the African-American variable was not included in the default models using the evaluation survey data.

This hypothesis is not confirmed. Both age and being an African American were shown to reduce the likelihood of repayment and to reduce the amount of repayment. Gender did not seem to have an effect on repayment behavior, however.

H2: Loan repayment performance will differ for individuals with and without a cosigner. Cosigners will increase the likelihood of more positive outcomes.

This hypothesis was confirmed. Having a cosigner increased the likelihood of repayment and the amount of repayment. It decreased the likelihood of default in the analyses of the evaluation survey data, although it increased the likelihood of default in the full sample.

H3: Loan repayment performance will be lower for individuals who had been incarcerated prior to program application.

The small number of observations in which an individual identified themselves as having a felony made it difficult to reach statistically significant findings, but the signs of the effects seem to confirm this hypothesis. Having been a felon significantly reduced the amount of repayments and increased the likelihood of default.

H4: Loan repayment performance will be better for individuals who completed all of the courses that they began. Stated conversely, loan repayment performance will lag for individuals who did not complete a course in which they enrolled.

In general, this hypothesis was confirmed. One of the strongest explanatory variables in the loan repayment behavior models was the existence of a noncompleted course. This factor reduced the likelihood of repayment, increased the likelihood of default, and reduced significantly the total amount of repayments if such repayments had begun. The number of completed courses had a strong effect on payment status and default status, increasing the former and decreasing the latter. But the number of completed courses did not have a statistically significant effect on the amount of repayments.

H5: Loan repayment performance will differ for individuals who enroll in First Step or FAST TRACK from individuals who don't. The former will have lower performance.

This hypothesis was not confirmed. In general, students who had enrolled in First Step or FAST TRACK were estimated to have quite similar repayment behavior as those students who had not. There was (weak) evidence that these students may have a slightly higher default likelihood, and that both MTI and ITC students had slightly higher payment likelihoods.

H6: Loan repayment performance will not differ between MTI and ITC students.

This hypothesis was confirmed. Both types of students had quite similar estimated parameters with respect to payment and default. ITC students had slightly higher levels of total repayments, holding other things equal.

H7: Loan repayment performance will not vary by the size of the student responsibility.

This hypothesis was not confirmed by the empirical evidence. The size of the loan is a strong predictor of payment or default; however, it did not seem to have a strong effect on the amount of repayments. The empirical results indicate that larger loans clearly discourage payment and encourage default, other things equal.

H8: Loan repayment performance will differ across the marital and family status of applicants. The presence of a spouse or own children will increase the likelihood of more positive outcomes.

This hypothesis was not confirmed. Family status did not have a statistically significant effect on repayment or default.

H9: The strongest correlates of repayment behavior will be employment and earnings subsequent to attending Focus: HOPE. Higher levels of employment and earnings will be associated with higher levels of repayment.

Indeed, average earnings from the wage record data was strongly related to all of the repayment measures. We estimated that each additional \$1.00 in average quarterly earnings resulted in \$0.13 to \$0.19 additional repayments. Furthermore, average earnings increased the likelihood of making a payment. A puzzle is that average earnings is also correlated with default, although this relationship is not statistically significant.

H10: Individuals with a training-related placement will have higher levels of repayment.

This hypothesis was not confirmed. The training-relatedness of individuals' jobs was not related to any of the repayment behaviors.

H11: Loan repayment behavior will depend on the debt burden of program completers/leavers. Debt burden will be inversely related to repayment behavior.

We were not able to strongly confirm this hypothesis. Total debt was not significantly related to total payments against loan principal. It was a weak negative correlate of payment status, but it significantly increased the likelihood of a loan default.

In all, we have fairly consistent and sensible results concerning the relationships between observable characteristics and repayment behavior. However, it should be borne in mind that these statistical models explained only a small share of the variance in the data, which implies that nonobservable characteristics may be far more important than observables.

## **V. TRAINING NET IMPACTS**

The evaluation data set uses individuals as the unit of observation. For each individual in the treatment cohorts, the data base is populated with information from three time periods: Preenrollment, Focus: HOPE program participation, and posttraining. The individuals in the comparison cohorts have data from preencounter and postencounter time periods. Some variables are time-invariant, and others change over time.

The data blocks that are in the preenrollment (for treatment cohort members) and preencounter (for comparison cohort members) periods of time include demographics, information about childhood family(ies), high school(s) experiences, postsecondary educational experiences prior to encountering Focus: HOPE, current family status and relationships, health/disability status, sources and amounts of income.

The Focus: HOPE participation data for treatment cohort members include academic information about courses taken, completion, and financial aid information. The financial aid information includes application information, student account balances, and repayment/deferral histories.

The data blocks in the posttraining (postencounter) periods include employment-related information (occupation, wage rate, hours, availability of insurance, training, etc.), current family(ies) information, further education or training, health status, and sources and amounts of income.

### **LABOR MARKET OUTCOMES**

The gist of the net impact analyses is to determine the difference in outcomes between individuals who received Focus: HOPE training and the comparison group members. Because individuals were not randomly assigned to be in the participant group or in the comparison group, there may be systematic (nonrandom) differences between them. The statistical estimators used to calculate the net impact analyses attempt to control for those differences in order to get an unbiased estimate of the training's net impact.

We have used two data sources to estimate net impacts. First, we used the quarterly earnings data from the Unemployment Insurance wage record data system, and second, we used self-reported data from the sample survey.

#### **Wage Record Data Results**

Employers in Michigan are required to submit quarterly earnings records when they pay their Unemployment Insurance taxes. Applicants to Focus: HOPE have been requested to sign a form that allows the state to disclose these records to Focus: HOPE for programmatic and evaluation purposes. For the evaluation, the social security numbers of all the individuals in the analysis data base were sent to the state for earnings records matching. Because of strict

disclosure regulations, the state also used the first initial of the individuals' first names as a secondary match criterion.

## Employment

The first outcome to be examined is employment rates. In this case, employment is defined as having positive earnings in a quarter. The employment rate is employment as a percentage of the total sample.<sup>11</sup> The last two columns of Table 5.1 provide data on employment rates for the individuals who enrolled in 2002–2004 and for the comparison group of individuals who tested to become students in 2002–2004. As a benchmark, the first column of data show the employment rates for cohort 0 students (enrolled prior to 2002).

**Table 5.1 Employment Rates, by Group and Quarter**

Quarter	Cohort 0 (%)	Treatment: Cohorts 1–4 (%)	Comparison group (%)
2002:Q1	52.4 <sup>a,b</sup>	44.8 <sup>c</sup>	47.8
2002:Q2	54.7 <sup>a,b</sup>	48.3 <sup>c</sup>	50.1
2002:Q3	54.6 <sup>a,b</sup>	47.3 <sup>c</sup>	49.7
2002:Q4	49.0 <sup>a,b</sup>	44.9	45.0
2003:Q1	32.6	33.7	34.2
2003:Q2	54.8 <sup>a,b</sup>	42.0	42.1
2003:Q3	43.1 <sup>a,b</sup>	32.7	34.3
2003:Q4	57.8 <sup>a,b</sup>	51.8	49.6
2004:Q1	54.5 <sup>a,b</sup>	49.8 <sup>c</sup>	46.9
2004:Q2	53.4 <sup>a,b</sup>	49.2	47.9
2004:Q3	57.2 <sup>a,b</sup>	54.2 <sup>c</sup>	50.4
2004:Q4	56.1 <sup>b</sup>	53.2 <sup>c</sup>	49.7
2005:Q1	55.7 <sup>b</sup>	53.9 <sup>c</sup>	49.3
2005:Q2	55.3 <sup>b</sup>	53.0 <sup>c</sup>	48.0
2005:Q3	na	55.2 <sup>c</sup>	48.6
2005:Q4	na	55.1 <sup>c</sup>	47.8
2006:Q1	na	53.1 <sup>c</sup>	45.3
2006:Q2	na	47.6 <sup>c</sup>	42.0

NOTE: The dashed line indicates the point in time in which the treatment groups' employment rate surpassed the comparison groups'. na means data not available.

<sup>a</sup>Cohort 0 statistically significantly different from treatment.

<sup>b</sup>Cohort 0 statistically significantly different from comparison group.

<sup>c</sup>Treatment statistically significantly different from comparison group.

Some interesting characteristics about the data in the table should be noted. First, all three groups experienced the employment cycle in parallel. Employment rates started to drop in the 4th quarter of 2002 and were abysmal through 2003:Q3, with the exception of the 2nd quarter, which may have reflected summer employment. The employment rates rebounded substantially in 2004. Second, note that the treatment and comparison groups' employment rates were quite

<sup>11</sup> The employment rates that are reported are underestimates of the “true” rate. Because of erroneous social security numbers, the wage record match missed a significant number of individuals. The match rates that were achieved were approximately 75 percent. The nonmatches would be individuals not employed, individuals who were employed out of state, and individuals who were employed but whose erroneous data prevented a match. A “guesstimate” is that the employment rates reported here are underestimated by about 10 percentage points. That would yield rates that approximate the rates that are self-reported in the evaluation survey.

lower than the cohort 0 rates in the earliest quarters displayed, but then they become much closer toward the end of the data. This likely reflects the fact that the treatment and comparison groups are younger and have less labor market experience. Finally, note that the treatment group surpasses the comparison group for the final 11 quarters of data. We have inserted a dashed line to indicate this phenomenon. During these 11 quarters, the employment differential favoring the Focus: HOPE students averaged 4.60 percentage points, which is almost a 10 percent effect.

### Disaggregation of the employment impact

Of course, a characteristic of the treatment group is that a significant share of the individuals are students, which may dilute their employment rates. Table 5.2 displays the employment rate data for the treatment group disaggregated by whether the individual was enrolled in Focus: HOPE during the quarter as well as the comparison group. Here, the employment rate for nonenrolled individuals exceeds the comparison group's employment rate for virtually the entire period, whereas the enrolled students' employment rate is less than the comparison group's for virtually every quarter, except for the last three quarters. (Of course, it should be recognized that some of the comparison group members may be students at other training institutions during the period.) Over the entire 18-quarter period presented in the table, the treatment students not enrolled have a 3.8 percentage point higher employment rate on average than the comparison group. This is a positive net impact of approximately 8 to 10 percent.

**Table 5.2 Employment Rates by Whether Treatment Groups Students are Enrolled, by Quarter**

Quarter	Treatment cohorts 1–4:		Comparison group (%)
	Enrolled students (%)	Nonenrolled (%)	
2002:Q1	40.3 <sup>a,b</sup>	46.3	47.8
2002:Q2	42.0 <sup>a,b</sup>	51.3	50.1
2002:Q3	42.4 <sup>a,b</sup>	50.6	49.7
2002:Q4	40.9	47.3	45.0
2003:Q1	27.7 <sup>a,b</sup>	37.7	34.2
2003:Q2	42.3	41.9	42.1
2003:Q3	28.1 <sup>a,b</sup>	34.4	34.3
2003:Q4	45.2 <sup>a</sup>	53.9 <sup>c</sup>	49.6
2004:Q1	42.9 <sup>a</sup>	52.2 <sup>c</sup>	46.9
2004:Q2	40.7 <sup>a,b</sup>	51.8 <sup>c</sup>	47.9
2004:Q3	49.3 <sup>a</sup>	55.7 <sup>c</sup>	50.4
2004:Q4	47.4 <sup>a</sup>	54.6 <sup>c</sup>	49.7
2005:Q1	48.4 <sup>a</sup>	54.8 <sup>c</sup>	49.3
2005:Q2	47.9	53.6 <sup>c</sup>	48.0
2005:Q3	59.1	54.8 <sup>c</sup>	48.6
2005:Q4	58.2 <sup>b</sup>	54.9 <sup>c</sup>	47.8
2006:Q1	—	53.2 <sup>c</sup>	45.3
2006:Q2	—	47.7 <sup>c</sup>	42.0

NOTE: The dashed line indicates the point in time in which the nonenrolled treatment group's employment rate surpassed the comparison groups'. — indicates sample size too small to be meaningful.

