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The Three E's: Enrollment, Employment, and Earnings in the Medicaid Buy-In Program, 2006

Final Report

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All statements and information presented in this report are the sole responsibility of the authors and should not be interpreted as representing the views of any federal or state agency.

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EXECUTIVE SUMMARY

The Medicaid Buy-In program is part of a broader federal effort to improve employment outcomes for people with disabilities. Authorized by the Balanced Budget Act of 1997 and the Ticket to Work and Work Incentives Improvement Act of 1999, the Buy-In program allows states to expand Medicaid coverage to workers with disabilities whose income and assets would ordinarily make them ineligible for Medicaid. States can customize their Buy-In programs to their unique needs, resources, and objectives. This flexibility leads to considerable state-to-state variation in three outcomes that are key measures of program performance: enrollment, employment, and earnings. This variation also creates an ideal opportunity not only to examine the relationship between program design features and program outcomes, but also to identify which features can lead to improved employment outcomes for people with disabilities.

This report, prepared by Mathematica Policy Research (MPR) under contract to the Centers for Medicare & Medicaid Services (CMS), is the latest in a series of annual reports on participation in the Medicaid Buy-In program.[1] It presents a profile of enrollment, employment, and earnings in the 32 states with both a Buy-In program and a Medicaid Infrastructure Grant (MIG) in 2006. More specifically, it investigates the association between participants' characteristics and state program features as well as the employment rates and annual earnings of participants.

Two data sources support the analyses documented in the report: (1) state finder files on Buy-In participants and (2) federal administrative data on participation in public disability programs and on the annual earnings of Buy-In participants. The integration of state and federal data sources provides the most up-to-date, accurate, and comprehensive information on participation in the Medicaid Buy-In program. In 2007, we also obtained qualitative data from a survey completed by all Buy-In program directors, and we conducted telephone interviews with program staff in Arizona, California, Minnesota, and Wisconsin to gather more information on the history of their Buy-In programs.

[1] Previous annual reports (e.g. Ireys et al., 2007; Liu and Ireys; 2006) and issue briefs on the Medicaid Buy-In program are available at www.mathematica-mpr.com/disability/medicaidbuy-in.asp.

KEY FINDINGS

Enrollment

- ***The Medicaid Buy-In program continues to be a popular coverage option for states, and enrollment nationwide is growing.*** In 2006, 32 states were operating a Medicaid Buy-In program; 97,491 participants were enrolled at any point during the year. Maryland, Rhode Island, and South Dakota implemented a Buy-In program for the first time in 2006. Maryland and Rhode Island had 85 and 19 participants, respectively, and South Dakota had one. Since 2001, nationwide enrollment more than tripled, from 29,398 to 97,491 participants.

- ***Most Buy-In participants received Social Security Disability Insurance (SSDI) in the year before they enrolled in the program.*** More than two-thirds of Buy-In participants (71 percent) in 2006 were receiving SSDI benefits at the end of 2005, but about 28 percent of participants were neither SSDI nor SSI beneficiaries.

- ***The composition of the Medicaid Buy-In population in 2006 was weighted toward older white adults.*** Older adults (age 41 to 60) accounted for the largest share of Buy-In participants nationwide (58 percent), while younger adults (age 31 to 40) represented 18 percent of participants. Roughly equal numbers of men and women (49 and 51 percent) were enrolled in the Buy-In program in 2006. Most participants were white (76 percent).

- ***The most common primary disabling condition was severe mental illness (25 percent); an additional 7 percent had other mental disorders in 2006.*** Overall, nearly one in three Buy-In participants had a primary diagnosis of mental illness in 2006.

Employment

- ***About 69 percent of Buy-In participants nationwide were employed and had earnings in 2006.*** This figure represents a three-percentage-point increase from 2005, when 66 percent of participants had earnings. The change is partly explained partly by the fact that Missouri discontinued its Buy-In program, which had a large proportion of unemployed participants in 2005.

- ***Age and the receipt of federal disability benefits are related to employment.*** Older participants were five percent less likely to be employed than younger participants, for each one-year difference in age. Participants who were neither SSDI nor SSI beneficiaries were more than two times as likely as an SSI recipient to be employed.

- ***Employment varied by primary disabling condition.*** Participants with mental retardation were almost three times as likely as participants with a

musculoskeletal disorder to be employed. Indeed, several groups of participants with other disabling conditions were all more likely than participants with a musculoskeletal disorder to be employed, including those with a severe mental illness (82 percent more likely), other mental disorder (52 percent more likely), a sensory impairment (84 percent more likely), or any other condition (8 percent more likely).

- ***Of all state program features, shorter grace periods (also known as work stoppage provisions) had the strongest positive association with the likelihood of being employed, followed by higher earned income limits.*** Participants in states with a shorter grace period, which allows people to remain enrolled in the Buy-In program during a medical leave from work, had a 37 percent greater likelihood of being employed than in states with longer grace periods. Participants in states with higher earned income limits were 26 percent more likely to be employed than people in states with lower limits.

- ***Participants in states with a work verification requirement were 27 percent more likely to be employed relative to participants in states without any such requirement.*** States vary in the extent to which they verify a person's employment status. Many ask applicants to show that they have paid taxes; some ask for letters from employers; and others do not require any documentation.

Earnings

- ***While a majority of Buy-In participants nationwide were employed in 2006, average annual earnings were relatively low at $8,237.*** This figure is below the 2006 annualized "substantial gainful activity" (SGA) level of $10,320, which is based on $860 per month for a nonblind individual, but it represents a 4.6 percent increase over the average annual earnings of participants in 2005, which were $7,877. Younger employed participants had higher earnings than older participants, other things being equal. Average earnings were lower for SSDI and SSI recipients than for participants who did not receive federal disability benefits.

- ***Average annual earnings varied by primary disabling condition.*** While participants with mental retardation were more likely than those with a musculoskeletal disorder to be employed, they earned $1,003 less than employed participants with a musculoskeletal disorder. Compared to participants with a musculoskeletal disorder, those with a severe mental illness earned $379 less, those with a sensory impairment earned $1,133 more, and those with any other condition earned $343 more.

- ***Of all state program features, shorter grace periods had the strongest association with higher earnings, followed by higher earned income limits.*** A shorter grace period (one to 6 months) was associated with a $975

increase in earnings compared with a longer grace period (6 to 12 months). A higher earned income limit, i.e., 251 to 350 percent of the federal poverty level, was associated with a $386 increase in earnings relative to a lower limit of 250 percent of the federal poverty level.

- ***Participants in states with a work verification requirement had higher annual earnings compared to those in states without any such requirement.*** In states that required participants to verify their employment by documenting the payment of taxes, the annual earnings of participants were $503 higher than the earnings of participants in states without a work verification requirement.

- ***We found evidence of a direct offset between federal disability benefits and annual earnings.*** Each dollar increase in monthly SSDI or SSI benefits received by Buy-In participants was associated with a $1.09 or $0.80 decrease in annual earnings, respectively.

- ***How states define work is both a key determinant of their Buy-In policies and procedures and an influence on the employment and earnings of participants.***

POLICY IMPLICATIONS

Our findings on the Medicaid Buy-In program in 2006 and over the years indicate that it continues to grow and support employment opportunities for people with disabilities. These findings suggest a number of policy implications for improving program outcomes at both the state and national level.

Enrollment, Employment, and Earnings

As enrollment in the Buy-In program continues to grow nationwide, states may want to consider whether to step up their outreach activities to recruit more participants or whether it makes sense to maintain current enrollment levels. Some states may wish to focus on serving current participants effectively, rather than expanding enrollment. In states where enrollment has actually dropped, policymakers and program administrators may want to both monitor the retention of existing participants and be more aggressive about recruiting new participants.

Our findings show that employment and earnings outcomes vary by age group. Younger adults with disabilities may be motivated to work because it gives not only monetary benefits but also a sense of purpose and belonging to the community. For older adults with disabilities, especially those receiving SSDI payments, access to health care and predictable benefit payments may be more important than the social benefits of a job. Therefore, state policymakers and administrators who are interested in improving employment and earnings outcomes may want to develop policies that reflect the relationship between these outcomes and different age groups.

We also found that higher average earnings and the likelihood of employment are associated with work verification requirements, shorter grace periods, and generous earned income limits. Of these program features, shorter grace periods had the strongest association with higher earnings and the likelihood of being employed. Policymakers may therefore want to consider modifying or adding these features—or some variation of them—to their Buy-In programs as a means to achieving improved employment and earnings outcomes.

Directions for Future Research

Although some states have initiated well-designed studies of their Buy-In programs, additional research at the state and national level could address a range of still-open questions. For example, to what extent does the Buy-In program function as a transition from public to private insurance? How does the duration of Buy-In enrollment vary with the participant's experience with federal disability benefits? Do Buy-In participants leave the program because of positive circumstances such as securing a higher-paying job or negative circumstances such as losing a job? Research that focuses on these questions could build a better understanding of how participants view and use the Buy-In program, which affects enrollment and participant earnings.

Finally, the use of quantitative methods for tracking the enrollment, employment, and earnings of participants in the Medicaid Buy-In program and the capacity to link and integrate information from state and federal administrative data sources will continue to provide CMS and policymakers with valuable information to monitor the impact of policy changes and trends. Although employment and earnings provide a useful measure of program performance, they may not capture all dimensions associated with better outcomes for Buy-In participants. Other measures such as Medicaid expenditures, health status, and the value of work to individuals with disabilities are also markers of whether the Buy-In program is putting participants on the path to self-sufficiency. Research that incorporates these measures can further improve our understanding of how well the Buy-In program is meeting its goal, and of whether and how policy might be changed to enhance program performance.

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CHAPTER I

INTRODUCTION

A. POLICY CONTEXT

Many adults with disabilities who want to work are barred from achieving their goal for reasons related to health insurance coverage. Working adults with a disability may either be forced to stop working or prevented from returning to work because their pre-existing condition makes private health insurance unavailable or prohibitively expensive. As a result, they may turn to public health insurance, such as Medicare or Medicaid. They can enroll in Medicare after a two-year waiting period if they also qualify for Social Security Disability Insurance (SSDI), and they can enroll in Medicaid if they meet state requirements related to income and assets. Despite the advantages of SSDI, there is an inherent—albeit unintended—disincentive to work in the program's eligibility requirements. For example, adults receiving SSDI who want to return to work may think twice about it because an increase in earned income would cause them to lose public health insurance coverage and all cash benefits.

In response to this situation, Congress established the Medicaid Buy-In program when it passed the Balanced Budget Act (BBA) of 1997 and the Ticket to Work and Work Incentives Improvement Act (Ticket Act) of 1999. Under the program, so named because participants "buy into" it by paying monthly premiums or co-payments, states can offer Medicaid coverage to workers with disabilities whose income and assets would otherwise make them ineligible for Medicaid. To enroll in the program, individuals must have a disability as defined by the Social Security Administration (SSA) and meet certain work and financial eligibility requirements.[1] States have the flexibility to design the Buy-In program

[1] For the BBA, individuals with incomes up to 250 percent of the federal poverty level (after disregarding certain types of income) can participate. The Ticket Act permits states to establish their own income and resource standards, including the possibility of having no income limits. Unlike the BBA, which authorizes a single group of Buy-In participants, the Ticket Act offers two groups—(1) a basic coverage group, which includes working individuals with disabilities who are 16-64 years of age and meet the SSA definition of having a certified disabling condition, and (2) a medical improvement group, which includes working individuals who no longer meet the SSA definition because of an improvement in health status, but still have an impairment. (GAO 2003). Individuals can earn above the substantial gainful activity level and still be eligible for the Medicaid Buy-In program.

according to their unique needs and priorities. For example, states can establish their own earned and unearned income limits as well as work verification requirements.[2]

Despite chronic strains on state Medicaid budgets, the Buy-In program has been widely adopted since Congress passed the authorizing legislation. In 2006, 32 states were operating a Medicaid Buy-In program, up from 16 states in 2001.[3] Overall, nearly 190,000 people have enrolled in the Medicaid Buy-In program at some point between 1997 and 2006. In 2006 alone, more than 97,000 individuals were participating nationwide. Sixty-nine percent of them were working and earning an average of $8,237 annually, an impressive figure considering that only 38 percent of all adults with disabilities were working based on the 2006 American Community Survey (RRTC 2007).

Congress authorized the Centers for Medicare and Medicaid Services (CMS) to oversee the Medicaid Buy-In program by (1) monitoring participation, (2) providing states with general programmatic guidance, and (3) keeping federal and state policymakers informed about program trends. CMS has contracted with Mathematica Policy Research, Inc. (MPR) to assist in this effort by collecting and analyzing quantitative data from the states, tracking key trends in state Buy-In policies and program features, and disseminating research findings through annual reports and issue briefs.

B. PURPOSE OF THE REPORT

The purpose of this report, the latest in a series of annual reports on participation in the Medicaid Buy-In program, is to:

- Provide CMS with an update on recent policy changes and enrollment in the Medicaid Buy-In program through the end of 2006, including evidence of whether and how Medicare Part D is affecting Buy-In participation

- Describe the association between the characteristics of Buy-In participants and employment and earnings—nationwide and by state in 2006

- Examine how selected features of state Buy-In programs and the characteristics of program participants interact to shape employment and earnings outcomes

[2] A summary of state program features and list of states by authorizing legislation and implementation year are included in Appendix A.

[3] This figures includes 32 states with both a Buy-In program and a Medicaid Infrastructure Grant (MIG). This report includes Buy-In programs in states with MIG funding because only these states are required to submit information to CMS on their Buy-In participants. However, in 2006, some states had a Buy-In program, but not a MIG; these include Mississippi, New York, and Oklahoma (Jensen 2007).

C. DATA RELIABILITY AND ACCURACY

Taking the first step in developing the data for this report, states provided CMS with finder files that included personal identifiers and selected demographic information on all Buy-In participants. Under a data-sharing agreement between CMS and SSA, MPR obtained information on federal disability program participation and the annual earnings of Buy-In participants from SSA administrative data. The integration of state and federal data sources provides the most up-to-date, accurate, and comprehensive information on participation in the Medicaid Buy-In program. More specifically, the integration of data makes it possible to examine participants' age, gender, race, primary disabling condition, Medicaid Buy-In enrollment history, receipt of federal disability benefits, employment status, and earnings.[4]

In 2007, MPR also obtained qualitative data from a survey completed by all Buy-In program directors. The two goals of the survey were to identify major programmatic changes that occurred in 2006 and obtain feedback on the effect of Medicare Part D on Buy-In enrollment. MPR also conducted telephone interviews with program staff in Arizona, California, Minnesota, and Wisconsin in December 2007 and January 2008 to gather additional information on the historical context of the Buy-In program.

D. OVERVIEW OF THE REPORT

Chapter II describes the conceptual framework MPR used to understand, and to develop hypotheses about, the individual and state-level factors that influence the enrollment, employment, and earnings of Medicaid Buy-In participants. Chapter III summarizes enrollment in the Buy-In program in 2006 nationwide and by state, reviews the policy changes that occurred in 2006, and describes participant characteristics. Chapter IV focuses on employment rates among Buy-In participants at the national level and by state; it also presents findings from descriptive and multivariate analyses that show which individual characteristics and state program features are associated with higher rates of employment. Chapter V covers participants' earnings at the national level and by state, and presents findings from descriptive and multivariate analyses that show which individual characteristics and state program features are associated with higher earnings. Chapter VI describes the Buy-In programs in Arizona, California, Minnesota, and Wisconsin, thus enriching our understanding of the state policy context and perspectives on employment and earnings. Chapter VII summarizes our key findings and policy implications for the Medicaid Buy-In program.

[4] A summary of data sources appears in Appendix B of this report. Additional descriptions of the finder files, data sources, validation process, and linking procedures may be found in a statistical profile report (Liu and Ireys 2006), which is available at www.mathematica-mpr.com/disability/medicaidbuy-in.asp.

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CHAPTER II

CONCEPTUAL FRAMEWORK

The Medicaid Buy-In program is a key component of the federal effort to make it easier for people with disabilities to work without losing health benefits. To measure the extent to which the program is moving toward this goal, it is necessary to understand how state program features, participant characteristics, and local market factors are related to employment and earnings, two of the three outcome measures in our study. This chapter (1) describes the conceptual framework that illustrates these relationships and forms the basis for our analysis, (2) defines employment and earnings, and (3) presents a set of testable hypotheses on how state program features, individual participant characteristics, and local market factors affect the enrollment, employment, and earnings of participants.

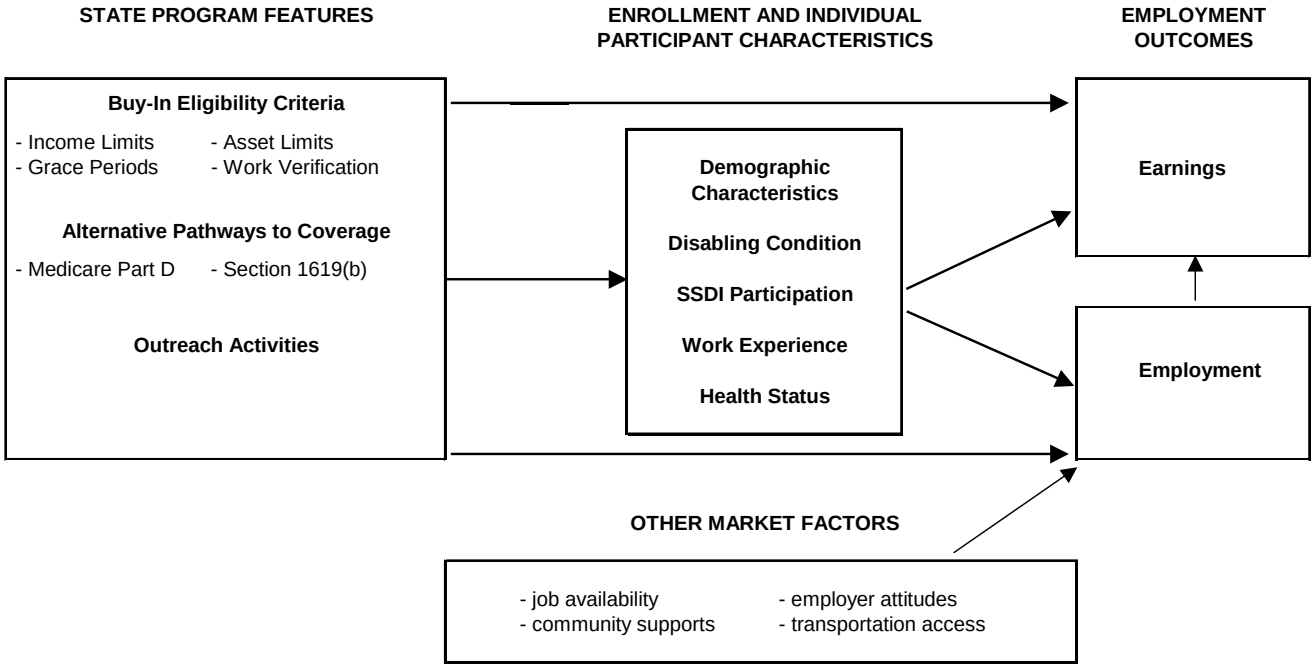
A. OVERVIEW OF THE FRAMEWORK

As shown in the framework, state program features, individual participant characteristics, and local market factors can influence the enrollment, employment, and earnings of Medicaid Buy-In participants (Figure II.1). For instance, state outreach activities and eligibility criteria such as income limits, work verification, and grace periods can affect enrollment in and the composition of the Buy-In program. The program's composition can also be affected by the availability of Medicaid coverage through pathways other than the Buy-In. State-level factors can have a direct effect on earnings by imposing a ceiling on participant earnings, and also have an indirect effect on earnings by altering the demographic composition of participants.

Individual participant characteristics such as age, type of disabling condition, and work experience also influence employment and earnings. For example, younger participants may have a different earnings profile compared with older participants. Individuals with a long history of maintaining employment are more likely to work than people with no prior employment history. Also, the type and severity of a disabling impairment may affect the maximum number of hours that a person is able to work and earn income.

Market factors such as local access to transportation and employer attitudes toward hiring people with disabilities can influence employment outcomes. Furthermore, the availability of jobs for people regardless of disability depends on the local state of the economy, as indicated by the state unemployment rate.

Figure II.1. Conceptual Framework of State, Individual, and Market Environment Factors on Employment Outcomes



B. EMPLOYMENT AND EARNINGS

Defining employment in the context of the Buy-In population has been a challenge for states and researchers alike. In developing the program, Congress explicitly prevented states from defining employment for purposes of establishing eligibility. This decision left open the possibility that individuals who can work only for a limited time would be eligible for the program. In addition, Ireys et al. (2007) noted that the Balanced Budget Act (BBA) of 1997 and the Ticket to Work and Work Incentives Improvement Act (Ticket Act) of 1999 both require individuals to be working when they apply to the program. However, neither act establishes, or allows states to establish, an eligibility criterion for basic coverage groups based on a minimum number of hours worked or dollars earned in a given period.[1] On the other hand, the Ticket Act explicitly requires individuals in the medical improvement group to work at least 40 hours per month and earn at least minimum wage, but it makes no such provisions for the basic coverage group.[2] Therefore, some individuals can work a very small number of hours and still be eligible for the program. Although this provision in the Ticket

[1] In a CMS technical assistance document sent to states in 2000, the agency noted that a "state cannot establish a definition of work or employment for the basic coverage group (or BBA) that sets a minimum number of hours worked or earnings during a period of time" (Ireys et al. 2007).

[2] A basic coverage group includes working adults with disabilities age 16 to 64, while the medical improvement group refers to employed individuals losing basic coverage because they no longer meet the SSI disability definition but still have a severe impairment (GAO 2003).

Act allows people with disabilities who have little work experience to enter the job market gradually, it may undermine the work incentive built into the program if participants intend to work only a few hours per month over the long run.

Despite these challenges, researchers have measured employment in various ways. Krause and Terza (2006) used administrative records on hourly wages, job tenure, and annual earnings to determine whether an individual was working. In our analysis, we used positive annual earnings to determine whether a Buy-In participant was "employed." We derived the data from SSA's Master Earnings File (MEF), which contains income information reported to the IRS, including annual total income from wages, salaries, and self-employment.[3] Hence, we considered participants "not employed" if they had zero reported earnings in the MEF data. Using positive earnings as an indicator of employment is consistent with other research (Ozawa and Yeo 2006; Thornton et al. 2007).

C. STATE PROGRAM FEATURES

Policymakers have the ability to shape their state's program features through various mechanisms related to eligibility criteria. The resulting differences in program features by state contribute to differences in program outcomes, such as employment and earnings. To illustrate how the design of these features can influence outcomes, we present in this section examples of select program features that are likely to have an effect on the enrollment, employment, and earnings of participants.

Income Eligibility Criteria. Eligibility criteria based on earned income directly affect the average earnings level of participants by restricting or expanding the pool of eligible candidates with high earnings. Criteria based on a ceiling for earned income vary from as little as 200 percent of the federal poverty level to no limit at all. Thus, participants in states with higher income limits would have higher average earnings, and a larger proportion of employed Buy-In participants in these states would have positive earnings.

Unearned Income Limits and Spousal Income. Limits on unearned income can directly affect the extent to which SSDI recipients with large monthly cash benefits are eligible for the Buy-In program. In states with very low unearned income limits, fewer SSDI recipients will be eligible for the Buy-In. If spousal income is included in the definition of countable earned income, it is likely to reduce an individual's reported earnings, and it may exclude some married couples with higher aggregate income from enrolling in the program to the extent that total countable income exceeds the limit for married couples.

[3] Not all Buy-In participants have enough income to file a tax return. The 2006 version of IRS Publication 501 states that individuals with at least $5,150 in annual earned income or $850 in annual unearned income must file a tax return. Those who do file returns may receive some "in-kind" income that is not reported on tax returns, including small amounts of cash from a casual job, or pay from sheltered workshops or employers who are exempt from reporting income. As a result, our analysis does not capture all work activity, but it does reflect all taxable earned income. The earnings dataset is described in detail in Appendix B.

Asset Limits. States with very low asset limits are likely to have fewer enrollees than states without any asset limits. States with a Buy-In program vary in the maximum amounts of assets that a person can hold and remain eligible, from $2,000 per individual to no limit at all. Asset limits can also affect the eligibility of people who, like homeowners, have managed to accumulate wealth. Furthermore, in states with very low asset limits, there may be more people who have exhausted their savings, which may be correlated with the length of time spent out of the labor force, which, in turn, may influence their commitment to return to the work force.

Grace Periods. Grace periods, otherwise known as work stoppage provisions, are likely to affect the earnings and employment of Buy-In participants. Grace periods allow individuals to remain enrolled in a program after a medical leave of absence or an involuntary job loss. Longer grace periods are likely to be associated with lower average earnings levels because participants are effectively "unemployed" for part of the year. Therefore, all else being equal, we would expect to see higher average earnings and employment in states with shorter grace periods.

Work Verification Requirement. Although it has been difficult for states to define work for the purposes of program eligibility, some states have introduced work verification requirements. In effect, such requirements affect enrollment, employment, and earnings because they tend to exclude candidates who do not work enough hours to pay taxes or receive in-kind payments and include candidates who pay FICA taxes and have reported earnings. States with strict work verification requirements are likely to have a higher rate of employment while those without any requirements will have a lower rate of employment. A few states have introduced an earnings "floor," which is intended to exclude people with very low earnings from the Buy-In program.

Other Medicaid Eligibility Groups. State-specific eligibility criteria for other Medicaid groups are likely to affect the pool of individuals eligible for the Buy-In program, and thus program enrollment overall. For example, people with disabilities can also obtain Medicaid coverage through the following channels: (1) the SSI program, including the 1619 provisions that extend Medicaid to SSI beneficiaries whose current earnings make them ineligible for full cash benefits; (2) "poverty-level" Medicaid, through which states may provide coverage for people whose income is below the federal poverty level; and (3) the medically needy program, which is for people with disabilities whose income, after medical expenses are deducted, or "spent down," is below a state threshold.

Outreach and Medicare Part D. Outreach can affect enrollment by informing people with disabilities and eligibility workers about the Buy-In program. The extent to which the enrollment process is efficient and eligibility workers are aware of the Buy-In program can draw people into or deter them from applying to the program. However, the effect of outreach on earnings and employment is largely determined by the characteristics of participants. For example, outreach initiatives that build awareness of the program among young workers may increase the average earnings of participants compared to outreach designed to attract older workers near retirement age. The introduction of Medicare Part D in 2006 may have a negative impact on enrollment in the Medicaid Buy-In

program because Medicare Part D provides coverage for most outpatient prescription drugs. Therefore, if the Part D premium is lower than the Buy-In premium, and the scope of services is equivalent or greater, then dual eligibles are not likely to enroll in the Buy-In.

D. INDIVIDUAL PARTICIPANT CHARACTERISTICS

Age. Employment and earnings are associated with the age of participants. Earlier studies have shown that younger participants are more prevalent among the top 10 percent of earners in the Buy-In program (Gimm et al. 2007). In a study of whether participants increase their earnings after Buy-In enrollment, Liu and Weathers (2007) found that younger participants were more likely to increase their earnings after enrollment compared to older participants. The authors found that 65 percent of Buy-In participants under 21 years of age increase their earnings, compared to 47 percent of those 21 to 44 years of age, 33 percent of those 45 to 64 years of age, and 30 percent of those 65 years of age and older. This age-specific difference in earnings is consistent with other studies of people with disabilities. Using data from the 1996 panel of the Survey of Income and Program Participation (SIPP), Ozawa and Yeo (2006) found that younger people with any disability (based on the SIPP definition) were more likely to have higher earnings than older participants, controlling for other demographic characteristics.

Receipt of SSDI Benefits. A majority of Buy-In enrollees nationwide have received SSDI benefits (Ireys et al. 2007). However, the SSDI eligibility rules may create a disincentive to work, albeit unintentionally. Specifically, SSDI recipients stand to lose their cash benefits if their earned income rises above a ceiling that is implicit in the SSDI benefit structure. Known as the "cash cliff," the ceiling in 2006 was $860 per month or $10,320 per year for nonblind individuals, and SSDI beneficiaries will lose their cash benefits if they earn at or above the level of substantial gainful activity (SGA).[4] The fear of losing cash benefits is a strong deterrent to earning more income. Also, SSDI recipients who have endured a long, complex application process may be reluctant to re-apply (given the current backlog in SSA disability applications) if a higher-paying job is not perceived to be stable. Therefore, we would expect to see lower rates of employment and earnings among SSDI recipients compared with non-SSDI recipients.

