

OCCUPATIONS OF SSI RECIPIENTS WHO WORK

by Jeffrey Hemmeter*

This article uses the 2007 American Community Survey to estimate the occupational distribution of Supplemental Security Income (SSI) disability recipients aged 18–61 who work, and it compares their occupational distribution with that of working nonrecipients with and without disabilities. Based on models of occupational choice for working SSI recipients and nonrecipients, predicted occupational distributions are also estimated to understand what occupations are available to SSI recipients. Unlike the nonrecipient populations that are largely composed of sales- and office-based occupations (25 percent), the most common occupations of SSI recipients who work are in services (34 percent) and production, transportation, and material moving (30 percent), although sales- and office-based occupations are also common for SSI recipients (22 percent). The occupational distribution of working SSI recipients is also more concentrated than that of nonrecipient populations.

Dissimilarity indices are used to compare the predicted and actual occupational distributions of the SSI recipient population and nonrecipient populations. More than one-half of the difference between the occupations of working SSI recipients and nonrecipients can be explained by demographic characteristics, human capital, and disability type. Additionally, nonemployed SSI recipients have similar predicted occupational distributions as currently employed SSI recipients. Given the estimated occupational distributions and the average earnings of individuals in the most common occupations of SSI recipients, the results suggest that more targeted vocational training may provide expanded opportunities for employment.

Introduction

The Social Security Administration's (SSA's) involvement in back-to-work programs, vocational rehabilitation programs, and programs generally designed to help recipients become economically self-sufficient would benefit from an understanding of the types of jobs available to Supplemental Security Income (SSI) recipients. With the exception of a few back-to-work studies and work incentive demonstrations, relatively little is known about the occupations of SSI recipients relative to non-SSI recipients. This article fills a gap in knowledge about the types of jobs recipients have and how this differs from the jobs of the nondisabled and nonrecipient populations.

According to SSA (2008a), 5.7 percent (or 357,344) of the working-age (18–64) SSI population worked in December 2007. These individuals tend to have low wages; average earnings from wages were \$597 in December. Knowledge of how the jobs these recipients hold differ from those of nonrecipients

could help identify where vocational programs and placement efforts should best be focused and where outreach may be necessary to ensure employment opportunities for recipients. SSA is interested in assisting these individuals in becoming productive members of the economy and becoming self-sufficient. If individuals leave the SSI rolls but are trapped in marginal occupations (that is, occupations with low pay and insufficient health insurance), they may not only return to the program in the future, but may

Selected Abbreviations

ACS	American Community Survey
DI	Disability Insurance
HHI	Herfindahl-Hirschman Index
IIA	independence or irrelevant alternatives
NBS	National Beneficiary Survey
non-LFP	non-labor force participation

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Selected Abbreviations—*continued*

NSCF	National Survey of SSI Children and Families
OASDI	Old-Age, Survivors, and Disability Insurance
RR	Railroad Retirement
SIPP	Survey of Income and Program Participation
SOC	Standard Occupational Classification
SSA	Social Security Administration
SSI	Supplemental Security Income

be in worse health, requiring greater expenditures from related programs (for example, Medicaid) than would have been required had they remained in the SSI program.

This article addresses three important questions regarding the occupations of the disabled. First, how do the occupations of people with disabilities (particularly SSI recipients) compare with the occupations of people without disabilities? Second, what occupations would the people with disabilities (particularly SSI recipients) have if they did not have a disability? And third, what occupations can we expect SSI recipients who are not working to have? This study uses the large sample size of the 2007 American Community Survey (ACS) to estimate the occupational distributions of the SSI recipient population and nonrecipient populations with and without disabilities. These distributions are compared with the actual and predicted occupational distributions of these populations.

The next section describes the SSI program and the work incentives for recipients, followed by reports of what is known about the occupations and employment of individuals with disabilities. The data is then detailed, and a description of the methodology is given. What follows are the actual occupational distributions of employed individuals and the predicted occupations of nonworking SSI recipients. A discussion of the policy relevance of the results follow, and the last section concludes the article.

The Appendix tables provide detailed information about the data and results: Table A-1 lists the occupation categories used in this study; Table A-2 presents summary statistics; and Table A-3 shows the multinomial logit results.

SSI Program

The SSI program is a means-tested transfer program that provides income support for individuals who are blind, disabled, or aged. A working-age adult (18–64) is determined to be disabled if he or she has “a medically determinable physical or mental impairment that is expected to last (or has lasted) at least 12 continuous months or to result in death and ... prevents him or her from doing any substantial gainful activity” (SSA 2008a, 2). The substantial gainful activity amount was defined as \$900 per month in 2007.¹ For children (younger than age 18), there is a functional definition of disability that does not depend on employment; the aged (65 or older) do not need to have a disability to qualify for SSI.

In addition to the disability requirement, an individual must have low monthly income levels to qualify for SSI and no more than \$2,000 in resources (\$3,000 for a couple). The federal government sets the maximum monthly benefit level (\$623 for an individual and \$934 for a couple in 2007), which is supplemented by some states. Payments are reduced when an individual receives earned or unearned income.

Although these restrictions on income and assets may reduce the likelihood that recipients will work, there are several incentives and supports available to them should they attempt work. These include allowances for impairment-related work expenses, the Ticket to Work Program, and special SSI payments and Medicaid eligibility for working SSI recipients, known as Sections 1619(a) and (b).² Additionally, SSI payments are structured so that the first \$65 of monthly earnings and an additional \$20 of unearned or earned monthly income are not counted toward an individual’s income level. After this disregard, there is a gradual reduction in payments of \$1 for every additional \$2 earned until payments are reduced to zero. As a result, SSI recipients can earn as much as \$15,000 per year (depending on their state of residence) and remain eligible for reduced SSI payments and the accompanying health insurance access.³ However, these limitations on earnings may also limit the observable occupations in the SSI community if certain occupations typically have earnings greater than these thresholds.

The number of back-to-work incentives and similar demonstration projects administered and proposed by SSA indicate the interest policymakers have in helping these individuals become economically self-sufficient. This study attempts to address a gap in the literature

on the differences between the occupations SSI recipients have and those of the nonrecipient populations with and without disabilities. By understanding the differences between the occupations of these groups, policymakers may be able to develop work incentives and vocational rehabilitation programs that will help these individuals return to the work force in a manner that will enable them to be self-sufficient. This may result in placing these individuals in occupations known to provide either immediate earnings or with higher earnings potential.

Previous Literature

Although several previous analyses have focused on the labor force participation of the SSI and Social Security Disability Insurance (DI) beneficiary populations (see, for example, Neumark and Powers (2003/2004); Muller, Scott, and Bye (1996); Autor and Duggan (2003); Hennessey and Muller (1995); Hennessey (1997); Muller (1992)), there have only been a handful of studies on the occupations of recipients who work (see, for example, Schechter (1999)).⁴

Most related occupational research has focused on all individuals with disabilities, who generally have less severe disabilities and greater labor force participation than the SSI population. Haveman and Wolfe (1990) and Wolfe and Haveman (1990) summarize the research of the employment patterns of individuals with disabilities through the mid-1980s, which was characterized by declining labor force participation rates. The employment of individuals with disabilities appears to be more cyclical than the nondisabled population (Yelin and Katz 1994).

The general decline in the employment rates of individuals with disabilities over the past few decades, shown by Burkhauser, Houtenville, and Wittenburg (2003), may be expected to translate into a tighter distribution of occupations for SSI recipients and other workers with disabilities. The changes in occupational requirements in the occupations of those with disabilities may also affect the occupational distribution (Stapleton, Goodman, and Houtenville 2003). However, Trupin and Yelin (2003) found no consistent trend in changes in the share of occupations held by those with and without disabilities from 1970 through 2001.

Occupation is common as an explanatory variable in regressions of earnings or labor force participation (for example, Muller (1992), Hotchkiss (2004), Ozawa and Yeo (2006)), but it is uncommon as the dependent variable in the literature on disability, especially on the SSI and DI populations. Most studies consider broad

occupational categories, which mask finer occupation definitions. For example, Yelin and Cisternas (1996) used the National Health Interview Survey to show that 17.2 percent of individuals with disabilities were employed as professionals, followed closely by service jobs at 16.1 percent. They found that the change in occupation mix between 1970 and 1992 affected those with and without disabilities in a similar manner. Their grouping of occupations into nine categories sheds light on the general type of jobs performed, but lacks detail regarding specific occupations.

Stoddard and others (1998) report tabulations of the occupations of workers with disabilities from McNeil (1993), based on the 1991 Survey of Income and Program Participation (SIPP). They show that four occupations (out of 58) account for 25 percent of occupations of workers with disabilities—executive and administrative, machine operators, food preparation and service, and sales (retail and personal services). Hale, Hayghe, and McNeil (1998) also use the SIPP and find that individuals with severe disabilities are most likely to be in service occupations or work as operators, fabricators, and laborers. It is likely, however, that employment in some occupations (for example, laborers) may be a contributing cause of the disability, and the occupations of those with disabilities severe enough to receive SSI payments or DI benefits may be different.

Some studies have revealed information on the characteristics of the occupations of individuals with disabilities or the DI beneficiary or SSI recipient populations, but not the occupations themselves. Yelin and Trupin (2003), for instance, found that individuals with disabilities are less likely to be employed in traditional occupations or occupations that are economically and psychologically rewarding. The skills required in certain occupations and the level of accommodation may affect what types of jobs individuals with disabilities can perform. “Whether persons with disabilities are increasingly relegated to peripheral jobs within the growing and declining sectors of the economy or whether, instead they get the kinds of jobs and the working conditions they want and in which they and their workplaces can succeed” (Yelin and Cisternas 1996, 55) is likely more important for those with the most severe disabilities and those with low labor force attachment (who are more likely to be SSI recipients).

Workers with disabilities are more likely to have lower levels of education (Hale, Hayghe, and McNeil 1998; Steinmetz 2006). This is especially true of SSI recipients (DeCesaro and Hemmeter 2008) and may limit the occupational choices available to them.

Yelin and Trupin (2003) found that workers with disabilities are more likely to have episodic employment and employment that is part time. Hotchkiss (2004), however, argues that the increase in the fraction of the population with disabilities engaged in part-time work is largely a voluntary phenomenon. Because the relative “attractiveness” of the occupations (in terms of O*NET⁵ measures of achievement, working conditions, recognition, relationships, support, and independence) chosen by individuals with and without disabilities changed little from 1990 to 2000, she argues that disability policy changes led to increased part-time employment among workers with disabilities. However, the author does not consider whether or not her sample actually received SSI (or DI).

Data

Research on the SSI population is largely based on administrative data or on special surveys of the beneficiary population (for example, the National Survey of SSI Children and Families (NSCF) or the National Beneficiary Survey (NBS)).⁶ Administrative data cannot be used for the purposes of the current research because it is necessary to have a nonrecipient comparison group with which to compare the occupational distributions. Most recipient-specific survey data share this common drawback. National surveys, such as the Survey of Income and Program Participation or the National Health Interview Survey often do not include a large enough sample of SSI recipients to obtain reliable estimates of occupations given the small fraction of recipients who work.⁷

The inability of most survey’s to capture a sufficiently large SSI population can be partially overcome by using a sufficiently large data set. The public-use version of the 2007 American Community Survey has a large enough sample size to accurately measure the SSI occupational distribution.⁸ Roughly 3 million interviews are conducted annually, divided among the 12 months of the year. The ACS is designed to replace the decennial census long form and provide researchers and administrators information to evaluate programs and compare communities in intercensal years. This study uses the public-use version of the ACS.

