

Nonmarket Work among Working-Age Disability Beneficiaries: Evidence from the American Time Use Survey

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1. Introduction

Over 8 million adults in the United States in 2012 had work disabilities severe enough to qualify them for income maintenance in the form of Social Security Disability Insurance (SSDI) (Social Security Administration, 2013). However, a lack of attachment to the paid labor market does not mean that SSDI beneficiaries do not engage in other forms of labor inputs that contribute to economic production. Activities such as housework, care work, volunteering, and the coordination of services related to household production all have exchange value (National Research Council, 2005). Additionally, like transactions measured in the market, they have the potential to increase the value of purchased goods and services and help develop and maintain human capital (Chadeau, 1992). Previous research has used time diary data to document and estimate the economic value of nonmarket work (Landefeld, Fraumeni, & Vojtech, 2009; Frazis & Stewart, 2011)—particularly as contributed by populations that may be less attached to the labor market, including mothers (Folbre & Yoon, 2008) and retirees (Moen & Flood, 2013). However, less is known about how disability beneficiaries spend their time, how much of this time contributes to production, or the market value of this production.

This study uses data from the 2003-2012 American Time Use Survey (ATUS), matched to the Annual Social and Economic Supplement of the Current Population Survey (CPS), to provide the first nationally representative analysis of time use among working-age disability beneficiaries in the United States. The objectives of this analysis are three-fold: to estimate nonmarket time use among SSDI recipients; to calculate replacement wages that could be earned if nonmarket activities were compensated in the market; and to compare the relative contribution of nonmarket labor inputs to Gross Domestic Product (GDP) and aggregate SSDI payments.

2. Data and Methods

Individual-level nonmarket time use is estimated from the ATUS, a nationally representative survey sponsored by the U.S. Bureau of Labor Statistics (Hofferth, Flood, & Sobek, 2013). Respondents were chosen randomly from households that had undergone their final interview for the CPS, and therefore can be matched to the March Supplement to identify SSDI receipt. The final sample consists of 32,619 individuals aged 18-64—1,028 (3.15%) of whom report receiving SSDI as a result of their own disability. Nonmarket work includes household activities, caring for household and nonhousehold members, consumer purchases, volunteering, obtaining services, and most government services and civic obligations.

Occupation-level replacement wages calculate wages that could be earned if beneficiaries' nonmarket activities were compensated in the market. Generalist, specialist, and adjusted specialist wages are estimated from hours-weighted mean wages for corresponding occupations from CPS Outgoing Rotation Group (Frazis & Stewart 2011).

National-level GDP and SSDI payments compare beneficiaries' nonmarket labor inputs to GDP and aggregate SSDI payments. These are collected from the World Bank's (2015) World Development Indicators and the Social Security Administration (2013).

3. Results

Nonmarket time use (Figure 1). Of all types of nonmarket work, beneficiaries spend the most daily time, on average, in household activities (114 minutes). Most of this time (37 and 36 minutes) is spent in housework and food and drink preparation. Beneficiaries spend over an hour

and one-half in all types of care work, each day—including 56 minutes in secondary child care. More time is spent caring for non-household members (20 minutes) than for household members (17 minutes). Types of care work also vary across household context, with the majority of household care (11 minutes) directed toward children, and the majority of non-household care (9 minutes) directed toward adults. Of the remaining categories, little time is spent on average in volunteer activities (5 minutes) and other services (2 minutes). Sixteen minutes per day are spent in professional and personal care services and 32 in consumer purchases.

Nonmarket labor inputs, GDP, and SSDI Payments (Table 1). Even when all nonmarket time is considered general labor (compensated at housekeeping cleaner rate), labor inputs are valued at \$150.2 billion in 2012. Assigning a specialist wage category increases this estimate to \$153.6 billion, while adjusting specialist rates for differences in efficiency leads to the lowest valuation of \$139.7 billion. As the number of beneficiaries on the rolls increases, so will their total labor inputs—but the relative contribution of these inputs to GDP and as compared to SSDI payments need not. Regardless of year and estimation approach, beneficiaries' nonmarket production is valued between .69% (2003) and .98% (2011) of annual GDP. Labor inputs are valued between 123% (2012) and 146% (2003) of total average SSDI payments.