Health Status. Participants with poor health status may have impairments that limit the number of hours and type of work that can be performed. In addition, poor health status may require additional leave time from a job to obtain needed health care services. Both of these factors tend to reduce earnings. Research shows that people with disabilities are more likely than those without disabilities to work part time or in other nonstandard jobs (Hotchkiss 2004). Also, a chronic condition may undercut the feasibility of holding a

[4] SSA regulations define a disability as the inability to engage in substantial gainful activity (SGA) by reason of a medically determinable physical or mental impairment that is expected to result in death or last for at least 12 months. State examiners determine whether an individual meets the SSA eligibility criteria by screening out applicants with earnings that exceed the SGA level, which is indexed to inflation. Individuals can earn above the SGA level and still be eligible for the Medicaid Buy-In program.

traditional, full-time job (Schur 2003). Thus, people with a more severe condition or impairment would be expected to work fewer hours and therefore have less earned income.

Disabling Condition. The type of disability can affect the employment and earnings of Buy-In participants. For example, in a recent study of people enrolled in the Massachusetts Buy-In program, Henry et al. (2006) found that although participants with developmental disabilities such as mental retardation were more likely to work, their earnings were lower than the earnings of other participants. Categories of disabling conditions in our analysis include mental illness, other mental disorders, musculoskeletal disorders, and mental retardation.

Other Factors. Ozawa and Yeo (2006) found that educational attainment beyond high school was associated with higher rates of employment among people with disabilities. Work experience is an indicator of the motivation and the ability to remain employed over time. Buy-In participants with more work experience are therefore more likely to be employed, other things being equal.

E. OTHER MARKET FACTORS

In addition to state program features and the characteristics of participants, other market factors may affect employment. These factors include the availability of jobs for all people regardless of disability status as indicated by the state unemployment rate and employer attitudes toward hiring people with disabilities. Other market factors that could affect employment include access to transportation, adaptive equipment, and the availability of community and family supports such as child care. These factors influence not only the decision to work but also the number of hours to work, for those who are employed.

F. HYPOTHESIS TESTING

In this report, we test the following sets of hypotheses by using the information available from state finder files and MEF data on Buy-In participants.

- State Program Features
    - Participants in states with higher earned income limits are more likely to be employed and to have higher average earnings than participants in other states.
    - Participants in states with shorter grace periods are more likely to be employed and to have higher average earnings than participants in other states.
    - Participants in states with strict work verification policies are more likely to be employed, other things being equal.

- Individual Participant Characteristics
  - Younger Buy-In participants are more likely to be employed and to have higher average earnings that are older participants.
  - Buy-In participants who are SSDI recipients have lower average earnings and a lower likelihood of being employed, compared with non-SSDI recipients.
  - The likelihood of being employed and having earnings varies by disabling condition.
- Other Market Factors
  - Higher statewide unemployment rates are associated with a lower likelihood of being employed and having earnings.

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CHAPTER III

ENROLLMENT

Medicaid Buy-In enrollment data can provide insight into how well the program is attracting new participants, reaching its target population, and growing or stabilizing as the program matures. The data can also help to explain why enrollment trends tend to differ across states. This chapter presents findings on national and state-level enrollment in the Medicaid Buy-In program from 2001 through December 2006.[1] It also describes several factors that may have affected enrollment during this time, including state policy changes and outreach efforts in 2006, the emergence of new Buy-In programs, and the introduction of Medicare Part D.

A. ENROLLMENT AT THE NATIONAL LEVEL

In 2006, 32 states were operating a Medicaid Buy-In program; 97,491 participants were enrolled at any point during the calendar year.[2] This represents a two-fold increase since 2001—from 16 to 32—in the number of states with a Buy-In program (Figure III.1). It also translates to substantial growth in enrollment nationwide: the number of enrollees across the nation more than tripled during this time, from 29,398 people in 2001 to 97,491 people in 2006.

The one noteworthy exception to this trend was a drop in total enrollment from 2005 to 2006, which was the result of two factors. First, Missouri ended its Buy-In program in August 2005, effectively disenrolling almost 21,000 people.[3] In addition, New York had

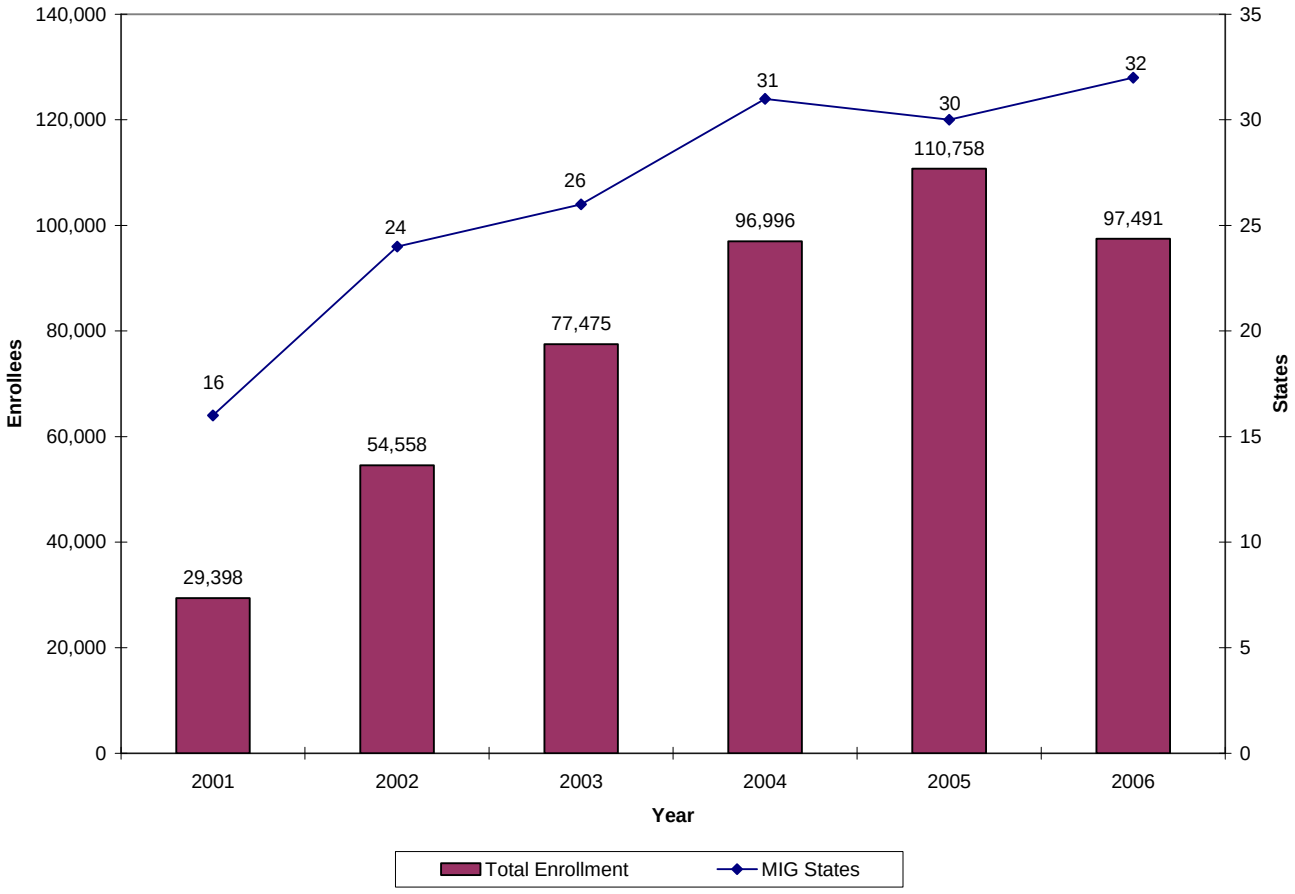
[1] This period allowed us to examine trends after most states had implemented a Buy-In program, either under the BBAof 1997 or the Ticket Act of 1999. For more information on Buy-In enrollment before 2001, see Ireys et al. (2007).

[2] This figure includes 32 states with both a Buy-In program and a MIG. This report addresses only Buy-In programs in states with MIG funding because only these states are required to submit information to CMS on their Buy-In participants. However, in 2006, Mississippi, New York, and Oklahoma had a Buy-In program but not a MIG (Jensen 2007).

[3] Missouri authorized a new Buy-In program (section 208.146) in September 2007. For a description of the context that led the state to rescind its first Buy-In program, known as the Medicaid Assistance for Workers with Disabilities (MAWD), see Ireys et al. (2007).

approximately 4,500 enrollees in 2005 but was not included in the total number of enrollees for 2006 because the state's enrollment data were not available when we conducted our analysis.

Figure III.1. Number of States with a Buy-In Program and Total Enrollment, 2001-2006



Source: Medicaid Buy-In finder files, 2001-2006

Notes: The decrease in enrollment between 2005 and 2006 is due to two factors. First, Missouri terminated its Buy-In program in August 2005. Second, New York had a Buy-In program in 2006 but did not have a MIG in 2007 and was not required to submit Buy-In enrollment data for 2006. The enrollment numbers count all participants who were ever enrolled during the calendar year. Duplicate cases that appear in two states during the same year are removed. For these 49 individuals, the record with the earliest Buy-In start date was included.

Despite the exit of Missouri's program in 2005, three new states (Maryland, Rhode Island, and South Dakota) implemented Medicaid Buy-In programs in 2006. While Maryland had 85 participants enrolled in 2006, Rhode Island and South Dakota had 19 enrollees and one enrollee, respectively. In most states, total enrollment tends to grow

rapidly after the initial year of program implementation (Appendix Table C.1). Awareness of the Buy-In program among eligibility workers and potential candidates may take more than a year to develop. Across all Buy-In states in 2006, enrollment ranged from one person in South Dakota, which implemented its program in 2006, to 14,866 people in Massachusetts, which, in 1997, was the first state to implement a Buy-In program (see Appendix A for implementation years and legislation). Average enrollment across all 32 states was 3,048, although programs in Iowa, Massachusetts, Pennsylvania, and Wisconsin each accounted for more than 10,000 people.

Changes in Buy-In enrollment over time are due in large part to the number of "first-time" enrollees who enter the program in a given year and to the retention of participants from one year to the next.[4] In 2006, more than 28,000 individuals participated in the Buy-In program for the first time, which represented almost 30 percent of total enrollment nationwide (Figure III.2). From 2001 to 2002, the number of first-time enrollees increased from 13,097 to 31,047 and remained steady until 2006, when the number of new enrollees dropped to 28,433. This event was primarily a result of the exit of Missouri's Buy-In program in August 2005 and the absence of New York from the data on total number of first-time enrollees.

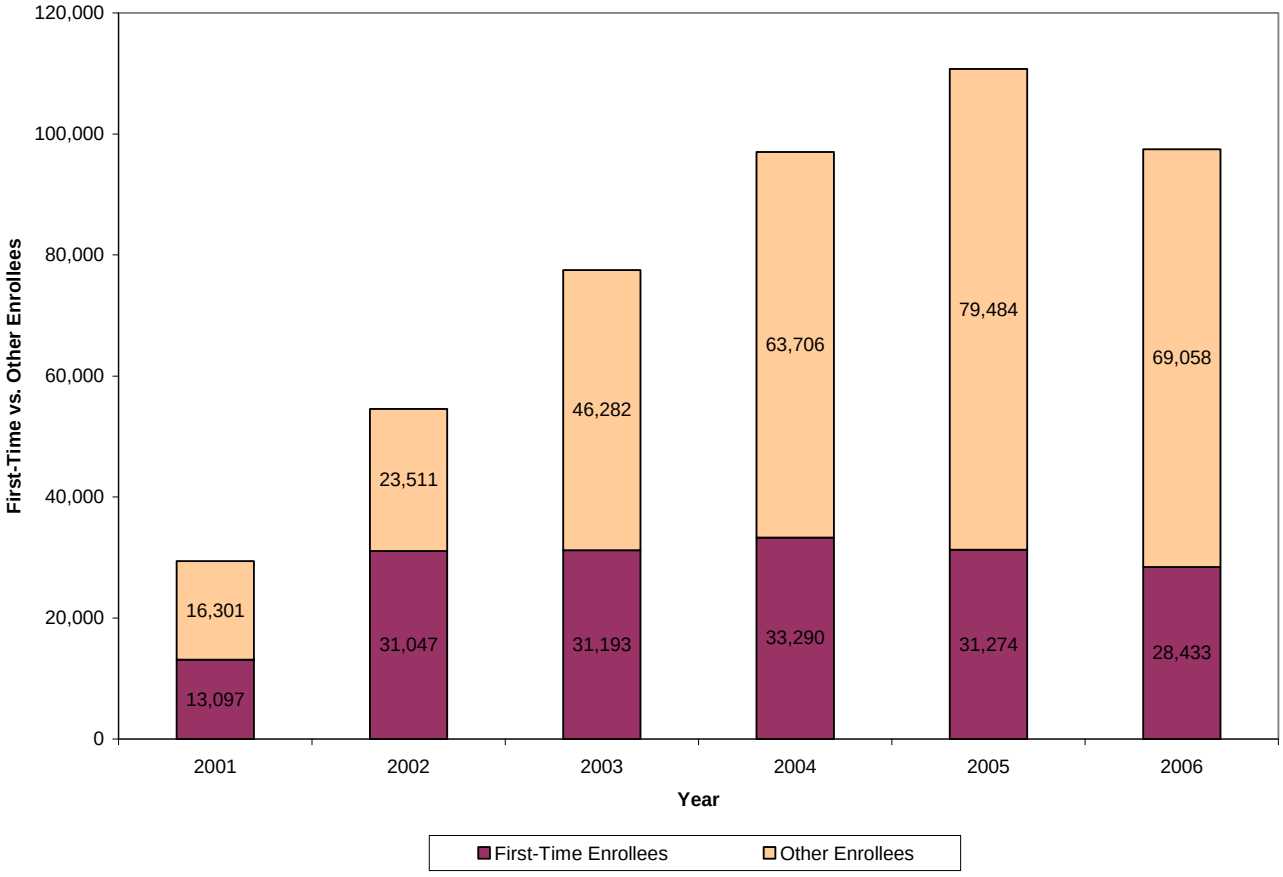
In terms of retention, more than 69,000 people enrolled in 2006 were also enrolled in a previous year. A total of 129,538 participants, excluding those in Missouri and New York, have been enrolled in the program since 1997 (Appendix C, Table C.3). More than 53 percent of all Buy-In participants who were ever enrolled since 1997 were also enrolled in 2006. The recruitment of first-time enrollees and the retention of enrollees from year to year both contribute to the growth in total enrollment over time.

B. ENROLLMENT AT THE STATE LEVEL

States vary considerably in their enrollment levels and in their year-to-year growth in enrollment (Table III.1). Twenty-five of the 29 Buy-In states that operated a program in 2005 and 2006 experienced a net increase in total enrollment over that period. Five of the 25 states—Pennsylvania, California, Wisconsin, Iowa, and Massachusetts—each gained at least 1,000 Buy-In participants. The combined enrollment gains in these 5 states represented 73 percent of all enrollment gains in the 29 states that operated a Buy-In program in 2005 and 2006. These 5 states also implemented their programs before February 2002, so compared with programs in other states, their programs can be considered mature. Appendix C includes a summary table of total participants ever enrolled by state from 2001 to 2006.

[4] First-time enrollment is based on a new SSN with no prior history of enrollment in the Buy-In program. We did not use individual level Medicaid ID numbers, which some states change after re-enrollment occurs following an extended absence.

Figure III.2. First-Time and All Other Participants in the Buy-In Program, 2001-2006



Source: Medicaid Buy-In finder files, 2001-2006

Notes: A first-time enrollee in a given year is defined as a new Buy-In participant with no prior history of enrollment in the program. The decrease in first-time and all other participants from 2005 to 2006 is due to two factors. First, Missouri terminated its Buy-In program in August 2005. Second, New York had a Buy-In program in 2006 but did not have a MIG in 2007 and was not required to submit Buy-In enrollment data for 2006. Duplicate cases that appear in two states during the same year were removed. For these individuals, the record with the earliest Buy-In start date was included.

Table III.1. Total Medicaid Buy-In Enrollment in States with a Buy-In Program in 2005 and 2006, Sorted by Change in Total Enrollment

State (Implementation Year)	2005 Total Enrollment	2006 Total Enrollment	Difference (2005-2006)	Percent Change (2005-2006)
Pennsylvania (2002)	6,366	10,646	4,280	67.2
California (2000)	2,500	3,990	1,490	59.6
Wisconsin (2000)	11,464	12,952	1,488	13.0
Massachusetts (1997)	13,445	14,866	1,421	10.6
Iowa (2000)	11,196	12,389	1,193	10.7
Michigan (2004)	637	1,296	659	103.5
New Jersey (2000)	2,195	2,734	539	24.6
Connecticut (2000)	5,049	5,512	463	9.2
Louisiana (2004)	952	1,275	323	33.9
Utah (2001)	786	1,084	298	37.9
Washington (2002)	944	1,221	277	29.3
West Virginia (2004)	272	540	268	98.5
Arizona (2003)	1,035	1,276	241	23.3
New Mexico (2001)	2,224	2,413	189	8.5
Minnesota (1999)	8,108	8,213	105	1.3
North Dakota (2004)	397	473	76	19.1
Kansas (2002)	1,230	1,273	43	3.5
Vermont (2000)	896	931	35	3.9
Arkansas (2001)	72	105	33	45.8
Maine (1999)	1,178	1,204	26	2.2
Wyoming (2002)	12	28	16	133.3
Nevada (2004)	26	28	2	7.7
Alaska (1999)	355	357	2	0.6
Nebraska (1999)	141	142	1	0.7
Oregon (1999)	786	787	1	0.1
South Carolina (1998)	70	46	-24	-34.3
Illinois (2002)	1,052	1,009	-43	-4.1
New Hampshire (2002)	2,187	2,082	-105	-4.8
Indiana (2002)	9,862	8,563	-1,299	-13.2

Source: Medicaid Buy-In finder files, 2001-2006

Notes: Beginning in August 2005, Missouri discontinued its Buy-In program. New York had a no-cost extension for its MIG in 2006 and was therefore not required to submit a finder file for that year. The table includes only states in which enrollment data were available for 2005 and 2006, and therefore excludes the three states with a Buy-In program that emerged in 2006 and had the following total enrollment: Maryland (85), Rhode Island (19), and South Dakota (1).

Although enrollment rose in some states from 2005 to 2006, it dropped in others. From 2005 to 2006, four states—South Carolina, Illinois, New Hampshire, and Indiana—experienced a net loss in enrollment. Indiana alone had a loss of more than 1,000 participants, which represents 88 percent of the combined drop in enrollment among the four states.

C. WHY DID ENROLLMENT INCREASE IN SOME STATES?

From 2005 to 2006, enrollment in the Buy-In program increased in some states but not in others largely because these states expanded their eligibility requirements or stepped up their outreach efforts. Not surprisingly, these changes resulted in gains in the number of first-time enrollees. Nationwide, first-time enrollees represented about 30 percent of total Buy-In enrollment in 2006. Moreover, states that experienced growth in total enrollment from 2005 and 2006 also had a large share of first-time enrollees in 2006.

1. Expanded Eligibility Criteria

Two states that had enrollment gains in 2006 expanded their eligibility criteria from 2005 to 2006 by changing their income limits. Wyoming experienced a net gain of 16 participants (133 percent growth), and Michigan experienced a net gain of 659 participants (103 percent growth). Wyoming increased its countable income limit from $1,737 to $1,809, and Michigan excluded unemployment benefits from unearned income, which allowed more people to become eligible for the program.

2. Outreach Activities

Outreach activities can lead to enrollment growth by raising awareness of the program in the minds of potential candidates and eligibility workers. Five states that experienced a net gain in enrollment from 2005 to 2006 cited extensive outreach as the main reason for their growth. Arkansas saw a net increase of 33 participants (46 percent growth), California saw 1,490 more (60 percent growth), Louisiana had 323 participants (34 percent growth), Utah had 298 (38 percent), and West Virginia experienced a net gain of 268 participants (99 percent growth).

Arkansas, which did very little outreach before 2006, held over 200 presentations, distributed brochures and posters, and created print ads during 2006. Utah printed new brochures for its Medicaid Work Incentive program and distributed them to each eligibility worker in its Department of Health and the Department of Workforce Services. West Virginia conducted a fairly extensive awareness campaign and disseminated promotional materials in early 2006. California took a different approach to identifying potential program participants by sending cover letters, brochures, and voluntary questionnaires to approximately 28,000 people enrolled in its Medically Needy program. In the fall of 2006, Los Angeles County began to re-examine its Medicaid caseload to assess whether people with disabilities in other Medicaid groups were eligible for the Buy-In program. If any individual had both a disability determination and earned income, they were automatically switched to the Buy-In program.

Although states with a new program would tend to use outreach more than states with an older program, outreach activities can still promote enrollment growth in older programs. For example, when a state reaches a plateau in enrollment, it may use outreach activities to identify new groups of potential candidates. It is also possible that an older program has more experience with its original target population and has put a strategy in place to retain them. California, Utah, and Arkansas have had Buy-In programs since 2001. California and

Utah have seen consistent growth since 2001, largely as a result of outreach. Arkansas, which conducted outreach activities in 2006, also experienced enrollment growth in 2006.

That said, states with new programs use outreach when they feel their programs are not reaching their target population or when enrollment falls short of initial expectations. Louisiana and West Virginia, which implemented their programs in 2004, made a significant effort to increase awareness among potential participants. Enrollment jumped during the first year of operation, but grew slowly afterwards. A decreasing rate of growth is common in states with newer programs, since the rate of growth tends to decrease as the baseline number of participants increases (Appendix C, Table C.1). Louisiana almost doubled its enrollment, from 520 participants in 2004 to 952 participants in 2005, but it experienced only a 34 percent increase to 1,275 participants in 2006. West Virginia tripled its first-year enrollment from 87 participants in 2004 to 272 participants in 2005 and doubled its enrollment to 540 participants in 2006.

D. WHY DID ENROLLMENT DECREASE IN OTHER STATES?

Enrollment dropped in certain states partly because the policies used to increase enrollment in "growth" states worked in reverse. Some states have narrowed their eligibility requirements to limit or decrease the size of their programs because of budget constraints or a legislative mandate. Other states may want to change the target population for their Buy-In program and adjust their program features accordingly. For instance, a decrease in earned income limits (e.g., from 350 to 250 percent of the federal poverty level), an increase in monthly premium amounts, or the elimination or restriction of grace periods (e.g., from six to three months for medical leave or an involuntary job loss) could have a negative effect on enrollment. Not every Buy-In state has a goal of expanding enrollment. Some Buy-In states may be focused on serving current participants effectively rather than expanding enrollment.

1. Limited Recruitment

In 2006, Illinois, Indiana, New Hampshire, and South Carolina experienced a net decline in total enrollment. However, none changed their programs in any way that would explain the decline. However, all four states had relatively low rates of new enrollee recruitment: 20 percent in Illinois, 25 percent in Indiana, 25 percent in New Hampshire, and 13 percent in South Carolina, all of which were below the national average of 29 percent (Appendix C, Table C.4).

2. Effect of Medicare Part D

Thirteen states reported that Medicare Part D contributed to participant dissatisfaction or led to a decline in Buy-In enrollment. Program directors in three states reported either a decline in actual enrollment or a major slow-down in enrollment growth because of Medicare Part D.

Illinois, which saw a 4 percent drop in enrollment in 2006, noted that its enrollment dropped by more than 15 percent since Part D was implemented because most of its Buy-In

enrollees were dual eligibles who used the Buy-In mainly for outpatient prescription drug coverage. Buy-In enrollees appeared to drop out of the program once they realize that Part D covers their medications without a premium. Illinois further noted that it expected enrollment to continue to decline.

Kansas and Wisconsin also attribute the slowing in enrollment growth to Part D. Kansas saw a little over 3 percent growth in 2006, a significantly lower rate than in years past. The state recently reported that its enrollment increased every month from program implementation in July 2002 to January 2006, which marked the first decrease in enrollment. The decline continued through August 2006, when enrollment began to grow again. Wisconsin noted similar trends. Although the state saw almost 13 percent growth in 2006, its program growth rate slowed compared to previous years. Wisconsin reported that it now "lose[s] as many [individuals] as [it] enroll[s]." It is possible that Part D has affected enrollment in other states as well, and we may see more evidence of this effect in the years ahead to the extent that dual eligibles find the benefits of Medicare Part D attractive.

E. STATE PENETRATION RATES

The state penetration rate is defined as the number of Buy-In enrollees per 10,000 state residents age 16 to 64 who have a disability. State penetration rates in 2006 provide an indication of a program's reach that is more informative than absolute enrollment levels, since it takes into account the potential size of eligible populations in each state. A complete listing of Buy-In states is included in Appendix C. For the top 10 states with the highest enrollment in 2006, Table III.2 shows each state's absolute number of enrollees in 2006, its rank based on this number, its penetration rate, and rank based on this rate.

The three states with the highest total enrollment in 2006 (Massachusetts, Wisconsin, and Iowa) are also the three states with the highest penetration rate relative to other states with a Buy-In program.[5] Relative to one another, however, Wisconsin remains in the number two spot, but Massachusetts drops to the number three spot, and Iowa jumps to number one. Other states ranked about the same in the absolute enrollment rate and in the penetration rate. California, Pennsylvania, and New Jersey, however, fell out of the top 10 listing when ranked by state penetration rate.[6]

[5] Since the ACS estimates of working-age people with disabilities only included those between 16 and 64 years of age, we adjusted the penetration rates in 2006 by excluding the number of Buy-In participants who were 65 years or older (see Appendix C.7). This adjustment did not affect the ranking of the five states with the highest penetration rate, but did result in two changes. Indiana moved from 8th to 7th place switching its rank with Vermont, and Kansas moved from 15th to 14th highest penetration rate, switching places with Alaska.

[6] North Dakota and Vermont ranked 23rd and 20th in absolute size of enrollment. However, the rankings for both states were much higher—at 10th and 7th place—using the state penetration rate instead of total enrollment.

Table III.2. Buy-In Enrollment and Penetration Rates in the 10 States with the Highest Enrollment Levels, 2006

State	2006 Total Enrollment	Rank by Absolute Enrollment	Working-Age People with a Disability *	2006 State Penetration Rate **	Rank by Penetration Rate
Massachusetts	14,866	1	267,896	555	3
Wisconsin	12,952	2	209,160	619	2
Iowa	12,389	3	119,646	1,035	1
Pennsylvania	10,646	4	620,363	172	11
Indiana	8,563	5	300,624	285	8
Minnesota	8,213	6	184,122	446	4
Connecticut	5,512	7	133,084	414	5
California	3,990	8	1,394,587	29	22
New Jersey	2,734	9	304,901	90	16
New Mexico	2,413	10	88,740	272	9

Source: Medicaid Buy-In finder files, 2006; American Community Survey (ACS), 2006

* The ACS estimate of working-age people with disabilities, aged 16-64, includes both employed and unemployed individuals, and those with and without Medicaid coverage.

** Penetration rate is defined as Buy-In enrollment per 10,000 state residents age 16 to 64 with a disability as reported in the 2006 ACS.

F. CHARACTERISTICS OF BUY-IN PARTICIPANTS

Examining the characteristics of Buy-In participants can provide insight into whether current policies, including outreach, are effective in reaching target populations for the program.