As part of the section on income in the ACS, individuals are asked to report how much SSI income they received in the previous year. This information was used to create a binary variable indicating SSI program participation in the previous year. The ACS also includes three sets of disability-related questions, each including two parts. These questions ask if the

individual: 1a) has “blindness, deafness, or a severe vision or hearing impairment” (sensory); 1b) “has a condition that substantially limits one or more basic physical activities such as walking, climbing stairs, reaching, lifting, or carrying” (physical); 2a) has difficulty “learning, remembering, or concentrating” (mental); 2b) has difficulty “dressing, bathing, or getting around inside the home” (self-care); 3a) has difficulty “going outside the home alone to shop or visit a doctor’s office” (go outside home); and 3b) has difficulty “working at a job or business” (employment).⁹

If nonrecipients reported having any one of these conditions, they are defined as having a self-reported disability; otherwise they do not have a self-reported disability. This forms two groups of nonrecipients (with and without a disability) whose occupational distributions are compared with that of working-age SSI recipients (who are all disabled according to SSA’s rules, but may not have a self-reported disability in the survey).

In addition to the employed working-age SSI population and the nonrecipient populations with and without disabilities, three other groups of interest are identified in the data: (1) nonrecipients with a work-related disability (the “employment” question above) are included and analyzed separately because this definition of disability is most closely aligned with the definition of disability used to qualify a working-age individual for SSI payments based on disability; (2) unemployed SSI recipients are included; and (3) SSI recipients who are not participating in the labor force are also included in the data to inform policy options regarding return to work among the nonemployed SSI population.¹⁰

If employed, respondents to the ACS write in descriptions of their occupations (type of work and most important activities and duties), which are coded by ACS contractors into Standard Occupational Classification (SOC) codes. The 509 identified occupations can be collapsed into 22 major occupational groups, not including unemployment or military-specific codes, according to the *Standard Occupational Classification Manual: 2000*.¹¹ For the most part, the SOC groupings are maintained throughout the article. There are, however, two exceptions. First, all construction, extraction, maintenance, and repair occupations are collapsed into a single group because of the small number of SSI recipients in extraction occupations. Second, computer and mathematical occupations; architecture and engineering occupations; and life, physical, and social science occupations are collapsed into a single group because of small cell sizes in the

prediction models. Table A-1 lists the occupation groups used in this study along with their codes.

Sample Restrictions

The data are limited to individuals aged 18–61. By limiting the data to those in this age range, most early retirees and individuals adjusting their employment in preparation for retirement are excluded from the sample. The unweighted sample for the bulk of the analysis includes 1,256,019 employed individuals; 2,745 SSI recipients; 72,686 nonrecipients with disabilities (including 18,414 with work disabilities); and 1,180,588 nonrecipients without disabilities. These individuals are all currently employed in nonmilitary occupations. Additionally, there are 861 unemployed SSI recipients and 30,009 SSI recipients who are not participating in the labor force.

Non-SSI recipients who receive Old-Age, Survivors, and Disability Insurance (OASDI) benefits or Railroad Retirement (RR) benefits are excluded from this analysis. The ACS questionnaire does not distinguish the program in which these individuals are participating; although the majority of these individuals are likely to be disabled workers under the DI program covered by Social Security, this cannot be identified with precision. Additionally, this group is likely systematically different from the non-SSI population because of the requirement that earnings remain under substantial gainful activity for OASDI beneficiaries. This may result in those beneficiaries being relegated to certain occupations. As a result, the usefulness of the results combining OASDI/RR beneficiaries with the nonrecipient populations with or without disabilities for determining which occupations are most useful in helping individuals become self-sufficient may be limited. SSI recipients who concurrently receive OASDI or RR benefits are retained in the sample.¹²

Limitations of the Data

There are three main limitations to the data. First, the quality of reported SSI and Social Security (or OASDI) receipt in survey data has long been known to be subject to reporting errors. Huynh, Rupp, and Sears (2002), for example, have shown that in the SIPP, SSI recipients report SSI payments only 80 percent of the time. The accuracy of the ACS instrument regarding SSI receipt has not been assessed. Some individuals may report no income from these sources even though they received payments (or vice versa). This could be due to recall failure or confusion on the months asked about in the survey. Additionally, some recipients

may confuse SSI payments with Social Security (or OASDI) benefits. Because the accuracy of the survey reports is uncertain, these numbers should be taken with some degree of caution.

Second, recipients are defined as having positive income from SSI sometime in the previous 12 months. Because of this, they may have been off of the program rolls for the better part of a year and have an occupation that pays significantly higher amounts than the average reported by SSA.

Finally, there are also issues with the measurement of disability in surveys. Most previous research has focused on individuals with a work-based disability. However, it is known that work-disability measures in surveys miss a large proportion of the population with disabilities. Additionally, it is not clear if the presence of a self-reported work disability reflects a work environment that limits work or an impairment that limits work. See Bound (1991), Hale (2001), National Council on Disability (2002), Burkhauser, Daly, and Houtenville (2002), and Burkhauser and Stapleton (2003) for a discussion of these issues in the literature. By using both the work-based and broad measure of disability, the current analysis allows for multiple concepts of disability to be assessed.

Methodology

The first step in assessing differences in the occupational distributions is to obtain estimates of the actual occupational distribution of each group. In addition, a common measure of market concentration, known as the Herfindahl-Hirschman index (HHI), is estimated. This is calculated by summing the square of each occupation's share of the distribution. The higher the HHI, the more concentrated the distribution. In an economy where there is only one occupation, the maximum HHI of 10,000 is reached. In an economy of J occupations, where each occupation is equally represented, the minimum HHI, $J*(100*(1/J))^2$, is attained. In this case, there are 19 occupation classes, so the minimum HHI is 526.

The (dis)similarity of occupations between a reference group and each of the remaining groups is measured using the dissimilarity index proposed by Duncan and Duncan (1955):

$$(1) D = \sum_{j=1}^J \frac{1}{2} |A_j - B_j|,$$

where j identifies each occupation and $A_j(B_j)$ is the proportion of the group A(B) in occupation j . This simple measure can be interpreted as the proportion of

the population that would need to change occupations so that groups A and B had similar distributions.

The next step is to estimate the occupational distributions under the assumption that no differences exist between the two groups. As with other studies of occupational choice (for example, Miller and Volker (1985); Brown, Moon, and Zoloth (1980); Gabriel and Schmitz (2007); Gabriel, Williams, and Schmitz (1990)), a multinomial logit model of occupational choice is estimated on a comparison group (for example, the sample of nonrecipients without a disability) controlling for observable characteristics (see Schmidt and Strauss (1975)). This model is based on random utility theory where individual i potentially gains utility U from each occupation j equal to—

$$(2) U_{ij} = \beta'Z_{ij} + \varepsilon_{ij}.$$

The Z vector incorporates all relevant individual characteristics. Assuming an individual would choose the occupation that offers the highest level of utility, the probability of individual i choosing occupation j takes the general form of—

$$(3) \Pr(Y_i = j) = \frac{e^{\beta'Z_{ij}}}{\sum_{j=1}^J e^{\beta'Z_{ij}}}.$$

The dependent variable identifies the occupation group of the individual.¹³ In this study, the base occupation is office and administrative support, which comprises the largest single occupation group. Characteristics controlled for (the Z vector) include demographic characteristics: sex (men versus women), Hispanic ethnicity (Hispanic versus non-Hispanic), race (white versus nonwhite), marital status (married versus nonmarried), age, and age squared. Also controlled for are human capital characteristics: education (more than high school but less than college, college or more versus high school or less, or missing). Although this is a parsimonious model, it is limited by the fact that few other variables are available in the data set that would be expected to better explain occupation choice.¹⁴

The estimated coefficients are used to obtain the predicted probability of occupation j for individual i in each of the other groups (that is, working SSI recipients, nonrecipients with a disability, and nonrecipients with a work disability). These probabilities are then summed to estimate the fraction of individuals in each group in each occupation. Note that this is not equivalent to assigning each individual an occupation based on the highest predicted probability. Using the

highest predicted probability would result in a loss of valuable information if there are small differences between predicted probabilities of different occupations. Additionally, if there are several occupations or occupations with very low probabilities, they would never be represented in the estimated distributions.

The dissimilarity index between the actual distributions of two groups reflects how different the occupational distributions are between those groups. Dissimilarity indices can also be calculated between the actual distribution of one group and the distribution of another group under the model of the first group; that is, the coefficients from a multinomial logit model predicting the occupational distribution of group A are applied to group B and the index is calculated from the actual distribution of group A and the estimated distribution of group B. Typically, any residual difference has been interpreted as a measure of the level of discrimination against one group. However, personal preferences, inadequate (specific) training, physical, cognitive, and mental limitations, or, especially with the population with disabilities, insufficient supports may also result in a nonzero dissimilarity index between the actual and predicted distributions.¹⁵

This process is repeated using the characteristics of the nonrecipients with disabilities, nonrecipients with work disabilities, and working SSI recipients to estimate occupational distributions of each group. However, an expanded model for these groups is estimated, which includes indicators of the type of disability to control for any disability-specific limitations in occupational opportunities.

Thus, predicted occupational distributions for each group, according to each of the other group's decision models, can be compared with the actual occupational distribution of the other groups. This can answer two important questions: First, what occupations would the disabled (or disabled SSI recipients) have if they were not disabled (or disabled SSI recipients), controlling for demographic and human capital characteristics? And second, conditional on having a disability and controlling for the type of disability and other demographic and human capital characteristics, what occupations would SSI recipients have if they did not receive SSI payments? Note that this methodology is based entirely on observable factors. Large differences in the occupational distributions could remain after controlling for observable factors if there are unobservable differences in the populations or their environments. This is discussed further in the Discussion section of this article.

Occupational Distributions of the Employed

The actual occupational distributions for the four employed populations are presented first and then compared with each other, focusing on comparisons with the working SSI population. This is followed by comparisons of predicted occupational distributions from the model(s) described above.