<sup>a</sup>Enrolled students statistically significantly different from nonenrolled.

<sup>b</sup>Enrolled students statistically significantly different from comparison group.

<sup>c</sup>Nonenrolled students statistically significantly different from comparison group.

Clearly, another interesting way to look at the employment rate outcome is by type. The Focus: HOPE training leads to higher employment rates, but the question might be asked about whether this positive outcome is equally distributed across the MTI or ITC students or students who did not proceed beyond First Step or FAST TRACK. Table 5.3 shows the employment rates disaggregated by course type. Several interesting findings stand out. First, the ITC employment rates are higher than the MTI rates for the first 13 quarters but then they are almost identical for the remainder of the analysis period. Second, both ITC and MTI employment rates are higher than the employment rates for the students who enrolled in First Step or FAST TRACK, but did not go on, and they are higher than the comparison group's employment rate.

**Table 5.3 Employment Rates by Course Type, by Quarter**

Quarter	FS/FT only	MTI	ITC	Comparison group
2002:Q1	37.2 <sup>b,c</sup>	39.2 <sup>d,e</sup>	54.5	47.8
2002:Q2	44.3 <sup>b,c</sup>	43.9 <sup>d,e</sup>	55.1	50.1
2002:Q3	43.1 <sup>b,c</sup>	41.6 <sup>d,e</sup>	55.3	49.7
2002:Q4	41.2 <sup>b</sup>	39.6 <sup>d,e</sup>	52.6 <sup>f</sup>	45.0
2003:Q1	30.8 <sup>b</sup>	30.6 <sup>d,e</sup>	38.4	34.2
2003:Q2	37.9 <sup>b</sup>	38.2 <sup>d,e</sup>	53.4 <sup>f</sup>	42.1
2003:Q3	27.0 <sup>b,c</sup>	31.9 <sup>d</sup>	40.2 <sup>f</sup>	34.3
2003:Q4	47.2 <sup>b</sup>	52.3 <sup>d</sup>	57.3 <sup>f</sup>	49.6
2004:Q1	46.5 <sup>b</sup>	48.7 <sup>d</sup>	55.6 <sup>f</sup>	46.9
2004:Q2	46.0 <sup>b</sup>	48.1 <sup>d</sup>	55.9 <sup>f</sup>	47.9
2004:Q3	50.3 <sup>b</sup>	53.1 <sup>d</sup>	62.3 <sup>f</sup>	50.4
2004:Q4	48.5 <sup>a,b</sup>	55.0 <sup>e</sup>	56.6 <sup>f</sup>	49.7
2005:Q1	48.8 <sup>a,b</sup>	55.4 <sup>e</sup>	58.4 <sup>f</sup>	49.3
2005:Q2	48.5 <sup>a,b</sup>	55.8 <sup>e</sup>	55.9 <sup>f</sup>	48.0
2005:Q3	50.1 <sup>a,b</sup>	57.2 <sup>e</sup>	57.9 <sup>f</sup>	48.6
2005:Q4	47.6 <sup>a,b</sup>	58.4 <sup>e</sup>	57.9 <sup>f</sup>	47.8
2006:Q1	46.7 <sup>a,b</sup>	55.1 <sup>e</sup>	56.8 <sup>f</sup>	45.3
2006:Q2	42.6 <sup>a,b</sup>	49.2 <sup>e</sup>	50.4 <sup>f</sup>	42.0

NOTE: Table entries are percentages.

<sup>a</sup>FS/FT only statistically significantly different from MTI.

<sup>b</sup>FS/FT only statistically significantly different from ITC.

<sup>c</sup>FS/FT only statistically significantly different from comparison group.

<sup>d</sup>MTI statistically significantly different from ITC.

<sup>e</sup>MTI statistically significantly different from comparison group.

<sup>f</sup>ITC statistically significantly different from comparison group.

Third, the employment rates of the First Step and FAST TRACK only students lag behind the comparison group for the first eight quarters, but then are virtually the same. This result is suggestive of a positive impact of those courses on the employability of students, even if the students do not proceed into the MTI or ITC. Only students who tested below a 9th grade level were required to take First Step or FAST TRACK. So all of those students had reading or math skill deficiencies. Some of the comparison group members had comparable test scores (i.e., skill deficiencies); however, many of them did not. Nevertheless, the employment rates of the two groups are virtually the same over the last 10 quarters of data.

In Table 5.4, we show data that address the second hypothesis about training impacts. Here the treatment group is split into individuals who had at least one course that they did not complete and individuals without any incomplete courses. As would be expected, the students

without any incompletes have higher employment rates than the comparison group or the students who had at least one incomplete, although the advantage did not show up until the last 11 quarters of data. Interestingly, the students with at least one incomplete also surpass the comparison group in the final 11 quarters of data, although the differential is much smaller than for individuals with no incompletes.

**Table 5.4 Employment Rates by Whether Students Had an Incomplete Course, by Quarter**

Quarter	Treatment cohorts 1–4:		Comparison group
	At least one incomplete	No courses incomplete	
2002:Q1	43.4	41.7 <sup>c</sup>	47.8
2002:Q2	46.1	46.5	50.1
2002:Q3	45.3	45.6	49.7
2002:Q4	43.7	42.7	45.0
2003:Q1	33.0	31.6	34.2
2003:Q2	39.7 <sup>a</sup>	44.3	42.1
2003:Q3	32.1	33.4	34.3
2003:Q4	51.0	52.7	49.6
2004:Q1	48.4	51.1 <sup>c</sup>	46.9
2004:Q2	46.5 <sup>a</sup>	52.0 <sup>c</sup>	47.9
2004:Q3	50.8 <sup>a</sup>	57.7 <sup>c</sup>	50.4
2004:Q4	50.5 <sup>a</sup>	56.1 <sup>c</sup>	49.7
2005:Q1	51.2 <sup>a</sup>	56.6 <sup>c</sup>	49.3
2005:Q2	49.6 <sup>a</sup>	56.4 <sup>c</sup>	48.0
2005:Q3	51.4 <sup>a</sup>	59.1 <sup>c</sup>	48.6
2005:Q4	52.5 <sup>a,b</sup>	57.7 <sup>c</sup>	47.8
2006:Q1	49.9 <sup>a,b</sup>	56.4 <sup>c</sup>	45.3
2006:Q2	43.9 <sup>a</sup>	51.3 <sup>c</sup>	42.0

NOTE: Table entries are percentages. The dashed line indicates the point in time in which the employment rate for individuals in the treatment group without an incompleted course surpassed the comparison group's.

<sup>a</sup>At least one incomplete statistically significantly different from no courses incomplete.

<sup>b</sup>At least one incomplete statistically significantly different from comparison group.

<sup>c</sup>No courses incomplete statistically significantly different from comparison group.

Another way to examine the data is to look at “successful” students versus the rest of the sample. Table 5.5 shows the employment rates for individuals who enrolled in MTI courses and completed at least Core 1, individuals who enrolled in ITC courses and completed Network Administration or Desktop Support, and all other students. Again, we see this pattern of MTI students lagging behind ITC students for the first several quarters, and then they end up on a par with or exceeding them for the most recent data.

## Earnings

The second data item from the earnings records that is analyzed is average quarterly earnings. The data in Table 5.6 display this information for the entire sample. Like the employment rate data, the treatment group does eventually surpass the comparison group, although this does not occur until the 17th quarter, i.e. the 1st quarter of 2006. During the first 16 quarters, the comparison group's mean quarterly earnings is a little over \$4,000 and the treatment group's mean is about \$3,625, which is about a 10 percent disadvantage. Neither the treatment nor comparison group's means come close to the benchmark of the cohort 0's earning. They average about \$5,200.

**Table 5.5 Employment Rates by Successful Completer Status, by Quarter**

Quarter	ITC successful completer	MTI successful completer	All other students	Comparison group
2002:Q1	56.3 <sup>a,b</sup>	39.2 <sup>c</sup>	42.6 <sup>f</sup>	47.8
2002:Q2	59.3 <sup>a,b</sup>	42.6 <sup>c</sup>	46.6 <sup>f</sup>	50.1
2002:Q3	58.8 <sup>a,b</sup>	42.6 <sup>c</sup>	45.1 <sup>f</sup>	49.7
2002:Q4	52.8 <sup>a</sup>	35.8 <sup>d,e</sup>	44.5	45.0
2003:Q1	36.7 <sup>a</sup>	26.1 <sup>c</sup>	34.0	34.2
2003:Q2	56.2 <sup>a,b,c</sup>	41.8	40.9	42.1
2003:Q3	38.8	34.4	32.3	34.3
2003:Q4	58.7 <sup>c</sup>	61.5 <sup>d,e</sup>	50.0	49.6
2004:Q1	57.9 <sup>b,c</sup>	58.6 <sup>d,e</sup>	47.6	46.9
2004:Q2	60.3 <sup>b,c</sup>	60.7 <sup>d,e</sup>	46.5	47.9
2004:Q3	69.4 <sup>b,c</sup>	62.3 <sup>d,e</sup>	51.7	50.4
2004:Q4	61.6 <sup>b,c</sup>	64.3 <sup>d,e</sup>	50.8	49.7
2005:Q1	64.0 <sup>b,c</sup>	66.4 <sup>d,e</sup>	51.1	49.3
2005:Q2	65.3 <sup>b,c</sup>	67.2 <sup>d,e</sup>	49.8	48.0
2005:Q3	68.2 <sup>b,c</sup>	69.3 <sup>d,e</sup>	51.1	48.6
2005:Q4	67.4 <sup>b,c</sup>	71.3 <sup>d,e</sup>	50.8 <sup>f</sup>	47.8
2006:Q1	66.5 <sup>b,c</sup>	70.9 <sup>d,e</sup>	48.3 <sup>f</sup>	45.3
2006:Q2	61.6 <sup>b,c</sup>	62.3 <sup>d,e</sup>	43.1	42.0

NOTE: Table entries are percentages. ITC successful completer defined as completed Network Administration or Desktop Support; MTI successful completer defined as completed Core 1.

<sup>a</sup>ITC successful completer statistically significantly different from MTI successful completer.

<sup>b</sup>ITC successful completer statistically significantly different from all other students.

<sup>c</sup>ITC successful completer statistically significantly different from comparison group.

<sup>d</sup>MTI successful completer statistically significantly different from all other students.

<sup>e</sup>MTI successful completer statistically significantly different from comparison group.

<sup>f</sup>All other students statistically significantly different from comparison group.