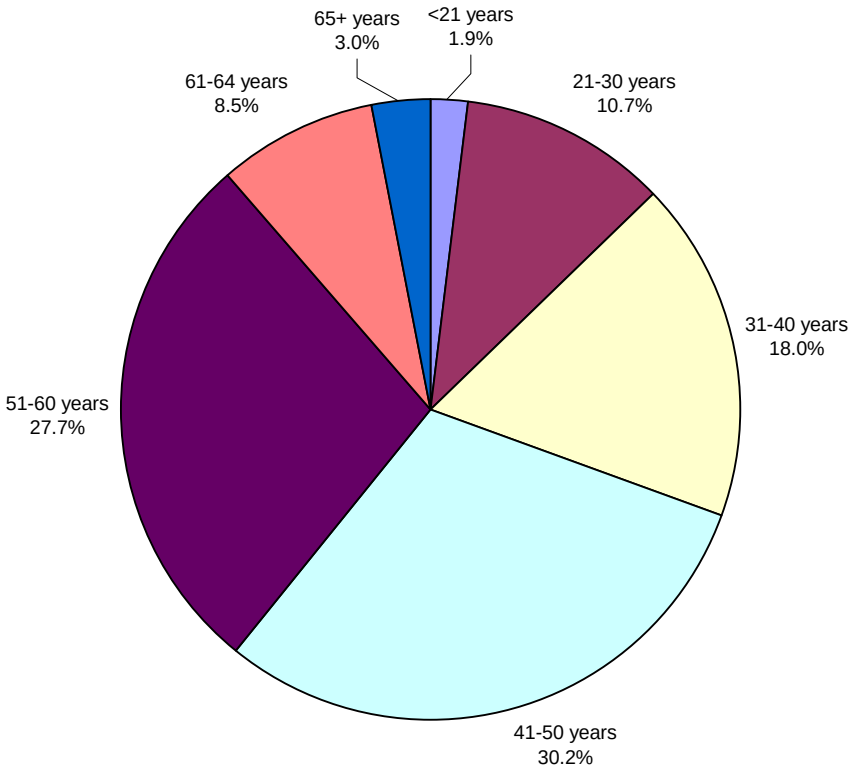
1. Demographic Characteristics

The majority of all 97,491 Buy-In participants nationwide (58 percent) were age 41 to 60 in 2006 (Figure III.3). Thirty percent of this group were age 41 to 50, 28 percent were age 51 to 60, and 18 percent were 31 to 40. This figure combines Buy-In participants from BBA states, which do not have an age restriction, and Ticket Act states, which include working individuals with disabilities who are 16-64 years of age.

Roughly equal numbers of men and women (49 and 51 percent, respectively) were enrolled in the Medicaid Buy-In program during 2006 (Appendix C, Table C.5). The majority of ever-enrolled individuals nationwide were white (76 percent), according to the state finder files.[7]

[7] Because coding for nonwhites in state finder files for nonwhites was inconsistent, we could not identify subgroup categories of nonwhites. Overall, 16 percent of Buy-In participants did not match to the TRF, which

Figure III.3. Age of Medicaid Buy-In Participants Ever Enrolled, 2006



Source: Buy-In finder files, 2006

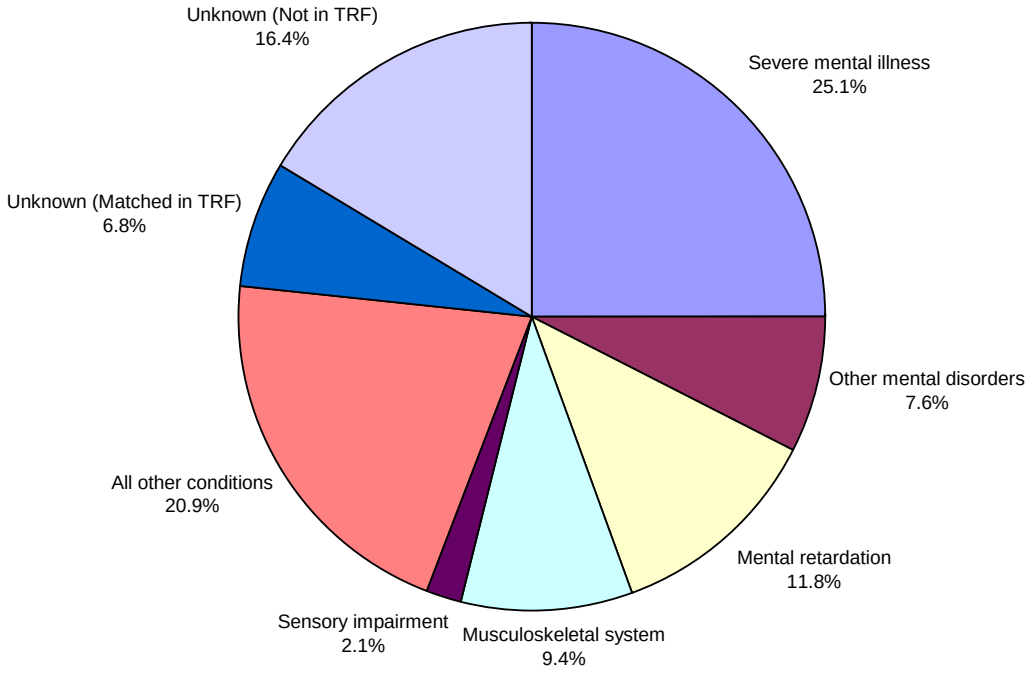
Note: Age is defined as of January 1, 2006.

2. Primary Disabling Condition

As shown in Figure III.4, the most common primary disabling condition of Buy-In participants in 2006 was severe mental illness (25 percent). Examples include bipolar disorder and schizophrenia. In addition, another 7 percent of enrollees were diagnosed with other mental disorders as a primary condition. Overall, 32 percent of Buy-In participants, or nearly one in three people, have been diagnosed with a mental illness or other mental disorder.

(*continued*)
also had a race/ethnicity variable. Of the 84 percent of participants who did appear in the TRF, 71 percent were white, 6 percent were African American, and 3 percent were Hispanic; the remainder comprised other races and ethnicities.

Figure III.4. Primary Disabling Condition of Medicaid Buy-In Participants Ever Enrolled, 2006



Source: Buy-In finder files and Ticket Research File, 2006

Mental retardation was the primary disabling condition in about 12 percent of Buy-In participants in 2006, and another 9 percent had a musculoskeletal disorder. Two percent of participants had a sensory impairment, such as hearing or vision loss, in 2006, and 21 percent had various other primary disabling conditions related to infectious diseases, HIV/AIDS, neoplasms, the endocrine system, nervous system, circulatory system, respiratory system, digestive system, genitourinary system, congenital anomalies, injuries, and all other conditions.[8]

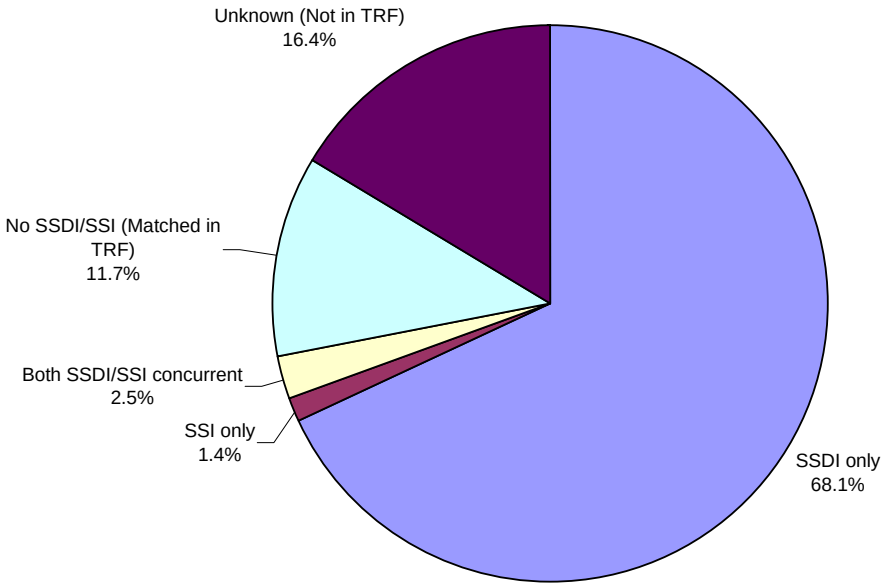
3. Public Program Participation

Given that the Medicaid Buy-In program is one of several federal initiatives that support working-age people with disabilities and require participants to have an SSA-certified disabling condition, it is not surprising that a majority of participants have been SSDI beneficiaries. Specifically, 71 percent of Buy-In participants ever enrolled in 2006 were SSDI beneficiaries in December 2005, including 2 percent who were concurrent beneficiaries

[8] In addition, 7 percent of participants were in the TRF, but information on primary disabling condition was not available. The remaining 16 percent of participants did not appear in the TRF. A detailed description of the Ticket Research File (TRF) is included in Appendix B.

in the SSDI and SSI programs.[9] About one percent of participants received SSI benefits only (Figure III.5). Overall, the distribution of these characteristics among Buy-In participants in 2006 was similar to that of participants in earlier years (Ireys et al. 2007).

Figure III.5. Public Program Experience of Medicaid Buy-In Participants Ever-Enrolled, 2006



Source: Buy-In finder files and Ticket Research File, 2006

[9] Twelve percent of Buy-In participants appeared in the TRF but were not enrolled in these public programs. A detailed description of the Ticket Research File (TRF) is included in Appendix B.

CHAPTER IV

EMPLOYMENT

Under federal rules, all individuals must be working when they apply to the Medicaid Buy-In program. Legislators would like to know whether participants are actually employed. Program administrators and eligibility workers can ask for proof of employment from program participants, though states vary in the strategies they use to verify a person's employment status. Many ask applicants to show that they have paid Federal Insurance Contributions Act (FICA) taxes; some ask for letters from employers; and others do not require written documentation.

In addition, many states have grace periods or work stoppage protections. These provisions allow participants to remain on the program (and therefore have access to Medicaid) even if they are temporarily unemployed because their job ended or because their symptoms or impairments worsened, resulting in a medical leave. Because of these grace periods, in most Buy-In programs less than 100 percent of participants are working on any given day.

This chapter focuses on employment of Buy-In participants during 2006, both at the national and state level. It presents summary findings and descriptive information about employment across important subgroups defined by age, participation in SSDI or SSI programs, and extent of prior work experience. The last section presents estimates of the factors that are most strongly associated with employment. The results in this chapter provide policymakers and program administrators with important clues about ways to structure their programs to sustain employment among Buy-In participants.

A. NATIONAL EMPLOYMENT OF BUY-IN PARTICIPANTS

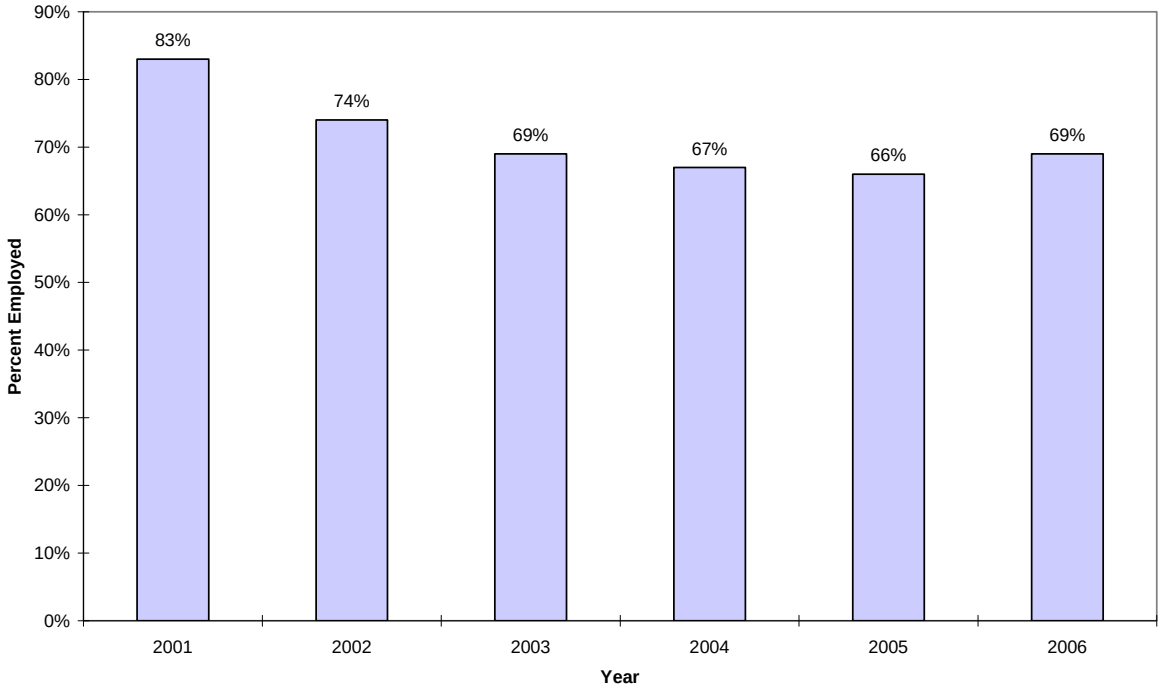
In 2006, 69 percent of Buy-In participants were employed nationwide, a three percentage point increase from the previous year (Figure IV.1). After dropping from 83 percent in 2001 to 69 percent in 2003, the employment rate for Buy-In participants remained essentially the same from 2003 to 2006, ranging from 66 percent to 69 percent.

The initial drop from 83 to 69 percent between 2001 and 2003 probably resulted from numerous factors, including new states joining the program that did not have strict work verification requirements. These figures understate the actual percentage of Buy-In

participants who are employed, because in some states a number of participants may be working in jobs that do not require them to report income to the IRS (hence these participants are not counted as employed in this study).

The slight increase from 2005 (66 percent) to 2006 (69 percent) reflects the termination of Missouri's Buy-In program in 2005. Among all Buy-In programs operating in 2005, Missouri's program had the largest enrollment (over 20,000 individuals) and the lowest percentage of employed participants (35 percent). Its termination, therefore, had a large effect on both total enrollment and the overall employment rate.

Figure IV.1. Percent of Buy-In Participants Employed Nationwide, 2006

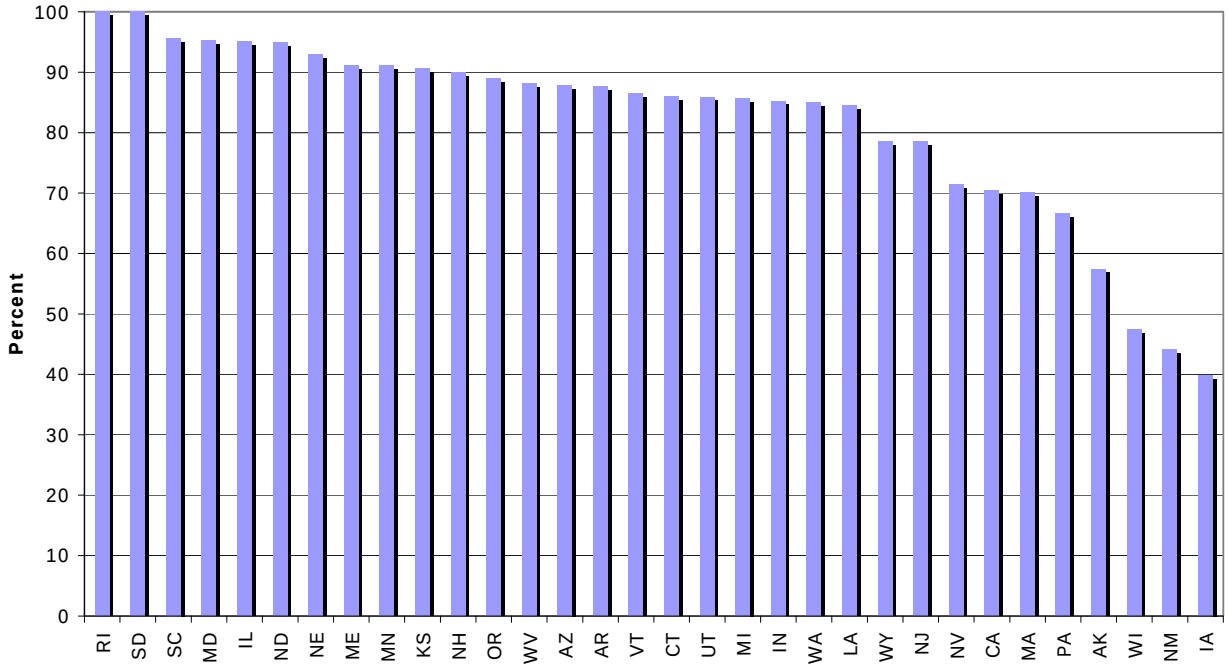


Source: Buy-In finder files and 2006 Master Earnings File, 2001-2006

B. BUY-IN PARTICIPANT EMPLOYMENT RATES, BY STATE

In 2006, the employment rate of participants in the state Buy-In programs varied from about 40 percent in Iowa to 100 percent in Rhode Island (Figure IV.2). In two-thirds of the state programs, at least 85 percent of participants were employed.

Figure IV.2. Percent of Buy-In Participants Employed, by State, 2006



Source: Buy-In finder files and the Master Earnings File, 2006.

Note: South Dakota had only one Buy-In participant enrolled during 2006; enrollment in other states varied between 19 and 14,866 participants.

Numerous factors contribute to the state variation in employment rates for participants in the Buy-In program. For example, the program requirements in three states with rates of employment that exceeded 90 percent in 2006 (South Carolina, Illinois, and Nebraska) have several features that may have contributed to their high rates of employment. South Carolina and Nebraska do not have any grace periods, while Illinois does not have a grace period for participants who lose their jobs for nonmedical reasons (for example, if the position is terminated). In addition, South Carolina and Nebraska have relatively low unearned income limits (the SSI monthly standard of $579 for both states), which may serve to exclude individuals who receive large SSDI payments and therefore limit their employment out of fear of losing these cash benefits.

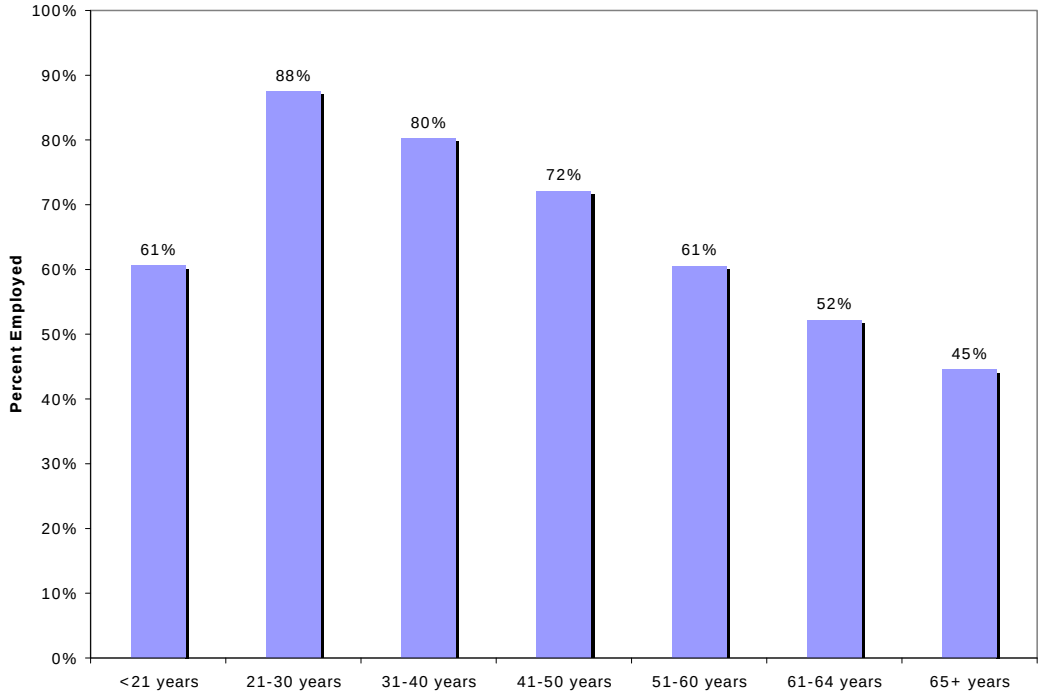
Similarly, the four states with low participant employment rates in 2006 (Alaska, Wisconsin, New Mexico, and Iowa, which have employment rates of 57 percent or less) share some eligibility features that most likely contribute to their low employment rates. None of the four requires verification of income, and all have either a substantial grace period or a policy that allows at least some participants to be temporarily unemployed but still enrolled in the program. Wisconsin allows individuals to enroll in the Buy-In program if they can show in-kind work (for example, food in exchange for work) or earnings from a sheltered workshop; in addition, the state allows participants to submit a work plan and receive Buy-In coverage for up to nine months (plus three months retroactively) before they

actually start to work. Although New Mexico requires participants to be working when they enroll in the Buy-In program, it does not require SSDI beneficiaries who are in their two-year waiting period for Medicare to be working during that period. Alaska requires only that the sum of the participant's and spouse's earned income be under 250 percent of the federal poverty level (FPL), after several disregards (including one-half of earned income).

C. Association of Selected Participant Characteristics with Employment

Consistent with our hypotheses, employment varied across subgroups of Buy-In participants. One of the most marked differences is between older and younger participants (Figure IV.3). Participants who were 21 to 30 years of age were most likely to be employed (88 percent), while those above 64 years of age were least likely to be employed (45 percent). This difference may be due in part to changes in the severity of a disabling condition over time, and also to different expectations about retirement and work for older participants, compared with their younger counterparts. Finally, the availability of certain jobs may be limited for older workers due to hiring preferences by employers for younger, less expensive workers.[1]

Figure IV.3. Percent of Buy-In Participants Employed, by Age Group, 2006



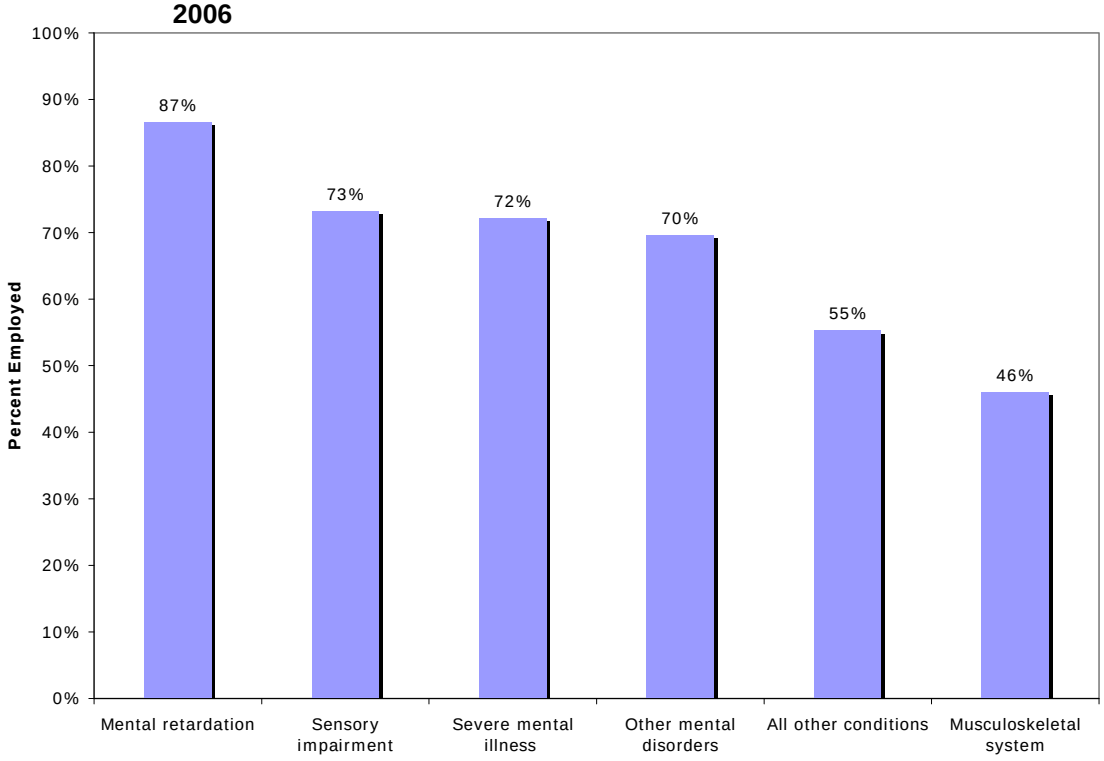
Source: Buy-In finder files, Ticket Research File, and Master Earnings File, 2006.

[1] Unlike the Ticket Act, which requires participants to be age 16 to 64, the BBA does not restrict the age range of individuals who can apply for the Buy-In program.

Additional analyses showed no differences in percent employed by gender or race/ethnicity (as reported in state-submitted finder files). However, prior work experience is positively correlated with employment. Participants with a history of positive earnings (as determined from a retrospective review of their earnings in the years prior to Buy-In enrollment) had a much greater likelihood of being employed while in the Buy-In program (see Appendix D). For example, only 9 percent of Buy-In participants with no reported earnings in the past decade were employed in 2006 compared to 86 percent of participants who worked 9 or 10 years in the past decade.

Employment varied greatly by primary disabling condition. In 2006, 87 percent of those with mental retardation were employed, the highest rate among the different types of conditions. The next highest prevalence of employment was among people with sensory impairments (73 percent), followed by severe mental illness (72 percent) and other mental disorders (70 percent). Among those with all other conditions, excluding musculoskeletal system conditions but including HIV/AIDS and circulatory and nervous system disorders, only 55 percent were employed. Finally, less than half—46 percent—of those with a musculoskeletal system disorder as a primarily disabling condition were employed (Figure IV.4).

Figure IV.4. Percent of Buy-In Participants Employed, by Primary Disabling Condition, 2006

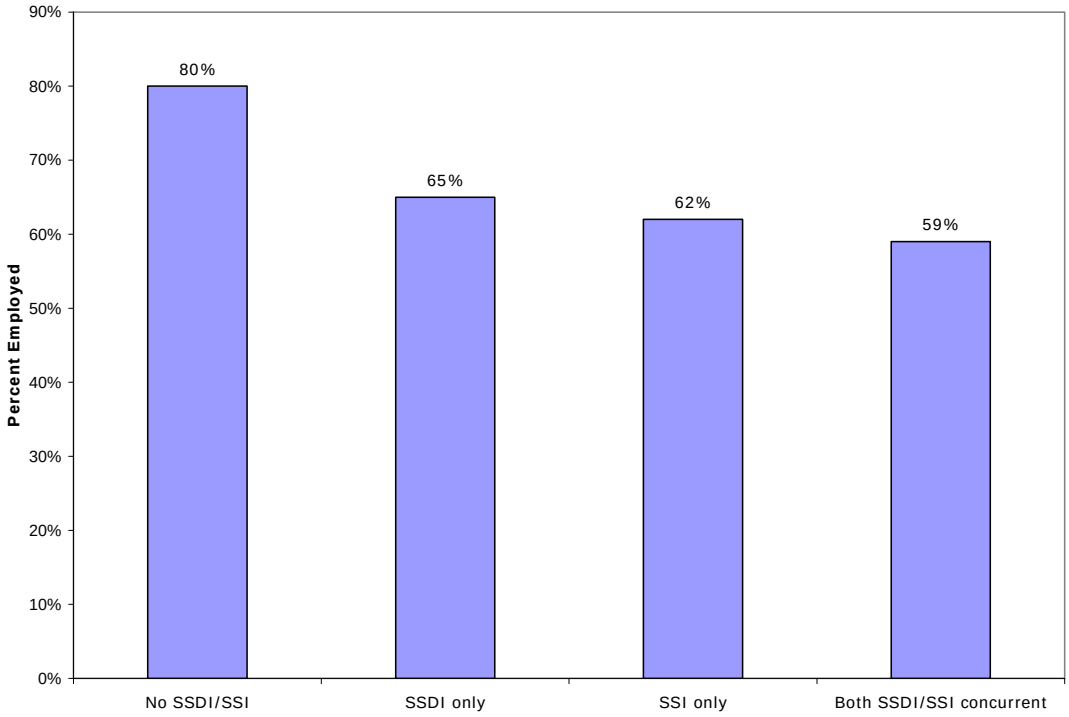


Source: Buy-In finder files, Ticket Research File, and Master Earnings File, 2006.

Employment was less likely for Buy-In participants who were SSDI and/or SSI beneficiaries, compared with participants who did not receive these benefits (Figure IV.5).

In 2006, only 59 percent of participants who received both SSDI and SSI benefits were employed, compared to 80 percent of participants who did *not* receive either SSDI or SSI benefits.