Actual Distributions

Table 1 presents the actual occupational distributions for the four employed population groups.¹⁶ The differences in the occupational distributions between the groups can easily be seen. Generally, lower fractions of working SSI recipients are employed in occupations with higher fractions of nonrecipients, and vice versa. The occupational distributions of the nonrecipient populations with any disability and with a work disability

Table 1.
Actual occupational distributions of the employed population

Occupation	SSI recipients		Non-SSI recipients with—					
			No disability		Any disability		Work disability	
	Percent-age	Standard error	Percent-age	Standard error	Percent-age	Standard error	Percent-age	Standard error
Total	100.00	...	100.00	...	100.00	...	100.00	...
Management, professional, and related	9.51	...	35.62	...	25.87	...	23.48	...
Management	1.70	0.28	9.88	0.03	6.94	0.11	5.86	0.22
Business and financial operations	1.48	0.25	4.55	0.02	3.15	0.08	3.03	0.15
Computer and mathematical, architecture and engineering, life, physical and social science	0.25	0.09	5.45	0.02	3.64	0.07	2.93	0.14
Community and social services	1.60	0.28	1.58	0.01	1.71	0.05	1.56	0.11
Legal	0.33	0.13	1.17	0.01	0.74	0.04	0.67	0.06
Education, training, and library	2.02	0.33	5.84	0.02	4.32	0.08	3.78	0.14
Arts, design, entertainment, sports, and media	1.06	0.22	1.92	0.01	1.43	0.05	1.53	0.11
Health-care practitioner and technical	1.07	0.23	5.23	0.02	3.93	0.08	4.12	0.17
Service	33.60	...	15.97	...	20.53	...	22.76	...
Health-care support	1.72	0.30	2.20	0.01	2.95	0.07	3.22	0.16
Protective service	1.31	0.28	2.10	0.02	2.11	0.07	2.26	0.13
Food preparation and serving related	9.75	0.67	4.99	0.03	5.74	0.12	6.20	0.23
Building and grounds cleaning and maintenance	14.54	0.98	3.58	0.02	5.80	0.13	6.49	0.25
Personal care and service	6.27	0.55	3.10	0.02	3.93	0.08	4.60	0.19
Sales and office	21.71	...	25.15	...	25.54	...	24.44	...
Sales and related	8.66	0.76	11.00	0.03	10.65	0.15	10.65	0.28
Office and administrative support	13.05	0.69	14.15	0.04	14.89	0.15	13.79	0.30
Farming, fishing, and forestry	0.84	0.21	0.67	0.01	0.73	0.04	0.75	0.07
Construction, extraction, maintenance, and repair	3.90	0.44	10.02	0.04	10.92	0.13	11.22	0.31
Production, transportation, and material moving	30.45	...	12.57	...	16.43	...	17.36	...
Production	15.68	0.97	6.64	0.02	8.33	0.14	8.33	0.25
Transportation and material moving	14.78	0.86	5.94	0.03	8.09	0.12	9.03	0.27
N (unweighted)	2,745		1,180,588		72,686		18,414	
N (weighted)	311,838		123,408,821		7,432,897		1,852,399	

SOURCE: Author's calculations using the 2007 American Community Survey using balanced repeated replicate sample weights.

NOTES: The sum of individual categories may not equal the total because of rounding.

... = not applicable.

are similar to each other and are more similar to the occupational distribution of those without a disability than the working SSI occupational distribution.

SSI recipients are more common in certain occupations: production (16 percent), transportation and material moving (15 percent), and buildings and grounds cleaning and maintenance (15 percent). Service, production, and transportation and material moving occupations account for almost two-thirds of SSI employment. Many SSI recipients also work in office and administrative support occupations (13 percent), although they are only slightly less likely to work in these occupations than the other groups. The most common occupational groups of each of the other populations are office and administrative support, sales and related occupations, and construction, extraction, maintenance, and repair.

These results are similar to the occupational distributions found by Hale, Hayghe, and McNeil (1998). Although they used different occupational groupings, they found that those with severe disabilities were most likely to work in service occupations and as operators, fabricators, and laborers, followed by administrative support, including clerical occupations. McNeil (1993, as cited in Stoddard and others (1998)) found that 5 of the top 10 occupations of individuals with disabilities were employed as machine operators, food preparation and services, sales, cleaning or building services, and as motor vehicle operators, which are among the most common occupations for

people with disabilities in the distributions estimated above. Both of those studies used the SIPP to estimate occupation distributions. The occupational distribution of SSI recipients is also similar to estimates from the National Beneficiary Survey of the occupations of SSI recipients and DI beneficiaries who work. Thornton and others (2008) show that the most common occupations of working SSI recipients and DI beneficiaries are in transportation and material moving (22 percent), production (14 percent), and building or grounds cleaning and maintenance (13 percent).¹⁷

Table 2 presents the Herfindahl-Hirschman and occupational dissimilarity indices for each of the population groups. The SSI population has the most concentrated occupational distribution (1,090). As would be expected, nonrecipients without disabilities have the lowest HHI (775). The HHI of the nonrecipient populations with a disability or work disability are slightly higher (796 and 786, respectively).

Although there is a high degree of similarity between the occupation rankings of the groups, there is also significant dissimilarity. Comparing working SSI recipients to the population without disabilities, 37 percent of the population would have to change occupation to achieve parity. This is higher than the percent that would need to change occupations when SSI recipients are compared with the populations with any disability (29 percent) or a work disability (26 percent). The occupational distribution of those with a work-related disability and any disability are quite

Table 2.
Herfindahl-Hirschman and occupational dissimilarity indices of the employed population

Employed population	SSI recipients	Non-SSI recipients with—		
		No disability	Any disability	Work disability
Panel A: Herfindahl-Hirschman index				
Population	1,089.90	774.93	795.82	786.49
Panel B: Dissimilarity index				
SSI recipients	0.00	36.95	29.23	26.49
Non-SSI recipients				
No disability	...	0.00	10.23	12.85
Any disability	...	...	0.00	3.77
Work disability	...	...	...	0.00

SOURCE: Author's calculations using the 2007 American Community Survey using balanced repeated replicate sample weights.

NOTES: The dissimilarity indices are calculated between the actual distributions. The dissimilarity matrix is symmetrical and only half is presented. This is the proportion of the two groups that would need to change occupations for there to be parity between the occupational distributions of the two groups.

The sum of individual categories may not equal the total because of rounding.

... = not applicable.

similar, only 4 percent of the population would need to change occupations for parity, and only 10–13 percent of the population would need to change occupations to equalize their distributions with respect to the population without a disability. Note that Table 2, panel B is symmetric and only one-half is presented.

Predicted Distributions

Whether or not the differences between these distributions disappear once factors such as age and education are taken into consideration would be useful for planning vocational rehabilitation or other back-to-work incentives. To do this, separate multinomial logit models of occupational choice are estimated for the four populations. The models control for sex, race,

ethnicity, marital status, age, and education. Disability type is included in all but the no-disability model. Four separate sets of occupational distributions are then predicted for each group based on the coefficients for each of these models, as described earlier.

The predicted occupations of the working SSI population based on these models are presented in Table 3; those of the population with disabilities are presented in Table 4; those of the population without disabilities are presented in Table 5; and those with work disabilities are presented in Table 6. These predicted occupational distributions are compared with the actual distribution for each group in Table 1. In Table 3, for example, the coefficients of the four occupational-choice *models* are applied to the working SSI

Table 3.
Estimated occupational distributions of the employed SSI population, by occupational-choice model ^a

Occupation	SSI recipients	Non-SSI recipients with—		
		No disability	Any disability	Work disability
Total	100.00	100.00	100.00	100.00
Management, professional, and related	9.25	16.64	13.38	12.92
Management	1.70	6.37	4.17	4.18
Business and financial operations	1.48	2.53	1.84	1.78
Computer and mathematical, architecture and engineering, life, physical and social science	0.25	2.38	2.00	1.71
Community and social services	1.60	0.82	1.07	1.03
Legal	0.33	0.49	0.44	0.42
Education, training, and library	2.02	2.43	2.28	2.10
Arts, design, entertainment, sports, and media	1.06	1.23	1.15	1.14
Health-care practitioner and technical	1.07	2.77	2.42	2.29
Service	33.60	21.88	28.99	30.00
Health-care support	1.72	3.03	3.53	3.34
Protective service	1.31	2.01	2.10	2.15
Food preparation and serving related	9.75	7.47	9.62	9.98
Building and grounds cleaning and maintenance	14.54	5.29	8.74	9.33
Personal care and service	6.27	4.08	5.00	5.20
Sales and office	21.71	27.36	24.58	22.49
Sales and related	8.66	11.18	10.43	10.30
Office and administrative support	13.05	16.18	14.15	13.98
Farming, fishing, and forestry	0.84	0.72	0.77	0.72
Construction, extraction, maintenance, and repair	3.90	12.59	10.22	10.10
Production, transportation, and material moving	30.45	18.45	20.05	22.49
Production	15.68	9.55	9.48	9.09
Transportation and material moving	14.78	8.90	10.57	11.18

SOURCE: Author's calculations using the 2007 American Community Survey.

NOTES: The sum of individual categories may not equal the total because of rounding.

a. The occupational-choice models are based on separate multinomial logit regressions of occupation for each population group.

Covariates in all models include sex, ethnicity, race, marital status, education, age, and age squared. The disabled, work-disabled, and working-SSI models also include disability type as additional covariates. All estimates use ACS balanced repeated replicate sample weights. See Table A-3 for the results of the models.

Table 4.
Estimated occupational distributions of the employed population with disabilities, by occupational-choice model ^a

Occupation	SSI recipients	Non-SSI recipients with—		
		No disability	Any disability	Work disability
Total	100.00	100.00	100.00	100.00
Management, professional, and related	18.46	29.03	25.87	22.70
Management	4.38	9.06	6.94	5.67
Business and financial operations	2.55	3.70	3.15	2.77
Computer and mathematical, architecture and engineering, life, physical and social science	1.23	3.98	3.64	2.73
Community and social services	2.35	1.26	1.71	1.54
Legal	0.45	0.87	0.74	0.64
Education, training, and library	3.36	4.21	4.32	3.91
Arts, design, entertainment, sports, and media	2.27	1.57	1.43	1.60
Health-care practitioner and technical	1.88	4.39	3.93	3.85
Service	27.95	17.21	20.53	22.90
Health-care support	2.17	2.41	2.95	3.08
Protective service	2.00	2.09	2.11	2.05
Food preparation and serving related	6.83	5.00	5.74	6.25
Building and grounds cleaning and maintenance	9.32	4.38	5.80	6.65
Personal care and service	7.63	3.33	3.93	4.88
Sales and office	27.17	26.47	25.54	24.55
Sales and related	10.84	10.98	10.65	10.99
Office and administrative support	16.32	15.49	14.89	13.34
Farming, fishing, and forestry	0.76	0.68	0.73	0.81
Construction, extraction, maintenance, and repair	7.66	11.34	10.92	12.19
Production, transportation, and material moving	18.01	15.28	16.43	17.06
Production	7.15	8.06	8.33	8.08
Transportation and material moving	10.86	7.22	8.09	8.98

SOURCE: Author's calculations using the 2007 American Community Survey.

NOTES: The sum of individual categories may not equal the total because of rounding.

a. The occupational-choice models are based on separate multinomial logit regressions of occupation for each population group. Covariates in all models include sex, ethnicity, race, marital status, education, age, and age squared. The disabled, work-disabled, and working-SSI models also include disability type as additional covariates. All estimates use ACS balanced repeated replicate sample weights. See Table A-3 for the results of the models.

population. Thus, Table 3 shows the predicted occupational distribution the working SSI population would have if their observable characteristics affected their occupational choice in the same manner as the reference population. Note that the predicted occupational distribution of a group based on its own population model is identical to the actual distribution in Table 1, although the standard errors are slightly different.¹⁸

Considering the occupational distributions of the working SSI population (Table 3), fewer SSI recipients would work in service occupations (from 34 percent to 22 percent) and production, transportation, and material moving occupations (from 30 percent to 18 percent) if their occupations were distributed according

to the no-disability occupational-choice model. Additionally, more working SSI recipients would be in construction, extraction, maintenance, and repair occupations (from 4 percent to 13 percent) and management, professional, and related occupations (from 10 percent to 19 percent) under the this model.