**Table 5.6 Quarterly Earnings, by Group and by Quarter**

Quarter	Cohort 0 (\$)	Treatment cohorts 1–4 (\$)	Comparison group (\$)
2002:Q1	4,211 <sup>a,b</sup>	2,993	3,244
2002:Q2	4,520 <sup>a,b</sup>	3,021 <sup>c</sup>	3,481
2002:Q3	4,854 <sup>a,b</sup>	3,014 <sup>c</sup>	3,391
2002:Q4	4,925 <sup>a,b</sup>	3,121 <sup>c</sup>	3,535
2003:Q1	4,463 <sup>a,b</sup>	2,788 <sup>c</sup>	3,357
2003:Q2	5,149 <sup>a,b</sup>	3,389 <sup>c</sup>	3,926
2003:Q3	5,349 <sup>a,b</sup>	3,442 <sup>c</sup>	4,056
2003:Q4	5,673 <sup>a,b</sup>	3,479 <sup>c</sup>	4,200
2004:Q1	5,338 <sup>a,b</sup>	3,442 <sup>c</sup>	3,853
2004:Q2	5,568 <sup>a,b</sup>	3,631 <sup>c</sup>	3,948
2004:Q3	5,421 <sup>a,b</sup>	3,687 <sup>c</sup>	4,064
2004:Q4	6,171 <sup>a,b</sup>	4,378	4,631
2005:Q1	5,505 <sup>a,b</sup>	3,944	4,195
2005:Q2	5,802 <sup>a,b</sup>	4,397	4,605
2005:Q3	na	4,584	4,834
2005:Q4	na	4,688	4,888
2006:Q1	na	4,855	4,745
2006:Q2	na	4,868	4,846

NOTE: The dashed line indicates the point in time in which the treatment group's average quarterly earnings surpassed the comparison group's. na indicates data not available.

<sup>a</sup>Cohort 0 statistically significantly different from treatment.

<sup>b</sup>cohort 0 statistically significantly different from comparison group.

<sup>c</sup>treatment statistically significantly different from comparison group.

### Disaggregation of the earnings net impacts

The next table displays the average earnings by quarter for the treatment students who are enrolled in a class during the quarter and those not enrolled. As would be expected the average quarterly earnings for the latter are much greater, Table 5.7 shows that the mean of the average quarterly earnings is about \$2,600 for the enrolled students and \$3,950 for the nonenrolled individuals. As for the treatment group as a whole, the average earnings for the treatment group nonstudents are less than the average earnings for the comparison group for almost the entire period, but then exceed them for the last two quarters.

**Table 5.7 Quarterly Earnings by Whether Treatment Groups Students are Enrolled, by Quarter**

Quarter	Treatment cohorts 1–4:		Comparison group (\$)
	Enrolled students (\$)	Nonenrolled (\$)	
2002:Q1	2,427 <sup>a,b</sup>	3,155	3,244
2002:Q2	2,856 <sup>b</sup>	3,087	3,481
2002:Q3	2,544 <sup>a,b</sup>	3,278	3,391
2002:Q4	2,956 <sup>b</sup>	3,203	3,535
2003:Q1	2,746	2,808 <sup>c</sup>	3,357
2003:Q2	2,903 <sup>a,b</sup>	3,572 <sup>c</sup>	3,926
2003:Q3	2,482 <sup>a,b</sup>	3,729	4,056
2003:Q4	2,365 <sup>a,b</sup>	3,769	4,200
2004:Q1	2,598 <sup>a,b</sup>	3,691	3,853
2004:Q2	2,477 <sup>a,b</sup>	3,910	3,948
2004:Q3	2,363 <sup>a,b</sup>	4,043	4,064
2004:Q4	2,748 <sup>a,b</sup>	4,716	4,631
2005:Q1	3,478 <sup>a,b</sup>	4,169	4,195
2005:Q2	2,573 <sup>a,b</sup>	4,602	4,605
2005:Q3	2,645 <sup>a,b</sup>	4,784	4,834
2005:Q4	2,565 <sup>a,b</sup>	4,798	4,888
2006:Q1	—	4,886	4,745
2006:Q2	—	4,869	4,846

NOTE: The dashed line indicates the point in time in which the nonenrolled individual's average quarterly earnings surpassed the comparison group's. — indicates cell size is too small to be meaningful.

<sup>a</sup>Enrolled students statistically significantly different from nonenrolled.

<sup>b</sup>Enrolled students statistically significantly different from comparison group.

<sup>c</sup>Nonenrolled students statistically significantly different from comparison group.

Table 5.8 shows the earnings impact by course type. Here we see considerable differentials between the course types. The ITC students' average quarterly earnings are approximately \$1,000 per quarter higher than the MTI students, which translates to be about 25 percent. In the early quarters of the time series, the MTI students' earnings are \$200 to \$500 greater than the First Step/FAST TRACK only students' earnings. But then this differential grows considerably. By the last few quarters the MTI students are earning almost \$1,000 per quarter than are the First Step/FAST TRACK only students.

In Table 5.9, we array quarterly earnings by whether the students had an incomplete class. In the first few quarters, individuals with an incomplete class actually average higher quarterly earnings than those without an incomplete. A likely explanation for this is that the

**Table 5.8 Quarterly Earnings by Course Type, by Quarter**

Quarter	FS/FT only (\$)	MTI (\$)	ITC (\$)	Comparison group (\$)
2002:Q1	2,171 <sup>b,c</sup>	2,549 <sup>d,e</sup>	3,796 <sup>f</sup>	3,244
2002:Q2	2,429 <sup>b,c</sup>	2,405 <sup>d,e</sup>	3,909	3,481
2002:Q3	2,405 <sup>b,c</sup>	2,477 <sup>d,e</sup>	3,836	3,391
2002:Q4	2,454 <sup>b,c</sup>	2,627 <sup>d,e</sup>	3,906	3,535
2003:Q1	2,026 <sup>b,c</sup>	2,486 <sup>d,e</sup>	3,481	3,357
2003:Q2	2,819 <sup>b,c</sup>	3,043 <sup>d,e</sup>	3,995	3,926
2003:Q3	2,808 <sup>b,c</sup>	3,102 <sup>d,e</sup>	4,105	4,056
2003:Q4	2,688 <sup>b,c</sup>	3,033 <sup>d,e</sup>	4,500	4,200
2004:Q1	2,491 <sup>a,b,c</sup>	3,213 <sup>d,e</sup>	4,391 <sup>f</sup>	3,853
2004:Q2	2,668 <sup>a,b,c</sup>	3,495 <sup>d,e</sup>	4,464 <sup>f</sup>	3,948
2004:Q3	2,958 <sup>a,b,c</sup>	3,599 <sup>d,e</sup>	4,340 <sup>f</sup>	4,064
2004:Q4	3,432 <sup>a,b,c</sup>	4,249 <sup>d,e</sup>	5,418 <sup>f</sup>	4,631
2005:Q1	3,032 <sup>a,b,c</sup>	3,893 <sup>d</sup>	4,801 <sup>f</sup>	4,195
2005:Q2	3,688 <sup>a,b,c</sup>	4,303 <sup>d</sup>	5,248 <sup>f</sup>	4,605
2005:Q3	3,837 <sup>a,b,c</sup>	4,506 <sup>d</sup>	5,503 <sup>f</sup>	4,834
2005:Q4	4,007 <sup>a,b,c</sup>	4,636 <sup>d</sup>	5,437 <sup>f</sup>	4,888
2006:Q1	3,885 <sup>a,b,c</sup>	4,515 <sup>d</sup>	6,078 <sup>f</sup>	4,745
2006:Q2	3,716 <sup>a,b,c</sup>	4,866 <sup>d</sup>	5,742 <sup>f</sup>	4,846

NOTE: The dashed line indicates the point in time in which the treatment group's average quarterly earnings surpassed the comparison group's.

<sup>a</sup>FS/FT only statistically significantly different from MTI.

<sup>b</sup>FS/FT only statistically significantly different from ITC.

<sup>c</sup>FS/FT only statistically significantly different from comparison group.

<sup>d</sup>MTI statistically significantly different from ITC.

<sup>e</sup>MTI statistically significantly different from comparison group.

<sup>f</sup>ITC statistically significantly different from comparison group.

**Table 5.9 Quarterly Earnings by Whether Students Had an Incomplete Course, by Quarter**

Quarter	Treatment cohorts 1–4:		Comparison group (\$)
	At least one incomplete (\$)	No courses incomplete (\$)	
2002:Q1	2,652 <sup>a,b</sup>	3,296	3,244
2002:Q2	2,861 <sup>b</sup>	3,141	3,481
2002:Q3	2,877 <sup>b</sup>	3,148	3,391
2002:Q4	3,123	3,085 <sup>c</sup>	3,535
2003:Q1	3,007	2,643 <sup>c</sup>	3,357
2003:Q2	3,493 <sup>b</sup>	3,294 <sup>c</sup>	3,926
2003:Q3	3,613 <sup>b</sup>	3,274 <sup>c</sup>	4,056
2003:Q4	3,428 <sup>b</sup>	3,529 <sup>c</sup>	4,200
2004:Q1	3,338 <sup>b</sup>	3,543	3,853
2004:Q2	3,719	3,551 <sup>c</sup>	3,948
2004:Q3	3,626 <sup>b</sup>	3,742	4,064
2004:Q4	4,269	4,478	4,631
2005:Q1	3,762 <sup>b</sup>	4,112	4,195
2005:Q2	4,225	4,550	4,605
2005:Q3	4,469	4,686	4,834
2005:Q4	4,538	4,827	4,888
2006:Q1	4,826	4,882	4,745
2006:Q2	4,742	4,977	4,846

NOTE: The dashed line indicates the point in time in which the treatment group's average quarterly earnings surpassed the comparison group's.

<sup>a</sup>At least one incomplete statistically significantly different from no courses incomplete.

<sup>b</sup>At least one incomplete statistically significantly different from comparison group.

<sup>c</sup>No courses incomplete statistically significantly different from comparison group.

individuals with an incomplete may have taken a full-time job, whereas the individuals without an incomplete may still be enrolled students. However, after the seventh quarter, the average earnings for individuals without an incomplete exceed the average earnings for those with an incomplete for the remainder of the time series.

The last disaggregation of the earnings data appears in Table 5.10, which shows average quarterly earnings by successful completion status. The successful completers from the ITC have a significant earnings advantage over the successful MTI completers, all other students, and the comparison group through most of the time period. Starting in 2004, their average quarterly earnings exceed the comparison group's average quarterly earnings by \$500 to \$1,000. For the first 11 quarters, the successful MTI completer's average earnings do not keep pace with the comparison group's. However, over the last 7 quarters, they do exceed the comparison, and even go past the ITC group in the final quarter.

**Table 5.10 Quarterly Earnings by Successful Completer Status, by Quarter**

Quarter	ITC successful completer (\$)	MTI successful completer (\$)	All other students (\$)	Comparison group (\$)
2002:Q1	4,446 <sup>a,b,c</sup>	2,639	2,692 <sup>f</sup>	3,244
2002:Q2	4,159 <sup>a,b</sup>	2,549	2,801 <sup>f</sup>	3,481
2002:Q3	4,067 <sup>a,b,c</sup>	2,426 <sup>e</sup>	2,853 <sup>f</sup>	3,391
2002:Q4	3,925 <sup>a,b</sup>	2,719	2,984 <sup>f</sup>	3,535
2003:Q1	3,091	2,372	2,778 <sup>f</sup>	3,357
2003:Q2	3,644	3,061 <sup>e</sup>	3,370 <sup>f</sup>	3,926
2003:Q3	3,851 <sup>a</sup>	2,642 <sup>d,e</sup>	3,497 <sup>f</sup>	4,056
2003:Q4	4,421 <sup>a,b</sup>	3,036 <sup>e</sup>	3,374 <sup>f</sup>	4,200
2004:Q1	4,382 <sup>a,b</sup>	3,481	3,278 <sup>f</sup>	3,853
2004:Q2	4,131 <sup>b</sup>	3,830	3,518 <sup>f</sup>	3,948
2004:Q3	4,168 <sup>b</sup>	4,088 <sup>d</sup>	3,549 <sup>f</sup>	4,064
2004:Q4	4,938 <sup>b</sup>	4,938 <sup>d</sup>	4,264 <sup>f</sup>	4,631
2005:Q1	4,757 <sup>b</sup>	4,664 <sup>d</sup>	3,713 <sup>f</sup>	4,195
2005:Q2	5,037 <sup>b</sup>	4,949 <sup>d</sup>	4,249 <sup>f</sup>	4,605
2005:Q3	5,425 <sup>b</sup>	5,088 <sup>d</sup>	4,432 <sup>f</sup>	4,834
2005:Q4	5,540 <sup>b</sup>	5,500 <sup>d</sup>	4,418 <sup>f</sup>	4,888
2006:Q1	5,858 <sup>b,c</sup>	5,401 <sup>e</sup>	4,563	4,745
2006:Q2	5,720 <sup>b,c</sup>	6,039 <sup>d,e</sup>	4,431 <sup>f</sup>	4,846

NOTE: The dashed line indicates the point in time in which the treatment group's average quarterly earnings surpassed the comparison group's. ITC Successful Completer defined as completed Network Administration or Desktop Support; MTI Successful Completer defined as completed Core 1.