Figure IV.5. Percent of Buy-In Participants Employed, by Public Program Experience, 2006



Source: Buy-In finder files, Ticket Research File, and Master Earnings File, 2006.

D. ASSOCIATION OF STATE AND PARTICIPANT CHARACTERISTICS WITH EMPLOYMENT

In addition to knowing how various Buy-In participant characteristics are associated with employment rates, many policymakers also want to know which characteristics are most important, and whether the relationships between these characteristics and employment outcomes are different across the state Buy-In programs. To examine these issues we conducted a series of multivariate analyses that were guided broadly by the conceptual framework described in Chapter II.[2] These analyses are especially useful because they can strengthen our confidence in the results described in the previous section or provide new insights into how different factors influence employment in different states, or both. The results of the analyses are presented in Appendix F, but several findings are especially salient and are described below.

[2] A technical description of these analyses, including variable specifications and coefficient estimates, is in Appendix F.

First, the analyses showed that certain state-level factors were significantly associated with a greater likelihood of being employed. For example, participants in states whose programs were established under the BBA were 52 percent less likely to be employed than participants in other states. This difference may be attributable to the BBA's more restrictive earned income requirement (250 percent of poverty) compared with the Ticket Act, which does not require an income limit.[3]

Second, certain state program features were associated with an increased likelihood of employment. Specifically, we found that:

- Participants in states with higher earned income limits had a 26 percent greater likelihood of being employed than those in states with lower, more restrictive limits.

- Stricter grace periods had a stronger positive effect on employment than earned income limits; participants had a 37 percent greater likelihood of being employed as the length of the grace periods decreased.

- Buy-In participants in states with some form of work verification had a 27 percent greater likelihood of being employed than in states without any verification in place.

Third, the analyses showed that, after accounting for all other state-level and individual characteristics, participants in programs that count spousal earnings when determining income eligibility for the Buy-In program have a 35 percent lower likelihood of employment compared to other participants in programs where spousal earnings are excluded.

Finally, the analyses did not show that the state unemployment rate was associated with the likelihood of employment. For example, three states had overall unemployment rates in 2006 above 6 percent: Michigan, Alaska, and South Carolina. Nevertheless, two of these states, Michigan and South Carolina, had high employment rates of 86 percent and 96 percent, respectively, in their Buy-In programs.

The analyses also confirmed some of the results described above, thereby strengthening confidence in their accuracy. Specifically, after controlling for state-level factors and other individual characteristics, we found that:

- Age was negatively associated with employment; older participants were five percent less likely to be employed than younger participants for each one-year difference in age.

[3] Under the BBA, net family income must be less than 250 percent of poverty after application of certain income disregards, and an individual's monthly countable unearned income must be less than the benefit amount for the SSI program. Under the Ticket Act, states can establish their own income and asset standards, and may have no income limits at all.

- Years of work experience prior to 2006 were positively associated with employment; for each one-year difference in work experience, participants with more work experience were 42 percent more likely to be employed in 2006 than those with fewer years of work.

- Participants with mental retardation were almost three times as likely to be employed as those with a musculoskeletal disorder.

- Participants with a severe mental illness (82 percent more likely), other mental disorder (52 percent more likely), a sensory impairment (84 percent more likely), or any other condition (8 percent more likely) were all more likely to be employed than participants with a musculoskeletal disorder.

- Participants who were neither SSDI nor SSI beneficiaries were more than two times as likely to be employed as those receiving only SSI benefits.

CHAPTER V

EARNINGS

The Medicaid Buy-In program offers adults with disabilities the opportunity to increase their earnings while retaining health benefits. Therefore, policymakers and program administrators are vigilantly tracking the earnings of participants as one indicator of how successfully the program encourages self-sufficiency and improved earnings. Some states are concerned that if the work effort of participants declines, the program may become politically vulnerable, since legislators may perceive low average earnings as being inconsistent with the program's mission. To avoid this possibility, some states have refined their program by tightening program requirements, such as work verification requirements, to attract more enrollees who have demonstrated a commitment to work.

This chapter focuses on the earnings of employed participants at the national and state levels, and presents descriptive information on how earnings varied by participant characteristics. We conclude the chapter by looking at which factors are most strongly associated with an increase or decrease in earnings, while at the same time taking into account various individual characteristics and state program features.

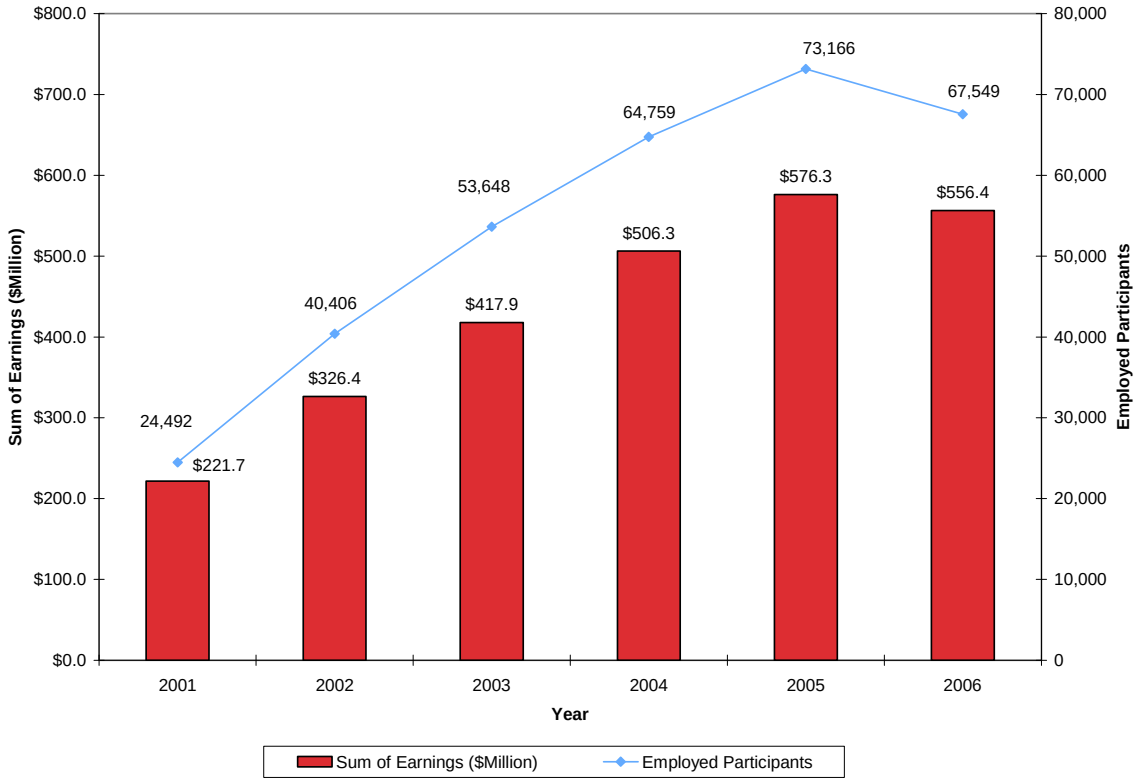
A. NATIONAL EARNINGS OF BUY-IN PARTICIPANTS

While a majority of Buy-In participants were employed in 2006, average annual earnings nationwide were $8,237, below the annualized 2006 SGA level of $10,320 (based on $860 per month for a nonblind individual). The SGA level is comparable to the annual earnings of a person working full-time at the federal minimum wage ($5.15) for 50 weeks. More than two-thirds of Buy-In participants in 2006 were also SSDI beneficiaries. Since earned income above the SGA level can lead to a loss of monthly SSDI cash benefits, low average earnings among the overall Buy-In population—and in particular among SSDI Buy-In participants—are consistent with a fear of going over the "cash cliff."

Since 2001, the sum of total earnings, inflation-adjusted to 2006 dollars, has grown substantially among all Buy-In participants ever enrolled (Figure V.1). This aggregate measure of earnings growth shows the contribution that Buy-In participants are making to the nation's economy. This trend is primarily due to an increase in the number of employed enrollees and the inclusion of new Buy-In states during this period. Since 2001, the number

of working Buy-In participants with positive earnings has climbed steadily, from 24,292 to 73,165 participants in 2005, followed by a slight decline to 67,549 in 2006 after Missouri discontinued its Buy-In program in August 2005.[1]

Figure V.1. Number and Total Earnings of Employed Buy-In Participants, 2001-2006



Source: Buy-In finder files, Ticket Research File, and Master Earnings File, 2001-2006

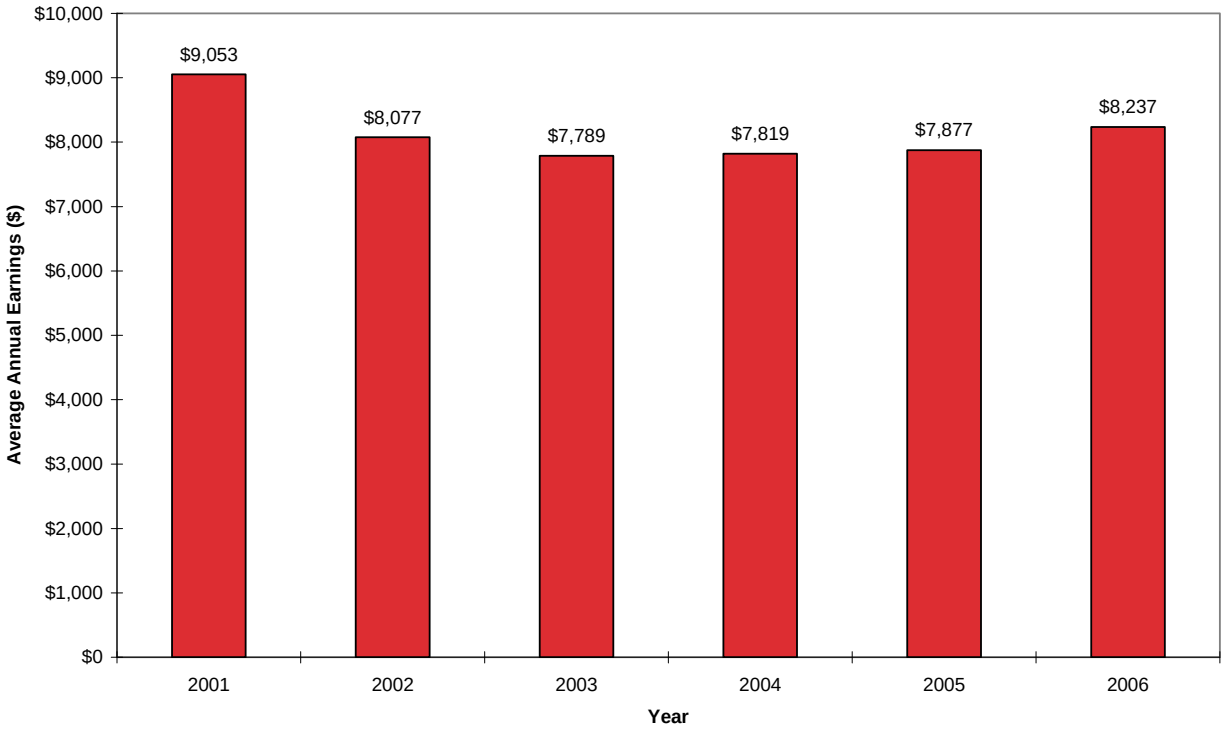
Note: Earnings are inflation adjusted to 2006 dollars.

A different trend from 2001 to 2006 emerges when average earnings (adjusted to 2006 dollars) among employed Buy-In participants are analyzed (Figure V.2). The overall national trend during this period shows a decline between 2001 and 2002 from $9,053 to $8,077, a stable value of approximately $7,800 from 2003 to 2005, and a slight increase in average annual earnings to $8,237 in 2006. The initial decrease in 2002 was primarily due to the addition of Missouri's Buy-In program, which had average inflation-adjusted earnings of $3,564 that were below the national average of $5,777 that year. Also, eight states introduced new Buy-In programs in 2002, and new Buy-In programs tend to have lower

[1] This is the first instance of an annual enrollment decrease in the nine-year history of the Buy-In program. As noted, it is due mainly to the loss of Missouri's Buy-In program, which had nearly 20,000 enrollees in 2005. The drop in total earnings reported here is also due to the absence of 2006 enrollment data for New York.

average annual earnings in the first year of implementation. After one or two years of implementation, many states experience an increase in average earnings (Ireys et al. 2007). Some of this increase may be attributed to rising income levels of participants after enrollment. For example, 40 percent of Buy-In participants increase their earnings one year after they have enrolled in the Buy-In program (Liu and Weathers 2007).

Figure V.2. Average Annual Earnings of Employed Buy-In Participants, 2001-2006



Source: Buy-In finder files, Ticket Research File, and Master Earnings File, 2001-2006

Note: Earnings are inflation adjusted to 2006 dollars. Participants with zero earnings are not included.

B. BUY-IN PARTICIPANT EARNINGS, BY STATE

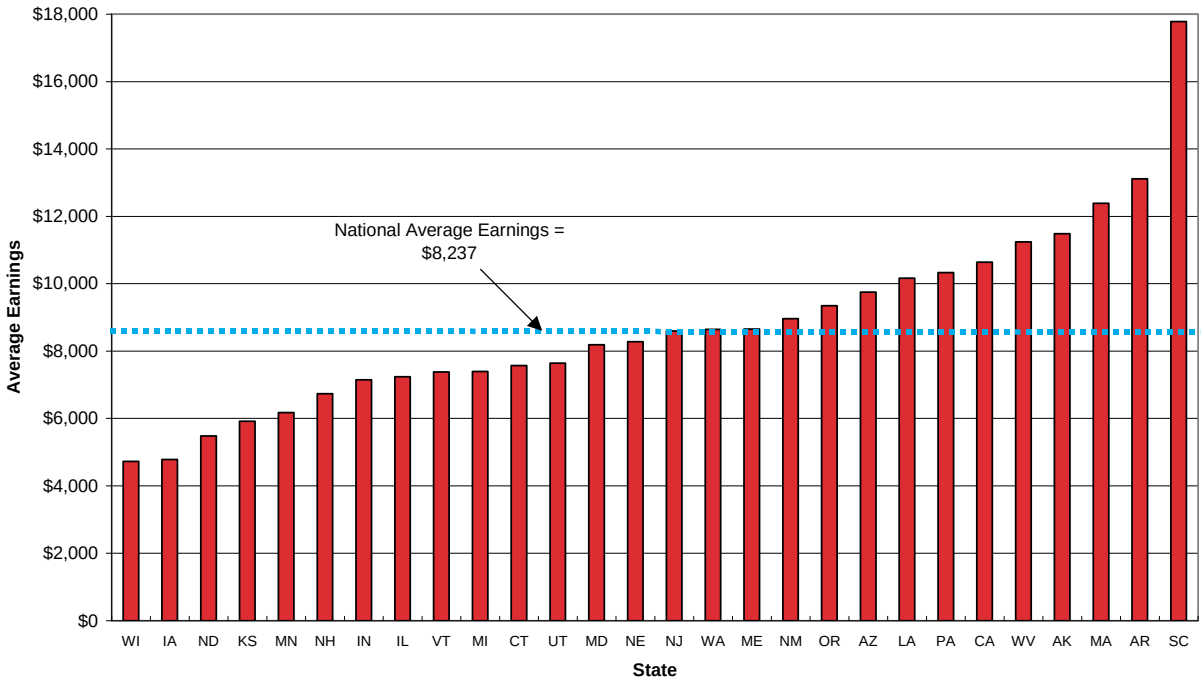
In 2006, the average earnings of participants who were employed varied considerably, from $4,727 in Wisconsin to $17,780 in South Carolina (Figure V.3). This difference in average earnings by state is consistent with the variations in program design across the states in areas such as earned income limits and work verification requirements.[2] Figure V.3 displays the average earnings for employed participants in 28 Buy-In states. Fifteen of these 28 states had average earnings above the national mean of $8,237.[3] While average national

[2] Average earnings are not adjusted for cost-of-living differences across states.

[3] Earnings for Nevada, Rhode Island, South Dakota, and Wyoming are not reported because the sample size of employed participants in 2006 was insufficient to allow us to report the information. However, participants from these four states are included in the national earnings average.

earnings of participants increased from $7,877 in 2005 to $8,237 in 2006 (see Figure V.2), this increase was not uniform across all states (see Appendix E, Table E.1). Of the 27 states that reported earnings data in 2005 and 2006, 14 showed a year-to-year increase in average earnings, while 13 states experienced a small decrease in average earnings.

Figure V.3. Average Earnings of Employed Buy-In Participants, by State, 2006



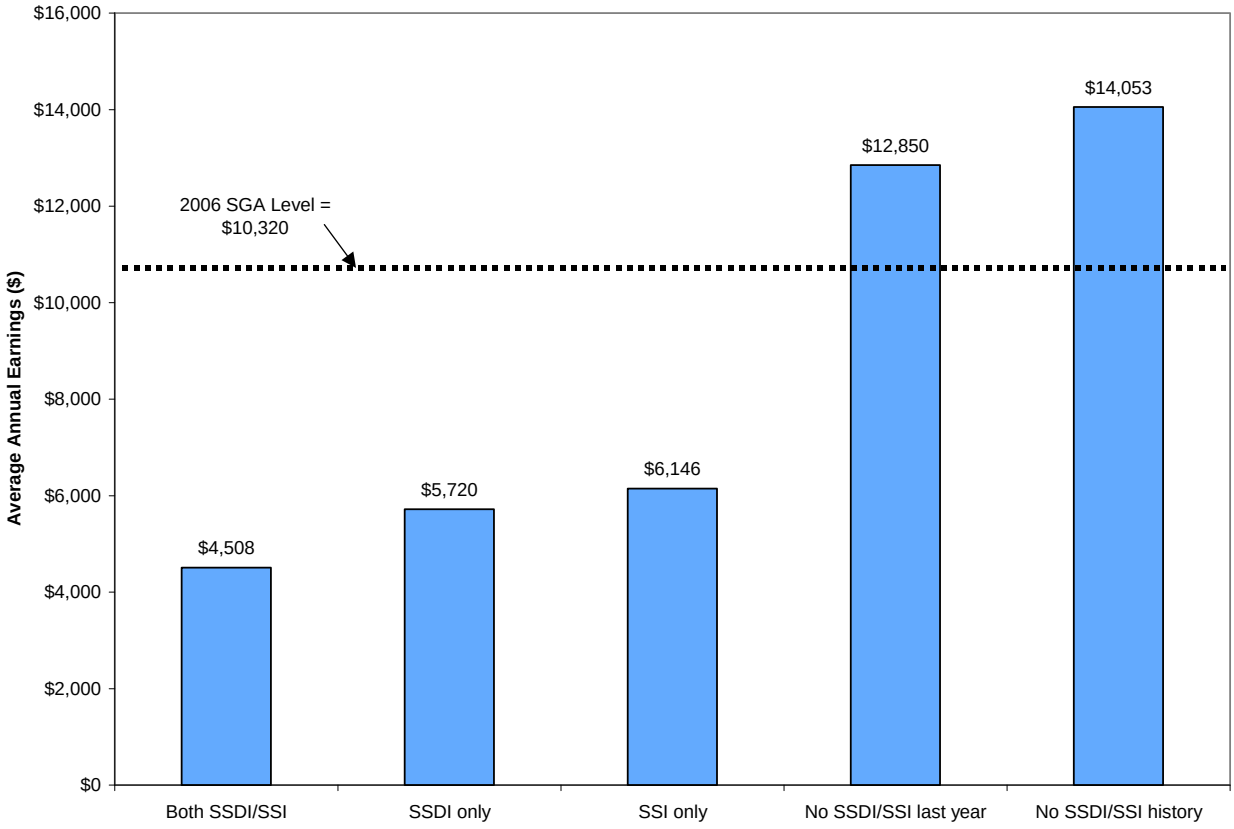
Source: Buy-In finder files, Ticket Research File, and Master Earnings File, 2006

Note: Earnings are inflation adjusted to 2006 dollars. Participants with zero earnings are not included.

C. Association of Selected Participant Characteristics with Earnings

Of all employed Buy-In participants in 2006, no more than 25 percent earned at or above the 2006 SGA level of $10,320 a year for a nonblind individual (Table E.3). The low proportion of Buy-In participants earning above the SGA level is largely explained by the relatively high rate of SSDI and SSI participation in the Buy-In program: About two-thirds of 2006 Buy-In participants had been receiving SSDI benefits in the previous year and risked losing their federal disability and Medicare benefits if they worked consistently above the SGA level for at least 12 months. In 2006, Buy-In participants who were employed and received federal disability benefits had the lowest average earnings amount. Employed participants who received both SSDI and SSI benefits had average annual earnings of $4,508, while those who received only SSDI benefits had earnings of $5,720, and employed SSI-only recipients had earnings of $6,146 (Figure V.4).

Figure V.4. Average Annual Earnings of Employed Buy-In Participants, by SSDI and SSI Program Participation, 2006



Source: Buy-In finder files, Ticket Research File, and Master Earnings File, 2006

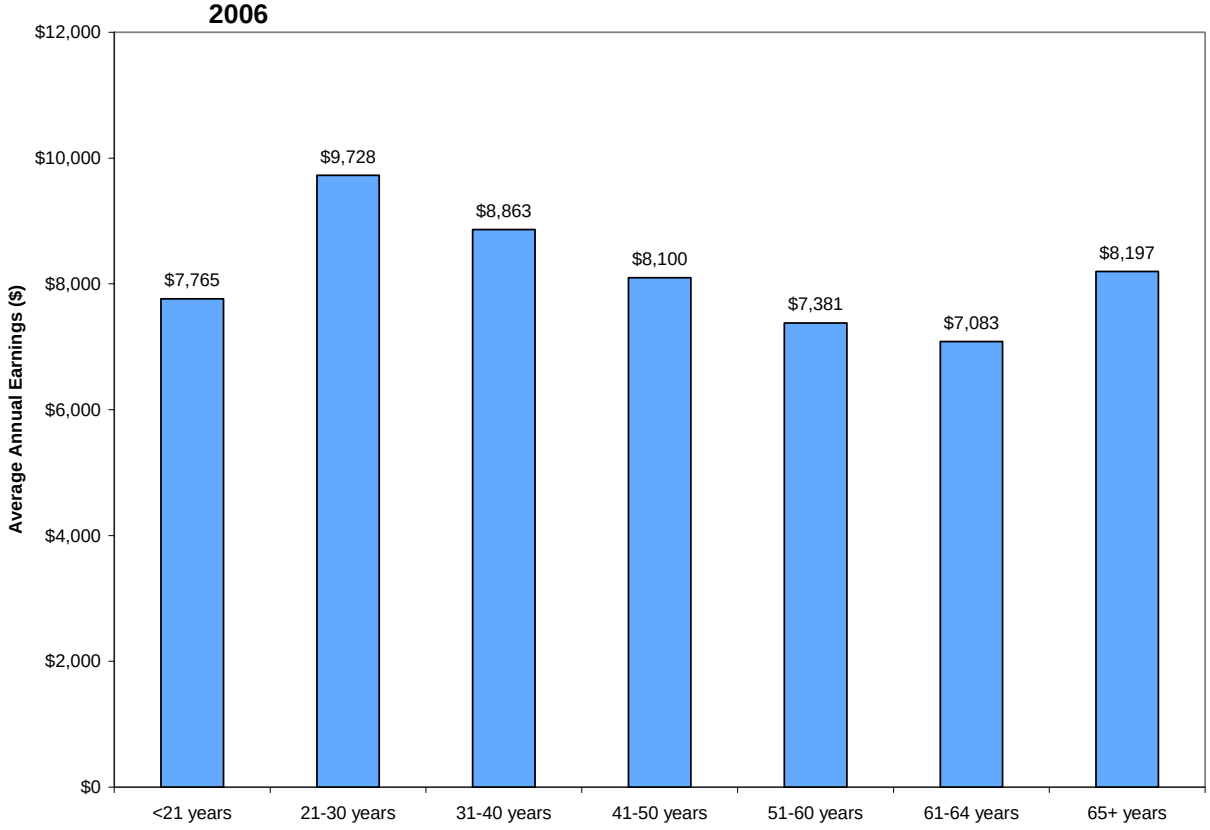
Note: Earnings are inflation adjusted to 2006 dollars. Participants with zero earnings are not included.

Buy-In participants in 2006 who did not receive either SSI or SSDI benefits in the previous year had average earnings of $12,850, well above the SGA level. Based on the data available for this study, these participants had received SSDI and/or SSI benefits at some point since 1994, but not as of December 2005. Average earnings were even higher, $14,053, for those who had no history of receiving SSDI or SSI benefits, or at least none since 1994. This relationship between earnings and receipt of federal disability benefits suggests that even for SSDI participants who are enrolled in the Buy-In program (the majority of whom have positive earnings), there is still a significant disincentive for SSDI participants to earn above the SGA level.

In addition to public program participation, earnings also varied by age group, ethnicity, primary disabling condition, and work history. Average earnings in 2006 were highest among participants 21 to 30 years of age ($9,728) and generally decreased with age (Figure V.5). The exceptions to this trend were the youngest and oldest age groups; the youngest age group (under 21) had lower earnings than the next-oldest age group, and the oldest

group (65 and older) had higher earnings than the second-highest age group. Surprisingly, participants who were 65 years of age or older had higher average earnings ($8,197) than participants who were between 61 and 64 years of age ($7,083). This increase in average earnings may occur because the SGA "cash cliff" is no longer applicable once someone reaches age 65 and becomes eligible for retirement benefits.

Figure V.5. Average Annual Earnings of Employed Buy-In Participants, by Age Category, 2006

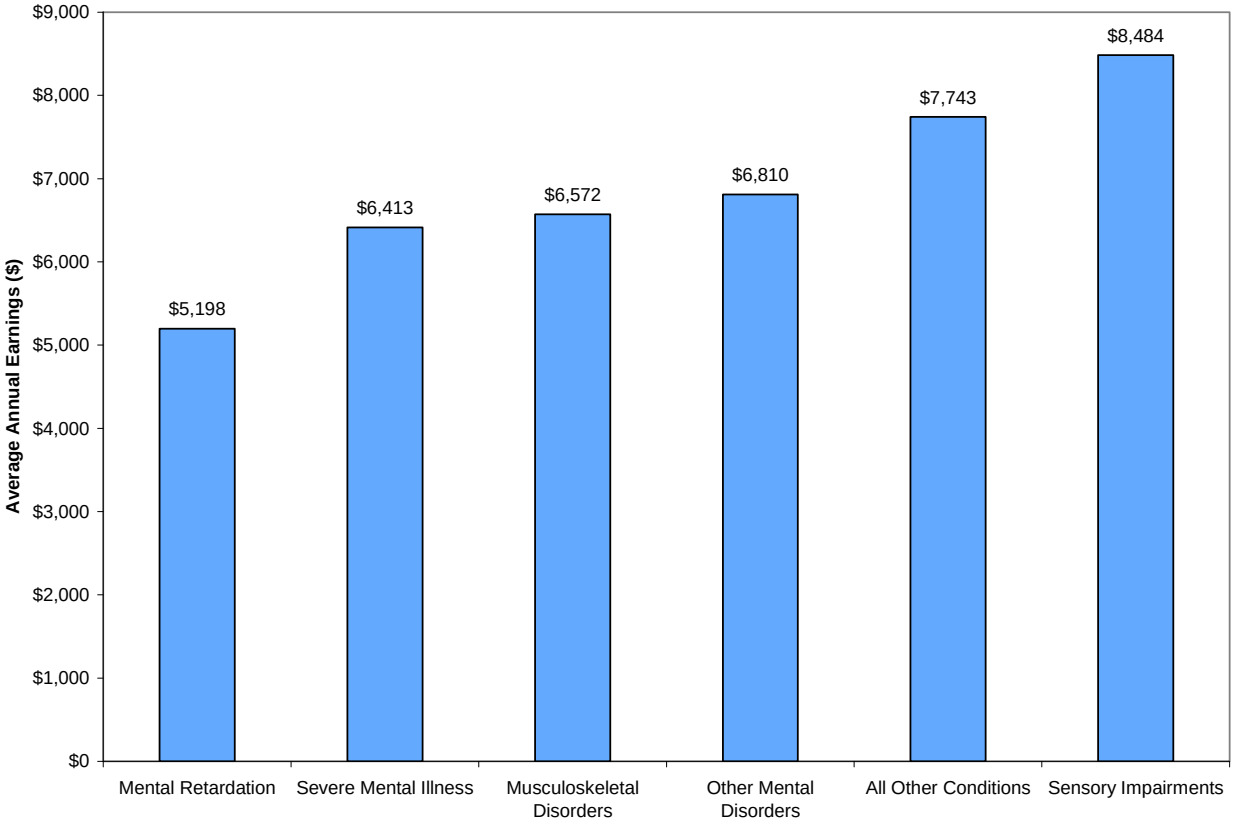


Source: Buy-In finder files, Ticket Research File, and Master Earnings File, 2006

Note: Earnings are inflation adjusted to 2006 dollars.