Most of the individual occupations see changes of less than 1 percentage point. The largest change is the reduction of SSI recipients working in building and grounds cleaning and maintenance (from 15 percent to 5 percent). The following occupations all see a change of more than 3 percentage points under the no-disability occupational-choice model: management; office and administrative support; construction,

Table 5.
Estimated occupational distributions of the employed population without disabilities, by occupational-choice model ^a

Occupation	SSI recipients	Non-SSI recipients with—		
		No disability	Any disability	Work disability
Total	100.00	100.00	100.00	100.00
Management, professional, and related	21.61	35.62	34.22	29.74
Management	6.32	9.88	8.68	7.41
Business and financial operations	1.64	4.55	4.32	3.55
Computer and mathematical, architecture and engineering, life, physical and social science	1.28	5.45	5.42	4.20
Community and social services	3.14	1.58	1.91	1.64
Legal	0.58	1.17	0.96	0.90
Education, training, and library	3.16	5.84	6.37	5.40
Arts, design, entertainment, sports, and media	2.56	1.92	1.65	1.62
Health-care practitioner and technical	2.94	5.23	4.90	5.01
Service	24.71	15.97	16.83	20.58
Health-care support	1.53	2.20	2.81	3.29
Protective service	1.69	2.10	1.73	2.08
Food preparation and serving related	7.13	4.99	5.02	5.66
Building and grounds cleaning and maintenance	8.09	3.58	4.12	5.11
Personal care and service	6.27	3.10	3.14	4.46
Sales and office	30.47	25.15	25.27	23.61
Sales and related	11.37	11.00	10.69	11.11
Office and administrative support	19.09	14.15	14.59	12.50
Farming, fishing, and forestry	0.52	0.67	0.71	0.85
Construction, extraction, maintenance, and repair	8.47	10.02	9.17	10.18
Production, transportation, and material moving	14.22	12.57	13.80	15.04
Production	5.10	6.64	7.22	7.35
Transportation and material moving	9.12	5.94	6.57	7.70

SOURCE: Author's calculations using the 2007 American Community Survey.

NOTES: The sum of individual categories may not equal the total because of rounding.

- a. The occupational-choice models are based on separate multinomial logit regressions of occupation for each population group. Covariates in all models include sex, ethnicity, race, marital status, education, age, and age squared. The disabled, work-disabled, and working-SSI models also include disability type as additional covariates. All estimates use ACS balanced repeated replicate sample weights. See Table A-3 for the results of the models.

extraction, maintenance and repair; production; and transportation and material moving.

Similar movements occur under the disability and work-related disability occupational-choice models, which yield similar results. For example, the percentage of working SSI recipients in management, professional, and related occupations increases from 9 percent to about 15 percent under these models, and the percentage in production, transportation, and material moving occupations falls from 30 percent to about 20–22 percent under these models.

Tables 4, 5, and 6 present similar estimates for the populations with any disability, no disability, and a work disability, respectively.¹⁹ Because this article is

focused on the SSI population, only the differences between the actual distributions and the working-SSI model are discussed here. As would be expected, when the working-SSI model is used to predict occupational distributions, the reverse of what was seen in Table 3 occurs. For example, the percentage of those with disabilities in management, professional, and related occupations falls from 26 percent to 18 percent (Table 4). Similarly, the decrease in the percentage in these occupations under the working SSI occupational-choice model is from 36 percent to 22 percent for the population without a disability (Table 5) and 23 percent to 20 percent for the population with a work disability (Table 6).

Table 6.
Estimated occupational distributions of the employed population with work disabilities, by occupational-choice model ^a

Occupation	SSI recipients	Non-SSI recipients with—		
		No disability	Any disability	Work disability
Total	100.00	100.00	100.00	100.00
Management, professional, and related	20.10	28.56	23.48	23.48
Management	3.60	8.93	5.86	5.86
Business and financial operations	2.49	3.67	3.03	3.03
Computer and mathematical, architecture and engineering, life, physical and social science	1.01	3.85	2.93	2.93
Community and social services	1.33	1.25	1.56	1.56
Legal	0.54	0.85	0.67	0.67
Education, training, and library	4.25	4.11	3.78	3.78
Arts, design, entertainment, sports, and media	3.96	1.53	1.53	1.53
Health-care practitioner and technical	2.93	4.37	4.12	4.12
Service	30.05	17.39	22.76	22.76
Health-care support	2.39	2.49	3.22	3.22
Protective service	1.75	2.08	2.26	2.26
Food preparation and serving related	5.53	4.97	6.20	6.20
Building and grounds cleaning and maintenance	10.67	4.46	6.49	6.49
Personal care and service	9.72	3.38	4.60	4.60
Sales and office	23.07	26.47	24.44	24.47
Sales and related	7.92	10.84	10.65	10.65
Office and administrative support	15.15	15.63	13.79	13.79
Farming, fishing, and forestry	0.49	0.67	0.75	0.75
Construction, extraction, maintenance, and repair	5.21	11.33	11.22	11.22
Production, transportation, and material moving	21.07	15.58	17.36	17.36
Production	8.29	8.23	8.33	8.33
Transportation and material moving	12.77	7.35	9.03	9.03

SOURCE: Author's calculations using the 2007 American Community Survey.

NOTES: The sum of individual categories may not equal the total because of rounding.

- a. The occupational-choice models are based on separate multinomial logit regressions of occupation for each population group. Covariates in all models include sex, ethnicity, race, marital status, education, age, and age squared. The disabled, work-disabled, and working-SSI models also include disability type as additional covariates. All estimates use ACS balanced repeated replicate sample weights. See Table A-3 for the results of the models.

There is an increase in the percent of these populations in service occupations under the working-SSI model—21 percent to 28 percent for those with a disability (Table 4), 16 percent to 25 percent for those without a disability (Table 5), and 23 percent to 30 percent for those with a work disability (Table 6). This is largely due to increases in the percentage working in building and grounds cleaning and maintenance occupations. Construction, extraction, maintenance, and repair occupations also see large declines, as would be expected given the results in Table 3.

The concentration of predicted occupations somewhat follows that of the actual occupations (Table 7, panel A). The working SSI recipient occupational-

choice model yields the highest concentration of occupations for all groups. Additionally, under each model, working SSI recipients have the highest HHI, reflecting more concentrated distributions. The occupational concentrations are not lowest under the no-disability occupational-choice model, as might be expected, although people without disabilities have the lowest concentrations under each model, other than the working SSI recipient model. However, all three nonrecipient models yield similar HHI values.

Controlling for demographic characteristics, human capital, and disability type greatly reduces the dissimilarity between the distributions of the various groups (Table 7, panel B). Compared with Table 2, the

Table 7.**Predicted Herfindahl-Hirschman and occupational dissimilarity indices of the employed population under alternative occupational-choice models**

Estimated population	SSI recipient model	Non-SSI recipient models with—		
		No disability	Any disability	Work disability
Panel A: Herfindahl-Hirschman index				
SSI recipients	1,089.90	898.38	865.27	876.76
Non-SSI recipients				
No disability	915.44	774.93	765.34	735.94
Any disability	865.66	825.35	795.82	797.31
Work disability	863.78	827.50	786.49	786.49
Panel B: Dissimilarity index of comparison group and model				
SSI recipients	0.00	16.70	12.14	10.44
Non-SSI recipients				
No disability	25.82	0.00	8.40	6.89
Any disability	20.66	6.61	0.00	2.07
Work disability	18.83	7.24	3.77	0.00

SOURCE: Author's calculations using the 2007 American Community Survey.

NOTE: Herfindahl-Hirschman indices are calculated for each row group's estimated distribution under the column group's occupational-choice model. Dissimilarity indices are calculated between the estimated distribution of the row group under the model based on the column group and the column group's actual distribution. This is the proportion of the two groups that would need to change occupations for there to be parity between the occupational distributions of the two groups.

differences between the occupational distributions of each of the control populations and the SSI population are halved. Only 17 percent of the population would need to change occupations to equalize the distributions of those receiving SSI and those without a disability under the no-disability model. Under the disability and work-disability models, the difference is even smaller (12 percent and 10 percent of the population, respectively). Under the working SSI recipient model, the difference between the working SSI population and each group is larger than under the other models, and the difference from the actual distribution is much smaller for each group.

Predicted Occupations of Unemployed SSI Recipients

Although the above results present the current occupational distributions and how much any differences can be explained away by demographic characteristics, human capital, and disability type, much of SSA's interest in return to work is in getting those *not* employed into the labor force and employed. Estimates of the occupations the unemployed and non-labor force participant (non-LFP) SSI recipients would have if they were employed under each of the models above are presented in Tables 8 and 9, respectively. These

estimates do not consider any effect the return to work would have on the larger distribution of occupations or for selection into the labor force. As a result, these estimates may under or overstate the proportion of recipients in each occupational group.

The predicted occupations of unemployed and non-LFP SSI recipients are very similar to those of working SSI recipients under any occupational-choice model (see Table 3 for comparison). For the unemployed SSI population, the most common predicted occupations are in office and administrative support (14 percent to 16 percent); sales and related occupations (about 11 percent); and construction, extraction, maintenance, and repair occupations (10 percent to 12 percent). Non-LFP SSI recipients are also well represented in these occupations. As with the working SSI population, many unemployed and non-LFP SSI recipients are predicted to work in building and grounds cleaning and maintenance or food preparation and serving-related occupations. In fact, service occupations comprise about 30 percent of predicted occupations in all but the no-disability occupational-choice model for both groups.

The HHI values for the predicted occupational distributions are similar to those of the working SSI population reported in Table 7 (see Table 10,

Table 8.
Estimated occupational distributions of unemployed SSI recipients, by occupational-choice model ^a

Occupation	SSI recipients	Non-SSI recipients with—		
		No disability	Any disability	Work disability
Total	100.00	100.00	100.00	100.00
Management, professional, and related	10.84	19.70	15.67	15.04
Management	1.84	6.28	4.12	4.20
Business and financial operations	1.48	2.65	1.82	1.75
Computer and mathematical, architecture and engineering, life, physical and social science	0.25	2.79	2.17	1.92
Community and social services	1.78	0.88	1.16	1.11
Legal	0.37	0.52	0.45	0.47
Education, training, and library	2.11	2.44	2.31	2.13
Arts, design, entertainment, sports, and media	1.71	1.34	1.26	1.20
Health-care practitioner and technical	1.31	2.80	2.38	2.25
Service	34.33	22.73	29.21	30.01
Health-care support	2.00	3.19	3.71	3.43
Protective service	1.39	2.15	2.21	2.19
Food preparation and serving related	9.82	8.25	10.23	10.21
Building and grounds cleaning and maintenance	14.34	4.96	7.90	8.79
Personal care and service	6.79	4.18	5.17	5.39
Sales and office	23.51	27.28	24.67	24.34
Sales and related	9.62	11.41	10.96	10.71
Office and administrative support	13.88	15.87	13.71	13.62
Farming, fishing, and forestry	1.00	0.74	0.81	0.75
Construction, extraction, maintenance, and repair	4.54	12.15	10.71	10.37
Production, transportation, and material moving	25.78	17.40	18.92	19.50
Production	11.49	8.94	8.82	8.69
Transportation and material moving	14.29	8.47	10.10	10.81

SOURCE: Author's calculations using the 2007 American Community Survey.

NOTES: The sum of individual categories may not equal the total because of rounding.