<sup>a</sup>ITC Successful Completer statistically significantly different from MTI Successful Completer.

<sup>b</sup>ITC Successful Completer statistically significantly different from all other students.

<sup>c</sup>ITC Successful Completer statistically significantly different from comparison group.

<sup>d</sup>MTI Successful Completer statistically significantly different from all other students.

<sup>e</sup>MTI Successful Completer statistically significantly different from comparison group.

<sup>f</sup>All other students statistically significantly different from comparison group.

## Sample Survey Data

The second source of data for the training net impact analysis is sample surveys that were conducted in March/April 2004, April/May 2005, and Spring/Summer 2006. These surveys were conducted by a survey unit of Wayne State University. The sampling frames for the surveys were confined to the students or comparison group members in cohorts 1 through 3. The

first survey obtained 460 usable responses, equally split between the treatment and comparison groups. The second survey obtained 700 responses; of which 360 were from the comparison group and 340 from the treatment group of students. The third wave of the survey obtained 645 responses, of which 310 were from the treatment group.

### Response rates and response analyses

Response rates to these surveys were quite low. It was exceedingly difficult to get responses to this telephone survey. To enhance response rates, we offered all individuals who completed the survey a gift card at Target (\$10 for the first survey and \$15 for the second and third). The Upjohn Institute supplied Wayne State with lists of the students sampled randomly that had the most recent contact information for the students as supplied to us by Focus: HOPE.

In the first wave of the survey, the response rate for the treatment group (first-time enrollees in 2002 and 2003) was about 17.0 percent. It was 11.8 percent for the comparison group. Most of the nonresponse came from bad telephone numbers (disconnected/not in service or wrong numbers) as opposed to refusals. In the second wave of the survey, the response rate for the treatment group, which now included the 2004 students was 18.3 percent, and the response rate for the comparison group was 12.8 percent. In the third wave of the survey, which had the same population as the second wave, the response rates were 16.7 percent and 11.9 percent for the treatment and comparison groups, respectively.

With such poor response rates, the question of potential bias is natural. We were able to analyze nonresponse using a couple of different statistics, and as a result, we don't believe that response bias is of a significant magnitude. Table 5.11 presents data on the application test scores for the total population and for the survey respondents, and data on self-reported employment rates of the respondents and the appropriate quarterly employment rate from the total population that got matched to wage records. The survey respondents average slightly higher on the test scores than does the entire population; however, this is true for both the treatment and comparison groups, and the differences are quite small.

**Table 5.11 Survey Response Analysis**

Statistic	Survey respondents		Population	
	Comparison	Treatment	Comparison	Treatment
Test scores <sup>a</sup>				
Math	9.5	10.0	9.3	9.9
Reading	11.3	11.7	11.2	11.5
Employment rates <sup>b</sup>				
Q2:2004	54.8	55.2	47.9	49.2
Q1:2005	58.3	58.3	49.3	53.9
Q2:2006	62.6	63.2	42.0	47.6

<sup>a</sup>If individual was retested, the highest score was used.

<sup>b</sup>Survey respondents' data pertain to current employment status on date of survey; population rates determined from wage record data. Population employment rates are biased downward because of mismatches between the student data and the UI wage record data.

The self-reported current employment rates are higher than the administrative quarterly rates. For the treatment group, the former is about 5 percentage points greater in the first two

waves of the survey, but then it jumps to more than 15 percentage points in the third wave. For the comparison group, the difference is about 7 to 8 percentage points in the first two waves, but then balloons to 20 percentage points in the third wave. Given the data problems that caused the matching to the UI wage records to underestimate employment, it is likely that the “true” population employment rates are greater than the survey rates in the first two waves, but may be less than the survey rates in the third wave. In other words, the survey may have underrepresented employed individuals in Waves 1 and 2, and overrepresented them in Wave 3. However, the statistics do not suggest a differential bias between the treatment and comparison groups.

### Demographic and educational characteristics

Table 5.12 provides descriptive statistics from the three waves of the survey concerning the demographics of the treatment and comparison groups of individuals. If we assume that there is no response bias in the survey, the table suggests that the average treatment group

**Table 5.12 Descriptive Statistics about Demographics, by Survey Wave**

Characteristic	2004 Survey		2005 Survey		2006 Survey	
	Treatment	Comparison	Treatment	Comparison	Treatment	Comparison
Sample size	230	230	340	360	307	340
Sex (%)						
Male	65.7	65.7	67.6	62.8	66.8	67.7
Female	34.3	34.3	32.4	37.2	33.2	32.3
Age at testing (mean)	28.3	30.1	28.4	29.0	31.1	33.8
Race/ethnic origin (%)						
Black/African American	90.0	86.5	88.8	88.6	93.1	84.3
White/Caucasian	2.2	4.8	3.2	5.6	3.0	7.4
Latino/Hispanic	2.6	3.5	2.2	1.1	1.3	2.7
Other (incl. mixed, DK, Ref.)	5.2	5.2	5.8	4.9	2.3	5.6
Childhood household (%)						
Number of adults < 2	28.5	26.4	26.8	23.3	22.6 <sup>a</sup>	24.0 <sup>a</sup>
Number of children ≥ 4	29.4	30.2	34.9	31.3	40.3 <sup>a</sup>	39.5 <sup>a</sup>
Mobility in childhood (%)						
Never moved	29.2	27.2	25.0	30.1	33.0 <sup>a</sup>	28.1 <sup>a</sup>
Moved once/twice	45.4	45.6	48.8	42.0	46.8 <sup>a</sup>	40.7 <sup>a</sup>
Moved 3+ times	25.4	27.2	26.2	27.9	20.2 <sup>a</sup>	31.1 <sup>a</sup>
Education of mother/female						
Guardian (%)						
Less than high school	8.8	14.3	12.1	12.1	10.5	9.7
High school or GED	33.0	35.0	29.1	34.6	30.9	39.8
Some college	28.9	29.9	28.8	29.4	29.5	24.3
College degree or more	29.3	20.8	30.0	23.9	29.2	25.5
Education of father/male						
Guardian (%)						
Less than high school	14.1	18.3	14.7	17.9	12.7	19.8
High school or GED	39.3	44.3	38.8	45.2	55.4	46.3
Some college	27.4	18.7	22.4	23.0	8.5	18.0
College degree or more	19.2	18.7	24.1	13.9	23.5	15.9

<sup>a</sup>Questions were not repeated in Wave 3, so these statistics are applicable only to Wave 3 respondents who happen to be in earlier waves of the survey.

member is slightly more likely to be a male, slightly younger, and slightly less likely to be White/Caucasian than the typical comparison group member. The comparison group members are individuals who tested high enough to get into Focus: HOPE, but chose not to enroll. The table’s statistics suggest that these individuals are slightly more likely to be female, older, and White/Caucasian.

The average treatment group member is slightly more likely to have come from a childhood home with a single parent, but the two groups seem to be indistinguishable in terms of number of children in the home and mobility. Finally, the treatment group seems to come from families with higher levels of parental education. The percentage of students with mother’s or father’s educational attainment to be high school diploma or less is much smaller for the Focus: HOPE students than for the comparison group, and the percentage with college or more is higher.

Table 5.13 has descriptive statistics concerning the educational backgrounds of the treatment and comparison groups. The self-reported high school grade point average (GPA) of the treatment group is lower than that of the comparison group respondents—this is consistent with the higher proportion of males. Also, not surprisingly, the comparison group seems to have slightly higher likelihoods of attending a college after high school and of participating in formal skill training other than at a college setting. These differences may be explained by the fact that the questions ask the respondents about post–high school education and training other than at Focus: HOPE.

**Table 5.13 Descriptive Statistics about High School GPA and Post–High School Formal Education or Training, by Survey Wave**

Characteristic	2004 Survey		2005 Survey		2006 Survey	
	Treatment	Comparison	Treatment	Comparison	Treatment	Comparison
High school GPA (self-reported)	2.69	2.81	2.73	2.79	2.77 <sup>a</sup>	2.80 <sup>a</sup>
Attended community college, college, or university (%)	62.6	61.3	58.8	67.5	66.1	72.4
Formal skill training, other than community college, college, university, or Focus: HOPE (%)	30.9	35.7	54.7	55.0	27.8	39.1

<sup>a</sup>Questions were not repeated in Wave 3, so these statistics are applicable only to Wave 3 respondents who happen to be in earlier waves of the survey.

### **Reasons for choosing not to attend Focus: HOPE<sup>12</sup>**

One of the purposes of the evaluation survey was to ask comparison group members about why they chose not to enroll in Focus: HOPE. Table 5.14 provides these data along with information about the application process. The top panel of the table shows that about half the respondents indicated that they were interested in MTI and a slightly smaller percentage was interested in ITC. Most of the applicants had completed a tour and orientation session. About half of the comparison group respondents to the first wave and about one-third of the respondents to the second wave indicated that they had taken a drug test.

<sup>12</sup> The questions about reasons for not attending Focus: HOPE were not asked in the third wave of the evaluation survey. This section is repeated from Hollenbeck and DeRango (2005).

**Table 5.14 Comparison Group Interactions with Focus: HOPE, by Survey Wave**

	2004 Survey	2005 Survey	
Program of application (%)			
MTI	51.3		50.8
ITC	41.8		43.1
Both	3.5		3.1
Other (Neither, DK, Ref.)	3.5		3.0
Activities completed			
Tour/orientation	91.7		93.9
Drug test	48.3		36.9
Financial aid application	48.3		34.7
Reasons for not attending (%)		<u>Mentioned</u>	<u>Two most important</u>
Not interested in that field	13.9	19.4	10.0
Training will take too long	9.2	14.0	8.2
Too expensive	24.4	36.0	28.5
Get education/training elsewhere	25.7	37.3	22.4
Didn't want loan	12.6	25.0	13.8
Couldn't get cosigner	8.7	12.5	6.8
Transportation difficulties	8.7	16.0	12.1
Got a job	27.8	36.0	25.9
Sample size	230		360

The lower panel of the table provides responses to the question about why the individuals chose not to enroll. The respondents provided multiple reasons, so the percentages in the table add up to more than 100 percent. In the second wave, we asked the individuals to indicate which of the reasons they considered to be the most important and allowed up to two responses. The reason mentioned most frequently in the first wave and second most often in the second wave was that the respondent “got a job.” This was mentioned by approximately one-third of the respondents. A very similar-sized share of the respondents indicated that the Focus: HOPE training was “too expensive” or that they decided to “get education/training elsewhere.” Presumably there was high overlap between these two responses.