In 2006, nonwhite participants had higher average earnings ($9,982) than white participants ($7,625) (Appendix E, Table E.4). Of all participants with a primary disabling condition reported in the data, participants with sensory disorders had the highest average annual earnings ($8,484), followed by those with all other conditions ($7,743), mental disorders other than severe mental illness ($6,810), musculoskeletal system ($6,572), and severe mental illness ($6,413) (Figure V.6). Although participants with mental retardation had the highest rate of employment (87 percent) among the categories of primary disabling conditions (see Figure IV.4), participants with mental retardation had the lowest average earnings ($5,198) among participants who were working and had a primary disabling condition reported in the data.

Figure V.6. Average Annual Earnings of Employed Buy-In Participants, by Primary Disabling Category, 2006



Source: Buy-In finder files, Ticket Research File, and Master Earnings File, 2006

Note: Earnings are inflation adjusted to 2006 dollars. Participants with zero earnings are not included.

Earnings varied by years of prior work experience and were highest ($8,681) among the 59 percent of participants who reported positive earnings for at least nine of the past 10 years (Appendix E, Table E.6). Average earnings steadily declined for participants with fewer years of reported positive earnings. This drop was particularly apparent for first-time earners (those with no years of reported earnings prior to 2006); average earnings were just $3,475 for this group.

D. Association of State and Participant Characteristics with Earnings

Among Buy-In participants who reported positive earnings in 2006, we analyzed the statistical relationship between state-level program features and earnings, controlling for individual characteristics. Results from the multivariate analysis of Buy-In participant characteristics during 2006 were consistent with our findings from the descriptive analysis. The primary benefits of using multivariate analysis are to strengthen our confidence in the results described in the previous sections and provide new insights into how different

individual and state-level factors affect earnings, while accounting for other factors at the same time.[4]

First, certain state program features were associated with higher annual earned income. Specifically, we found that:

- Participants in states with more generous earned income limits had a higher level of earnings on average. For example, an earned income limit between 251 and 350 percent of FPL was associated with a $386 increase in earnings relative to limits set at 250 percent of FPL. This is consistent with the assumption that people with higher annual earnings are more likely to be eligible for the Buy-In program when the limits are more generous.

- Stricter grace periods had a stronger positive association with earnings than income limits; for example, a one- to six-month grace period was associated with a $975 increase in earnings compared with a 6- to 12-month grace period.

- Work verification rules that require documentation of FICA taxes paid were associated with a $503 increase in the earnings level compared to states with no work verification rules.

Second, the analyses showed that including spousal earnings in the definition of income was associated with a $1,290 decline in earnings for participants.

Finally, unlike the multivariate analysis of employment, average earnings were not associated with whether the state used the BBA or the Ticket Act to establish its Buy-In program, after accounting for state-level factors and individual-level characteristics. We also found that participants who had a job in a state with a high unemployment rate exhibited a *higher* level of earnings. After taking a closer look at the data, we found that two of the three states with high unemployment rates exceeding 6 percent (Michigan, Alaska, South Carolina), had very high average earnings. Specifically, the average annual earnings of employed participants in Alaska was $11,485; in South Carolina the average was $17,780. Both states exceeded the national average of $8,237 in 2006.

After controlling for state-level factors and other individual characteristics, we found that:

- Older participants had lower earnings than younger participants, with a $91 decline in earnings for each one-year difference in age, after controlling for other factors.

- Although males were no more likely to be employed than females, males earned about $279 more than female participants in 2006. Nonwhite participants

[4] Variable specifications and results with coefficient estimates and p-values appear in Appendix F.

earned $1,253 more than white participants on average, despite having no difference in the likelihood of being employed.

- While participants with mental retardation were much more likely to be employed, they earned $1,003 less than participants with musculoskeletal disorders.

- Participants with a severe mental illness earned $379 less than people with a musculoskeletal system disorder. Participants with a sensory impairment earned $1,133 more than participants with a musculoskeletal system disorder, while participants with other conditions earned $343 more.

- Participants who received SSDI benefits (with or without concurrent SSI benefits) had lower earnings on average than people without SSDI or SSI. Having SSDI and SSI concurrently was associated with lower earnings ($1,272 less) compared to SSI only; participants with neither SSDI nor SSI had a higher level of earnings ($6,394) compared to SSI only.

We also found evidence of a direct offset between federal disability benefits and earned income. This finding confirms the substitution of unearned income between public cash benefits and earned income, and provides empirical evidence of a work disincentive. For example, a $1 increase in monthly SSDI benefits was associated with a $1.09 decline in annual earnings. Each dollar increase in monthly SSI benefits was also associated with an $0.80 decline in annual earnings.

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CHAPTER VI

EXAMPLES OF STATE MEDICAID BUY-IN PROGRAMS

Quantitative measures of participation in the Medicaid Buy-In program provide critical information that policymakers can use to track enrollment trends at both national and state levels. Focusing solely on quantitative indices, however, can obscure state variations in program implementation. Understanding each state's decisions regarding eligibility criteria and operating procedures is important in developing a comprehensive view of the Medicaid Buy-In program. This chapter adds to our quantitative findings by describing four examples of state Buy-In programs, including how the states were selected and what the programs have in common.

A. SELECTING THE EXAMPLES

Rather than selecting state programs randomly, we chose state Buy-In examples that reflect strategic differences in program features affecting participant employment and earnings. We defined employment as having positive annual earnings, based on income information reported to the IRS. (Appendix B) Specifically, after excluding South Dakota (because it had only one participant in 2006), we used information from the remaining 31 Buy-In programs to calculate the median percentage of participants who were employed across all states (86 percent) and, for those employed participants, the median level of average earnings ($8,485). These cut-points define the medians of these indices; that is, half the states fall above and half the states fall below these figures.

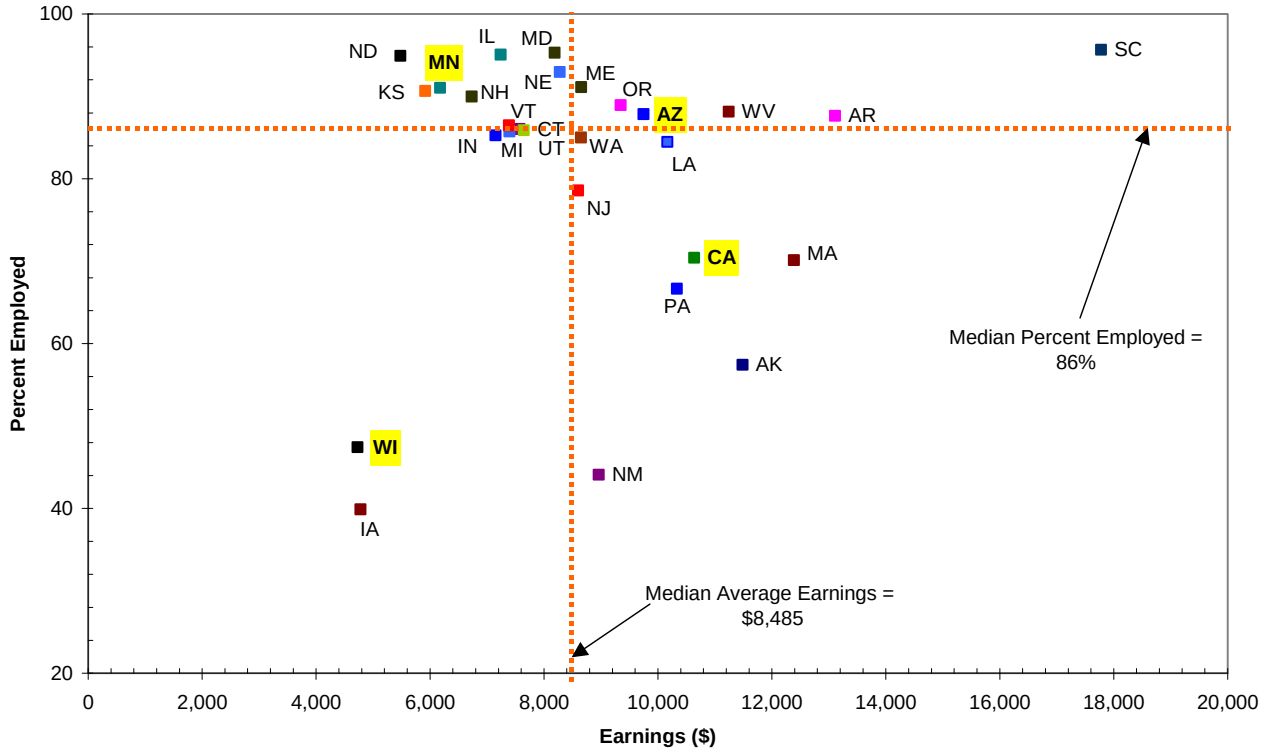
The states then were divided into four groups with programs that, in 2006, were:

- Above the median percentage of employed participants and above the median average earnings of employed participants
- Above the median percentage of employed participants and below the median average earnings of employed participants
- Below the median percentage of employed participants and above the median average earnings of employed participants

- Below the median percentage of employed participants and below the median average earnings of employed participants

The distribution of states across these groups is illustrated in Figure VI.1 where "high employment/high earnings" states are in the upper right quadrant, "high employment/low earnings" states are in the upper left quadrant, "low employment/low earnings" states are in the lower left quadrant, and "low employment/high earnings" states are in the lower right quadrant. Quadrant boundary lines represent the median percent of employed participants and median average earnings. One state from each quadrant was selected as an example of a Buy-In program: Wisconsin, California, Arizona, and Minnesota.

Figure VI.1. Scatter Plot of State Buy-In Programs, Based on Median Percent Employed and Median Average Earnings, 2006



Source: Buy-In program finder files and Master Earnings File, 2006

Note: Wyoming, Rhode Island, Nevada, and South Dakota are not displayed because each state has fewer than 25 observations and is subject to SSA's cell size restriction in reporting earnings in dollars.

Figure VI.1 also shows that many states cluster close to one or both of the medians. In addition, it also suggests that many of the most populous states with major urban populations (for example, California, New Jersey, Pennsylvania, and Massachusetts) are in the "low employment/high earnings" group (that is, the lower right quadrant). In these states, a below-average percentage of participants are employed, but they have above-average

earnings, possibly because of higher wage rates associated with urban areas or other state-level and market factors.

B. STATE EXAMPLES

To gather information on the four state programs, we developed a semi-structured interview that covered topics ranging from the history to the context of each program. We then conducted telephone interviews with state program directors and staff, and synthesized the material into brief program descriptions. States reviewed these brief descriptions for accuracy, but the descriptions should not be viewed as being officially sanctioned by the states.

1. Wisconsin

Initially, Wisconsin intended its Medicaid Buy-In program—referred to as the Medical Assistance Purchase Plan, or MAPP—to support individuals who wanted to work in competitive jobs and eventually earn more than other medical assistance programs would allow. The program was designed to target individuals with disabilities who were already working, and would eventually transition off the Buy-In and state benefit programs entirely. When the Buy-In program began, Medicare eligibility was not extended past the 36-month Extended Period of Eligibility (EPE) as it is now, so the state hoped the program would serve as a bridge for SSDI participants with relatively high levels of earned income. Based on the number of people expected to finish an EPE, Wisconsin estimated that between 4,000 and 5,000 individuals eventually would enroll in its Buy-In program.

In 2006, Wisconsin's MAPP had a total enrollment of more than 12,900 people, but only 47 percent of them were employed with positive earnings. Several factors seem to have shifted the Buy-In population toward low and zero earners as opposed to high earners.

First, enrollment policies and procedures do not target high earners. After meeting with individuals who are seeking public assistance, an eligibility worker determines the programs for which each individual is eligible and then enrolls her or him in the most appropriate programs. However, in a recent survey, the state found that 30 percent of participants in the MAPP did not know that they were in a Buy-In program; these individual are probably unaware of the program's emphasis on employment in competitive jobs.

Second, the MAPP has a generous asset limit and an annual re-determination of eligibility. Furthermore, Wisconsin does not have an income verification requirement where participants must provide documentation that FICA taxes are being paid. Many eligibility workers view the annual re-determination process as administratively attractive because other Medicaid programs require a six-month review. In addition, the MAPP has a generous asset limit up to $15,000, compared with $2,000 in other Medicaid groups. As a result, many applicants transfer to the Buy-In program from other Medicaid groups to increase their asset limits and ease administrative burdens, regardless of their ability or desire to work.

Third, low or zero earnings may occur through other mechanisms. For example, members of the health employment counseling (HEC) group are permitted to have no earned income while enrolled in the MAPP.[1] However, the MAPP requires that HEC participants submit a plan to find and start work within a nine-month period to maintain Buy-In coverage. Additionally, the MAPP considers any work-related activity as employment; therefore, people who have jobs that provide in-kind payment such as meals (that is, they do not earn money for their work) may still remain in the program.

Since the MAPP was established in 2000, state policymakers have not changed its target population, even though the program's population is much larger and different from what was originally expected. Instead, administrators changed the program's premium structure to reward enrollees who do not receive large amounts of unearned income. Participants start paying a premium when their countable income exceeds 150 percent of FPL. The premium calculation is the sum of 3 percent of earned income and 100 percent of unearned income; however, the second component of the calculation is zero, if unearned income is $25 or less. MAPP program administrators view this revised premium structure as a step toward refocusing the program, because premiums are higher when unearned income is greater than earned income.

2. California

California established its Buy-In program—known as the 250% California Working Disabled Program—in 1999, partly in response to strong advocacy from HIV/AIDS organizations and groups representing adults with disabilities. Policymakers, administrators, and the advocacy community wanted to develop a program that would attract individuals interested in competitive employment and also be grounded in fiscal reality. Originally, the state had hoped the program would serve as a bridge to employer-sponsored health coverage. Program enrollment grew slowly and has remained low relative to the state's nearly 1.4 million people of working-age with disabilities due to the challenge of conducting outreach in a large state. In 2006, the program's participants earned above the national average of Buy-In participants, probably because of the high cost of living in California relative to other states.

Administrative changes since 1999 have focused on expanding eligibility while maintaining budget neutrality. Discussions of changes to various program policies and procedures began in earnest in 2001 when the World Institute on Disability and other stakeholders asked the state to (1) increase the program's income limit from 250 percent of the FPL to 450 percent of the FPL, (2) exclude the income of the applicant's spouse or parents in determining net countable income for eligibility determination, (3) disregard resources set aside in a designated independence account or "Individual Development Account" as well as those retained in retirement accounts, and (4) cover personal assistance services at work and home. After analyses indicated that these changes would increase the

[1] Medicaid Buy-In enrollees in Wisconsin are required to either work or participate in an HEC for up to one year.

budget significantly, only the cost-neutral provision related to the use of personal assistance services at home and work was passed.

In recent years, state staff members have focused on enhancing incentives to increase self-sufficiency and employment among adults with disabilities. Specifically, the state is considering several changes to the program's administrative structure such as (1) permitting individuals to retain accumulated earnings when kept in separately identified accounts and not combined with other resources, (2) allowing a 26-week grace period for individuals who are temporarily unemployed, (3) exempting SSDI income, which automatically converts to retirement income, and (4) allowing enrollees to keep their retirement accounts upon moving to a different Medicaid program. Finally, the state is considering the removal of sunset provisions in the legislation, which would make the Buy-In program permanent.

3. Arizona

When Arizona implemented its Buy-In program, known as Freedom to Work, in 2003, the state sought to reduce barriers to entry into the program but required that individuals work and earn income in order to enroll. Therefore, the program would be accessible to a wide range of people who were able to work, including individuals who required an institutional level of care. To apply for the program, an individual who is applying for Medicaid contacts a centralized eligibility office by phone or mail. The applicant's income is then verified through documentation of wage stubs, self-employment tax returns, or business records. (In the future, the state hopes to have a centralized system for all programs so that referrals into the Buy-In program are more systematic.) Each participant is subject to an annual review to determine continued eligibility.

To enroll in the Buy-In program, an individual is required to earn income and pay taxes. Work in exchange for meals or other in-kind payment is not considered employment. Arizona's program has both generous and strict eligibility provisions. For example, the program does not have an asset limit, allowing participants to save as much as possible. Also, the earned income limit threshold of 250 percent of FPL excludes spousal income and unearned income. While these program features are generous, Arizona also requires that participants adhere to a strict income-verification process that prevents individuals with no earnings or in-kind work from remaining in the program. Participants must pay Social Security and Medicare taxes, both of which require earnings; therefore if an individual does not pay or is not required to pay these taxes, he or she is not eligible for the Buy-In program. The state does not have a grace period for individuals who lose their job, but the state does continue eligibility for individuals on medical leave who remain employed. Taken together, these generous and strict features yield a group of employed participants with high earnings.

Although Arizona experiences a high rate of employment and earnings among Buy-In participants, its strict income verification process and lack of a grace period have resulted in turnover in program participants. Typically, individuals leave the Buy-In program in Arizona because they (1) lose their job, (2) do not complete the annual renewal, (3) fail to pay the premium, (4) are approved for another Medicaid program, or (5) turn 65 years old and "age

out" of the program. In 2006, Arizona had 1,276 total participants enrolled at some time during the year, including individuals who required an institutional level of care.

Between November 2006 and November 2007, 394 people exited the Buy-In program. Only 64 of them (16 percent) re-qualified at a later time, primarily within a month. The remaining 330 (84 percent) who left the program did not re-qualify at all. The most common reasons for leaving the program were failing to pay a premium, not submitting a renewal form, or losing a job. Of those people who failed to pay a premium, 37 percent returned to the program. Only 18 percent of people who did not submit a renewal form came back to the Buy-In program, while just 10 percent of those who were dismissed because they were no longer working returned. Finally, 9 percent of individuals who exited the Buy-In program were approved for other Medicaid groups.

4. Minnesota

Minnesota's program philosophy was to start by removing barriers to work and decreasing work disincentives, introducing employment and earnings incentives later. When Medical Assistance for Employed Persons with Disabilities (MA-EPD) was first conceived in 1999, Minnesota set out to encourage people with disabilities to work, become taxpayers, and reduce dependency on government programs. The primary focus was employment, not earnings. Although the actual population of participants (mostly SSDI recipients) matched expectations, initial demand for the program was much stronger than the state had originally estimated. Minnesota expected 480 participants in the first month, with about 960 people enrolled after the first year. A month into the program, however, the state had already enrolled 1,386 people.

The program has evolved since it was first introduced, but the guiding principles have remained the same. MA-EPD has no upper income limit and a generous asset limit of $20,000 that excludes spousal resources. When the program first began, Minnesota required all participants to be employed, which meant earning at least $1 per month. Since 2004, the first $65 of monthly earnings is disregarded, so participants must have earned income of more than $65 per month to qualify. Consequently, many of the very low earners either dropped off the program or began working and earning more. Another change during the 2003 legislative session requires that all enrollees pay a monthly premium of at least $35, or more based on their income and household size, as well as 0.5 percent of any unearned income. In addition, to be considered employment, MA-EPD requires that participants pay Medicare and Social Security taxes based on earned income. Participant contribution to the tax base is a major goal of the program. Enrollees must be employed to qualify for the program; however, a grace period of four months (lengthened from two months in 2003) is allowed for participants who require a medical leave or who lose their job involuntarily. The state does not limit the number of times a person can use the grace period in a year. Therefore, it is possible that some participants may use the leave, return to work for a short time, and then go back on leave.

After many years of programmatic changes, MA-EPD seems to have found a combination of program features that supports its original Buy-In philosophy. With 91

percent of its more than 8,000 participants employed during 2006, Minnesota has made significant progress in reducing barriers to employment for people with disabilities in the state. In addition to a high rate of employment among participants, Minnesota has also seen a decrease in Medicaid utilization among Buy-In enrollees.

With these successes, the state has now turned its attention to helping people with disabilities increase their earnings. For example, in early 2008, a mailing was sent to all MA-EPD enrollees to inform them there is no earned income limit and that they could increase their earnings without affecting MA-EPD eligibility. In 2008, Minnesota also plans to examine why participants leave MA-EPD. Preliminary evidence suggests that most people leave because they do not return their income and asset review form, are no longer working, or cannot pay the premium. These individuals often maintain Medicaid coverage through other, more traditional, eligibility categories. Additionally, about 10 people each month age-out of the program when they turn 65, an issue the state plans to study more closely in the future.

C. CROSS-CUTTING THEMES

Several cross cutting themes emerge from these state examples. First, state perspectives on the definition of work have a tremendous impact on the design and on employment outcomes of each Buy-In program. Arizona does not consider in-kind work (for example, unpaid voluntary work in exchange for meals) as employment and has a strict work verification requirement, which partly explains its 88 percent employment rate. Wisconsin, on the other hand, considers in-kind work to be employment and does not require documentation of paid income taxes, and it had a much lower employment rate of 47 percent. While California does not have a formal definition of work, the state requires proof of employment in the form of pay stubs or written letters from employers, and it had a 70 percent employment rate. Minnesota, which has emphasized the importance of work since its program's inception, requires its participants to demonstrate that FICA taxes are being paid, and it had a 91 percent employment rate.

Second, the state examples corroborate this study's findings that the length of the grace period is strongly associated with employment outcomes. Wisconsin has a generous grace period of 12 months, which allows participants to remain enrolled without having earnings. Minnesota has a shorter grace period of four months, which may diminish annual earnings for the year, but is not long enough to deter employment within the year. Arizona does not have a grace period, so people are forced to leave the Buy-In program when they are no longer employed.

Third, states that intentionally focus on either employment or earnings, but do not link them together, experience differences in the two outcomes. For example, California designed its authorizing legislation with high earners in mind, but did not explicitly link earnings to employment—which is relatively low compared to earnings. When Minnesota's Buy-In program started, the state emphasized reducing barriers to employment and allowed participants who earned a single dollar to enter the program. This approach opened the door to many participants with limited work experience, but may have also contributed to a

prevalence of low earners. In contrast, Arizona sought to reduce barriers to entering the Buy-In program, but allowed only participants who were both employed and earning income to enroll in the program.

CHAPTER VII

SUMMARY AND IMPLICATIONS

A. STATUS OF THE MEDICAID BUY-IN PROGRAM IN 2006

Since its inception in 1997, the Medicaid Buy-In program has offered state policymakers an option for providing affordable health care coverage to working adults with disabilities. Nearly 190,000 people were enrolled in the program at any given time between 1997 and 2006. In 2006 alone, 32 states were operating a Buy-In program, and enrollment reached an impressive high of 97,491. Although Missouri discontinued its Buy-In in August 2005, 2006 ushered three new states into the program: Maryland, Rhode Island, and South Dakota.

The success of the Buy-In program is based on myriad factors, not the least of which include the following advantages for participants:

- For SSDI beneficiaries who want to work, the Buy-In program opens up access to health benefits that may not be covered by their existing insurance, such as long-term care and personal assistance. The program also offers basic coverage for people who would otherwise be uninsured during the two-year waiting period for Medicare. For SSDI dual eligibles, the Buy-In program pays for Medicare premiums and co-payments.

- For SSI beneficiaries, the Buy-In is an opportunity to increase earnings without losing Medicaid coverage.

- For working age adults with disabilities who are neither SSDI nor SSI beneficiaries, the Buy-In program is a supplement or alternative to private coverage that is prohibitively expensive.

B. SUMMARY OF FINDINGS

1. Enrollment

- In 2006, 32 states were operating a Medicaid Buy-In program; 97,491 participants were enrolled at any point during the year. Nationwide, more than 28,000 people were first-time enrollees in the program.

- Maryland, Rhode Island, and South Dakota implemented a Buy-In program for the first time in 2006. Maryland and Rhode Island had 85 and 19 participants, respectively. South Dakota reported having one person enrolled.

- Since 2001, nationwide enrollment more than tripled from 29,398 to 97,491 participants. However, total enrollment dropped from 110,758 people in 2005 to 97,491 people in 2006 because Missouri discontinued its Buy-In program in August 2005.

- Twenty-five of 29 states in which a Buy-In program was operating in 2005 and 2006 experienced a net increase in enrollment. Seventy-three percent of the growth in enrollment nationwide was concentrated in Pennsylvania, California, Wisconsin, Iowa, and Massachusetts, each of which had a net gain of at least 1,000 participants.

- In four states, South Carolina, Illinois, New Hampshire, and Indiana, there was a net decline in total enrollment from 2005 through 2006, ranging from 24 to 1,299 participants.

- Evidence points to outreach and expanded eligibility criteria as possible reasons for growth in enrollment. Possible reasons for a net decline in enrollment or a slowdown in growth are fewer first-time participants and early evidence that Medicare Part D may be "crowding out" some outpatient prescription drug benefits offered through Medicaid.

2. Participant Characteristics

- Older adults (age 41 to 60) accounted for the majority of Buy-In participants (58 percent), while younger adults (age 31 to 40) represented 18 percent of enrollment nationwide.

- Roughly equal numbers of men and women (49 and 51 percent) were enrolled in the Buy-In program in 2006. Most participants were white (76 percent).

- The most common primary disabling condition in 2006 was severe mental illness (25 percent); an additional 7 percent have other mental disorders. Overall, nearly one in 3 people had a primary diagnosis of mental illness.

- More than two-thirds of Buy-In participants (71 percent) in 2006 were receiving SSDI benefits at the end of 2005, but about 28 percent of participants were neither SSDI nor SSI beneficiaries.

3. Employment

- In 2006, about 69 percent of Buy-In participants nationwide were employed and had reported earnings. This 3-percentage-point increase from 2005 is explained

partly by the ending of Missouri's Buy-In program, which had a large proportion of unemployed participants in 2005.

- Older participants were five percent less likely than younger participants to be employed, for each one-year difference in age. Neither gender nor ethnicity was significantly associated with the likelihood of being employed.

- Participants with mental retardation were almost three times as likely to be employed as participants with a musculoskeletal disorder. Indeed, several groups of participants with other disabling conditions were all more likely than participants with a musculoskeletal disorder to be employed, including those with a severe mental illness (82 percent more likely), other mental disorder (52 percent more likely), a sensory impairment (84 percent more likely), or any other condition (8 percent more likely).

- Participants who were neither SSDI nor SSI beneficiaries were more than two times as likely as an SSI recipient to be employed.

- Among all the features of state programs, grace periods (work stoppage provisions) had the strongest positive association with the likelihood of being employed, followed by limits on earned income.

- Participants in states with a work verification requirement were more likely to be employed relative to participants in states without any such requirement.

4. Earnings

- Total earnings nationwide rose steadily from $222 million in 2001 to $576 million in 2005; the slight decrease to $556 million in 2006 was due largely to the ending of Missouri's Buy-In program.

- While a majority of Buy-In participants nationwide were employed in 2006, average annual earnings were relatively low, at $8,237. This figure is below the 2006 annualized SGA level of $10,320 (based on $860 per month for a nonblind individual), but it represents a 4.6 percent increase over the average annual earnings in 2005, which were $7,877.

- Older participants earned less than younger participants. There was a $91 decline in earnings for each additional year of age, after controlling for other factors.

- Although men were no more likely than women to be employed, they earned about $279 more than women in 2006. Nonwhite participants also earned $1,253 more than white participants on average, despite the fact that there was no difference in the likelihood of being employed.

- While participants with mental retardation were more likely to be employed, they earned $1,003 less than employed participants with a musculoskeletal disorder. Compared to participants with a musculoskeletal disorder, those with a severe mental illness earned $379 less, those with a sensory impairment earned $1,133 more, and those with any other condition earned $343 more.

- Participants with neither SSDI nor SSI earned $6,394 more, on average, than participants with SSI only.