- a. The occupational-choice models are based on separate multinomial logit regressions of occupation for each population group. Covariates in all models include sex, ethnicity, race, marital status, education, age, and age squared. The disabled, work-disabled, and working-SSI models also include disability type as additional covariates. All estimates use ACS balanced repeated replicate sample weights. See Table A-3 for the results of the models.

panel A). If currently unemployed or non-LFP SSI recipients were placed in occupations according to the occupational distribution of currently employed SSI recipients, the difference between the groups would be minimal. Only about 5 percent of the population would need to change occupations for parity (Table 10, panel B).

About 16 percent of the population would have to change occupations for unemployed SSI recipients and nonrecipients without a disability to reach occupational parity; similarly, 17 percent of non-LFP SSI recipients and nonrecipients without a disability would have to change occupations. Surprisingly, the differences between the distributions of unemployed recipients and

nonrecipients with any disability or a work-related disability are slightly smaller than those between working recipients and unemployed recipients.

Discussion

There are several reasons why differences between the occupational distributions of the groups do not disappear when controlling for observable demographic characteristics, human capital, and disability type. First, the working-age SSI population is composed of low-income individuals with a disability defined to be severe and work limiting. It is unlikely that these individuals are physically, cognitively, or mentally capable of all the occupations available to the nondisabled or

Table 9.
Estimated occupational distributions of non-labor force participant SSI recipients, by occupational-choice model ^a

Occupation	SSI recipients	Non-SSI recipients with—		
		No disability	Any disability	Work disability
Total	100.00	100.00	100.00	100.00
Management, professional, and related	10.16	18.58	14.44	14.56
Management	1.54	6.64	4.03	4.16
Business and financial operations	1.71	2.48	1.83	1.91
Computer and mathematical, architecture and engineering, life, physical and social science	0.20	2.02	1.57	1.52
Community and social services	1.26	0.83	1.03	1.08
Legal	0.43	0.46	0.39	0.36
Education, training, and library	2.41	2.29	1.99	1.93
Arts, design, entertainment, sports, and media	1.34	1.10	1.04	1.14
Health-care practitioner and technical	1.27	2.77	2.55	2.44
Service	34.97	22.32	30.46	30.45
Health-care support	2.70	3.36	4.01	3.74
Protective service	1.38	1.77	2.17	2.16
Food preparation and serving related	7.68	6.54	8.63	8.77
Building and grounds cleaning and maintenance	14.77	6.25	9.71	9.78
Personal care and service	8.44	4.40	5.95	6.00
Sales and office	20.57	28.99	24.81	25.13
Sales and related	8.02	10.90	10.03	10.33
Office and administrative support	12.55	18.09	14.79	14.80
Farming, fishing, and forestry	0.50	0.73	0.76	0.72
Construction, extraction, maintenance, and repair	3.30	10.82	9.52	9.58
Production, transportation, and material moving	30.50	18.56	20.01	19.57
Production	14.98	9.93	9.71	9.53
Transportation and material moving	15.52	8.63	10.30	10.04

SOURCE: Author's calculations using the 2007 American Community Survey.

NOTES: The sum of individual categories may not equal the total because of rounding.

a. The occupational-choice models are based on separate multinomial logit regressions of occupation for each population group.

Covariates in all models include sex, ethnicity, race, marital status, education, age, and age squared. The disabled, work-disabled, and working-SSI models also include disability type as additional covariates. All estimates use ACS balanced repeated replicate sample weights. See Table A-3 for the results of the models.

disabled nonrecipient populations. For example, one of the largest changes under the no-disability model would place almost 9 percent more individuals in construction occupations, which many SSI recipients simply would not be able to do. Additionally, some recipients' occupational choices may also be constrained by an inability to work full time. Over 70 percent of working SSI recipients work part time, compared with 17 percent of the population without a disability (Table A-2). Section 1619(b) may ease the transition from SSI to full-time employment, but its effect is not clear.

Second, SSI is a means-tested income support program; therefore occupations that traditionally

have high wages and salaries, such as most management and professional occupations, will never have large numbers of SSI recipients. Workers in those occupations typically earn more than an individual can earn under SSI regulations while still receiving SSI payments. However, it is unlikely that many SSI recipients would be able to obtain these occupations given the average SSI recipient's level of education and work history.

Third, the models, although similar to other models of occupational choice, are parsimonious and most likely suffer from some form of omitted variable(s) bias, which may bias the predictions. Similarly, many observed variables were not included in the model

Table 10.**Predicted Herfindahl-Hirschman and occupational dissimilarity indices of the unemployed and non-labor force participant SSI recipient populations under alternative occupational-choice models**

Estimated population	SSI recipients	Non-SSI recipients with—		
		No disability	Any disability	Work disability
Panel A: Herfindahl-Hirschman index				
Unemployed SSI recipients	1015.32	877.41	854.88	864.79
Non-labor force participant SSI recipients	1072.12	921.67	870.51	872.37
Panel B: Dissimilarity index				
Unemployed SSI recipients	4.88	15.91	11.58	9.52
Non-labor force participant SSI recipients	5.39	17.47	13.54	11.00

SOURCE: Author's calculations using the 2007 American Community Survey using balanced repeated replicate sample weights.

NOTE: Herfindahl-Hirschman indices are calculated for each row group's estimated distribution under the column group's occupational-choice model. Dissimilarity indices are calculated between the estimated distribution of the row group under the model based on the column group and the column group's actual distribution. This is the proportion of the two groups that would need to change occupations for there to be parity between the occupational distributions of the two groups.

because they are endogenous to the occupational decision. For example, 11 percent of the working SSI sample reside in group homes, which may impose a limit on potential occupations if they focus on certain activities or do not allow employment outside the group home. Additionally, 25 percent of SSI recipients in the sample are employees of a private nonprofit, tax-exempt, or charitable organization (almost four times the percentage of individuals without disabilities), which may indicate sheltered workshops (Table A-2).

The results suggest that nonrecipients with any disability or a work-related disability have occupational distributions very similar to those of nonrecipients without disabilities, controlling for demographic characteristics and human capital. This suggests that factors unique to SSI recipients that are not included in the model explain much of the difference.

In addition to the severity of the disability, policy factors—such as the reduction in payments for SSI recipients who work—may constrain the occupational choices of beneficiaries. Even though there are incentives to employment that would ensure the continued receipt of Medicaid, some beneficiaries may be confused by the program rules. Studies have repeatedly shown that beneficiaries are largely unaware of the work incentives associated with SSA's disability programs (for example, Hennessey and Muller (1995) for DI and Loprest and Wittenburg (2005) for SSI).

SSA has extensive work incentives for SSI recipients and has expressed a desire to help recipients return to work. Even though disability advocates suggest that

help should be given to all who are willing to work, the form of that help and the final outcome expected needs to be weighed against what can realistically be expected. Table 11 shows the average annual wages of individuals in each occupation for each population group. The wages of individuals in the occupations in which SSI recipients are commonly employed are very low, even among nonrecipients. In fact, the wages of SSI recipients in the most common single occupation group (production) is, on average, lower than the level required for the SSI federal payment plus the state supplement to be reduced to zero in any state (SSA 2008b). Placing individuals in these occupations may not remove them from the SSI rolls, or may only remove them temporarily. Training and work incentives more closely aligned with occupations that are realistically attainable, but offer higher pay, may lead to better success in removing recipients from the rolls.

Conclusion

This article suggests a large difference in the occupational distributions of SSI recipients compared with nonrecipients with and without disabilities. Controlling for demographic characteristics, human capital, and disability type eliminates much of this difference, however a large gap remains. The low dissimilarity indices between the predicted occupations of unemployed and non-LFP SSI recipients and the actual occupations of working SSI recipients suggest these individuals have similar job prospects as the currently employed. It is not clear if the return-to-work efforts

Table 11.
Average annual wages of working individuals, by occupation and population group

Occupation	SSI recipients		Non-SSI recipients with—					
			No disability		Any disability		Work disability	
	Mean	Standard error	Mean	Standard error	Mean	Standard error	Mean	Standard error
Management, professional, and related								
Management	31,484	6,415	74,479	266	52,146	843	42,761	1,593
Business and financial operations	25,932	5,548	60,669	306	46,443	1,113	38,067	1,467
Computer and mathematical, architecture and engineering, life, physical and social science	28,324	7,715	65,865	210	56,446	1,074	47,661	1,489
Community and social services	14,225	1,752	36,320	158	32,802	712	29,443	1,290
Legal	29,695	10,387	86,667	1,003	55,220	2,875	46,582	5,267
Education, training, and library	15,868	2,981	37,154	118	33,749	543	30,240	1,238
Arts, design, entertainment, sports, and media	8,685	2,373	38,186	396	26,305	894	18,667	1,890
Health-care practitioner and technical	26,437	5,930	62,161	282	47,233	1,059	43,125	1,821
Service								
Health-care support	10,883	1,831	21,685	122	19,405	352	18,295	671
Protective service	12,225	2,412	45,534	199	33,292	700	31,084	1,650
Food preparation and serving related	5,902	480	15,757	74	13,456	347	12,592	491
Building and grounds cleaning and maintenance	6,688	463	18,882	120	16,291	378	12,598	382
Personal care and service	6,642	778	15,228	122	12,758	345	10,143	643
Sales and office								
Sales and related	11,155	1,751	40,959	188	27,981	598	22,729	1,022
Office and administrative support	11,425	829	29,586	60	26,705	231	23,514	499
Farming, fishing, and forestry	6,889	2,888	19,964	286	18,216	792	17,435	1,822
Construction, extraction, maintenance, and repair	16,737	2,314	34,129	94	30,352	355	25,810	592
Production, transportation, and material moving								
Production	12,023	691	32,936	104	28,962	356	24,909	565
Transportation and material moving	9,286	798	31,210	119	25,460	354	22,653	594

SOURCE: Author's calculations using the 2007 American Community Survey using balanced repeated replicate sample weights.

SSA is currently implementing will result in improved outcomes for these individuals or result in more program exits for the reasons previously discussed. Targeting training toward occupations in building and grounds cleaning and maintenance or food preparation and serving-related work or partnering with large corporations, which utilize these jobs, may yield more immediate employment results for SSI recipients, but not program exits.

The model used to predict the occupations of the currently unemployed is not complete, and future studies should look into developing a model that controls for selection in the decisions to receive SSI and work. Particularly, variables (such as part-time status and type of employment) were not included in the model because they are endogenous and would bias the results because certain occupations have more

part-time opportunities and some individuals may be limited in their ability or desire to work full time. Future work should consider more rigorous methods of controlling for these factors. Additionally, a match between the ACS and SSA administrative records would more accurately identify the population of interest and would enable an expansion of the analysis to the much larger DI program covered under Social Security. This would also allow an analysis of Section 1619(b) participants, who only receive Medicaid coverage, to determine if their employment opportunities differ from those receiving SSI payments. Finally, it may be useful to compare the current distribution with distributions in earlier years, particularly using data from the 2000 Decennial Census, to determine whether the employment opportunities available to SSI recipients are declining or improving.