Of particular interest to Focus: HOPE was the extent that the loan obligation might deter applicants. This seemed to affect a relatively small share of the comparison group. About 13 percent of the first wave respondents mentioned that they “didn’t want a loan,” and about nine percent “couldn’t get a cosigner.” Again, there is overlap between these two response categories. In the second wave, these responses were mentioned slightly more often: about 25 and 13 percent of the time.

Finally, logistical problems such as transportation or length of the program were relatively minor, as was the response that after orientation, the respondent decided that they were no longer interested in the field.

## Outcomes

### Labor market outcomes

Table 5.15 provides information from the survey about the labor market outcomes that occurred for the treatment and comparison groups of individuals after their training from or

application encounters with Focus: HOPE. The first row of data shows the employment rates at the time of application. The comparison group members had an employment rate that was six to eight points higher than the treatment grouping the first and last wave of the survey, but it was about the same for the second wave. The higher employment rate is consistent with one of the most numerous mentioned reasons for not attending Focus: HOPE, which was because the individual had a job.

**Table 5.15 Labor Market Outcomes, by Survey Wave and Treatment Status**

Outcome	2004 Survey		2005 Survey		2006 Survey	
	Treatment	Comparison	Treatment	Comparison	Treatment	Comparison
Employed at time of application (%)	29.2	35.3	35.0	34.8	27.1 <sup>a</sup>	34.8 <sup>a</sup>
Current employment status (%)						
Employed	55.2	54.8	58.3	58.3	63.2	62.6
Not employed	44.8	45.2	41.7	41.7	36.8	37.4
If currently employed,	N=127	N=126	N=198	N=210	N=197	N=206
Job is training-related (%)	33.9	22.3	29.3	20.5	48.2	33.0
Tenure (in months)	11.1	16.7	13.2	13.8	15.2	18.1
Hours/week	36.2	39.9	35.3	37.3	40.0	39.6
Hourly wage (\$)	10.93	12.13	10.72	10.82	12.10	12.82
Received promotion? (%)	28.4	44.5	38.1	37.1	40.2	41.4
Health insurance? (%)	40.2	53.2	41.2	45.5	64.8	51.4
If not employed,	N=103	N=104	N=142	N=150	N=113	N=129
Currently looking? (%)	81.5	80.8	74.7	80.7	77.0	79.8
Unemployment rate (%)	39.8	40.0	35.0	36.6	32.1	32.3
Held job in last 2 years?						
Yes (%)	64.1	73.1	60.8	76.0	69.9	68.2
No (%)	35.9	26.9	39.2	24.0	30.1	31.8
Percent long-term unemployment (%)	16.1	12.2	16.5	10.0	12.4	13.2

<sup>a</sup>Questions were not repeated in Wave 3, so these statistics are applicable only to Wave 3 respondents who happen to be in earlier waves of the survey.

The second panel in the table displays employment and nonemployment rates of the samples at the time of the survey. These data show no statistically significant differences between the treatment and comparison groups. The employment rates of both groups grow over time—from about 55 percent in Wave 1 to about 58 percent in Wave 2 to about 63 percent in the most recent wave. Individuals who responded that they were currently employed were asked a number of questions about their jobs. These data items are presented next in the table. Based on the individuals' description of their job duties, occupation, and industry, we created an indicator of whether the job was related to their Focus: HOPE training. The percentages are higher for the treatment group, although the magnitudes seem quite modest. Slightly less than a third of the employed Focus: HOPE students were in a machining, manufacturing, or IT-related position in the first two waves. This percentage increased to almost one-half in the third wave, however.<sup>13</sup>

Not surprisingly, the comparison group had longer tenures in their current job. Many of the comparison group members chose not to attend Focus: HOPE because they had/got a job and

<sup>13</sup> This concept of training-relatedness refers to the technical content of the training. The Focus: HOPE training may also impart employability skills that would be germane to any occupation.

many of the treatment group members were taking classes when their counterparts in the comparison group may have been working. Concomitantly, the hours per week and hourly wage of the comparison group exceeded the treatment group. These are likely to be related to the longer tenures. Interestingly, in the second and third waves of the survey, even though the comparison group individuals who were employed had slightly longer average tenure, their probability of receiving a promotion at their job was slightly lower than for the Focus: HOPE students. Perhaps even more significant is the higher incidence of health insurance coverage for Focus: HOPE students in the third wave of the survey. Almost two-thirds of the treatment group indicated that they had health insurance coverage compared to about one-half for the comparison group.

The final items of data in the table relate to individuals who reported that they were not employed at the time of the survey. About 75–80 percent of them in both treatment and comparison groups reported that they were looking for employment, so the unemployment rates of the groups were in the range of 32–40 percent, and don't differ by treatment or comparison group status. A higher share of the Focus: HOPE students reported holding no job in the last two years in the first two waves of the survey, but a higher share of the comparison group reported not holding a job in the previous two years in the third wave. The bottom row of the table is the percent of the total sample that are not working and have not held a job in the last two years. These percentages are in the 10–16 percent range.

### **Multivariate analysis of employment and wages**

The analyses presented above compare employment and earnings for the treatment and comparison groups based on quarterly averages. Another, perhaps more rigorous, method for detecting a treatment effect is through multivariate regression analysis. In particular, the evaluation survey data can be used to estimate the following probit model:

$$(1) \quad \begin{aligned} EMP_i &= 1 \text{ if } p_i^* > 0 \\ &= 0 \text{ otherwise} \end{aligned}$$

where  $p_i^* = a_0 + A_1'Y_i + A_2T_i + u_{Ei}$

$$EMP_i = \begin{aligned} &1 \text{ if individual } i \text{ is employed (i.e., has positive earnings/} \\ &\text{wages); 0 otherwise} \end{aligned}$$

$$Y_i = \begin{aligned} &\text{vector of characteristics describing } i \text{ that are thought to be} \\ &\text{related to employment} \end{aligned}$$

$$T_i = \begin{aligned} &1 \text{ if individual } i \text{ is a "treatment"; 0 if "comparison"} \end{aligned}$$

$$a_0, A_1, A_2 = \begin{aligned} &\text{parameters to be estimated by Probit} \end{aligned}$$

$$u_{Ei} = \begin{aligned} &\text{standard error term} \end{aligned}$$

The parameter  $A_2$  is the treatment effect. If it is estimated to be positive, then the employment likelihood for Focus: HOPE students is greater than for the comparison group.

Similarly, we can estimate a wage equation to determine the net impact of being a treatment case. Equation (2) presents the basic model:

$$(2) \quad \ln W_i = a_1 + B_1' X_i + B_2 T_i + e_i$$

where

$\ln W_i$	=	(log) of hourly wage of individual $i$
$X$	=	vector of characteristics describing individual $i$ that are thought to be related to wages
$T_i$	=	“treatment” dummy variable as defined above
$a_1, B_1, B_2$	=	parameters to be estimated
$e_i$	=	standard error term

Wages are only observed for employed individuals, so we address potential heterogeneity through the standard technique of constructing the Inverse Mills Ratio (IMR) term from (1) that will serve as a statistical correction when estimating the wage equations only for those individuals with observed wages (i.e., for those currently working) (Heckman 1974). We then use the predicted IMR ( $\hat{\lambda}$ ) for each observation in the sample of workers in equation (2), resulting in equation (2') below.<sup>17</sup>

$$(2') \quad \ln W_i = a_1 + B_1' X_i + B_2 T_i + B_3 \hat{\lambda} + e_i$$

## Results

The econometric estimates of Equations (1) and (2') are intended to supplement the employment and earnings results that we calculated by using wage record data from the unemployment insurance system. Note that the outcome variables are different. Employment is measured directly by asking the survey respondents whether they are employed. In the discussion of employment impacts and Tables 5.1 to 5.5, employment was defined as having nonzero earnings in a quarter. In the survey, we ask the individuals who indicated that they were employed for their current hourly wage rate.

Table 5.16 provides the signs and significance of the probit estimates of Equation (1), i.e., explaining employment. The first column of entries displays the results from a specification with a single variable indicating that the individual was in the treatment group. The sign of this treatment effect is positive, which is consistent with the tabular analyses presented above. The coefficient was not statistically significant, however. In the second specification, we replaced the single treatment variable with three binary variables—had taken First Step/FAST TRACK only, had taken MTI classes, and had taken ITC classes. Here the sign on the First Step/FAST TRACK only variable was negative, whereas the signs on the other two variables were positive. However, again these effects were not statistically significant.

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<sup>17</sup>Variables that are included in the estimation of (1) but not (2), thus helping to identify it, include the mother's education, father's education, and family status.

**Table 5.16 Signs and Significance of Probit Estimates of Employment Likelihood**

Characteristic	Specification 1	Specification 2
Treatment effects		
Treatment	(+)	—
FS/FT only	—	(-)
MTI student	—	(+)
ITC student	—	(+)
Demographics		
Age	(-)	(-)
Male	(+)	(+)
African American	(-)	(-)
Preprogram Characteristics		
Mother's yrs. of educ.	(+)	(+)
Father's yrs. of educ.	(+)	(+)
Reading test score	(-)	(-)
Math test score	(+)	(+)
Some postsecondary educ.	(-)	(-)
Postprogram Characteristics		
Poor health	(-)	(-)
Disability	(-) <sup>***</sup>	(-) <sup>***</sup>
Locus of control	(+)	(+)
Felon	(-) <sup>*</sup>	(-)
Family status	(-) <sup>**</sup>	(-) <sup>**</sup>

NOTE: Number of observations = 370; pseudo R-squared = 0.1047 for specification 1; 0.1087 for specification 2. — indicates variable was not entered in this specification. \* = statistically significant at the 10% level; \*\* = statistically significant at the 5% level; \*\*\* = statistically significant at the 1% level.

The only characteristics that had strong explanatory power were family status, disability status, and being a felon. All of these factors were barriers to being employed. The family status variable was likely picking up child care responsibilities.

Table 5.17 provides the coefficient estimates from equation (2'), explaining hourly wages as reported by the survey respondents. These estimates were generated using Ordinary Least Squares (OLS), and since the dependent variable was in log form, the coefficients represent percentage changes that would accompany a unit change in the variable. Again, the first column of entries displays the results from a specification with a single variable indicating that the individual was in the treatment group. This coefficient is negative and significant, indicating that the survey comparison group's wage rates are about 14 percent higher than treatment group wage rates, holding other factors constant. In the second specification, we replaced the single treatment variable with three binary variables—had taken First Step/FAST TRACK only, had taken MTI classes, and had taken ITC classes. All three coefficients are negative, but only the coefficient on FS/FT is significant. Relative to the comparison group, an individual who only took First Step/FAST TRACK and didn't proceed into MTI or ITC has wage rates that are 22 percent lower.

The only characteristics that had strong explanatory power were age and being an African American. Both of these had positive impacts on the wage rate. We hypothesize that the positive effects of age, being an African American, being a felon, and being disabled in this equation are a result of selection. The prior equations showed that these characteristics were

**Table 5.17 Estimates from a Model of Hourly Wage Rates**

Characteristic	Specification 1	Specification 2
Treatment effects		
Treatment	-0.14**	—
FS/FT only	—	-0.22**
MTI student	—	-0.09
ITC student	—	-0.08
Demographics		
Age	0.01***	0.01***
Male	-0.07	-0.05
African American	0.19*	0.17*
Preprogram Characteristics		
Reading test score	0.29	0.02
Math test score	0.00	0.01
Some postsecondary educ.	0.12	0.13
Postprogram Characteristics		
Poor health	-0.02	-0.02
Disability	0.14	0.14
Locus of control	0.03	0.02
Felon	0.10	0.09

NOTE: Number of observations = 225. Models estimated with OLS and include constant and Inverse Mills Ratio from first-stage probits. — indicates variable was not entered in this specification. \* = statistically significant at the 10% level; \*\* = statistically significant at the 5% level; \*\*\* = statistically significant at the 1% level.

negatively associated with employment. The wage equation is estimated only on individuals who are employed, so the individuals with these characteristics who are employed must have overcome the barriers, and thus, on average, have higher motivation or skills.