- Federal disability benefits directly offset annual earnings. That is, each dollar increase in monthly SSDI or SSI benefits was associated with a $1.09 or $0.80 decrease in annual earnings, respectively.

- Of the program features in all states, grace periods (work stoppage provisions) had the strongest association with higher earnings, followed by limits on earned income.

- Participants in states that adopted some work verification reported higher earnings relative to states without work verification.

5. Themes from State Examples

- How states define work is a key determinant of their Buy-In policies and procedures, and ultimately of the incentives for participants to work.

- States that intentionally focus on either employment or earnings, but do not link them together, experience differences in the two outcomes.

C. STUDY LIMITATIONS

The study documented in this report was limited by potential errors in both the finder files and the administrative data. These files were checked for accuracy and completeness, and we checked any questions directly with the states, correcting errors when possible. Despite these efforts, errors in the enrollment counts may exist if, for example, participants were inadvertently excluded from the finder files, non-participants were inadvertently included in the finder files, or program eligibility dates were misreported.

Missing data were also an issue. There was no information on the primary disabling condition for about 16 percent of Buy-In participants who did not receive federal disability benefits from 1996 through 2006. In addition, information on educational attainment was not available for about 75 percent of Buy-In participants. Additional limitations of the multivariate analysis are discussed in Appendix F.

The Master Earnings File data are useful in that they are not affected by the self-reporting biases that arise in survey data, and the outcomes are based on consistent reports of earnings. However, not all Buy-In participants have enough income to file a tax return,

and those who do file returns may receive some "in-kind" income that is not reported, including small amounts of cash from a casual job, or pay from sheltered workshops or employers who are exempt from reporting income. As a result, our analysis does not capture all work activity, but it does reflect all taxable earned income.

D. POLICY IMPLICATIONS

Employment is an important step on the pathway to self-sufficiency, regardless of disability status. For younger participants, work can be an important part of a person's social identity as a way to meet people, generate income, and establish a sense of contribution to the community at large. For older adults with disabilities, especially those receiving SSDI payments, access to health care and predictable benefit payments may be more important than the social benefits of a job. Our findings show that employment and earnings outcomes vary by age group. As the Buy-In program matures, state policymakers and administrators may wish to consider program improvements and policies to refine the composition of Buy-In participants and factors associated with improved employment and earnings outcomes.

State policymakers have considerable flexibility in the design of Medicaid Buy-In program policies and procedures, which influence the number and composition of participants who are eligible to enroll in the program. For example, states vary in the strictness of their earned and unearned income limits as well as work verification requirements. Also, states vary in the length of grace periods, which allow participants to remain enrolled in the Buy-In program for a specified number of months while unemployed due to a medical leave or involuntary job loss. Our findings show that states with work verification requirements, shorter grace periods, and generous earned income limits are associated with higher average earnings and the likelihood of participants being employed. Policymakers may wish to consider these findings in light of refining current program features to move closer toward improving the employment and earnings of people with disabilities.

The Medicaid Buy-In program will continue to be a popular option for states as it provides a pathway to improved employment and self-sufficiency for people with disabilities. As enrollment in the Buy-In program continues to grow nationwide, states may want to consider whether new outreach activities are warranted to expand recruitment further, or whether it makes sense to maintain a steady-state based on current enrollment levels. For states that have experienced drops in enrollment, monitoring the retention of existing participants and developing recruitment strategies for first-time enrollees will be important steps to shape future enrollment trends.

A wide range of issues could be addressed by survey research and studies at the national and state level. Some states have already initiated well-designed studies, but additional evaluation is needed to examine a range of key questions. For example, to what extent does the Buy-In program function as a transition from public to private insurance? Does this vary with the participant's experience with federal disability benefits? Also, do Buy-In participants leave the program because of positive circumstances such as a job with a higher

wage, or negative circumstances, such as the loss of employment? These analyses may help to further our understanding of how participants view and use the Buy-In program.

The use of quantitative methods for tracking the enrollment, employment, and earnings of participants in the Medicaid Buy-In program and the capacity to link and integrate information from state and federal administrative data sources will continue to provide CMS and policymakers with valuable information to monitor the impact of policy changes and trends. Although employment and earnings provide a useful measure of program performance, they may not capture all of the critical dimensions associated with improved outcomes for Buy-In participants. Other indicators such as Medicaid expenditures, health status, and the value of work to individuals with disabilities are also important markers of whether the Buy-In program is improving the self-sufficiency of participants. Additional studies of these measures can enhance our understanding of how well the Buy-In program is meeting its goal.

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APPENDIX A

AUTHORIZING LEGISLATION AND STATE PROGRAM FEATURES, 2006

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Table A.1. Buy-In Program Implementation Year and Authorizing Legislation

State	Month	Year	Authorizing Legislation and Groups
Massachusetts	July	1997	Section 1115 Waiver
South Carolina	October	1998	BBA
Oregon	February	1999	BBA
Alaska	July	1999	BBA
Minnesota	July	1999	BBA (before Oct 2000), Ticket Act Basic (since Oct 2000)
Nebraska	July	1999	BBA
Maine	August	1999	BBA
Vermont	January	2000	BBA
New Jersey	February	2000	Ticket Act Basic
Iowa	March	2000	BBA
Wisconsin	March	2000	BBA
California	April	2000	BBA
Connecticut	October	2000	Ticket Act Basic & Medical Improvement
New Mexico	January	2001	BBA
Arkansas	February	2001	Ticket Act Basic
Utah	June	2001	BBA
Pennsylvania	January	2002	Ticket Act Basic & Medical Improvement
Washington	January	2002	Ticket Act Basic & Medical Improvement
Illinois	January	2002	Ticket Act Basic
New Hampshire	February	2002	Ticket Act Basic
Indiana	July	2002	Ticket Act Basic
Kansas	July	2002	Ticket Act Basic & Medical Improvement
Missouri	July	2002	Ticket Act Basic
Wyoming	July	2002	Ticket Act Basic
Arizona	January	2003	Ticket Act Basic & Medical Improvement
New York	July	2003	Ticket Act Basic & Medical Improvement
Louisiana	January	2004	Ticket Act Basic
Michigan	January	2004	Ticket Act Basic
North Dakota	May	2004	Ticket Act Basic
West Virginia	May	2004	Ticket Act Basic & Medical Improvement
Nevada	July	2004	Ticket Act Basic
Rhode Island	January	2006	BBA
Maryland	April	2006	Section 1115 Waiver
South Dakota	October	2006	BBA

Source: Beauchamp et al., 2007

Table A.2. Selected Characteristics of State Buy-In and Medicaid Programs, 2006

	Alaska	Arizona	Arkansas
Implementation date	July 1999	January 2003	February 2001
Federal authority	BBA	Ticket Act Basic and Medical Improvement	Ticket Act Basic
Income eligibility	Earned income: Up to 250% FPL for Alaska[a] (includes spousal income) Unearned income must be at or below $1,119 per month	Up to 250% FPL of earned income (excluding spousal income).	Up to 250% FPL net personal income (earned plus unearned, after SSI income exclusions); unearned income must be less than SSI standard plus $20. Spousal income not counted.
Individual asset limit	$2,000 (individual) $3,000 (couple)	N/A	$4000 individual,
Medically needy income limit (monthly)	N/A	N/A	$108
Income standard for poverty-level Medicaid (monthly)	$1,119	$851	N/A
SSI Benefit (combined federal and state) (monthly)	$965[b]	$623	$603
1619(b) income threshold (monthly)	$4,126	$2283.41	$2,207
Premium threshold	100% FPL	$500 of monthly earned income	N/A
Premium structure	A sliding-scale premium as a fixed percentage of income. The maximum premium is 10 percent of net family income.	Sliding scale premium not to exceed 2% of net earned income	No premium required. Co-payments higher than those for regular Medicaid are required when income is above 100% FPL.
Income verification requirements	Eligibility is based entirely upon receipt of earned income, which includes spousal income. Not required to demonstrate that income and FICA taxes are being paid.	Must document social security and FICA taxes are being paid	Required to demonstrate that earned income is reported to the IRS (see statement at comment DHS5)
Work stoppage protection	None	N/A	Up to six months given that participant states his/her intention to return to work

[a]Federal poverty guidelines for Alaska are higher than those for the 48 contiguous states
[b]Alaska provides Medicaid coverage to people with disabilities receiving only the SSI supplement who have countable income up to $1,075 per month.

	California	Connecticut	Illinois
Implementation date	April 2000	October 2000	January 2002
Federal authority	BBA	Ticket Act Basic and Medical Improvement & BBA (added 10/2006)	Ticket Act Basic
Income eligibility	Up to 250% FPL (includes spousal income, excludes SSDI benefits)	Up to $75,000 per year (excludes spousal income)	Up to 200% FPL (includes spousal income)
Individual asset limit	$2,000 (excludes spousal resources)	$10,000 (individual) $15,000 (couple)	$10,000 (includes spousal resources)
Medically needy income limit (monthly)	$600	$477	$283
Income standard for poverty-level Medicaid (monthly)	$1,047 (includes a $230 disregard)	N/A	$816
SSI Benefit (combined federal and state) (monthly)	$836	$771	Individually budgeted
1619(b) income threshold (monthly)	$2,562	$3,935	$2,390
Premium threshold	Net countable income of $1	200% FPL	100% FPL
Premium structure	A sliding-scale premium is based on net countable income. For income from $1 up to 250% FPL, premiums range from $20 to $250 for an individual and $30 to $375 for a couple.	Premiums equal 10% of total income above 200% FPL	Premium payment categories are calculated based on the sum of 7.5% of unearned and 2% of earned income.
Income verification requirements	Proof of employment (e.g., pay stubs or written verification from the employer). Self-employed or contractor provide records (e.g., W-2 forms, 1099 IRS form). Not required to demonstrate that income and FICA taxes are being paid.	Must have payroll taxes, including FICA, taken out of wages, unless self-employed. If self-employed, must provide tax forms or legitimate business records.	Employment must be verified by pay stubs and employer documents that income is subject to income taxes and FICA.
Work stoppage protection	If an enrollee is out of work "for good cause" – such as being laid-off, a worksite closure, health problems due to one's disability, or a loss of current transportation with no other means of transportation – a 2 month grace period is granted	Enrollees may continue enrollment for up to 12 months if job loss due to (1) health crisis or (2) involuntary job dismissal and participant intends to return to work. The participant must continue to pay monthly premium based on remaining income.	Up to 90 days if premiums are paid and a letter from a physician is submitted stating that the enrollee is unable to work due to health problems.

	Indiana	Iowa	Kansas
Implementation date	July 2002	March 2000	July 2002
Federal authority	Ticket Act Basic	BBA	Ticket Act Basic and Medical Improvement
Income eligibility	Up to 350% FPL (excludes spousal income)	Up to 250% FPL (includes spousal income)	Up to 300% FPL (includes spousal income)
Individual asset limit	$2,000 (excludes spousal resources)	$12,000 (individual) $13,000 (couple)	$15,000 (includes spousal resources)
Medically needy income limit (monthly)	$564	$483	$475
Income standard for poverty-level Medicaid (monthly)	N/A	N/A	N/A
SSI Benefit (combined federal and state) (monthly)	$579	$579	$603
1619(b) income threshold (monthly)	$2,433	$1,891	$2,405
Premium threshold	150% FPL	150% FPL	100% FPL
Premium structure	Based on percentage of applicant and spouse's gross income according to family size.	Based on sliding scale premium schedule with 16 premium brackets, ranging from $27 to $422	Sixteen premium amounts based on income brackets from $55 to $152 for individual and $74 to $205 for two or more. Cannot exceed 7.5% of income.
Income verification requirements	Must have pay stubs and documentation that enrollee is paying income and FICA taxes.	Must have earned income verifiable by pay stubs, completed tax forms, or a signed statement from a person's place of work. Not required to demonstrate that income and FICA taxes are being paid.	Employment must be verifiable by pay stubs and employer documents that income is subject to FICA taxes.
Work stoppage protection	Enrollment can continue for up to 1 year after losing employment.	6 months	6 months

	Louisiana	Maine	Maryland
Implementation date	January 2004	August 1999	April 2006
Federal authority	Ticket Act Basic	BBA	Waiver 1115
Income eligibility	Up to 250% FPL (excludes spousal income)	Up to 250% FPL on total income, up to 100% FPL on unearned income (includes spousal income)	Up to 300% FPL (including spousal income)
Individual asset limit	$25,000 (excludes spousal resources)	$8,000 (includes spousal resources)	$10,000 (includes spousal resources)
Medically needy income limit (monthly)	$100	$315	
Income standard for poverty-level Medicaid (monthly)	N/A	$872	
SSI Benefit (combined federal and state) (monthly)	$603	$603 + $55 income disregard for state SSI supplement and $10 state supplemental check	Ranges from $669-$1269 depending on level of supervision needed
1619(b) income threshold (monthly)	$2,090	$3,153	$2,772
Premium threshold	150% FPL	150% FPL	Flat rate
Premium structure	$80 for 150%- 200%, $110 for 200%-250% FPL	$10 premium for 150%-200% FPL, $20 for 200%-250% FPL	$75 every 6 months
Income verification requirements	Required to demonstrate that income and FICA taxes are being paid	Must have earned income. Not required to demonstrate that income and FICA taxes are being paid.	Employment must be verifiable by pay stubs and employer must document that income is subject to FICA taxes
Work stoppage protection	Individuals in the Buy-In who lose their jobs can retain their MPP eligibility for up to 6 months provided they intend to return to the workforce.	None.	For those that are eligible, but lose their job during the 6 months of eligibility, a 4 month grace period is offered.

	Massachusetts	Michigan
Implementation date	July 1997	January 2004
Federal authority	1115 Demonstration Waiver	Ticket Act Basic
Income eligibility	No limit	No earned income limit. Unearned income limit is 100% FPL (excludes spousal income)
Individual asset limit	No limit	$75,000 (excludes spousal resources)
Medically needy income limit (monthly)	N/A[a]	$350
Income standard for poverty-level Medicaid (monthly)	The income standards are variable depending on the population, ranging from 100% - 200% FPL ($797 - $1595 for a family of 1)	$817
SSI Benefit (combined federal and state) (monthly)	$693	$617 (Includes $603 federal and $14 state supplement)
1619(b) income threshold (monthly)	$2,649	$1,780
Premium threshold	100% FPL	250% FPL
Premium structure	Premiums based on two different sliding scales—one for enrollees with other health coverage, one for enrollees without it. Premiums begin at 100% and increase in increments of $5 to $16 based on 10% increments of the FPL.	Based on sliding scale ranging from $50 to $920 per month.
Income verification requirements	Demonstrate at least 40 hours of work per month.	Must be employed on a regular and continuing basis. Not required to demonstrate the income or FICA tax payment.
Work stoppage protection	Up to 3 months if the participant maintains premium payments. Eligibility is re-determined when the participant reports job loss.	Up to 24 months if the result of an involuntary layoff or determined to be medically necessary

[a] Massachusetts is unique in that, rather than have a medically needy or spend down program as many other states do, all persons with disabilities who are not eligible for the working benefit plan of CommonHealth (i.e., the state's Buy-In program) are eligible for the non-working benefit plan, which requires that participants meet a one-time deductible to receive coverage.

[b]Massachusetts covers nonworking people with disabilities with incomes at or below 133 percent of the FPL through its Section 1115 demonstration waiver.

	Minnesota	Mississippi
Implementation date	July 1999	July 1999
Federal authority	BBA (prior to Oct 2000), Ticket Act Basic (as of Oct 2000)	BBA
Income eligibility	No upper income limit. Must have monthly wages or self-employment earnings of more than $65. (Excludes spousal income)	Earned income limit is 250% FPL; Unearned income limit is 135% FPL.
Individual asset limit	$20,000 (excludes spousal resources)	$24,000 (individual) $26,000 (couple)
Medically needy income limit (monthly)	$798	N/A
Income standard for poverty-level Medicaid (monthly)	$798	135% FOL for aged/disabled individuals without Medicare coverage (1115c waiver). Individuals with Medicare are covered under the Medicare cost-sharing groups
SSI Benefit (combined federal and state) (monthly)	$645	$603
1619(b) income threshold (monthly)	$3,294	$1901
Premium threshold	All enrollees must pay a minimum premium of $35.	150% FPL
Premium structure	Premiums based on a minimum of $35 or a sliding fee scale based on income and household size. The premium gradually increases to 7.5% of income for incomes equal to or above 300% of FPL. Must also pay 0.5 percent of unearned income. No maximum premium amount.	Premiums payable on a sliding scale based on 5% of countable earnings up to 250% FPL limit. Unearned income is not factored into premium structure.
Income verification requirements	Earned monthly income above $65. Required to demonstrate that FICA taxes are being paid.	All earnings and work hours are verified. A minimum of 40 hours per month of paid activity must exist to qualify.
Work stoppage protection	Up to 4 months if no earned income due to medical condition or involuntary job loss.	N/A.

	Nebraska	Nevada
Implementation date	July 1999	July 2004
Federal authority	BBA	Ticket Act Basic
Income eligibility	Two-part income test: (1) sum of spouse's earned income and applicant's unearned income must be less than SSI standard ($564 in 2004)[a]; (2) countable income up to 250% FPL (includes spousal income)	Up to 250% FPL on earned income and $699 unearned income
Individual asset limit	$4,000 (includes spousal resources)	$15,000 (excludes spousal resources)
Medically needy income limit (monthly)	$392	N/A
Income standard for poverty-level Medicaid (monthly)	$776	$1060
SSI Benefit (combined federal and state) (monthly)	$687	$579
1619(b) income threshold (monthly)	$2,567	$2,228
Premium threshold	200% FPL	All enrollees pay at least 5%
Premium structure	Sliding scale based on income ranging from 2% of income if income is from 200% to 210% of FPL to 10% of income if income is from 240% to 250% of FPL.	Enrollees who earn a monthly net income $1,595 or less pay 5% of income. Those earning more than $1,595 (up to $1,994) pay 7.5% of income.
Income verification requirements	Must have earned income based on pay stubs, employer forms, or tax returns. Not required to demonstrate that income and FICA taxes are being paid.	Must provide proof of employment (pay stub) or self-employment (tax return).
Work stoppage protection	None	Three months, as long as premiums continue to be paid.

[a]In Nebraska, the applicant's unearned income is disregarded if he or she is in an SSDI trial work period.

	New Hampshire	New Jersey
Implementation date	February 2002	February 2000
Federal authority	Ticket Act Basic	Ticket Act Basic
Income eligibility	Up to 450% FPL on earned income (includes spousal income)	Up to 250% FPL on earned income; up to 100% FPL on unearned income disregarding SSDI benefits received under individual's account (SSN, not survivor's SSN)
Individual asset limit	$22,694 for an individual; $34,041 for a married couple	$20,000 (excludes spousal resources)
Medically needy income limit (monthly)	$591	$367
Income standard for poverty-level Medicaid (monthly)	N/A	$817
SSI Benefit (combined federal and state) (monthly)	$603	$634.25
1619(b) income threshold (monthly)	$3,229	$2,337
Premium threshold	150% FPL	150% FPL
Premium structure	Six brackets from $91 to $245 for individuals. Individuals with gross income (spousal included) that exceeds $75,000 are required to pay premiums of 7.5% of the adjusted gross income starting March 2006 through February 2007.	Flat rate [c] $25 individual $50 couple
Income verification requirements	Must be employed (proven with a pay stub or 1099 estimated tax statement for self-employment). Must demonstrate that appropriate FICA contributions are being made. Must not be earning less than the hourly federal minimum wage.	Be employed full or part time. Not required to demonstrate that income and FICA taxes are being paid.
Work stoppage protection	Six months with a possible subsequent 6-month grace period if the individual demonstrates medical necessity or has documentation of a proven job search to employers.	Up to 26 weeks if the person has employer paid sick leave, worker's compensation or Temporary Disability Insurance and intends to return to work

[b]Participants in New Hampshire who disenroll from the Buy-In program but remain enrolled in Medicaid have "asset continuity," allowing them to keep the assets acquired during Buy-In enrollment in a separate bank account that is excluded from Medicaid eligibility requirements.
[c]New Jersey does not collect premiums because the revenue would be insufficient to offset the administrative costs.

	New Mexico	New York
Implementation date	January 2001	July 2003
Federal authority	BBA	Ticket Act Basic and Medical Improvement
Income eligibility	Up to 250% FPL on earned income, and up to $1,226/month on unearned income (includes spousal income). Must earn at least $970 per quarter.	Up to 250% FPL (includes spousal income)
Individual asset limit	$10,000 (excludes spousal resources)	$10,000 (includes spousal resources)
Medically needy income limit (monthly)	N/A	$667
Income standard for poverty-level Medicaid (monthly)	N/A	N/A
SSI Benefit (combined federal and state) (monthly)	$603 (individual) $904 (couple)	$666
1619(b) income threshold (monthly)	$2,512	$3,131
Premium threshold	Not applicable	150% of FPL
Premium structure	No premium required. Co-payments higher than those for regular Medicaid are required at all income levels; clients' responsibility to keep track of co-payments	3% of net earned income plus 7.5% of net unearned income. Premiums not collected until automated premium collection and tracking processes are available.
Income verification requirements	Show that the applicant earned or expects to earn sufficient wages in calendar quarter to count toward Social Security coverage ($970 in a quarter in 2006) [b] Proof of income or FICA tax payment is required.	Must have earned income and demonstrate that income and FICA taxes are being paid.
Work stoppage protection	None	Up to 6 months in a 12-month period for medical reasons and involuntary job loss with intent of returning to work.

[a]Oregon provides Medicaid coverage to individuals not receiving SSI but who have countable income below $580.70.
[b]New Mexico waives its work requirement for SSDI recipients in the two-year waiting period for Medicare.

	North Dakota	Oregon
Implementation date	May 2004	February 1999
Federal authority	Ticket Act Basic	BBA
Income eligibility	Up to 225% FPL (excludes spousal income)	Up to 250% FPL on adjusted earned income (excludes spousal income) Participants must have minimum earnings of $900 per quarter.
Individual asset limit	$13,000 (includes spousal resources)	$5000 (excludes spousal resources)
Medically needy income limit (monthly)	$500	N/A
Income standard for poverty-level Medicaid (monthly)	N/A	$624.70
SSI Benefit (combined federal and state) (monthly)	$623	$624.70 (includes a $1.70 state supplement)[a]
1619(b) income threshold (monthly)	$2,747	$2333
Premium threshold	All participants are required to pay a premium	After 6 months, income in excess of $2,400/month; Unearned income above the SSI level
Premium structure	5% of an individual's gross income	"Cost share" equal to 100% of unearned income above SSI standard. Premium equal to gross income plus unearned income remaining after "cost share" is paid minus (1) mandatory taxes; (2) approved employment and independence expenses; and (3) 200 percent of FPL, and multiplying the remainder by 2% to 10%.
Income verification requirements	May verify earned income with a letter from an employer or a pay stub. Not required to demonstrate that income or FICA taxes are being paid.	Must have at least $920 per quarter. Not required to demonstrate that income and FICA taxes are being paid.
Work stoppage protection	May continue enrollment if job loss is due to health problems. If over 3 months, must have a physician's statement.	Must retain a relationship with employer after job loss. Those otherwise eligible for Medicaid will not lose coverage.

[a]Only the participant's income is counted if spousal income is less than half of the SSI standard.

	Pennsylvania	Rhode Island	South Carolina
Implementation date	January 2002	January 2006	October 1998
Federal authority	Ticket Act Basic and Medical Improvement	BBA	BBA
Income eligibility	Up to 250% FPL (includes spousal income)	Up to 250% FPL (excludes spousal income)	Up to 250% FPL (includes spousal income), unearned income must be below SSI standard ($579)
Individual asset limit	$10,000 (includes spousal resources)	$10,000 (individual) $20,000 (couple)	$2,000 (excludes spousal resources)
Medically needy income limit (monthly)	$425	$753	N/A
Income standard for poverty-level Medicaid (monthly)	$817	$850.83 plus $20 disregard (individual) $1140.83 plus $20 disregard (couple)	$851
SSI Benefit (combined federal and state) (monthly)	$630.40	$660.35	$623
1619(b) income threshold (monthly)	$2,204	$2768	$2,134
Premium threshold	All participants pay a premium	100% FPL	N/A
Premium structure	5% of countable income. Premiums of less than $10 are waived.	Dollar for dollar over $753 for an individual	Premium not required.
Income verification requirements	Must provide verification of earned income. Not required to demonstrate that income and FICA taxes are being paid.	Must provide verification of earned income. Not required to demonstrate that income and FICA taxes are being paid.	Income verification required, FICA and income tax payment is not.
Work stoppage protection	May remain in program and have premium waived for up to 2 months if unable to work due to job loss or health problems.	May remain in program and have premium waived for up to 4 months if unable to work due to job loss or health problems.	None

[a]Only the participant's income is counted if spousal income is less than half of the SSI standard.

	South Dakota	Utah
Implementation date	October 2006	June 2001
Federal authority	BBA	BBA
Income eligibility	Up to 250% FPL (excludes spousal income)	Up to 250% FPL (includes spousal income).
Individual asset limit	$8,000 (excludes spousal resources)	$15,000 (includes spousal resources)
Medically needy income limit (monthly)	N/A	$817
Income standard for poverty-level Medicaid (monthly)		$817
SSI Benefit (combined federal and state) (monthly)	$618	$603
1619(b) income threshold (monthly)	$2434	$2,193
Premium threshold	N/A	100% FPL
Premium structure	No premium is required.	100%-110% FPL: 5% premium charged 110%-120% FPL: 10% premium charged Over 120% FPL: 15% premium charged
Income verification requirements	Must provide verification of earned income and demonstrate that income and FICA taxes are being paid.	For wage employment, worker must demonstrate that FICA taxes are being paid. For self-employment, worker must have a tax return or business plan.
Work stoppage protection	Enrollment may continue for 3 months if enrollee is unable to verify employment.	None.

[a]Wisconsin limits the duration and frequency (twice in a five-year period) of enrollment in employment counseling.

	Vermont	Washington State
Implementation date	January 2000	January 2002
Federal authority	BBA	Ticket Act Basic and Medical Improvement
Income eligibility	Two-part test for family income: 1) Income less than 250% FPL, 2) Income does not exceed either the Medicaid protected income level for one or the SSI/AABD payment level for two, whichever is higher, after disregarding the earnings, SSDI benefits, and any veteran's disability benefits of the individual working with disabilities.	220% FPL (includes spousal income)[a]
Individual asset limit	$5,000 (individual) $6,000 (couple) Disregards assets accumulated from earnings since enrollment	No limit
Medically needy income limit (monthly)	$841	$603
Income standard for poverty-level Medicaid (monthly)	N/A	N/A
SSI Benefit (combined federal and state) (monthly)	$655	$603
1619(b) income threshold (monthly)	$2,638	$1,997
Premium threshold	N/A	$65 earned income and/or $579 unearned income
Premium structure	Premium eliminated in June 2004.	The lesser of (1) 7.5% total income or (2) a total of the following: 50% unearned income above MNIL plus 5% total unearned income plus 2.5% earned income after deducting $65
Income verification requirements	Earnings of the working individual with disabilities shall be documented by evidence of FICA tax payments, Self-employment Contributions Act tax payments, or a written business plan approved and supported by a third-party investor or funding source.	Must have payroll taxes taken out of wages, unless self-employed. If self-employed, must provide tax forms or legitimate business records
Work stoppage protection	None	Enrollees may continue enrollment for up to 12 months if job loss due to (1) health crisis or (2) involuntary job dismissal and participant intends to return to work. The participant must continue to pay the monthly premium based on remaining income.