Appendix

Table A-1.
Standard occupational classification code groupings

Occupation	Code range	
	Lowest	Highest
Management, professional, and related		
Management	0010	0430
Business and financial operations	0500	0950
Computer and mathematical, architecture and engineering, life, physical and social science	1000	1960
Community and social services	2000	2060
Legal	2100	2150
Education, training, and library	2200	2550
Arts, design, entertainment, sports, and media	2600	2920
Health-care practitioner and technical	3000	3540
Service		
Health-care support	3600	3650
Protective service	3700	3950
Food preparation and serving related	4000	4150
Building and grounds cleaning and maintenance	4200	4250
Personal care and service	4300	4650
Sales and office		
Sales and related	4700	4960
Office and administrative support	5000	5930
Farming, fishing, and forestry	6000	6130
Construction, extraction, maintenance, and repair	6200	7620
Production, transportation, and material moving		
Production	7700	8960
Transportation and material moving	9000	9750

SOURCE: 2000 *Standard Occupational Classification Manual*, Bureau of Labor Statistics.

NOTE: See SOC Manual for information on codes.

Table A-2.
Means and standard errors of variables used in multinomial logit estimation

Variable	SSI recipients						Non-SSI recipients with—					
	Working SSI		Unemployed SSI		Non-LFP SSI		No disability		Any disability		Work disability	
	Mean	Standard error	Mean	Standard error	Mean	Standard error	Mean	Standard error	Mean	Standard error	Mean	Standard error
Male	0.52	0.01	0.53	0.02	0.44	0.00	0.53	0.00	0.54	0.00	0.53	0.00
Hispanic	0.08	0.01	0.09	0.01	0.11	0.00	0.15	0.00	0.12	0.00	0.12	0.00
White	0.71	0.01	0.64	0.02	0.66	0.00	0.76	0.00	0.76	0.00	0.74	0.00
Married	0.17	0.01	0.15	0.01	0.22	0.00	0.56	0.00	0.50	0.00	0.48	0.00
Some college	0.20	0.01	0.23	0.02	0.19	0.00	0.31	0.00	0.34	0.00	0.32	0.00
College	0.07	0.01	0.09	0.01	0.05	0.00	0.31	0.00	0.18	0.00	0.17	0.00
Age	39.20	0.30	36.84	0.46	45.24	0.08	39.24	0.01	43.44	0.06	43.67	0.11
Self-care	0.19	0.01	0.12	0.02	0.30	0.00	0.00	0.00	0.07	0.00	0.19	0.00
Sensory	0.18	0.01	0.19	0.02	0.19	0.00	0.00	0.00	0.29	0.00	0.12	0.00
Go outside home	0.43	0.01	0.25	0.02	0.46	0.00	0.00	0.00	0.10	0.00	0.29	0.00
Physical	0.42	0.01	0.36	0.02	0.63	0.00	0.00	0.00	0.51	0.00	0.55	0.00
Mental	0.64	0.01	0.57	0.02	0.56	0.00	0.00	0.00	0.28	0.00	0.29	0.00
Employment	0.55	0.01	0.61	0.02	0.86	0.00	0.00	0.00	0.25	0.00	1.00	0.00
Nonprofit-type employment	0.25	0.01	...	...	...	...	0.07	0.00	0.07	0.00	0.07	0.00
Part-time employment	0.71	0.01	...	...	...	...	0.17	0.00	0.22	0.00	0.31	0.00
Noninstitutional group home	0.11	0.01	0.03	0.01	0.05	0.00	0.01	0.00	0.01	0.00	0.01	0.00
N	2,745		861		31,009		1,180,588		72,686		18,414	
Weighted N	311,838		101,191		3,387,226		123,408,821		7,432,897		1,852,399	

SOURCE: Author's calculations using the 2007 American Community Survey using balanced repeated replicate sample weights.

NOTE: ... = not applicable.

Table A-3.
Coefficients and standard errors from multinomial logit estimations of occupational choice

Occupation and variable	SSI recipients		Non-SSI recipients with—					
			No disability		Any disability		Work disability	
	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
Management								
Male	0.68	0.34	1.40	0.01	1.30	0.04	1.33	0.10
Hispanic	-0.12	0.67	-0.19	0.02	-0.20	0.08	-0.24	0.17
White	-0.33	0.40	0.38	0.01	0.28	0.06	0.26	0.11
Married	0.55	0.39	0.28	0.01	0.26	0.04	0.17	0.09
Some college	0.28	0.40	0.13	0.01	0.01	0.05	-0.03	0.11
College	1.87	0.47	1.50	0.01	1.21	0.06	1.06	0.12
Age	0.09	0.10	0.19	0.00	0.15	0.02	0.10	0.03
Age squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self-care	-0.68	0.46	-5.98	0.07	0.16	0.09	0.23	0.12
Sensory	-0.15	0.45	...	...	0.04	0.06	-0.08	0.15
Go outside home	-0.59	0.41	...	...	-0.14	0.08	-0.06	0.10
Physical	0.40	0.39	...	...	-0.09	0.06	-0.19	0.10
Mental	-0.64	0.42	...	...	-0.25	0.06	-0.31	0.11
Employment	0.12	0.38	...	...	-0.08	0.06	...	...
Constant	-4.60	2.08	-0.79	0.08	-5.20	0.34	-4.07	0.75
Business and financial operations								
Male	0.43	0.40	0.66	0.01	0.46	0.06	0.39	0.12
Hispanic	-0.12	0.66	-0.19	0.02	-0.16	0.12	-0.29	0.26
White	0.06	0.45	0.07	0.02	0.14	0.07	0.19	0.14
Married	-0.25	0.43	0.13	0.01	0.27	0.06	0.20	0.12
Some college	0.17	0.50	0.61	0.02	0.67	0.08	0.82	0.15
College	2.37	0.58	2.34	0.02	2.16	0.08	2.21	0.16
Age	0.11	0.13	0.12	0.00	0.11	0.02	0.07	0.04
Age squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self-care	0.10	0.44	-4.91	0.08	0.15	0.11	0.24	0.16
Sensory	1.08	0.43	...	...	-0.10	0.07	-0.22	0.23
Go outside home	0.24	0.38	...	...	0.10	0.10	0.15	0.13
Physical	0.71	0.41	...	...	-0.10	0.07	-0.10	0.12
Mental	-0.19	0.43	...	...	-0.25	0.07	-0.18	0.13
Employment	0.21	0.46	...	...	-0.03	0.07	...	...
Constant	-6.56	2.83	0.39	0.09	-5.10	0.42	-4.74	0.90
Computer and mathematical, architecture and engineering, life, physical and social science								
Male	2.17	0.96	1.93	0.01	1.84	0.06	1.58	0.12
Hispanic	0.52	1.36	-0.48	0.02	-0.28	0.11	-0.35	0.25
White	-0.29	0.98	-0.09	0.01	0.17	0.07	0.16	0.14
Married	3.01	1.11	0.19	0.01	0.18	0.06	0.16	0.12
Some college	-0.16	1.47	0.96	0.02	1.04	0.08	1.04	0.19
College	4.49	1.01	2.70	0.02	2.36	0.09	2.36	0.19
Age	-0.33	0.25	0.12	0.00	0.15	0.02	0.12	0.05
Age squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self-care	-1.65	1.36	...	...	0.19	0.11	0.34	0.17
Sensory	1.60	0.69	...	...	-0.07	0.07	-0.14	0.21
Go outside home	0.11	1.05	...	...	0.12	0.10	0.15	0.13
Physical	0.10	0.78	...	...	-0.09	0.07	-0.25	0.13
Mental	0.78	0.60	...	...	-0.09	0.07	-0.23	0.13
Employment	0.76	0.87	...	...	-0.24	0.07	...	...
Constant	-1.97	4.31	-5.43	0.08	-6.39	0.40	-5.78	0.96

(Continued)

Table A-3.
Coefficients and standard errors from multinomial logit estimations of occupational choice—Continued

Occupation and variable	SSI recipients		Non-SSI recipients with—					
			No disability		Any disability		Work disability	
	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
Community and social services								
Male	0.25	0.41	0.32	0.02	0.41	0.08	0.37	0.16
Hispanic	-1.00	0.71	0.04	0.03	0.12	0.13	0.37	0.27
White	-0.75	0.46	-0.34	0.02	-0.51	0.09	-0.45	0.18
Married	-0.71	0.45	0.04	0.02	-0.02	0.08	-0.22	0.15
Some college	-0.48	0.48	0.56	0.04	0.58	0.12	0.50	0.24
College	1.43	0.52	2.77	0.03	2.58	0.11	2.43	0.23
Age	0.29	0.13	0.02	0.01	0.04	0.02	0.07	0.06
Age squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self-care	-0.10	0.52	...	...	0.08	0.16	0.13	0.20
Sensory	0.66	0.47	...	...	0.11	0.10	0.09	0.26
Go outside home	0.30	0.42	...	...	-0.13	0.14	-0.02	0.17
Physical	-0.37	0.43	...	...	0.16	0.10	0.25	0.18
Mental	-0.18	0.35	...	...	0.14	0.09	-0.17	0.16
Employment	-0.50	0.43	...	...	-0.02	0.10	...	...
Constant	-7.50	2.46	-4.00	0.13	-4.17	0.52	-4.76	1.20
Legal								
Male	-1.05	0.79	0.72	0.02	0.25	0.11	0.12	0.21
Hispanic	-29.97	0.55	-0.07	0.04	-0.45	0.23	-0.96	0.54
White	-0.61	0.69	0.53	0.03	0.49	0.16	0.16	0.26
Married	-0.08	0.89	0.09	0.02	0.03	0.11	-0.11	0.22
Some college	-30.54	0.60	0.81	0.05	0.84	0.20	1.25	0.42
College	1.22	0.82	3.15	0.04	2.91	0.19	3.25	0.40
Age	-0.02	0.24	0.14	0.01	0.15	0.04	0.09	0.09
Age squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self-care	0.85	1.10	...	...	0.05	0.19	0.23	0.26
Sensory	0.48	0.88	...	...	0.04	0.14	-0.21	0.36
Go outside home	-0.56	0.46	...	...	0.13	0.21	-0.06	0.22
Physical	-0.20	1.15	...	...	-0.05	0.13	-0.10	0.22
Mental	-0.66	0.56	...	...	0.13	0.14	0.17	0.22
Employment	0.48	0.68	...	...	-0.09	0.14	...	...
Constant	-2.56	4.82	-7.95	0.16	-8.04	0.91	-6.54	1.93
Education, training, and library								
Male	-0.80	0.36	-0.22	0.01	-0.28	0.06	-0.21	0.12
Hispanic	-0.50	0.58	0.01	0.02	0.02	0.09	-0.02	0.21
White	-0.42	0.39	0.23	0.02	0.02	0.06	0.13	0.13
Married	-0.08	0.36	0.32	0.01	0.26	0.05	0.19	0.11
Some college	1.01	0.46	0.56	0.02	0.55	0.08	0.61	0.17
College	2.74	0.51	3.13	0.02	2.97	0.08	3.00	0.16
Age	0.19	0.13	-0.03	0.00	-0.01	0.02	-0.06	0.04
Age squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self-care	-0.12	0.45	...	...	0.21	0.10	0.45	0.15
Sensory	0.12	0.52	...	...	0.02	0.07	0.24	0.18
Go outside home	-0.02	0.41	...	...	-0.15	0.09	-0.11	0.12
Physical	0.43	0.38	...	...	-0.04	0.07	0.02	0.12
Mental	-0.21	0.37	...	...	-0.06	0.07	-0.35	0.12
Employment	0.53	0.35	...	...	-0.09	0.07	...	...
Constant	-7.41	2.68	-2.37	0.08	-2.35	0.36	-1.60	0.85