4. Implications

Results indicate that beneficiaries make substantial contributions to production, with labor inputs valued at nearly 1% of GDP and exceeding the costs of aggregate average SSDI payments. Relative to other industries' value added as a percentage of GDP over the same period, beneficiaries' labor inputs are comparable in size to that of farms, educational services and nursing facilities (U.S. Bureau of Economic Analysis, 2015). In other words, beneficiaries' labor inputs surpass the value of many industries with substantial market power. Beneficiaries' nonmarket work is also valued at 23-46% more than the aggregate average monthly SSDI payment. While the size of SSDI rolls and the rate of take-up depends on many factors, these results suggest SSDI payments cover only a portion of beneficiaries' contributions to production.

At the individual level, these results indicate that SSDI beneficiaries spend a significant portion of their time in productive work. Their total average nonmarket time adds to 4 and one-third hours per day; more than 30 hours per week. While the majority of this daily time (114 minutes) goes toward household activities, much (36 minutes) is additionally devoted to care for others. While the ATUS data are unable to address the extent of disablement, or how disablement might affect the translation of nonmarket labor into market production, time use data indicates that SSDI beneficiaries report a substantial amount of work—albeit not in the market.

5. References

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Figure 1. Average daily nonmarket time use (aggregate categories)

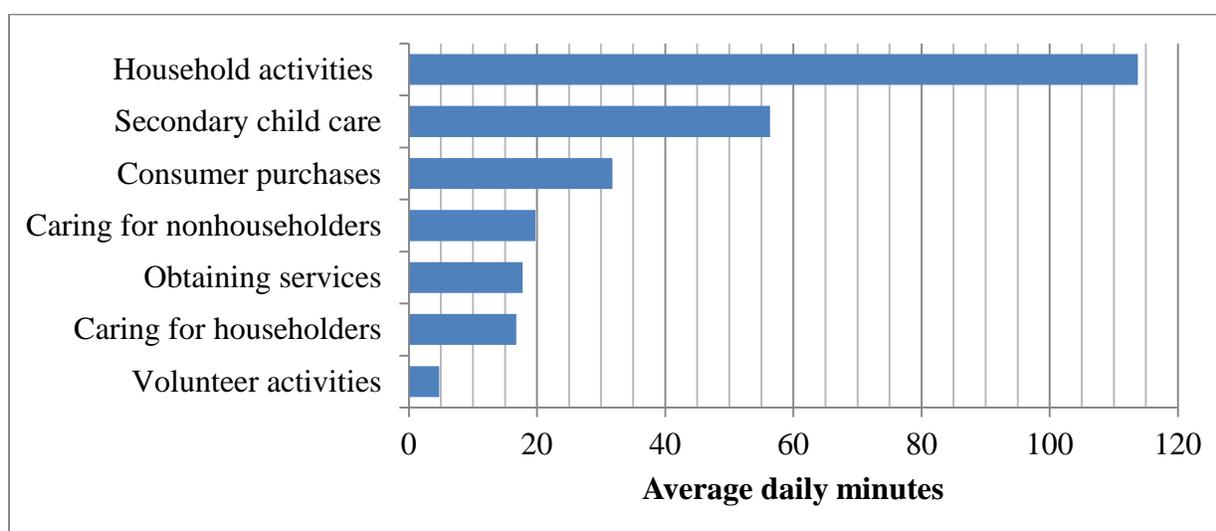


Table 1. Nonmarket Labor Inputs as % of GDP and SSDI Expenditures

Year	Total Labor Inputs (in billions of dollars)			Labor Inputs as % GDP			Labor Inputs as % SSDI Expenditure		
	G	S	AS	G	S	AS	G	S	AS
2004	\$88.3	\$93.4	\$85.0	0.72	0.76	0.69	134.6	142.3	129.5
2006	\$102.1	\$107.0	\$97.3	0.74	0.77	0.70	131.6	137.8	125.4
2008	\$119.9	\$124.8	\$113.5	0.81	0.85	0.77	132.6	138.0	125.5
2010	\$135.0	\$142.8	\$130.0	0.90	0.95	0.87	134.0	141.7	129.0
2012	\$150.2	\$153.6	\$139.7	0.93	0.95	0.86	132.3	135.3	123.0

Notes: G = generalist wage, S = specialist wage, AS = adjusted specialist wage. Select years shown.