### **Asset and debt accumulation**

The evaluation survey collected information about asset ownership and debt of the respondents. These are self-reported data, and some of the data seem spurious. But in general, the percentages of individuals that own certain assets and the average values of those assets and liabilities seem reasonable. Table 5.18 presents summary statistics. The picture that gets painted in that table is that a fair share of both the treatment and comparison groups have “mainstream” financial assets and liabilities. There does not seem to be a systematic difference between the treatment and comparison group.

About one-fifth of the respondents indicated that they owned a house, condo, or mobile home. Approximately two-thirds of the homeowners reported owing a balance on it. About two-thirds of the individuals reported owning an automobile, and between one-quarter and one-third of them indicated that they owed a balance on it. A little over half of the respondents reported having a checking account, and about 40 percent indicated that they had a savings account.

Between 30 and 40 percent of the respondents (a smaller share of the treatment cases) reported owing a balance on a credit card(s). The average balance was approximately \$3,000. Finally, about one-fourth of the respondents indicated that they owed money on an educational

**Table 5.18 Asset and Debts of Treatment and Comparison Group**

Asset/Liability	Treatment		Comparison	
	Have (%)	Mean value (\$)	Have (%)	Mean value(\$)
<b>Assets</b>				
House, condo, mobile home	20.0	112,957	22.5	127,900
Automobile	67.1	9,068	65.8	9,797
2nd automobile	16.8	8,687	14.7	11,630
Checking account	54.7	1,562	51.1	1,859
Savings account	39.5	2,217	45.0	4,522
<b>Liabilities</b>				
House, condo, mobile home	12.3	74,339	14.4	84,717
Automobile	20.7	8,720	19.9	9,119
2nd automobile	1.3	4,350	1.5	—
Credit cards	30.2	2,973	39.8	3,120
Educational loans	25.5	8,865	28.8	10,475
Focus: HOPE loan	55.1	6,078	na	na
Child support/alimony	7.4	na	8.1	na

NOTE: na means not applicable. — indicates sample size was too small to calculate mean.

loan with average balances of approximately \$9,000. Finally, 55 percent of the treatment cases indicated that they owed money on a Focus: HOPE loan.

**Noneconomic outcomes.** The evaluation survey collected a few items of data that might be interpreted as noneconomic outcomes. In other words, these data may be indicative of the individuals' well-being. In particular, we examine in Table 5.19 a series of variables that comprise a locus of control scale, a self-reported health indicator, and marital status. The locus of control variables are a series of questions in which the interviewed individuals respond with a scale that goes from 1 to 4 meaning strongly disagree, disagree, agree, or strongly agree. The items are worded such that a higher score is correlated with a higher degree of self-efficacy and self-control. The health indicator is also a scale, in which the respondent was asked to rate their health from 1 to 5 where 1 was poor and 5 was excellent.

**Table 5.19 Noneconomic Outcomes**

Outcome	Treatment group (entries are mean ratings)	Comparison group (entries are mean ratings)
<b>Locus of control</b>		
I am able to do most things as well as most other people.	3.70	3.67
I take a positive attitude toward myself.	3.73	3.69
I make long-range plans for myself.	3.38	3.22
I generally work towards achieving my goals.	3.69	3.63
I can accept criticism about my work.	3.57	3.51
I can express disagreement without making other people angry.	3.43	3.36
Despite the uncertainties of life, I feel my future is going to be good.	3.72	3.67
I generally pay my bills on time.	3.25	3.17
I am on time for appointments, classes, or meetings.	3.64	3.65
(Self-reported) health condition	4.24	4.15
Married	15.1%	15.6%

Interestingly, the table shows that the treatment individuals have consistently higher “scores” on the locus of control items, and a higher average health status indicator. In short, these data suggest slightly more positive noneconomic outcomes.

## **SUMMARY**

The net impact analysis suggests generally positive labor market outcomes for Focus: HOPE students. Note that the counterfactual that is employed is represented by the comparison group of individuals. In other words, the analysis assumes that if Focus: HOPE were not available, then the individuals who attended Focus: HOPE would look like and have outcomes like the individuals comprising the comparison group.

Using wage record data from the State of Michigan, we find that employment rates of former students of Focus: HOPE exceed the employment rates of the comparison group for the most recent 10 quarters of data. Furthermore, the same source of data shows that quarterly earnings of former students exceed the quarterly earnings of the treatment group for the most recent five quarters.

A less sanguine result from the sample surveys is the relatively modest rate of employment that is related to the training received by Focus: HOPE students. In the first two waves of the survey, only about one-third of the employed individuals who had attended Focus: HOPE reported working in an industry or job related to machining or IT. In the third wave, this fraction increased to about one-half. As noted, these data refer to the technical content of the training, not the more general employability skills. Also in interpreting these data, note that the job market in Detroit in manufacturing deteriorated substantially over this period of time. In 2001, employment in manufacturing in the Detroit MSA was 355,900. Five years later, it had dropped by over 30 percent to 268,000.

The empirical analyses presented in this chapter shed light on the hypotheses that were stated in the introductory chapter. Specifically, we found the following:

H1: Enrolling in and attending Focus: HOPE programs will result in better labor market outcomes.

This hypothesis was confirmed. Relative to a comparable group of individuals, the students that enrolled in Focus: HOPE programs had employment rates that were on the order of 10 percent higher. Earnings outcomes were not quite as sanguine. The average quarterly earnings of the treatment cases eventually overtook the comparison group’s earnings, but not until virtually the end of the analyses time series. In the evaluation survey, we also found that Focus: HOPE students had a higher incidence of health insurance coverage, obviously an important component of total compensation. Almost two-thirds of the treatment group indicated that they had health insurance coverage compared to about one-half for the comparison group in the third wave of the survey.

H2: Course completers will have better outcomes than individuals who did not complete all of their courses.

This hypothesis was also confirmed. It took a few quarters for the students without incompletes to catch up, but over the last three years, their employment rates have exceeded the employment rates of individuals with incomplete classes by 5 to 8 percentage points, which is greater than 10 percent. The Focus: HOPE students with incompletes also eventually had higher employment rates than the comparison group, but the advantage was less than 10 percent. In terms of average quarterly earnings, Table 5.9 shows that it took until almost the last couple of quarters for the Focus: HOPE students to catch up to the comparison group, and over those quarters, students without any incompletes had average quarterly earnings that were between \$100 to \$300 greater than the average for those with an incomplete.

H3: Among MTI and ITC students, individuals who successfully complete a sequence of courses will have better outcomes.

As noted above, we defined a successful MTI completer as an individual who completed Core 1 and a successful ITC completer as someone who completed Network Administration or Desktop Support. As Tables 5.5 and 5.10 show, the outcomes for these students far exceeded the remaining students and the comparison group.

H4: Holding the number of and completion of courses constant, there should be no difference in outcomes between individuals who started in First Step or FAST TRACK and those who didn't.

We have scant, inconclusive evidence on this hypothesis. The full sample of students does not have enough information to support the statistical estimation of a regression model that would fully test this hypothesis. The employment and hourly wage models that were estimated from the evaluation survey did not yield statistically significant effects regarding program type.

H5: Students who did not progress into a technical program in MTI or ITC, i.e., attended only First Step or FAST TRACK, will have poorer outcomes, than students who did take machining or IT courses.

Table 5.3 provides evidence on employment rates. Students who enrolled in MTI or ITC course have much higher employment rates than students who only enrolled in First Step or FAST TRACK. Interestingly, the latter ended up with higher employment rates than the comparison group over the last several quarters of data. This suggests that First Step and FAST TRACK are resulting in employability gains even if the students don't progress into the specific machining or IT fields.

In Table 5.8, we find that MTI and ITC students have much higher average earnings than students who did not get beyond First Step or FAST TRACK, although they still barely catch up

to the comparison group at the end of the data period. The students in First Step or FAST TRACK only remain well behind the comparison group in earnings throughout the entire analysis period.

## VI. CONCLUSIONS AND RECOMMENDATIONS

### CONCLUSIONS

Focus: HOPE provides valuable training to a population of young individuals who have barriers to the development of viable careers such as low-income backgrounds, basic skills deficiencies, incarceration in some cases, and single parenthood, in some cases. As the policy and economic times have changed, Focus: HOPE has changed as well. For students with low basic skills, it offered First Step in addition to FAST TRACK. It initiated training in information technology. Since the late 1990s, Focus: HOPE has operated a loan fund to continue to provide access to its programs in the face of declining government support, to provide its students with the human capital of dealing with financial responsibility, and to provide revenue for the program.

Obviously, the educational mission of Focus: HOPE is not easy work, and not surprisingly this evaluation has found some positives and negatives. There seems to be little doubt that Focus: HOPE is providing valuable training for many students who are becoming gainfully employed. On the other hand, program enrollment and the loan fund's viability seem to be struggling.

### Employment and Earnings

The single most positive finding is that Focus: HOPE has a significant impact on the employment likelihood of its students. Comparing all individuals in the treatment group to all individuals in the comparison group yields an impact that is on the order of 10 percent (perhaps six to seven percentage points), which is comparable to or larger than the impacts found in evaluations of many employment training programs. On average, we estimate that the employment rate several quarters after training for the Focus: HOPE students is around 65–70 percent, whereas it is perhaps 58–63 percent for the comparison group.<sup>14</sup>

Disaggregating the employment effect shows that students who progress into the MTI or ITC have higher employment likelihoods than students who took only First Step or FAST TRACK. But even First Step or FAST TRACK only students have higher employment rates

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<sup>14</sup> This 7 percentage point impact can be compared to Raphael and Stoll (2005), who report an estimated employment effect of workforce development programs in Massachusetts of 5 percentage points. Furthermore, Hollenbeck and Huang (2006, Table 1.2, p. 8) found the following programmatic impacts on employment in the state of Washington:

WIA Title I Adults	6.6 percentage points
WIA Title I Dislocated Workers	6.4
WIA Title I Youth	10.3
Community and Technical Colleges	6.7
Adult Education	5.9
Private Career Schools	4.3
Apprenticeships	6.8
Secondary Career and Technical Education	5.4

than the comparison group. When we looked at employment outcomes for “successful” completers in MTI or ITC, they were even more positive as might be expected.

Training-related employment rates seem to have improved over time, but still are lower than might be expected. The evidence about training-related placement comes from the evaluation survey, and was calculated in two ways. First, we went through every single record that reported an employer and an occupation, and coded whether the occupation was (potentially) related to the Focus: HOPE training. Table 5.15 shows that the training-related employment rate for the treatment cases consistently exceeded the rate for the comparison group, but in the first two waves the rate for the treatment cases was only about one-third (of the employed individuals). In the third wave, the rate increased significantly to almost 50 percent. The second measure of training-relatedness comes from direct survey questions. The first question asked of students was “Did your training at Focus: HOPE lead to a job?” In the third wave, 116 out of 300 respondents (38.7 percent) responded affirmatively. For those 116 individuals, we asked, “Do/did you use your training on this job?” 90 of the 116 (77.6 percent) said yes. So all together, 90 out of 300 (30.0 percent) of the evaluation survey respondents who had been Focus: HOPE students said that their training led to a job in which they used their training.