(Continued)

Table A-3.
Coefficients and standard errors from multinomial logit estimations of occupational choice—Continued

Occupation and variable	SSI recipients		Non-SSI recipients with—					
	Coefficient	Standard error	No disability		Any disability		Work disability	
			Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
Arts, design, entertainment, sports, and media								
Male	1.19	0.40	1.06	0.02	1.04	0.08	0.95	0.15
Hispanic	0.23	0.79	-0.08	0.03	-0.06	0.15	-0.03	0.30
White	-0.93	0.49	0.43	0.02	0.23	0.11	0.33	0.21
Married	0.82	0.54	-0.26	0.02	-0.14	0.08	-0.14	0.15
Some college	-1.54	0.59	0.61	0.03	0.59	0.11	0.76	0.20
College	1.93	0.52	2.13	0.03	1.87	0.11	1.67	0.21
Age	0.27	0.14	0.05	0.01	0.02	0.03	0.04	0.05
Age squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self-care	-0.87	0.77	...	...	0.04	0.15	0.12	0.21
Sensory	0.65	0.56	...	...	0.06	0.11	0.42	0.24
Go outside home	-1.39	0.63	...	...	0.04	0.14	0.09	0.16
Physical	-0.10	0.47	...	...	-0.05	0.10	-0.16	0.16
Mental	-0.06	0.46	...	...	0.13	0.10	-0.06	0.16
Employment	1.58	0.50	...	...	0.20	0.10	...	...
Constant	-8.76	2.98	-4.31	0.11	-3.81	0.50	-4.63	1.04
Health-care practitioner and technical								
Male	-0.84	0.53	-0.21	0.01	-0.46	0.06	-0.59	0.12
Hispanic	0.33	0.75	-0.46	0.02	-0.29	0.11	-0.38	0.21
White	-0.65	0.46	-0.02	0.01	0.04	0.06	-0.05	0.12
Married	0.31	0.45	0.29	0.01	0.23	0.05	0.15	0.10
Some college	0.22	0.54	1.42	0.02	1.12	0.08	1.36	0.15
College	2.00	0.61	2.71	0.02	2.32	0.08	2.53	0.16
Age	0.21	0.20	0.11	0.00	0.11	0.02	0.12	0.04
Age squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self-care	-1.34	0.71	...	...	0.14	0.10	0.32	0.13
Sensory	-1.03	0.74	...	...	-0.08	0.07	-0.11	0.18
Go outside home	-0.95	0.67	...	...	-0.02	0.09	0.05	0.11
Physical	-0.01	0.53	...	...	-0.08	0.06	-0.05	0.11
Mental	-0.26	0.48	...	...	-0.20	0.07	-0.54	0.12
Employment	0.94	0.45	...	...	0.11	0.06	...	...
Constant	-7.17	4.28	-4.82	0.08	-4.81	0.39	-5.13	0.84
Health-care support								
Male	-1.27	0.41	-0.93	0.03	-0.93	0.08	-0.97	0.15
Hispanic	-0.71	0.76	-0.21	0.03	0.07	0.10	0.12	0.20
White	-1.13	0.38	-0.58	0.02	-0.55	0.07	-0.24	0.13
Married	0.05	0.35	-0.10	0.02	-0.06	0.06	-0.21	0.12
Some college	-0.67	0.41	-0.17	0.02	-0.38	0.06	-0.33	0.12
College	-1.00	0.89	-0.68	0.03	-0.55	0.11	-0.35	0.19
Age	0.11	0.13	0.04	0.00	0.04	0.02	0.05	0.03
Age squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self-care	0.78	0.57	...	...	0.02	0.12	0.09	0.18
Sensory	0.47	0.46	...	...	-0.07	0.08	-0.12	0.21
Go outside home	-1.54	0.51	...	...	-0.20	0.10	-0.15	0.13
Physical	-0.12	0.36	...	...	-0.09	0.07	-0.04	0.13
Mental	0.11	0.39	...	...	0.11	0.07	-0.36	0.13
Employment	0.47	0.38	...	...	0.23	0.07	...	...
Constant	-4.06	2.71	-1.59	0.09	-1.46	0.36	-1.39	0.67

(Continued)

Table A-3.
Coefficients and standard errors from multinomial logit estimations of occupational choice—Continued

Occupation and variable	SSI recipients		Non-SSI recipients with—					
	Coefficient	Standard error	No disability		Any disability		Work disability	
			Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
Protective service								
Male	1.07	0.42	2.32	0.02	1.98	0.08	1.91	0.15
Hispanic	-1.26	0.80	-0.20	0.03	-0.13	0.13	-0.06	0.24
White	-0.89	0.42	-0.23	0.02	-0.44	0.08	-0.27	0.16
Married	0.29	0.43	0.07	0.02	0.01	0.07	-0.08	0.14
Some college	0.14	0.42	0.24	0.02	-0.21	0.08	-0.06	0.15
College	-0.04	0.91	0.29	0.02	-0.16	0.10	-0.15	0.21
Age	0.13	0.14	0.13	0.01	0.06	0.02	0.10	0.04
Age squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self-care	0.04	0.69	...	...	0.19	0.14	0.67	0.20
Sensory	-0.14	0.49	...	...	0.15	0.09	-0.03	0.22
Go outside home	-0.52	0.72	...	...	-0.27	0.13	-0.21	0.16
Physical	0.31	0.37	...	...	0.11	0.09	-0.10	0.17
Mental	0.33	0.46	...	...	0.14	0.09	-0.18	0.16
Employment	-0.06	0.43	...	...	0.26	0.08	...	...
Constant	-5.59	2.65	-5.30	0.11	-3.92	0.45	-4.45	0.89
Food preparation and serving related								
Male	0.11	0.20	0.79	0.01	0.57	0.05	0.35	0.10
Hispanic	-0.28	0.34	0.41	0.02	0.41	0.07	0.28	0.14
White	-0.39	0.23	-0.08	0.02	-0.20	0.06	0.04	0.11
Married	-0.44	0.27	-0.44	0.01	-0.46	0.05	-0.41	0.10
Some college	-1.36	0.27	-0.78	0.01	-1.07	0.05	-1.09	0.10
College	-1.63	0.54	-1.05	0.02	-1.12	0.10	-1.29	0.19
Age	0.05	0.06	-0.10	0.00	-0.07	0.01	-0.05	0.03
Age squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self-care	-0.66	0.31	...	...	-0.06	0.10	0.12	0.13
Sensory	-0.40	0.28	...	...	0.11	0.07	0.40	0.16
Go outside home	0.15	0.26	...	...	-0.10	0.08	-0.05	0.10
Physical	-0.03	0.23	...	...	-0.01	0.06	-0.16	0.10
Mental	0.53	0.23	...	...	0.31	0.06	-0.01	0.10
Employment	-0.26	0.23	...	...	0.29	0.06	...	...
Constant	-0.45	1.15	1.66	0.06	1.32	0.25	1.22	0.50
Building and grounds cleaning and maintenance								
Male	0.75	0.19	1.55	0.02	1.34	0.05	1.19	0.09
Hispanic	-0.20	0.31	1.06	0.02	0.79	0.07	0.57	0.14
White	-0.59	0.21	-0.18	0.02	-0.27	0.06	-0.17	0.11
Married	-0.75	0.27	-0.20	0.02	-0.23	0.05	-0.44	0.09
Some college	-1.27	0.22	-1.29	0.02	-1.36	0.06	-1.33	0.10
College	-1.52	0.49	-1.69	0.03	-1.82	0.11	-1.77	0.20
Age	0.08	0.06	0.06	0.00	0.06	0.01	0.04	0.03
Age squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self-care	-0.67	0.27	...	...	-0.26	0.11	-0.04	0.14
Sensory	-0.18	0.26	...	...	0.16	0.06	0.34	0.14
Go outside home	0.07	0.23	...	...	0.02	0.09	-0.20	0.11
Physical	-0.56	0.21	...	...	-0.14	0.06	-0.20	0.10
Mental	0.75	0.22	...	...	0.47	0.06	0.13	0.10
Employment	0.28	0.21	...	...	0.33	0.06	...	...
Constant	-1.98	1.14	-2.98	0.08	-2.56	0.30	-1.64	0.56

(Continued)

Table A-3.
Coefficients and standard errors from multinomial logit estimations of occupational choice—Continued

Occupation and variable	SSI recipients		Non-SSI recipients with—					
	Coefficient	Standard error	No disability		Any disability		Work disability	
			Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
Personal care and service								
Male	-1.24	0.26	-0.27	0.02	-0.49	0.07	-0.79	0.12
Hispanic	0.04	0.39	-0.02	0.02	0.37	0.08	0.44	0.15
White	-0.06	0.26	-0.23	0.02	-0.29	0.06	-0.18	0.12
Married	0.08	0.29	-0.08	0.02	-0.11	0.06	-0.36	0.10
Some college	-0.13	0.27	-0.38	0.02	-0.55	0.06	-0.44	0.10
College	-0.22	0.44	-0.32	0.02	-0.51	0.09	-0.26	0.17
Age	-0.01	0.07	-0.03	0.00	-0.04	0.02	-0.02	0.03
Age squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self-care	0.06	0.32	...	...	-0.20	0.11	-0.07	0.14
Sensory	0.10	0.29	...	...	0.06	0.07	0.33	0.16
Go outside home	-0.83	0.31	...	...	-0.20	0.09	-0.25	0.12
Physical	0.09	0.26	...	...	-0.03	0.06	-0.12	0.10
Mental	0.25	0.26	...	...	0.34	0.06	-0.12	0.11
Employment	0.63	0.28	...	...	0.41	0.06	...	...
Constant	-0.82	1.28	-0.26	0.08	-0.17	0.31	-0.04	0.65
Sales and related								
Male	-0.26	0.22	1.05	0.01	0.79	0.04	0.61	0.08
Hispanic	-0.26	0.36	-0.09	0.02	-0.04	0.07	0.06	0.13
White	0.01	0.23	0.16	0.01	0.14	0.05	0.11	0.09
Married	-0.24	0.27	0.03	0.01	0.04	0.04	0.05	0.08
Some college	-0.85	0.25	-0.20	0.01	-0.35	0.04	-0.33	0.08
College	-0.12	0.38	0.49	0.01	0.23	0.05	0.22	0.11
Age	0.04	0.07	-0.05	0.00	-0.07	0.01	-0.08	0.02
Age squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self-care	-0.09	0.31	...	...	-0.10	0.08	0.09	0.11
Sensory	-0.19	0.29	...	...	0.03	0.05	0.12	0.13
Go outside home	-0.90	0.27	...	...	-0.19	0.07	-0.24	0.09
Physical	0.27	0.23	...	...	0.04	0.05	0.01	0.08
Mental	0.33	0.24	...	...	0.06	0.05	-0.12	0.08
Employment	-0.17	0.22	...	...	0.20	0.05	...	...
Constant	-0.67	1.26	0.25	0.05	0.86	0.23	1.09	0.46
Farming, fishing, and forestry								
Male	1.15	0.68	2.38	0.04	2.41	0.14	1.97	0.25
Hispanic	-29.80	0.44	1.70	0.03	1.45	0.13	1.63	0.23
White	0.47	0.83	0.37	0.04	0.20	0.14	0.32	0.24
Married	0.54	1.16	0.18	0.03	-0.04	0.12	-0.17	0.24
Some college	-1.20	0.67	-1.65	0.04	-1.51	0.14	-1.32	0.24
College	-34.41	0.43	-1.68	0.06	-2.06	0.25	-1.30	0.34
Age	0.15	0.18	-0.01	0.01	0.04	0.03	0.09	0.06
Age squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self-care	0.38	0.75	...	...	-0.16	0.26	-0.41	0.35
Sensory	0.09	0.62	...	...	0.34	0.14	0.37	0.29
Go outside home	-1.26	0.66	...	...	-0.36	0.21	-0.26	0.25
Physical	-0.20	0.67	...	...	-0.31	0.14	-0.01	0.23
Mental	1.32	0.72	...	...	0.06	0.14	-0.43	0.23
Employment	-0.22	0.52	...	...	0.39	0.14	...	...
Constant	-5.64	3.99	-4.20	0.16	-5.00	0.68	-5.34	1.35