	West Virginia	Wisconsin	Wyoming
Implementation date	May 2004	March 2000	July 2002
Federal authority	Ticket Act Basic and Medical Improvement	BBA	Ticket Act Basic
Income eligibility	Up to 250% FPL, unearned income must be equal to or less than SSI benefit ($584 in 2005) plus $20 (excludes spousal income)	Up to 250% FPL (includes spousal income)	$1,809 (applicant gross countable income only)
Individual asset limit	$2000 ($5000 liquid asset exclusion)	$15,000 (excludes spousal resources)	None
Medically needy income limit (monthly)	$200	$592	N/A
Income standard for poverty-level Medicaid (monthly)	N/A	N/A	N/A
SSI Benefit (combined federal and state) (monthly)	$623	$683	$603
1619(b) income threshold (monthly)	$2,029	$2,,493	N/A
Premium threshold	All enrollees must pay a minimum premium of $15	150% FPL	All participants pay a premium
Premium structure	Premiums are 3.5% of countable income with a $15 minimum amount. Enrollees must also pay an enrollment fee of $50, which includes the first month's premium.	Equal to the sum of (1) 3% of an individual's earned income, and (2) 100% of unearned income minus certain needs and expenses and other disregards. If the second calculation is less than $25, this component of the premium is $0.	7.5% earned income and 7.5% of unearned annual income over $600
Income verification requirements	Must be employed and earning at least the minimum wage. Not required to demonstrate that income or FICA taxes are being paid.	Required to either work or participate in an employment counseling program, which one can do for up to a year. Not required to demonstrate that income and FICA taxes are being paid.	Must be employed. No requirement to earn a certain amount of income or work a minimum number of hours each month. Verification of employment must be obtained.
Work stoppage protection	Coverage can continues for up to 6 months after an involuntary loss of employment if participant continues to pay premiums and show proof of job search efforts	Work requirement may be waived for up to one year after initial enrollment provided an employment plan is approved by the Medicaid Agency.[a]	No.

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APPENDIX B

DATA SOURCES

MEDICAID BUY-IN FINDER FILES

States with a Medicaid Infrastructure Grant (MIG) in 2007 that also operated a Buy-In program in 2006 were required to submit a Medicaid Buy-In finder file, which included information for all Buy-In participants as of 2006. The Buy-In finder file provided individual-level information such as Social Security number (SSN), date of birth, gender, race, state of residence, and enrollment and disenrollment dates for all Buy-In participants who had enrolled at any time between the program's inception and December 31, 2006.

As of April 2007, MPR received Buy-In finder files from a total of 32 MIG states, which included Alaska, Arkansas, Arizona, California, Connecticut, Illinois, Indiana, Iowa, Kansas, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, North Dakota, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Utah, Vermont, Washington, West Virginia, Wisconsin, and Wyoming.

MPR validated all participant identifiers (SSNs) from the finder files by matching them with SSA's Numident file. SSNs with errors or missing information were excluded from the analytic sample. Only observations with valid SSNs are included in the analyses in this report.

SSA TICKET RESEARCH FILES

The Ticket Research File (TRF) is an annually updated SSA data set with information from January 1994 to December 2006 on individuals 18 to 64 years of age who received SSDI or SSI benefits at any time between March 1996 and December 2006. These data, covered under the CMS-SSA interagency data use agreement, were culled from various other SSA administrative data files and include items such as identifiers, disabling conditions, SSDI/SSI program participation status, and benefits payments. However, the TRF data set does not include Medicaid Buy-In participants who never received SSDI/SSI benefits or received public assistance benefits before March 1996 or after December 2006. The

majority of Buy-In participants are likely to have been SSDI or SSI beneficiaries at some point between 1996 and 2006 and therefore will be included in the TRF.

SSA'S MASTER EARNINGS FILE

The Master Earnings File (MEF) includes earnings data (derived from W-2 reports) on nearly all workers in the United States for each calendar year from 1951 through 2006. In this analysis, we used the amount of wages subject to Medicare taxes to represent annual earnings (reported in Box 5 of the W-2 form). Unlike wages subject to Social Security taxes, there is no maximum wage base for Medicare taxes. Medicare wages include any deferred compensation, 401k contributions, or other fringe benefits that are normally excluded from the regular income tax and therefore should accurately represent an individual's total earnings. Data were pulled in August 2007, by which time the MEF was 94 percent completed for 2006 earnings, and missing data were largely associated with late filers who tend to have more complicated income tax returns and are unlikely to be Buy-In participants.

Given that the MEF is based on tax information from the W-2 form, the file is accessible only under rules established by the Internal Revenue Service (IRS). Those rules protect data privacy by restricting access to micro-level records for SSA employees only at SSA facilities. Even though the CMS-SSA interagency data use agreement does not give CMS direct access to the micro-level data, the agency may obtain aggregated data tables by using derived variables approved by SSA.

MEF data are available for all Buy-In participants regardless of SSDI or SSI status as long as participants or their employer reported earned income (including self-employment earnings) to the IRS. Individuals are likely to have some earnings in order to meet the eligibility criteria for the Buy-In program, especially if income verification is a necessary precondition for eligibility. However, some participants may not be in the MEF if they earn small amounts of cash income from a casual or part-time job (for example, babysitting for a few hours per month), receive in-kind benefits (for example, lunch provided during volunteer work at a hospital), did not report their income, or worked in sheltered workshops or similar settings where an employer is not required to report income.

APPENDIX C

ENROLLMENT DATA TABLES FOR CHAPTER III

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Table C.1. Total Participants Ever-Enrolled in Medicaid Buy-In Programs, by State and Year, 2001-2006

State (Year Implemented)	2001	2002	2003	2004	2005	2006
Alaska (1999)	179	251	306	346	355	357
Arkansas (2001)	219	209	83	60	72	105
Arizona (2003)	--	--	430	742	1,035	1,276
California (2000)	754	932	1,180	1,613	2,500	3,990
Connecticut (2000)	2,620	3,469	3,799	4,273	5,049	5,512
Iowa (2000)	4,103	5,890	7,533	9,398	11,196	12,389
Illinois (2002)	11	390	704	896	1,052	1,009
Indiana (2002)	--	4,259	7,834	9,359	9,862	8,563
Kansas (2002)	--	512	833	1,026	1230	1,273
Louisiana (2004)	--	--	--	520	952	1,275
Massachusetts (1997)	7,650	9,744	10,999	11,954	13,445	14,866
Maryland (2006)	--	--	--	--	--	85
Maine (1999)	986	1,114	1,171	1,056	1,178	1,204
Michigan (2004)	--	--	--	38	637	1,296
Minnesota (1999)	8,220	8,146	8,423	8,051	8,108	8,213
Missouri (2002-2005)	--	8,857	17,494	23,061	20,830	--
North Dakota (2004)	--	--	--	275	397	473
Nebraska (1999)	173	151	148	180	141	142
New Hampshire (2002)	1	1,124	1,527	1,974	2,187	2,082
New Jersey (2000)	327	729	1,171	1,667	2,195	2,734
New Mexico (2001)	558	1,097	1,499	1,838	2,224	2,413
Nevada (2004)	--	--	--	7	26	28
New York (2003)	--	--	949	2,891	4,552	--
Oregon (1999)	638	795	976	781	786	787
Pennsylvania (2002)	--	960	2,065	3,758	6,366	10,646
Rhode Island (2006)	--	--	--	--	--	19
South Carolina (1998)	105	105	83	70	70	46
South Dakota (2006)	--	--	--	--	--	1
Utah (2001)	333	570	599	675	786	1,084
Vermont (2000)	520	680	756	848	896	931
Washington (2002)	--	154	285	547	944	1,221
Wisconsin (2000)	2,007	4,440	6,657	9,048	11,464	12,952
West Virginia (2004)	--	--	--	87	272	540
Wyoming (2002)	--	3	9	7	12	28
National Total	**29,398**	**54,558**	**77,475**	**96,996**	**110,758**	**97,491**

Source: Medicaid Buy-In finder files, 2001-2006

Notes: These numbers represent participants ever enrolled at any point during a calendar year, regardless of prior participation. Cells with ' – ' denote years when state finder files were not available. Beginning in August 2005, Missouri discontinued its Buy-In program. New York did not have a MIG in 2007 and was therefore not required to submit a finder file for 2006. Duplicate identifiers that appear in two states in the same year are removed from the national total, but appear for each state. For identical SSNs, the record with the earliest Buy-In start date was kept for the national total.

Table C.2. First-Time Participants in Medicaid Buy-In Programs, By State and Year, 2001-2006

State (Year Implemented)	2001	2002	2003	2004	2005	2006
Alaska (1999)	107	131	128	134	126	128
Arkansas (2001)	212	24	14	15	20	50
Arizona (2003)	--	--	430	356	410	376
California (2000)	516	403	474	691	1,278	2,047
Connecticut (2000)	1,657	1,386	1,161	1,115	1,487	1,254
Iowa (2000)	1,917	2,263	2,218	2,667	2,894	2,475
Illinois (2002)	11	379	372	349	357	208
Indiana (2002)	--	4,259	3,993	3,378	2,877	2,153
Kansas (2002)	--	512	358	336	365	251
Louisiana (2004)	--	--	--	520	483	477
Massachusetts (1997)	2,775	3,692	3,289	3,752	4,331	4,388
Maryland (2006)	--	--	--	--	--	85
Maine (1999)	508	454	459	389	414	404
Michigan (2004)	--	--	--	38	599	754
Minnesota (1999)	2,368	1,691	1,747	1,373	1,342	1,107
Missouri (2002-2005)	--	8,857	8,731	7,355	1,852	--
North Dakota (2004)	--	--	--	275	142	121
Nebraska (1999)	70	46	45	64	59	60
New Hampshire (2002)	1	1,123	524	657	681	514
New Jersey (2000)	321	419	541	636	720	812
New Mexico (2001)	558	621	720	867	946	876
Nevada (2004)	--	--	--	7	19	6
New York (2003)	--	--	949	1,947	1,887	--
Oregon (1999)	366	294	362	160	196	172
Pennsylvania (2002)	--	960	1,215	1,971	3,059	5,183
Rhode Island (2006)	--	--	--	--	--	19
South Carolina (1998)	27	19	5	17	15	6
South Dakota (2006)	--	--	--	--	--	1
Utah (2001)	333	395	351	377	395	546
Vermont (2000)	276	294	262	282	263	239
Washington (2002)	--	154	141	308	478	430
Wisconsin (2000)	1,080	2,690	2,731	3,209	3,435	3,000
West Virginia (2004)	--	--	--	87	189	314
Wyoming (2002)	--	3	6	2	7	21
National Total	**13,097**	**31,047**	**31,193**	**33,290**	**31,274**	**28,433**

Source: Medicaid Buy-In finder files, 2001-2006

Notes: Cells with ' – ' denote years when state finder files were not available. Beginning in August 2005, Missouri discontinued its Buy-In program. New York had a no-cost extension for its MIG in 2006 and was therefore not required to submit a finder file for that year. Duplicate identifiers that appear in two states in the same year are removed from the national total, but appear for each state.

Table C.3. Buy-In Enrollment Penetration Rates in Medicaid Buy-In States, 2006

State	2006 Total Enrollment	Rank by Absolute Enrollment	Working-Age People with a Disability *	2006 State Penetration Rate **	Rank by Penetration Rate
Massachusetts	14,866	1	267,896	555	3
Wisconsin	12,952	2	209,160	619	2
Iowa	12,389	3	119,646	1,035	1
Pennsylvania	10,646	4	620,363	172	11
Indiana	8,563	5	300,624	285	8
Minnesota	8,213	6	184,122	446	4
Connecticut	5,512	7	133,084	414	5
California	3,990	8	1,394,587	29	22
New Jersey	2,734	9	304,901	90	16
New Mexico	2,413	10	88,740	272	9
New Hampshire	2,082	11	56,815	366	6
Michigan	1,296	12	531,186	24	23
Arizona	1,276	13	248,766	51	17
Louisiana	1,275	14	257,694	49	18
Kansas	1,273	15	108,775	117	15
Washington	1,221	16	314,919	39	20
Maine	1,204	17	84,093	143	12
Utah	1,084	18	80,860	134	13
Illinois	1,009	19	465,720	22	25
Vermont	931	20	31,858	292	7
Oregon	787	21	185,292	42	19
West Virginia	540	22	163,258	33	21
North Dakota	473	23	19,393	244	10
Alaska	357	24	28,329	126	14
Nebraska	142	25	61,256	23	24
Arkansas	105	26	201,676	5	27
Maryland	85	27	198,325	4	28
South Carolina	46	28	256,582	2	31
Wyoming	28	29	23,265	12	26
Nevada	28	30	95,920	3	30
Rhode Island	19	31	51,488	4	29
South Dakota	1	32	25,796	0	32

Source: Medicaid Buy-In finder files, 2006; American Community Survey (ACS), 2006.

Note: Adjusting penetration rates in 2006 by excluding the number of Buy-In participants 65 years or older did not affect the rankings of the top five states but did result in two changes. Indiana moved from 8th to 7th place switching its rank with Vermont, and Kansas moved from 15th to 14th highest penetration rate, switching places with Alaska.

*The ACS estimate of working-age people with disabilities, aged 16-64, includes both employed and unemployed individuals, and those with and without Medicaid coverage.
** Penetration rate is defined as Buy-In enrollment per 10,000 state residents aged 16-64 with a disability as reported in the 2006 ACS.

Table C.4. Recruitment of First-Time Enrollees in 2006 and Historical Retention of Participants, by State

State	2006 First-Time Enrollment	2006 Total Enrollment	2006 Recruitment Rate * (%)	2006 Existing Enrollment	Historical Existing Enrollment	Historical Retention Rate ** (%)
Alaska	128	357	35.9	229	721	31.8
Arkansas	50	105	47.6	55	292	18.8
Arizona	376	1,276	29.5	900	1,196	75.3
California	2,047	3,990	51.3	1,943	3,632	53.5
Connecticut	1,254	5,512	22.8	4,258	7,805	54.6
Iowa	2,475	12,389	20.0	9,914	14,359	69.0
Illinois	208	1,009	20.6	801	1,468	54.6
Indiana	2,153	8,563	25.1	6,410	14,507	44.2
Kansas	251	1,273	19.7	1,022	1,571	65.1
Louisiana	477	1,275	37.4	798	1,003	79.6
Massachusetts	4,388	14,866	29.5	10,478	26,037	40.2
Maryland	85	85	100.0	0	--	--
Maine	404	1,204	33.6	800	2,908	27.5
Michigan	754	1,296	58.2	542	637	85.1
Minnesota	1,107	8,213	13.5	7,106	15,418	46.1
North Dakota	121	473	25.6	352	417	84.4
Nebraska	60	142	42.3	82	417	19.7
New Hampshire	514	2,082	24.7	1,568	2,986	52.5
New Jersey	812	2,734	29.7	1,922	2,643	72.7
New Mexico	876	2,413	36.3	1,537	3,712	41.4
Nevada	6	28	21.4	22	26	84.6
Oregon	172	787	21.9	615	1,650	37.3
Pennsylvania	5,183	10,646	48.7	5,463	7,205	75.8
Rhode Island	19	19	100.0	0	--	--
South Carolina	6	46	13.0	40	183	21.9
South Dakota	1	1	100.0	0	--	--
Utah	546	1,084	50.4	538	1,851	29.1
Vermont	239	931	25.7	692	1,737	39.8
Washington	430	1,221	35.2	791	1,081	73.2
Wisconsin	3,000	12,952	23.2	9,952	14,142	70.4
West Virginia	314	540	58.1	226	276	81.9
Wyoming	21	28	75.0	7	18	38.9
National Total	**28,433**	**97,491**	**29.2**	**69,058**	**129,538**	**53.3**

Source: Medicaid Buy-In finder files, 2005-2006

Note: States with "-" did not have any enrollment prior to 2006. Existing enrollment in 2006 represents the difference between total and first-time enrollment in 2006.

* The recruitment rate is defined as the number of first-time enrollees in 2006 divided by total enrollment in 2006.

** The historical retention rate is the number of existing (non-first time) enrollees in 2006 divided by the cumulative number of Buy-In participants ever enrolled since the inception of the Buy-In program in 1997 less first-time participants in 2006, excluding Missouri and New York.

Table C.5. Demographic Characteristics of Medicaid Buy-In Participants, 2006

	Number of Total Participants	Percent of Total Participants
Nationwide Total	97,491	100.0
Age Category (Finder File)		
<21 years	1,862	1.9
21-30 years	10,460	10.7
31-40 years	17,547	18.0
41-50 years	29,459	30.2
51-60 years	27,012	27.7
61-64 years	8,263	8.5
65+ years	2,888	3.0
Gender (Finder File)		
Male	47,854	49.1
Female	49,637	50.9
Race/Ethnicity (Finder File)		
White	73,900	75.8
Non-White	11,948	12.3
Unknown	11,643	11.9
Race/Ethnicity (TRF)		
White	69,011	70.8
Black or African American	6,118	6.3
Hispanic or Latino	2,784	2.9
Asian or Pacific Islander	764	0.8
American Indian or Alaskan Native	423	0.4
Other Race	492	0.5
Unknown (in TRF)	1,931	2.0
Unknown (not in TRF)	15,968	16.4

Source: Medicaid Buy-In finder files; SSA's Ticket Research File, 2006.

Table C.6. Distribution of Medicaid Buy-In Participants by Primary Disabling Condition and Public Program Experience, 2006

	Number of Total Participants	Percent of Total Participants
Nationwide Total	97,491	100.0
Primary Disabling Condition (TRF)		
Severe mental illness	24,424	25.1
Other mental disorders	7,370	7.6
Mental retardation	11,523	11.8
Musculoskeletal system	9,131	9.4
Sensory impairment	2,058	2.1
All other conditions	20,368	20.9
Unknown (in TRF)	6,649	6.8
Unknown (NOT in TRF)	15,968	16.4
Public Program Participation (TRF)		
SSDI only	66,382	68.1
SSI only	1,349	1.4
Both SSDI/SSI concurrent	2,426	2.5
No SSDI/SSI (include missings)	11,366	11.7
Unknown (NOT in TRF)	15,968	16.4

Source: Medicaid Buy-In finder files; SSA's Ticket Research File, 2006.

Table C.7. Age Characteristics of Buy-In Participants, by State, 2006 (percent)

State	Number of Participants	Percent of Participants						
		<21 years	21-30 years	31-40 years	41-50 years	51-60 years	61-64 years	65+ years
Alaska	357	1	7	18	27	27	10	10
Arkansas	105	2	19	26	24	27	3	0
Arizona	1,276	0	11	20	31	30	8	1
California	3,990	0	6	15	30	33	10	6
Connecticut	5,512	1	15	23	32	22	5	2
Iowa	12,389	0	7	15	32	35	11	0
Illinois	1,009	2	12	21	36	24	6	0
Indiana	8,563	2	16	20	30	24	7	0
Kansas	1,273	1	10	20	35	28	6	0
Louisiana	1,275	2	15	17	26	27	12	0
Massachusetts	14,866	2	9	17	28	27	10	6
Maryland	85	0	9	21	47	22	0	0
Maine	1,204	1	14	20	31	22	7	4
Michigan	1,296	1	16	23	33	21	7	0
Minnesota	8,213	0	10	20	33	29	7	0
Missouri	--	--	--	--	--	--	--	--
North Dakota	473	1	15	22	33	25	5	0
Nebraska	142	0	18	25	32	21	4	0
New Hampshire	2,082	2	16	21	34	22	5	0
New Jersey	2,734	1	13	23	33	23	6	0
New Mexico	2,413	1	11	18	27	29	10	4
Nevada	28	0	18	32	29	11	11	0
New York	--	--	--	--	--	--	--	--
Oregon	787	0	9	21	33	26	7	3
Pennsylvania	10,646	9	13	17	28	25	7	1
Rhode Island	19	0	21	26	37	11	0	5
South Carolina	46	4	13	24	35	22	2	0
South Dakota	1	0	0	100	0	0	0	0
Utah	1,084	1	19	21	29	22	7	2
Vermont	931	0	9	20	31	27	7	6
Washington	1,221	1	13	20	34	26	6	0
Wisconsin	12,952	0	7	14	28	30	10	10
West Virginia	540	6	16	16	32	27	3	0
Wyoming	28	0	11	32	29	21	7	0
National Total	**97,491**	**2**	**11**	**18**	**30**	**28**	**8**	**3**

Source: Medicaid Buy-In finder files, 2006.

Table C.8. Primary Disabling Condition of Buy-In Participants, by State, 2006 (percent)

State	Severe Mental Illness	Other Mental Disorders	Mental Retardation	Musculo-skeletal System	Sensory Impairment	All Other Conditions	Unknown in TRF	Unknown not in TRF
Alaska	17	5	8	20	2	32	8	8
Arkansas	10	4	7	6	4	27	9	34
Arizona	41	10	8	9	3	21	4	4
California	26	6	9	10	3	31	6	10
Connecticut	35	8	20	5	3	15	7	7
Iowa	27	9	9	17	2	28	6	2
Illinois	38	7	18	4	3	16	5	9
Indiana	14	4	23	3	1	13	13	30
Kansas	38	7	18	9	3	21	4	1
Louisiana	11	3	9	8	4	28	9	28
Massachusetts	23	8	6	9	2	19	8	24
Maryland	58	6	14	6	1	5	9	1
Maine	27	12	11	11	3	18	4	14
Michigan	34	8	16	9	3	20	5	4
Minnesota	32	10	22	5	2	19	5	4
Missouri	--	--	--	--	--	--	--	--
North Dakota	22	8	36	6	2	19	5	3
Nebraska	25	11	13	11	1	33	4	1
New Hampshire	45	12	11	6	1	13	5	8
New Jersey	34	7	10	5	3	20	7	14
New Mexico	20	9	2	16	2	30	8	11
Nevada	14	21	7	7	0	29	18	4
New York	--	--	--	--	--	--	--	--
Oregon	22	8	18	8	4	26	6	7
Pennsylvania	14	3	4	8	1	15	6	49
Rhode Island	47	5	0	16	5	16	5	5
South Carolina	11	4	4	9	9	22	22	20
South Dakota	0	0	0	0	0	0	100	0
Utah	32	10	7	6	3	24	4	14
Vermont	35	13	8	12	3	21	4	4
Washington	36	11	15	5	2	17	5	10
Wisconsin	23	9	13	14	2	26	7	7
West Virginia	1	1	0	1	0	3	7	88
Wyoming	21	0	7	4	14	25	21	7
National Total	**25**	**8**	**12**	**9**	**2**	**21**	**7**	**16**

Source: Medicaid Buy-In finder files, 2006.

Note: Primary disabling condition was determined by ICD-9 diagnostic code in the TRF. "In TRF" indicates the individual was found in the Ticket Research File but an ICD-9 code was missing. "Not in TRF" indicates the individual was not found in the Ticket Research File.

Table C.9. Public Program Experience of Buy-In Participants, by State, 2006

State	Number of Participants	SSDI only (%)	SSI only (%)	Both SSDI and SSI (%)	Neither SSDI nor SSI ** (%)
Alaska	357	69	3	3	25
Arkansas	105	36	2	1	61
Arizona	1,276	81	1	1	17
California	3,990	76	1	1	22
Connecticut	5,512	69	5	5	20
Iowa	12,389	85	1	4	10
Illinois	1,009	75	1	2	21
Indiana	8,563	50	3	4	43
Kansas	1,273	88	0	2	9
Louisiana	1,275	50	2	2	47
Massachusetts	14,866	59	0	1	40
Maryland	85	82	0	5	13
Maine	1,204	72	0	3	25
Michigan	1,296	82	2	2	15
Minnesota	8,213	86	0	1	13
Missouri	--	--	--	--	--
North Dakota	473	85	1	3	11
Nebraska	142	78	2	1	18
New Hampshire	2,082	73	2	6	19
New Jersey	2,734	70	1	2	28
New Mexico	2,413	57	6	9	28
Nevada	28	57	0	4	39
New York	--	--	--	--	--
Oregon	787	74	1	3	23
Pennsylvania	10,646	39	1	2	58
Rhode Island	19	79	0	5	16
South Carolina	46	33	0	0	67
South Dakota	1	0	0	0	100
Utah	1,084	71	2	4	23
Vermont	931	82	1	2	15
Washington	1,221	76	1	2	21
Wisconsin	12,952	81	1	2	16
West Virginia	540	2	1	1	96
Wyoming	28	54	0	11	36
National Total	**97,491**	**68**	**1**	**2**	**28**

Source: Medicaid Buy-In Finder Files, SSA's Ticket Research File, 2006.

**Participants without SSDI or SSI were either not in the TRF, or matched to the TRF but were not receiving public benefits as of December 2005.

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APPENDIX D

EMPLOYMENT DATA TABLES FOR CHAPTER IV

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Table D.1. Percent of Buy-In Participants Employed with Positive Earnings, by State, 2001-2006

State	2001	2002	2003	2004	2005	2006
Alaska	58	53	58	55	57	57
Arkansas	42	52	61	85	85	88
Arizona	--	--	97	91	88	88
California	74	75	74	74	73	70
Connecticut	94	90	87	87	87	86
Iowa	64	54	49	44	42	40
Illinois	100	98	97	96	96	95
Indiana	--	89	89	89	87	85
Kansas	--	96	95	93	92	91
Louisiana	--	--	--	94	90	84
Massachusetts	91	88	85	79	76	70
Maryland	--	--	--	--	--	95
Maine	91	92	91	92	92	91
Michigan	--	--	--	97	92	86
Minnesota	85	86	86	90	93	91
Missouri	--	43	40	39	35	--
North Dakota	--	--	--	97	95	95
Nebraska	95	94	91	93	96	93
New Hampshire	100	91	87	87	89	90
New Jersey	93	91	90	87	84	79
New Mexico	40	39	43	47	46	44
Nevada	--	--	--	86	85	71
New York	--	--	83	83	82	--
Oregon	90	90	86	89	89	89
Pennsylvania	--	77	78	75	74	67
Rhode Island	--	--	--	--	--	100
South Carolina	89	91	87	91	93	96
South Dakota	--	--	--	--	--	100
Utah	84	75	77	81	84	86
Vermont	92	87	87	88	85	86
Washington	--	96	93	90	86	85
Wisconsin	83	71	62	56	51	47
West Virginia	--	--	--	92	89	88
Wyoming	--	67	67	57	50	79
National Total	**83**	**74**	**69**	**67**	**66**	**69**

Source: Medicaid Buy-In finder files, SSA's Ticket Research File, and Master Earnings File, 2001-2006

Note: Denominators used in calculating percent employed can be found in Table C.1, Total Participants Ever-Enrolled in Medicaid Buy-In Programs, by State and Year, 2001-2006. Percent employed is defined as the percent of all Buy-In participants with positive earnings. Cells with ' – ' denote years when state finder files were not available. Beginning in August 2005, Missouri discontinued its Buy-In program. New York had a no-cost extension for its MIG in 2006 and was therefore not required to submit a finder file for that year. The national percent employed is of all participants nationwide and is not an average of state percentages.

Table D.2. Employment of Buy-In Participants Nationwide, by Demographic Characteristic, 2006

	Number of Positive Earners	Number of Total Participants	Percent Employed
Nationwide Total	67,549	97,491	69
Age Category (Finder File)			
<21 years	1,128	1,862	61
21-30 years	9,153	10,460	88
31-40 years	14,077	17,547	80
41-50 years	21,235	29,459	72
51-60 years	16,359	27,012	61
61-64 years	4,311	8,263	52
65+ years	1,286	2,888	45
Gender (Finder File)			
Male	33,191	47,854	69
Female	34,358	49,637	69
Race/Ethnicity (Finder File)			
White	52,029	73,900	70
Non-White	8,360	11,948	70
Unknown	7,160	11,643	61
Race/Ethnicity (TRF)			
White	46,104	69,011	67
Black or African American	4,412	6,118	72
Hispanic or Latino	1,774	2,784	64
Asian or Pacific Islander	565	764	74
American Indian or Alaskan Native	258	423	61
Other Race	308	492	63
Unknown (in TRF)	1,349	1,931	70
Unknown (not in TRF)	12,779	15,968	80

Source: Medicaid Buy-In finder files, SSA's Ticket Research File, and Master Earnings File, 2006

Table D.3. Employment of Buy-In Participants Nationwide, by Public Program Participation and Primary Disabling Condition, 2006

	Number of Positive Earners	Number of Total Participants	Percent Employed
Nationwide Total	67,549	97,491	69
Public Program Participation (TRF)			
SSDI only	43,404	66,382	65
SSI only	834	1,349	62
Both SSDI/SSI concurrent	1,430	2,426	59
No SSDI/SSI *	21,881	27,334	80
Disabling Condition (TRF)			
Severe mental illness	17,622	24,424	72
Other mental disorders	5,129	7,370	70
Mental retardation	9,979	11,523	87
Musculoskeletal system	4,200	9,131	46
Sensory impairment	1,507	2,058	73
All other conditions	11,266	20,368	55
Unknown (in TRF)	5,067	6,649	76
Unknown (NOT in TRF)	12,779	15,968	80

Source: Medicaid Buy-In finder files, SSA's Ticket Research File, and Master Earnings File, 2006

*No SSDI/SSI includes people who were not in the TRF, as well as people in the TRF with a missing value for receipt of SSDI or SSI benefits in December 2005.