The earnings impact of Focus: HOPE training is also positive, but it is not nearly as strong an effect as employment. The average quarterly earnings of the treatment group eventually surpasses the comparison group, but not until almost the end of the analysis period and then only by about \$100. While the earnings impacts are quite modest, we did find some evidence in the evaluation survey data that Focus: HOPE students held jobs that were more likely to offer health insurance benefits than the comparison group’s jobs. The fact that the earnings impacts are not as sanguine as the employment impacts should not be a surprise. First, the comparison group members were not as likely to have engaged in training during the period of time during which the Focus: HOPE students were in training, so they may have gotten job experience and their job tenures would be longer implying that their earnings would be higher.

The second reason why the earnings impacts will not be as positive as the employment impacts is somewhat subtle. It comes down to the fact that because of Focus: HOPE, about 10 percent more individuals are employed than would be in the absence of Focus: HOPE. These individuals are arguably less employable/less skilled than the rest of the students who got employed, so their earnings are likely to bring down the overall average earnings of the group.

When we disaggregate the treatment group by program completion or by program, we find the expected earnings effects. Completers have much higher average earnings, and MTI and ITC students have much higher earnings than individuals who only enrolled in First Step or FAST TRACK or the comparison group. Note that the First Step/FAST TRACK enrollees’ earnings still ended up similar to the comparison group’s.

## **Loan Fund**

The loan fund has such high default rates as to make it very unlikely that revenue from loan payments will ever be enough to supplement government grants, which have been dwindling at a precipitous rate, to the point of being viable without substantial subsidization.

Through 2005, Focus: HOPE has entered into loan contracts since the inception of the loan program in 1997–1998 that total approximately \$14.8 million. Through 2005, repayments against principal have totaled just over \$1.2 million. Adding late fees, interest, and in-program copayments brings this total to about \$2.1 million. Defaults, on the other hand, total about \$7.5 million.

It is correct to say that the performance of the loan fund has been relatively stable over the past three to four years despite a precipitous decline in government grants. The loan fund has an annual net outflow (institutional subsidy) of approximately \$2 million that has trended downward over the past five years. Furthermore, the loan fund captures a significant amount of fees and interest that may defray a substantial share of the administrative cost of the fund.

Statistical analyses of repayment data suggest that presence of a cosigner, postprogram quarterly earnings, and absence of incomplete courses are most predictive of positive loan repayment behavior.

### **Enrollments and Completions**

In the last four years, annual enrollment has trended downward from 1,042 to 830 to 722 to 559 in 2002, 2003, 2004, and 2005, respectively. Concomitant with the reduction in enrollments over this four-year period has been a reduction in the number of class offerings. There were 110 classes in 2002, but this dropped to 76, 73, and 71 in 2003 through 2005. The enrollment drops have occurred in all of the programs. Enrollment in First Step/FAST TRACK averaged 264 students per year; with 357, 281, 247, and 170 in the last four years, respectively. The MTI enrollment had been relatively stable, although it dropped significantly in 2005. Its enrollments were 435, 386, 403, and 292, respectively. That averages 379 students per year. The ITC enrollment declined fairly drastically from 2002 to 2004, but then held fairly constant in 2005. Its enrollments were 366, 258, 185, and 173, respectively. That averages 246 students per year.

Course completion rates have also trended downward. The total number of (beginning) students in all of the courses offered was 1,816, 1,385, 1,234, and 965 in the four years, respectively. In 2002, there were 1,146 completions out of the 1,816 students on the rolls (63.1 percent), and in 2003, the completion rate was 62.1 percent (860 out of 1,385). In 2004 and 2005, the rates were 58.6 percent and 58.3 percent, respectively. The completion rates for First Step and FAST TRACK were 83.7, 78.2, 82.2, and 79.4 percent in 2002, 2003, 2004, and 2005, respectively. The ITC and MTI had lower completion rates. For MTI, the course completion rates over the four years were 44.3, 49.5, 47.4, and 49.4 percent. Finally, the completion rates for ITC courses showed a fairly significant downward trend at 73.4, 68.2, 62.1, and 60.0 percent.

### **RECOMMENDATIONS**

Of the three major conclusions, the most puzzling is the reduction in enrollments (and completions). It is well-known that training is countercyclical, so Focus: HOPE should be seeing a significant *increase* in enrollment interest given the continuing slump in the Michigan/Detroit economy. The large declines seem inexplicable. It must be the case that the one or more of the

referral mechanisms to Focus: HOPE is not as productive as it was formerly. We would recommend that Focus: HOPE immediately analyze its referral mechanisms and determine what would be required to increase them significantly.

If Focus: HOPE wants to continue its loan fund, there are a few changes that perhaps could result in marginal improvements to its financial performance. Actions that might increase the payment rate might include 1) offering educational programs/seminars to current or graduating students about debt management, 2) requiring cosigners for a larger share of students, and 3) screening out applicants with excessive debt burdens. Having an incomplete class is a strong explanatory factor, so there might be interventions possible when a student quits attending or threatens to quit attending a class.

Given the importance of postprogram earnings for establishing economic independence and self-support as well as on loan repayment behavior, it may make sense for Focus: HOPE to defer loan repayments until the program completers are employed, and it may be advisable Focus: HOPE to “beef up” its placement activities. This might require more aggressive job development, more follow-up to obtain feedback from employers who have hired recent graduates, or “radical” innovations such as guaranteed lifetime use of placement services as long as students are in good standing with their loan payments.

Overall, it is accurate to say that the training programs at Focus: HOPE are improving the life chances of its students despite encountering over the last few years conditions that might be characterized as a perfect storm: government grants-in-aid have dried up, and the labor market, especially in machine trades, has all but evaporated. These downward trends were unanticipated when the loan fund was established. So in our estimation, the two major problems that Focus: HOPE needs to solve in order to continue its positive benefits are establishing stable revenue sources to cover the costs of training and to reverse the downward trend in enrollment.

## **APPENDIX: LOAN FUND SIMULATION**

### **(MATERIAL FROM YEAR 2 REPORT)**

This appendix provides an overview of a simulation model that can be used to analyze the financial status of the Focus: HOPE loan fund. The simulation performed makes many simplified assumptions because of data limitations. Nonetheless, some important features of the loan fund are captured. First, the loan fund is characterized by a high default rate and a corresponding low rate of payback that is not isolated to any one particular subgroup of students. Default is a ubiquitous phenomenon. Second, government grants to students are the principle source of funds flowing into the loan fund. Students' copayments and repayments are small in comparison. Third, interest or late fee income, which would be net inflows to the loan fund, are relatively small. The effect of this combination of a high default rate and a small amount of interest and late fee income can be seen in simulation results. Holding constant the high default rate, interest rates would have to be unfeasibly high in order for the loan fund to break even. Likewise, holding constant the late fees and interest rate, the default rate would have to be lowered to almost zero before the loan fund comes to balance.

The appendix is organized as follows. We first describe the data sources used for information on student repayment and debt and then present results from various policy analysis simulations.

#### **Simulation Model Data Sources**

The data for the simulation came mainly from loan payment spreadsheets provided by Focus: HOPE, loan payment data from UAS, and the student records Access database from Focus: HOPE. The spreadsheets have been reformatted and entered into an Access database where the tables are linked by social security number (SSN). Because of a substantial number of inconsistencies in the SSNs from the different tables, the values used for parameters in the simulations are estimates and, thus, likely differ from the true values.

The student records database was the source of data for gender and date of birth. The date of birth was used to calculate age at enrollment. The AuditClose files provided information on tuition earned, copays, and student responsibility. These files contained information on government payments (defined, in our case, to be any outside payment including sources such as employer grants), but it was not formatted in a way that could be easily used. So government payments were defined as the difference between tuition earned and the sum of copayments and student responsibility. The AUDITCNTFLREPAY spreadsheets provided information on individuals who were in repayment, who had paid in full, and who were in default. Finally, we used the collections spreadsheets from both Focus: HOPE and UAS to calculate how much students had repaid on their loans.

## Simulation Results

The simulation tool divides students into five mutually exclusive groups depending on whether they took a developmental course (either FAST TRACK or First Step) and then whether or not they entered into the information technology (ITC) or machinist career (MTI) track. Table A.1 displays basic data about the five groups: Developmental (did not proceed into ITC or MTI), MTI and Developmental, MTI without Developmental, ITC and Developmental, and ITC without Developmental. For each of these groups, the columns in Table A.1 give the average tuition earned, student responsibility, grant amount, loan payments received, and delinquency rate. The data in this table come from activated loans only. In the simulation, someone is considered to be in good standing if they have either completely paid off their loan or if they are current in their loan payments. Otherwise they are delinquent.

The data on debt and repayment in Table A.1 reveal that all individuals in all categories have a delinquency rate of around 75 percent. Furthermore, while average student responsibility ranges from a low of about \$1,435 to a high of about \$6,640, the average amount of loan payments received is much lower—from \$250 to \$650. To date, grants constitute the largest source of revenue for the loan fund.

**Table A.1 Loan Fund Overview**

Student group	Average tuition earned (\$)	Average student responsibility (\$)	Average grant amount (\$)	Average copays (\$)	Average amount of loan payments (\$)	Delinquency rate (%)
Developmental (First Step/FT)	1,501	1,435	67	—	255	79.2
MTI and developmental	6,423	4,038	2,289	97	526	69.0
MTI, Not developmental	5,431	3,021	2,289	121	433	74.1
ITC and developmental	8,550	6,638	1,722	191	648	74.8
ITC, Not developmental	6,662	5,362	1,104	196	527	78.7
Overall average	4,994	3,426	1,466	102	435	75.3

Table A.2 presents a comparison of the characteristics of individuals who are in repayment (repayers) versus those who have been referred to collections or had their debts written off (defaulters). Of all activated loans, 691 students have repaid some or all of their loans; 2,104 have made no payments. Repayers are slightly more likely to be male (67.3 percent compared to 65.5 percent) and are, on average, older than nonpayers (an average age of 23.4 versus 21.8). Furthermore, in comparing student groups, we find that nonpayers are disproportionately concentrated in the developmental only group, whereas both MTI and ITC students are disproportionately in the repayer group.

**Table A.2 Characteristics of Repayers and Nonrepayers**

Group	Repayers	Nonrepayers
Sample size	N=691	N=2,104
<u>Course/program</u>		
Percent First Step/FT	22.1	27.7
Percent MTI and FS/FT	25.5	18.6
Percent MTI w/o FS/FT	31.1	29.2
Percent ITC and FS/FT	5.6	5.5
Percent ITC w/o FS/FT	15.6	19.0
<u>Characteristics</u>		
Percent male	67.3	65.5
Average age	23.4	21.8

Table A.3 contains summary statistics on payments received by enrollment group, age, and sex. Payments are classified as either government (meaning any grant), copays, or repays. From a business perspective, Table A.3 allows for the identification of groups with (relatively) high revenue. The highest revenue groups are females in MTI, both those who took the developmental courses first and those who didn't. These individuals have high levels of grant support and repay levels that are comparable to other populations. The first panel in the table shows that students who only took First Step or FAST TRACK had relatively small loans and government grants. Interestingly, repayments on average are not that much different from the other groups. The MTI programs have been in existence longer than the ITC programs, so the repayment averages are larger. Also, the grant payments are greater for MTI, except for males who started in a developmental course. The differences in copay and repay amounts between the groups is small in absolute dollar amounts compared to the difference in government funding.