(Continued)

Table A-3.
Coefficients and standard errors from multinomial logit estimations of occupational choice—Continued

Occupation and variable	SSI recipients		Non-SSI recipients with—					
	Coefficient	Standard error	No disability		Any disability		Work disability	
			Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
Construction, extraction, maintenance, and repair								
Male	2.45	0.40	4.46	0.02	4.07	0.08	3.96	0.15
Hispanic	-0.39	0.42	0.56	0.02	0.37	0.07	0.30	0.13
White	0.08	0.31	0.37	0.01	0.25	0.05	0.28	0.10
Married	0.62	0.31	0.10	0.01	0.10	0.04	-0.01	0.08
Some college	-0.97	0.31	-0.93	0.01	-0.97	0.04	-0.89	0.09
College	-1.17	0.61	-1.73	0.02	-1.64	0.08	-1.75	0.16
Age	0.07	0.08	0.11	0.00	0.12	0.01	0.12	0.02
Age squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self-care	0.00	0.40	...	...	-0.07	0.09	0.02	0.11
Sensory	-0.07	0.31	...	...	0.28	0.05	0.41	0.13
Go outside home	-1.46	0.40	...	...	-0.47	0.08	-0.45	0.10
Physical	0.08	0.32	...	...	-0.09	0.05	0.07	0.09
Mental	0.07	0.32	...	...	0.01	0.05	-0.45	0.09
Employment	-0.22	0.32	...	...	0.37	0.05	...	...
Constant	-3.71	1.59	-5.36	0.06	-5.39	0.26	-5.08	0.52
Production								
Male	0.61	0.18	2.00	0.01	1.80	0.04	1.61	0.09
Hispanic	-0.35	0.39	0.34	0.02	0.38	0.07	0.27	0.13
White	-0.21	0.20	-0.08	0.01	-0.08	0.05	-0.08	0.10
Married	-0.82	0.28	0.02	0.01	0.02	0.04	-0.05	0.09
Some college	-1.36	0.25	-1.04	0.01	-1.15	0.05	-1.10	0.09
College	-1.38	0.72	-1.65	0.02	-1.88	0.09	-1.71	0.16
Age	0.05	0.06	0.11	0.00	0.10	0.01	0.06	0.03
Age squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self-care	-0.05	0.23	...	...	-0.01	0.09	0.15	0.12
Sensory	0.21	0.23	...	...	0.24	0.05	0.23	0.13
Go outside home	0.98	0.22	...	...	-0.02	0.07	-0.07	0.09
Physical	-0.60	0.19	...	...	-0.20	0.05	-0.12	0.09
Mental	0.69	0.22	...	...	-0.03	0.05	-0.37	0.09
Employment	-0.02	0.20	...	...	0.19	0.05	...	...
Constant	-2.05	1.16	-3.41	0.07	-3.14	0.27	-1.94	0.55
Transportation and material moving								
Male	1.13	0.18	2.83	0.02	2.54	0.05	2.37	0.10
Hispanic	-0.55	0.32	0.20	0.02	0.14	0.07	-0.06	0.13
White	-0.35	0.21	-0.20	0.01	-0.18	0.05	-0.06	0.10
Married	-0.31	0.26	-0.07	0.01	-0.08	0.05	-0.13	0.09
Some college	-1.51	0.24	-1.08	0.01	-1.23	0.05	-1.01	0.09
College	-1.44	0.51	-1.67	0.02	-1.74	0.12	-1.40	0.24
Age	-0.02	0.06	0.07	0.00	0.07	0.01	0.10	0.03
Age squared	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self-care	-0.37	0.25	...	...	-0.06	0.09	0.01	0.12
Sensory	-0.06	0.25	...	...	0.08	0.06	0.22	0.14
Go outside home	0.23	0.21	...	...	-0.12	0.08	-0.17	0.10
Physical	-0.30	0.19	...	...	-0.06	0.05	-0.04	0.09
Mental	0.44	0.20	...	...	0.12	0.05	-0.08	0.10
Employment	0.27	0.20	...	...	0.32	0.06	...	...
Constant	-0.27	1.05	-3.12	0.07	-2.78	0.26	-3.08	0.53

(Continued)

Table A-3.
Coefficients and standard errors from multinomial logit estimations of occupational choice—Continued

Occupation and variable	SSI recipients		Non-SSI recipients with—					
			No disability		Any disability		Work disability	
	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
N	2,745		1,180,588		72,686		18,414	
Wald chi2(252)(144)(252)(234)	31,871.16		376,139.87		21,407.64		5,561.22	
Prob>chi2	0.0000		0.0000		0.0000		0.0000	
Pseudo R2	0.1213		0.1316		0.1166		0.1117	
Log pseudolikelihood	-5,866.55		-2,782,603.70		-173,140.86		-44,143.96	

SOURCE: Author's calculations using the 2007 American Community Survey using sample weights.

NOTES: Office and administrative support is the base outcome.

... = not applicable.

Notes

Acknowledgments: The author would like to thank Richard Balkus, Susan Grad, John Kearney, Chris Silanskis, John Hennessey, L. Scott Muller, Paul O'Leary, and Jim Sears for their helpful comments and suggestions.

¹ 2007 dollars are used because the data in this study are from 2007.

² For more information on the work incentives for SSI recipients see the *Red Book: A Summary Guide to Employment Support for Individuals with Disabilities under the Social Security Disability Insurance and Supplemental Security Income Programs*, available at <http://www.socialsecurity.gov/redbook>.

³ Almost all SSI recipients are automatically eligible for Medicaid.

⁴ Scott (1992) matched industry information to administrative SSI recipient data, but no information can be used to identify beneficiary occupations from administrative records.

⁵ O*NET is the Occupational Information Network, which lists standardized occupational descriptions and is replacing the Dictionary of Occupational Titles. See <http://www.onetcenter.org> for more information.

⁶ The NSCF is a survey of individuals up to age 26 who currently or formerly received SSI payments or who applied but were denied eligibility (and their families). The NBS is a survey that is part of SSA's evaluation of the Ticket to Work initiative and gathers information on Ticket participants and the national beneficiary population. More information on the NSCF is available from <http://www.socialsecurity.gov/disabilityresearch/nscf.htm> and for the NBS from <http://www.socialsecurity.gov/disabilityresearch/ttw2/appendixC.htm>.

⁷ For example, even with an oversample of SSI recipients, the 2001 SIPP only included 1,614 working-age SSI recipients, 10.3 percent of whom were working (DeCesaro and Hemmeter 2008).

⁸ The long form of the 2000 Decennial Census also has a sufficiently large sample of SSI recipients and contains the information necessary for a comparison with these ACS results.

⁹ See Weathers (2005) for more information on disability statistics and the ACS. Note that there is a large difference between SSA's definition of disability and the ACS's definition(s) of disability, particularly of "mental" disabilities.

¹⁰ Here and throughout the article, unemployment is defined as an individual who is without a job, but is looking for work.

¹¹ See <http://www.bls.gov/soc/home.htm> for information on SOC codes.

¹² In 2006 there were only 696,472 RR beneficiaries, and over a fourth of them were aged (Railroad Retirement Board 2008). Any concurrent recipients are thus most likely OASDI, and specifically DI, beneficiaries.

¹³ Multinomial logit models require that choices be made independently of other options available (the independence of irrelevant alternatives (IIA) assumption). Although these models are common in the occupational choice literature, the IIA assumption is rarely tested. Alternatives, such as the nested logit model are not feasible for this study because no information is known about the characteristics of the occupations themselves. Also, multinomial probit models are not computationally feasible with the current data. Formal tests of IIA are largely inconclusive regarding the appropriate occupation groupings. However, the estimates using only the six broad occupation groups —(1)

management, professional, and related; (2) service; (3) sales and office; (4) farming, fishing, and forestry; (5) construction, extraction, maintenance, and (6) repair; production, transportation, and material moving)—which are more likely to be independent of irrelevant alternatives, yield substantively similar results, suggesting IIA may not be a concern when the narrower occupations groups are used. Results using the six broad occupation groups are available from the author upon request.

¹⁴ See Blau and others (1956) for a fuller description of occupational-choice and selection models. Most occupational-choice models also include relatively few variables; most other variables not included in the model estimated here are likely a result of occupational choice.

¹⁵ Unfortunately, significance tests for the dissimilarity index are currently severely problematic. This would require estimating the mean and variance of the index, and, although there are some methods for doing this, all are problematic. See Mulekar, Knutson, and Champanerkar (2008) for a recent review of these methods.

¹⁶ All estimates in this article use the sample weights provided in the survey.

¹⁷ Thornton and others (2008) also found that 11 percent worked in food preparation and serving, 10 percent worked in office and administrative support, 5 percent worked in sales, 3 percent worked in personal care and services, and 22 percent worked in “other” occupations.

¹⁸ The means and standard errors of the variables used in the models are presented in the Appendix (Table A-2), and the estimated models are presented in Table A-3. Standard errors are not included in the predicted distributions for brevity, but are available from the author upon request. Balanced repeated replicate weights are not utilized in the estimation of the occupational-choice models, although the base weights are used. This was done for two reasons. First, the computational capacity needed to utilize these weights is prohibitively large. Second, because this study is not interested in the significance of the individual covariates in the model, per se, the correct standard errors are not needed. The use of the base weights yields the same point estimates for the coefficients and thus the predicted values from the model are identical to when balanced repeated replicate weights are used.

¹⁹ Although the coefficients for the estimated models are not identical (see Table A-3), the predicted occupational distributions for the work-disability population under the any-disability and work-disability models are identical. The any-disability approach produces the mean predicted value by estimating the model for those with and without a work disability and includes a dummy variable on the right-hand side of the regression that indicates whether a person has a work-related disability. This approach generates mean predicted values by predicting values for only those with a work disability (in this case) and taking the mean of those predicted values. The dummy variable allows one to

separate out the mean predicted value for those with a work disability from the mean predicted value for those without a disability. The difference between the two is determined by the coefficient on the dummy variable. The work-disability approach produces mean predicted values by estimating a model with the same right-hand side variables (except for the work-disability dummy, which is not identified in this model), but for only those with a work-related disability. It then takes the mean of the predicted values for those with a work disability. Thus, when the any-disability model is restricted to the work-disability population, the occupational distribution will be identical to that of the actual work-disability population.

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