Table D.4. Employment of Buy-In Participants Nationwide, by Education, Prior Work Experience, Duration of Buy-In Enrollment, and SSA Benefit History, 2006

	Number of Positive Earners	Number of Total Participants	Percent Employed
Nationwide Total	67,549	97,491	69
Years of Education (TRF)			
0-8 years	1,227	2,352	52
9-11 years	2,704	4,910	55
12 years	11,594	19,432	60
13-15 years	4,174	6,612	63
16+ years	2,438	3,646	67
Unknown (in TRF)	32,633	44,571	73
Unknown (NOT in TRF)	12,779	15,968	80
Years with Positive Earnings 1996-2005 (MEF)			
0 years	558	6,249	9
1 year only	1,096	2,616	42
2 to 4 years	5,868	10,668	55
5 to 6 years	7,514	12,450	60
7 to 8 years	12,527	18,948	66
9 to 10 years	39,986	46,560	86
Duration of Buy-In Enrollment (Finder File)			
0-6 months	13,703	19,158	72
7-12 months	10,760	15,839	68
13-24 months	14,290	21,722	66
25-36 months	9,308	13,812	67
37-60 months	12,422	17,935	69
>60 months	7,066	9,025	78

Source: Medicaid Buy-In finder files, SSA's Ticket Research File, and Master Earnings File, 2006

APPENDIX E

EARNINGS DATA TABLES FOR CHAPTER V

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Table E.1. Average Annual Earnings (in $) of Employed Buy-In Participants, By State, 2001-2006

State	2001	2002	2003	2004	2005	2006
Alaska	11,848	11,467	12,070	12,668	12,118	11,485
Arkansas	6,548	6,972	9,515	10,365	13,341	13,111
Arizona	--	--	7,983	8,059	9,175	9,748
California	9,188	10,425	10,370	10,244	10,297	10,635
Connecticut	7,598	7,739	7,575	7,755	7,578	7,573
Iowa	4,824	4,685	4,636	4,676	4,762	4,781
Illinois	****	7,431	7,249	7,409	7,406	7,239
Indiana	--	5,721	6,300	6,669	6,819	7,149
Kansas	--	5,031	5,332	5,508	5,531	5,918
Louisiana	--	--	--	9,905	9,529	10,165
Massachusetts	14,860	14,294	13,859	13,623	13,018	12,388
Maryland	--	--	--	--	--	8,188
Maine	9,213	9,528	9,259	9,402	8,722	8,654
Michigan	--	--	--	8,345	7,156	7,393
Minnesota	6,091	6,200	6,200	6,076	6,136	6,178
Missouri	--	5,023	5,809	6,262	6,287	--
North Dakota	--	--	--	4,918	5,505	5,481
Nebraska	8,048	9,384	9,010	8,583	8,367	8,280
New Hampshire	****	5,961	6,020	6,405	6,728	6,732
New Jersey	7,564	7,835	8,286	8,762	8,617	8,598
New Mexico	8,539	8,389	8,736	8,895	8,585	8,962
Nevada	--	--	--	****	****	****
New York	--	--	7,922	8,510	8,096	--
Oregon	10,946	9,830	8,237	9,160	9,065	9,346
Pennsylvania	--	7,418	7,725	8,417	9,182	10,333
Rhode Island	--	--	--	--	--	****
South Carolina	14,503	13,310	14,132	15,302	15,970	17,780
South Dakota	--	--	--	--	--	****
Utah	8,280	7,618	7,247	7,246	7,856	7,645
Vermont	7,435	7,638	7,367	7,427	7,461	7,385
Washington	--	6,768	8,128	7,824	8,143	8,649
Wisconsin	5,925	5,439	5,332	5,183	5,051	4,727
West Virginia	--	--	--	11,414	11,359	11,241
Wyoming	--	****	****	****	****	****
National Total	**9,053**	**8,077**	**7,789**	**7,819**	**7,877**	**8,237**

Source: Medicaid Buy-In finder files, SSA's Ticket Research File, and Master Earnings File, 2001-2006

Notes: Earnings are inflation-adjusted to 2006 dollars. Participants with zero earnings are excluded. Cells with ' – ' denote years when state finder files were not available. Beginning in August 2005, Missouri discontinued its Buy-In program. New York had a no-cost extension for its MIG in 2006 and was therefore not required to submit a finder file for that year. Cells with "****" indicate too few observations (less than 25) to display earnings in dollars.

Table E.2. Median Annual Earnings (in $) of Employed Buy-In Participants, By State, 2001-2006

State	2001	2002	2003	2004	2005	2006
Alaska	8,946	8,648	9,357	9,924	8,433	8,451
Arkansas	5,370	5,130	7,084	8,179	9,929	10,920
Arizona	--	--	6,507	6,503	7,375	7,634
California	7,404	7,504	7,642	7,757	7,952	7,854
Connecticut	6,298	6,193	5,975	6,121	6,077	6,225
Iowa	3,702	3,683	3,453	3,356	3,488	3,473
Illinois	****	6,597	6,430	6,708	6,635	6,584
Indiana	--	3,970	4,214	4,586	4,704	5,193
Kansas	--	4,386	4,324	4,495	4,576	5,098
Louisiana	--	--	--	8,173	7,906	8,413
Massachusetts	10,606	10,217	9,849	9,800	9,155	8,780
Maryland	--	--	--	--	--	7,407
Maine	7,490	7,829	7,854	7,626	7,483	7,550
Michigan	--	--	--	7,101	6,100	6,070
Minnesota	4,683	4,727	4,730	4,649	4,700	4,839
Missouri	--	3,564	4,189	4,529	4,453	--
North Dakota	--	--	--	3,942	4,848	4,632
Nebraska	7,069	7,468	7,955	7,003	7,101	7,647
New Hampshire	****	4,825	4,691	4,942	5,027	5,030
New Jersey	6,233	6,122	6,613	6,697	6,622	6,745
New Mexico	5,967	6,401	6,507	6,683	6,454	6,690
Nevada	--	--	--	****	****	****
New York	--	--	6,839	6,932	6,659	--
Oregon	7,484	6,739	5,829	6,650	7,033	7,129
Pennsylvania		6,262	6,440	6,997	7,545	8,161
Rhode Island	--	--	--	--	--	****
South Carolina	12,122	10,994	10,797	13,056	13,145	17,123
South Dakota	--	--	--	--	--	****
Utah	6,445	5,747	5,625	6,087	6,092	6,306
Vermont	6,478	6,301	6,012	6,510	6,484	6,467
Washington	--	6,092	6,195	6,523	6,667	6,891
Wisconsin	4,892	4,205	3,942	3,735	3,638	3,394
West Virginia	--	--	--	11,644	10,852	10,662
Wyoming	--	****	****	****	****	****
National Total	**6,406**	**5,777**	**5,629**	**5,770**	**5,918**	**6,201**

Source: Medicaid Buy-In finder files, SSA's Ticket Research File, and Master Earnings File, 2001-2006

Notes: Earnings are inflation-adjusted to 2006 dollars. Participants with zero earnings are excluded. Cells with ' – ' denote years when state finder files were not available. Beginning in August 2005, Missouri discontinued its Buy-In program. New York had a no-cost extension for its MIG in 2006 and was therefore not required to submit a finder file for that year. Cells with "***" indicate too few observations (less than 25) to display earnings in dollars.

Table E.3. Employed Buy-In Participants and Percent Earning at or above SGA Level, 2006

State	Number of Positive Earners	Number at or above SGA *	Percent at or above SGA
Alaska	205	83	40
Arkansas	92	49	53
Arizona	1,121	334	30
California	2,810	924	33
Connecticut	4,742	959	20
Iowa	4,940	436	9
Illinois	959	177	18
Indiana	7,301	1821	25
Kansas	1,154	123	11
Louisiana	1,077	396	37
Massachusetts	10,424	4,297	41
Maryland	81	14	17
Maine	1,097	272	25
Michigan	1,111	204	18
Minnesota	7,477	938	13
Missouri	--	--	--
North Dakota	449	46	10
Nebraska	132	29	22
New Hampshire	1,873	312	17
New Jersey	2,148	563	26
New Mexico	1,064	328	31
Nevada	20	9	45
New York	--	--	--
Oregon	700	160	23
Pennsylvania	7,096	2,756	39
Rhode Island	19	4	21
South Carolina	44	29	66
South Dakota	1	1	100
Utah	931	199	21
Vermont	805	160	20
Washington	1,038	269	26
Wisconsin	6,141	515	8
West Virginia	476	250	53
Wyoming	22	4	18
National Total	**67,549**	**16,660**	**25**

Source: Medicaid Buy-In finder files, SSA's Ticket Research File, and Master Earnings File, 2006.

Notes: SGA stands for "substantial gainful activity" and is the income limit for SSDI eligibility. In 2006, the SGA level for a non-blind participant was $860 per month or $10,320 per year. Cells with ' – ' denote years when state finder files were not available.

Table E.4. Average and Median Earnings (in $) of Employed Buy-In Participants Nationwide, by Demographic Characteristic, 2006

	Number of Positive Earners	Average Earnings ($)	Median Earnings ($)
Nationwide Total	67,549	$8,237	$6,201
Age Category (Finder File)			
<21 years	1,128	7,765	6,484
21-30 years	9,153	9,728	7,721
31-40 years	14,077	8,863	6,616
41-50 years	21,235	8,100	5,966
51-60 years	16,359	7,381	5,410
61-64 years	4,311	7,083	5,573
65+ years	1,286	8,197	6,756
Gender (Finder File)			
Male	33,191	8,518	6,249
Female	34,358	7,965	6,157
Race/Ethnicity (Finder File)			
Non-White	8,360	9,982	7,615
White	52,029	7,625	5,808
Unknown	7,160	10,648	7,536
Race/Ethnicity (TRF)			
White	46,104	6,568	5,137
Black or African American	4,412	8,552	6,716
Hispanic or Latino	1,774	9,999	7,475
Asian or Pacific Islander	565	9,362	6,863
American Indian or Alaskan Native	258	7,583	6,185
Other Race	308	8,660	6,705
Unknown (in TRF)	1,349	6,381	4,824
Unknown (not in TRF)	12,779	$14,053	$12,240

Source: Medicaid Buy-In finder files, SSA's Ticket Research File, and Master Earnings File, 2006

Table E.5. Average and Median Earnings (in $) of Buy-In Participants Nationwide, by Public Program Participation and Primary Disabling Condition, 2006

	Number of Positive Earners	Average Earnings ($)	Median Earnings ($)
Nationwide Total	67,549	$8,237	$6,201
Public Program Participation (TRF)			
Both SSDI and SSI concurrently	1,430	4,508	3,631
SSI only	834	6,146	4,699
SSDI only	43,404	5,720	4,968
No SSDI/SSI (include missings)	9,102	12,850	9,441
Unknown (NOT in TRF)	12,779	14,053	12,240
Disabling Condition (TRF)			
Severe mental illness	17,622	6,413	5,293
Other mental disorders	5,129	6,810	5,608
Mental retardation	9,979	5,198	4,546
Musculoskeletal system	4,200	6,572	5,394
Sensory impairment	1,507	8,484	6,904
All other conditions	11,266	7,743	5,724
Unknown (in TRF)	5,067	9,744	6,049
Unknown (NOT in TRF)	12,779	$14,053	$12,240

Source: Medicaid Buy-In finder files, SSA's Ticket Research File, and Master Earnings File, 2006

Table E.6. Average and Median Earnings (in $) of Buy-In Participants Nationwide, by Education, Prior Work Experience, Duration of Buy-In Enrollment, and SSA Benefit History, 2006

	Number of Positive Earners	Average Earnings ($)	Median Earnings ($)
Nationwide Total	67,549	$8,237	$6,201
Years of Education (TRF)			
0-8 years	1,227	7,239	5,543
9-11 years	2,704	7,179	5,645
12 years	11,594	6,912	5,507
13-15 years	4,174	7,368	5,459
16+ years	2,438	8,311	6,071
Unknown (in TRF)	32,633	6,661	5,206
Unknown (NOT in TRF)	12,779	14,053	12,240
Years with Positive Earnings 1996-2005 (MEF)			
0 years	558	3,475	1,971
1 year only	1,096	5,818	3,939
2 to 4 years	5,868	7,124	5,327
5 to 6 years	7,514	7,706	5,772
7 to 8 years	12,527	8,081	6,104
9 to 10 years	39,986	8,681	6,552
Duration of Buy-In Enrollment (Finder File)			
0-6 months	13,703	8,510	6,281
7-12 months	10,760	8,842	6,748
13-24 months	14,290	8,549	6,574
25-36 months	9,308	8,176	6,255
37-60 months	12,422	7,144	5,450
>60 months	7,066	$8,157	$5,852

Source: Medicaid Buy-In finder files, SSA's Ticket Research File, and Master Earnings File, 2006

APPENDIX F

MULTIVARIATE ANALYSIS

Using a cross-sectional snapshot of Buy-In participants who were ever enrolled in 2006, we ran a series of logistic and OLS regression models to estimate the association between individual participant characteristics and earnings as well as the likelihood of employment. The purpose of conducting a multivariate regression analysis is to estimate the statistical association between participant characteristics and employment outcomes while controlling for other factors. Given that we obtained several participant characteristics from the TRF, we excluded from the multivariate analyses those participants who did not match with a TRF record. Our final sample for studying the likelihood of employment included 74,269 observations with information from the TRF. Our final sample for studying factors associated with earnings among employed participants included 49,451 observations, after excluding participants with zero earnings.

VARIABLE SPECIFICATIONS

Outcome measures for employment and earnings came from the MEF. Employment is a binary variable with a value of 1 if a participant had positive earnings and zero otherwise. Earnings in 2006 dollars represent the sum of wage and self-employment income reported on W-2 forms. Information on individual characteristics and state program features came from several data sources: (1) finder files from each state provided information on demographic characteristics (e.g., age, gender, race) and the enrollment dates of Buy-In participants; (2) survey responses from each state to policy changes in 2006 provided information on state program features; and (3) the Ticket Research Files from SSA included data on disabling conditions and SSDI or SSI participation history and monthly benefits.

PARTICIPANT CHARACTERISTICS

We included as many individual participant characteristics as possible but excluded participant characteristics if the data were not available (e.g., marital status) or not reliable due to a large number of missing observations (e.g., education). Stability of estimates across several specifications was an important consideration in the state program features included in the model specification we used.

Demographic variables and Buy-In enrollment variables were based on information provided by the state finder files. Age is the number of years between the participant's birth date and December 31, 2005. The age-squared quadratic term is included to allow for the possibility of a non-linear functional form. Male is a binary indicator with female as the reference group. Non-white is also a binary indicator with white as the reference group. Duration of Buy-In enrollment is the sum total of months during which a participant was ever enrolled. The continuous enrollment indicator is a flag for participants with no interruptions in enrollment during the course of a year.

Primary disabling condition variables were based on ICD-9 codes obtained from the TRF. The ICD-9 codes were categorized into six major types of impairment as defined by SSA. Severe mental illness represented primary diagnoses of schizophrenia (295.0 to 295.9) and major affective disorders, such as bipolar disorder and major depression (296.0 to 296.9). Other mental disorders covered anxiety, non-major depression, and substance abuse (290.0 to 294.9; 297.0 to 302.9; 305.0 to 315.1; 315.4 to 316.9; and 319.5). Mental retardation covered a range of mild and severe developmental disabilities (317.0 to 319.4 and 319.6 to 319.9). Musculoskeletal disorders included arthritis, joint pain, and difficulty in walking (710.0 to 739.9). Sensory disorders included visual, hearing, and speech impairments (361.0 to 369.9; 378.0 to 378.9; 389.0 to 389.9; and 784.0 to 784.9). All other conditions represented a wide variety of conditions, including diabetes, obesity, hypertension, and asthma (see Liu 2006 for a full list of relevant codes).

SSA program participation was defined as of December 2005 and based on the TRF. Measures included whether a participant had received SSDI or SSI benefits as well as the average monthly benefits for each program. Other individual-level variables were years of work experience between 1996 and 2005 based on the flag of positive earnings in each year, the maximum level of earnings during that time, and a self-employment binary indicator based on the presence of any self-employment income from the MEF.

STATE FACTORS AND SCORES

State factors included the provisions of the Balanced Budget Act (BBA) of 1997, whereby the reference group would be participants in states operating under the Ticket to Work and Work Incentives Improvement Act (Ticket Act) of 1999 or Section 1115 waiver. In Table F.1, the earned income score was scaled to a range from 0 to 5 based on the threshold percentage of the federal poverty level (FPL) for eligibility. A score of 0 represented 200 percent of FPL while a score of 1 represented 220 to 249 percent of FPL. A score of 2 represented 250 percent of FPL. A score of 3 represented 251 to 350 percent of FPL, and a score of 4 was 450 to 800 percent, and a score of 5 was no limit.

Table F.1. State Program Features and Scores Used in Multivariate Analysis

State Program Feature	Category Definition	Score
1. Earned Income Limit	No Limit	5
	450% to 800% FPL	4
	251% to 350% FPL	3
	250% FPL	2
	220 to 249% FPL	1
	200% FPL	0
2. Grace Period	0 months	3
	Up to 6 months	2
	6-12 months	1
	More than 12 months	0
3. Work Verification Requirement	Yes	3
	No	0
4. Spouse Income Inclusion	Yes	1
	No	0

Grace period scores were based on the number of months allowed for work stoppage in each Buy-In state. Shorter grace periods corresponded to higher scores, which would be positively associated with the likelihood of employment. For example, the absence of any grace period yielded a score of 3. A positive grace period of fewer than 6 months yielded a score of 2. A more generous grace period of 6 to 12 months had a score of 1. And the most generous grace period, defined as more than 12 months, yielded a score of 0.

The spousal inclusion score is a binary variable with a value of 1 if the Buy-In program uses spousal earnings in the definition of total income used to qualify for the program. A spousal income restriction places a constraint on the maximum amount an individual can earn and still remain eligible for the Buy-In program. A score of 0 indicates that spousal income is excluded from the definition of total income. The work verification score is an index with a value of 3 if a Buy-In state has any requirement verifying participants' work status (e.g., documentation of taxes paid, employer pay stubs, and so forth). States without such a verification requirement would have a score of 0.

MODEL #1: EMPLOYMENT LIKELIHOOD AND ODDS RATIO

The main outcome in the first model is the likelihood of being employed or having any positive earnings. Because employment is a binary variable with a value of 1 or 0, a linear probability model using ordinary least squares (OLS) is subject to error by falsely predicting significant estimates when no relationships exist between covariates and dependent variables. Therefore, researchers use alternative specifications such as the logistic function to account for the limited variation in the dependent variable to two possible outcomes.

For employment, the odds ratio estimates the likelihood of being employed versus unemployed. If an individual characteristic had no association at all with employment, it would generate equivalent odds of employment versus unemployment. An equal or "50-50"

chance of being employed and unemployed implies an odds ratio of 1. Therefore, having an odds ratio greater than 1 implies that a characteristic is associated with an increased likelihood of employment. For example, an odds ratio of 1.27 can be interpreted as a factor with a positive association, or a 27 percent increase in the likelihood of employment. Conversely, an odds ratio less than 1 implies that a characteristic is associated with a lower likelihood of employment.

MODEL #2: EARNINGS AMONG EMPLOYED PARTICIPANTS

The outcome in the second model is the amount of participant earnings in 2006 conditional on being employed. We used an OLS regression model for the analysis of earnings. Each coefficient estimate of individual and state factors may be interpreted as a positive or negative association of a specific factor on earnings, holding all other variables constant. For example, Table F.3 shows that males had a coefficient estimate of $279. With females as the reference category, this finding indicates that male Buy-In participants earned $279 more than females on average in 2006. We assume a significance level of 5 percent and report all p-values in Table F.3. We also ran separate multivariate regression models with positive and zero earners combined and applied a logarithmic transformation to the dependent variable. However, for ease of interpretation, we report the OLS findings with earnings in dollars as the dependent variable.

LIMITATIONS OF MULTIVARIATE ANALYSIS

Because the data used for both multivariate models are cross-sectional in nature, they reflect employment and earnings only at one point in time (that is, 2006) as opposed to changes over time. The results from the analysis therefore provide evidence of the relative importance of each personal characteristic and each state factor as it affects employment and earnings among Buy-In participants in 2006. However, findings cannot be used to make longitudinal inferences about how participation in the Medicaid Buy-In program may have caused change in a person's employment outcomes.

We considered several factors when selecting explanatory variables to include in the models. First, when they were available, we tried to include the most prominent person-level predictors of employment outcomes as identified in the literature, including research on both people with disabilities and the general population. One exception is educational attainment, which is excluded from both regression analyses because it had a large number (62 percent) of missing values in the TRF data set. Nevertheless, our descriptive analysis of nonmissing data suggests that educational attainment was positively associated with earnings and employment. Second, because of the complexity of the state-level program features, we chose to focus only on factors that were empirically most related to employment outcomes. After testing alternative specifications with different combinations of state-level factors, we used the model that generated the most robust and stable estimates. Finally, other environmental factors such as community supports and employer attitudes toward hiring people with disabilities are important too, but it is impossible to measure them with the available data, so they were omitted from the current analyses.

Table F.2. Summary Statistics from Multivariate Analytic Sample, 2006

Description of Variable (Data Source)	N Obs	Mean	Min	Max
Outcomes (MEF)				
Employment Status in 2006	97,491	0.69	0	1
Total 2006 Annual Earnings (in $)	97,491	8,237	0	160,616
Demographics and Buy-In Enrollment (Finder Files)				
Age in years as of Dec 2005	97,491	46	0	95
Age-squared	97,491	2,264	0	9,025
Male indicator	97,491	0.49	0	1
Non-White indicator	95,285	0.14	0	1
Duration of Buy-In enrollment (in months)	97,491	26.23	1	114
Continuous enrollment indicator	97,491	0.80	0	1
Primary Disabling Condition (TRF)				
Mental Retardation	74,874	0.15	0	1
Severe Mental Illness	74,874	0.33	0	1
Other Mental Disorders	74,874	0.10	0	1
Musculoskeletal Disorders	74,874	0.12	0	1
Sensory Impairments	74,874	0.03	0	1
All Other Conditions	74,874	0.27	0	1
SSA Program Participation (TRF)				
SSDI recipient only in Dec 2005	97,491	0.68	0	1
SSI recipient only in Dec 2005	97,491	0.01	0	1
Both SSDI and SSI concurrent in Dec 2005	97,491	0.02	0	1
Neither SSDI nor SSI in Dec 2005	97,491	0.28	0	1
SSI average monthly benefit ($) in 2005	97,491	23.06	0	3,569.75
SSDI average monthly benefit ($) in 2005	97,491	588.73	0	15,750.20
Other Individual-Level Variables (MEF, TRF)				
Years of Prior Experience (1996-2005)	97,491	7.19	0	10
Max Earnings ($) in Last 10 Years	97,491	18.01	0	1,499.31
Self-Employment earnings indicator *	97,491	0.04	0	1
State-Level Factors				
Balanced Budget Act	97,491	0.25	0	1
State unemployment rate	97,491	4.51	2.9	6.9
Earned Income score	97,491	2.97	0	5
Grace period score	97,491	1.53	0	3
Spouse inclusion score	97,491	0.39	0	1
Income floor indicator	97,491	1.07	0	3
Work verification indicator	97,491	2.39	0	3

Source: Medicaid Buy-In finder files, SSA's Ticket Research File, and Master Earnings File, 2006

*The Self-employment earnings indicator is included in the earnings model specification, but excluded from the employment model because it is perfectly co-linear with the likelihood of having positive earnings.

Table F.3. Logistic Regression of Employment on Individual Characteristics and State-Level Factors, 2006

Explanatory and Control Variables	Odds Ratio Estimate	Wald Chi-Sq Statistic	P-Value (Pr > ChiSq)
Intercept	n/a	2.03	0.1538
Demographic Characteristics			
Age in years as of 12/2005	0.949	67.00	<.0001
Age-squared	1.000	8.04	0.0046
Male indicator	0.977	1.44	0.2294
Non-White indicator	1.030	1.16	0.2819
Primary Disabling Condition			
Mental Retardation	2.877	614.36	<.0001
Severe Mental Illness	1.825	391.04	<.0001
Other Mental Disorders	1.523	112.95	<.0001
Sensory Impairments	1.837	91.47	<.0001
All Other Conditions	1.083	7.17	0.0074
Work Experience and Buy-In Duration			
Years of Prior Experience (1996-2005)	1.429	9661.16	<.0001
Max Earnings ($) in Last 10 Years	0.964	2400.08	<.0001
Duration of Buy-In enrollment (in months)	0.999	1.39	0.2376
Continuous enrollment indicator	0.749	133.31	<.0001
Prior SSA Program Participation			
SSDI recipient only in Dec 2005	0.853	4.15	0.0417
Both SSDI and SSI concurrent in Dec 2005	0.580	39.08	<.0001
Neither SSDI nor SSI in Dec 2005	2.067	75.89	<.0001
SSI average monthly benefit ($) in 2005	0.999	150.93	<.0001
SSDI average monthly benefit ($) in 2005	1.000	5.87	0.0154
State-Level Factors			
Balanced Budget Act	0.482	675.04	<.0001
State unemployment rate	1.056	7.67	0.0056
Earned Income score	1.263	409.66	<.0001
Grace period score	1.376	665.69	<.0001
Spouse inclusion score	0.646	171.08	<.0001
Income floor indicator	0.729	534.26	<.0001
Work Verification indicator	1.271	481.23	<.0001

Source: Medicaid Buy-In finder files, SSA's Ticket Research File, and Master Earnings File, 2006

N = 74,269 observations; pseudo R-squared = 0.2877; Likelihood ratio test p<.0001

Table F.4. OLS Regression of Positive Earnings (in $) on Individual Characteristics and State-Level Factors, 2006

Explanatory and Control Variables	Coefficient Estimate	t statistic	P-Value
Intercept	1,251.17	2.48	0.0132
Demographic Characteristics			
Age in years as of 12/2005	-90.78	-5.26	<.0001
Age-squared	0.25	1.25	0.2097
Male indicator	278.56	5.23	<.0001
Non-White indicator	1,252.99	15.81	<.0001
Primary Disabling Condition			
Mental Retardation	-1,003.63	-8.57	<.0001
Severe Mental Illness	-378.61	-3.63	0.0003
Other Mental Disorders	-205.49	-1.63	0.103
Sensory Impairments	1,132.74	6.37	<.0001
All Other Conditions	342.96	3.19	0.0014
Work Experience and Buy-In Duration			
Years of Prior Experience (1996-2005)	-61.01	-5.26	<.0001
Max Earnings ($) in Last 10 Years	89.82	45.39	<.0001
Self-Employment Indicator	-1,312.92	-10.74	<.0001
Duration of Buy-In enrollment (in months)	18.75	14.58	<.0001
Continuous enrollment indicator	10.52	0.17	0.867
Prior SSA Program Participation			
SSDI recipient only in Dec 2005	8.97	0.04	0.9699
Both SSDI and SSI concurrent in Dec 2005	-1,272.07	-4.73	<.0001
Neither SSDI nor SSI in Dec 2005	6,394.05	26.29	<.0001
SSI average monthly benefit ($) in 2005	-0.80	-2.83	0.0047
SSDI average monthly benefit ($) in 2005	-1.09	-14.43	<.0001
State-Level Factors			
Balanced Budget Act	71.37	0.86	0.3895
State unemployment rate	1,156.56	23.39	<.0001
Earned Income score	385.66	13.64	<.0001
Grace period score (work stoppage)	975.40	28.62	<.0001
Spouse inclusion score	-1,290.28	-14.36	<.0001
Income floor indicator	-814.45	-22.34	<.0001
Work Verification indicator	502.83	16.61	<.0001

Source: Medicaid Buy-In finder files, SSA's Ticket Research File, and Master Earnings File, 2006

N = 49,451 observations; R-squared = 0.2350