**Table A.3 Payments, by Enrollment Group, Age, and Sex (in dollars)**

Program and age	Male			Female		
	Government	Copays	Repays	Government	Copays	Repays
Developmental (FS/FT) only						
17-19	130	—	409	75	—	350
20-25	33	—	210	46	—	456
26-64	34	—	153	73	—	264
MTI and FS/FT						
17-19	2,057	93	1,512	2,830	140	737
20-25	1,759	80	328	2,934	126	393
26-64	2,144	94	254	2,761	94	273
MTI, not FS/FT						
17-19	2,325	135	673	3,631	152	650
20-25	2,132	120	389	2,853	135	472
26-64	2,057	106	285	1,929	110	221
ITC and FS/FT						
17-19	2,064	166	1,162	852	178	426
20-25	1,544	142	428	675	159	648
26-64	2,654	225	724	1,827	269	350
ITC, not FS/FT						
17-19	1,039	179	393	1,188	155	320
20-25	649	212	218	735	204	449
26-64	781	198	284	1,642	219	185

NOTE: Data based on activated loans only.

## Simulation model operation

The section describes a simulated model of the loan fund built into an Excel spreadsheet. The simulation parameters, provided in Table A.4, are based on actual historical data from activated loans. The simulation model allows these parameters to be varied to accomplish sensitivity analyses such as the following:

- enrollment of students into various mutually exclusive groups (developmental (FS/FT) only, MTI and FS/FT, MTI without developmental, ITC and FS/FT, ITC without developmental);
- amount of copayments required;
- loan interest rates;
- percentage of students who never make any payment into the system;
- quarterly percentage of students who become late in their payments after making a payment in the previous quarter;
- quarterly percentage of students who default after becoming delinquent; and
- quarterly percentage of students who pay their debts in full.

The accounting period of the simulation model is quarterly.

**Table A.4 Simulation Parameters**

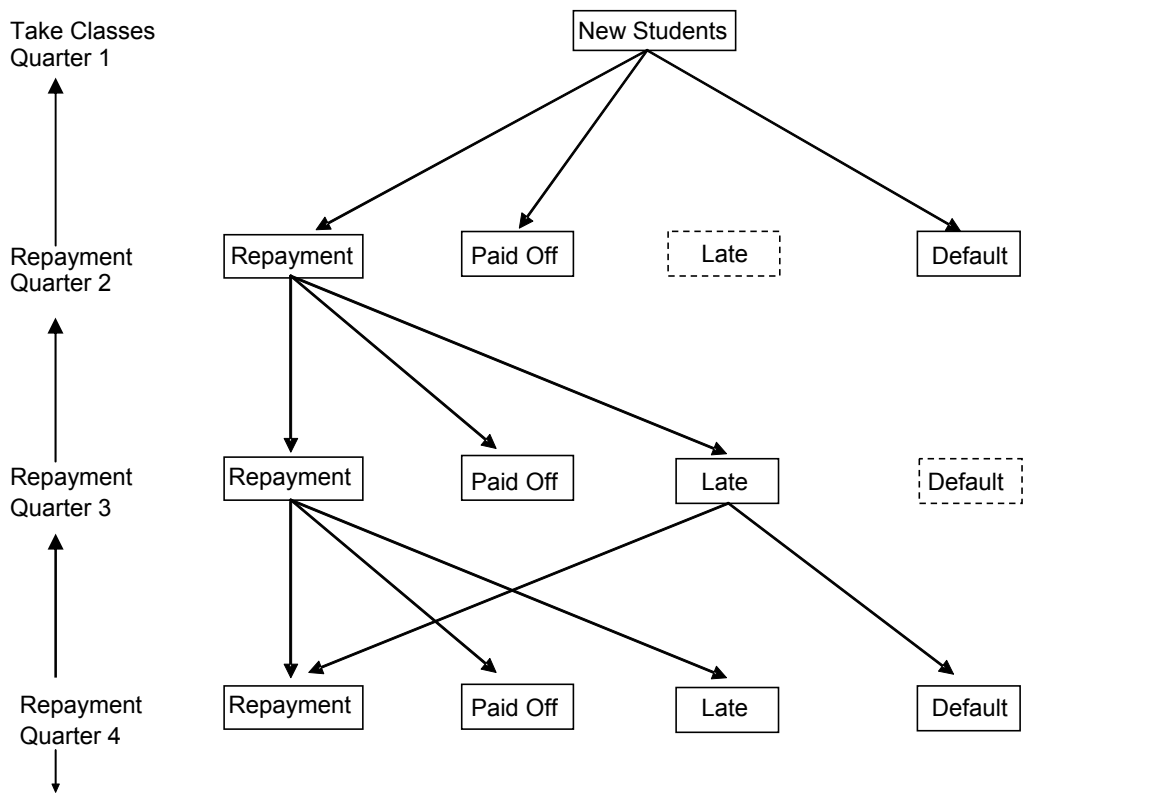
Parameter	ITC, with FS/FT	ITC only	MTI, with FS/FT	MTI only	FS/FT only
Quarterly enrollment of students	10	35	20	75	40
Tuition	7,808	6,150	6,613	5,241	1,365
Total copays	187	198	108	125	0
Percent government payments	28.5	26.8	47.7	57.7	19.4
Percent who never make a payment (default)	65.2	76.9	67.6	70.4	69.8
Percent quarterly who become late	37.1	40.6	36.5	38.4	41.3
Percent quarterly of late who default	33.6	40	30.9	35.6	34.3
Percent quarterly pay in full	3.0	3.0	3.0	3.0	3.0
Net fund outflow (\$401,637)					
Assumptions:	Years to pay off loan: 5				
	Interest rate: 5%				
	Total quarters: 20				
	Late fee \$15				

The key outcome of the simulation model is net fund outflow. The net fund outflow is defined as the flow of quarterly expenses (new tuition liabilities minus government grants, which equal new loans made) subtracted from the flow of quarterly revenues (repays and copays).

For simplicity, the simulation model assumes all persons in a particular programmatic category have the same characteristics (this is a simplifying assumption that may be relaxed in future work). It is furthermore assumed that all students complete all of their courses in a single quarter, and that Focus: HOPE receives copayments and any applicable government grants during that quarter. After they attend classes and incur a loan in the first quarter, students enter one of three “states” in the second quarter. These states are called repayment, paid in full, and

default. Default means that the student will not make any more loan payments in this or successive quarters (referred to as a sinking state in Markov chains.) The small share of students who pay off their loan in full also never reenter the simulation (another sinking state). Once in repayment a student can stay in repayment, pay off the balance of the loan, or become late in paying in the third and successive quarters. Students who are late in paying go into default or go back into repayment. If a student who was late goes back into repayment, a late fee is added to the regular loan payment. Figure A.1 presents a flow chart of the simulation model.

In the simulation in quarter 1, there is only 1 cohort. In quarter 2, there are 2 cohorts; cohort 1 in the first quarter of repayment or default and cohort 2 in the taking classes phase. As the quarters progress, additional cohorts are added. After the number of quarters reaches the time allotted for cohort 1 to pay off its loans, the model enters a steady state, meaning the inflows and outflows will not change from quarter to quarter as the new cohort is offset by the leaving cohort. For example, if the time allotted to pay off the loan is 5 years the model enters steady state after 20 ( $5 \times 4 = 20$ ) quarters.



**Figure A.1 Simulation Model Flowchart**

The default parameters used in the baseline case for the simulation are based on estimates generated from data provided by Focus: HOPE. Table A.4 shows the numbers used to generate the baseline case. The first row gives the quarterly number of students in each category, the

second row gives tuition amounts, and the third row gives the percentage of tuition covered by government grants. The total number of students is assumed to be 180 in a quarter (or 720 per year). The fourth and fifth rows give the percentages of students each quarter who either (at onset) never make a payment to Focus: HOPE or, having made a payment in the past, the probability that they will fail to make a payment in the next quarter. Keep in mind that this is a quarterly default rate and that defaults will compound over the term of the loan. The sixth row gives the probability that the failure to make one payment will be followed by the failure to make any future payments. The last row gives the percentage of students who pay their debts in full each quarter. Net fund outflows in the baseline case are  $-\$401,637$  per quarter. On an annual basis, this is about  $\$1.6$  million, which is in line with Table 3.3 data.

### Results of simulation experiments

A question of concern to Focus: HOPE is how to reduce the net fund outflow. The first experiment that we did was to, in effect, invest more resources into delinquent (i.e., late) cases and reduce the rate at which delinquent cases end up in default. We simulate the effect on net fund outflows of changing the quarterly default rate from its baseline of around 35 to 40 percent to 20, 10, and 0 percent. The results are given in Table A.5. These changes reduce the net fund outflow by up to  $\$70,000$  per quarter, or about 18 percent of the outflow. Of course, the cost of getting all delinquent cases to begin repayment may be quite high.

**Table A.5 Effect of Changing Default Rate of Those Who Become Late**

Percent quarterly who become late	Net fund outflow (\$)
Baseline (approx. 35–40)	(401,637)
20	(380,243)
10	(360,867)
0	(330,677)

The next experiment that was performed was to simulate the effect of investing the resources to reduce the default rate of student. That is, about 70 percent of loan holders never make any payments. Through education programs, better screening of applicants, or requiring more cosigners, it might be possible to reduce that percentage. Table A.6 shows the results of changing the percentage of students who never make a payment from baseline (approximately 70 percent) to 50, 25, and 0 percent. These changes have a larger impact on the net outflow than reducing delinquencies. Note that the baseline parameters of the rate of default for delinquencies are held constant at their baseline values (about 35 to 40 percent). Getting the percentage of initial defaults down to 25 percent for example, reduces the net fund outflow by almost 25 percent, from  $-\$401,637$  to  $-\$300,818$ .

**Table A.6 Effect of Changing Percent Who Never Make a Payment**

Percent who never make a payment	Net fund outflow (\$)
Baseline (approx. 65–70)	(401,637)
50	(355,503)
25	(300,818)
0	(246,120)

Another mechanism for reducing the net fund outflow would be to institute copayments in the developmental First Step and FAST TRACK programs and to increase the copayments for MTI and ITC. Table A.7 displays the results of changing the baseline copay structure to 1) a moderate increase of an average of \$300 for MTI and ITC and \$150 for FS/FT, and 2) a more substantial increase of an average of \$600 for MTI and ITC and \$250 for FS/FT. This change does not affect the bottom line much. The biggest change reduces the outflow by about \$60,000 per quarter (15 percent).

**Table A.7 Effect of Changing Copays**

Copay amounts	Net fund outflow (\$)
Baseline copay structure	(401,637)
\$300 average from ITC and MTI and \$150 average from FS/FT only	(378,213)
\$600 average from ITC and MTI and \$250 average from FS/FT only	(339,096)

Table A.8 simulates the effect of a change in interest rates while holding constant the current default rate and copay structure. The results indicate that even if raising the interest rate had no effect on the default rate (a strong assumption), the loan fund would not have a positive net fund outflow unless it charges an astronomical 242 percent interest rate.

**Table A.8 Effect of Changing Interest**

Interest rate on loan	Net fund outflow (\$)
Baseline (5%)	(401,637)
18%	(386,147)
50%	(339,941)
242%	1,519

In short, the simulation model suggests that the most payoff may come from policies or procedural changes that induce more students to begin to payoff their loan. Smaller impacts come from reducing the default rate of delinquent accounts, increasing the copay structure, or raising the interest rate charged on loans. Of course, a combination of these types of changes might yield significant impacts.

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