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## Research Grants Studies

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Section 1110 of the Social Security Act provides for a cooperative research grants program. The grants given by the Social Security Administration under this program are to nonprofit organizations for research in the broad area of social security. Reports on two recently completed grants projects are summarized below. Similar summaries will be published in the BULLETIN as the projects are concluded.

### EFFECT OF SOCIAL SECURITY ON PERSONAL SAVING

How has the guaranteed retirement income provided by social security benefits affected people's savings behavior? Using SSA Research Grant No. 56106, Alicia Munnell of Harvard University analyzed cross-sectional and time-series data to determine the impact of the social security program on personal savings.

There are two widely accepted but irreconcilable views on the way compulsory savings affect savings behavior. Traditional life-cycle savings theory indicates that private savings decline as compulsory savings increase. International data have provided some support for this hypothesis. The more popular view, however, is that compulsory savings—such as the social security program—stimulate private savings by providing a base on which individuals can build toward an adequate retirement income.

This study attempts to provide an alternative explanation, within the neoclassical framework, for why the aggregate savings rate has remained constant over the past 35 years despite a significant growth in social security benefits. The explanation supported by this research is that the growing importance and concern about retirement since the introduction of the social security program has stimulated saving and that this stimulation has served to offset the negative impact of the guaranteed retirement benefits.

Retirement has become an increasingly widespread phenomenon. The average number of years that an individual can expect to spend in retirement has grown significantly because of the de-

creased participation of older persons in the labor force and a longer life expectancy. Many factors have contributed to the decline in labor-force participation, but the social security program itself has played an important role. Two strong forces have been operating simultaneously on the aggregate savings rate during the past 3 decades. On the one hand, the introduction of social security, whether viewed as compulsory saving or as increased wealth, has led to a decline in private savings; on the other hand, the extension of retirement years has forced individuals to save more during their working lives.

The empirical work developed to support this dual-impact hypothesis strongly emphasizes the multiple motives for saving and looks to the retirement component to isolate the impact of social security. In the time-series analysis, a "retirement saving" series was constructed from disaggregated savings data for 1900-70, and this retirement series rather than total personal savings was used as the dependent variable. The offsetting influence of the social security and retirement variables was quite clear in the retirement savings equation, although these variables were insignificant in the aggregate savings equations.

In the regression equations, social security was introduced either in terms of social security contributions or as social security "wealth." The wealth variable is the present discounted value of social security benefits outstanding and was entered into the equations either as a gross figure or as a net figure (minus taxes). As indicated earlier, the time-series empirical results are consistent with the hypothesis that there have been two forces influencing the savings rate. Social security has been simultaneously stimulating the savings rate (indirectly through its impact on

*The final reports of these two research grants projects are in the Social Security Administration Library, 571 Altmeyer Building, 6401 Security Blvd., Baltimore, Md., 21235, and in the Library of the Office of Research and Statistics, Room 320-0, Universal North Building, 1875 Connecticut Ave., N.W., Washington, D.C., 20009. Copies of the reports may be obtained through interlibrary loans. (Also in these libraries are copies of more than 50 other research grants projects that have been completed since 1963. A list of these projects appeared in the May 1974 BULLETIN.)*

retirement years) and depressing the savings rate (directly through the level of guaranteed benefits).

Even though this time-series analysis can explain the constancy of the savings rate since the introduction of social security, other studies have shown that pension plan coverage stimulates savings behavior. Consequently, the results of one of these studies—*The Effect of Pension Plans on Aggregate Savings* by Philip Cagan—were reexamined. On close inspection, his published results seem less convincing, and the conclusion that pensions stimulate saving is questionable. Further investigation using a subsample of the data yielded results that directly contradict his original conclusion. Coverage by either a private pension plan or social security was accompanied by a 3-percent decline in the savings rate among persons aged 55–65, the retirement savers. Unfortunately, because of the atypical nature of his sample, these results cannot be extended to the whole population. Nevertheless, evidence that might have contradicted the dual-impact hypothesis of this study has been weakened.

Just as in the time-series analysis, the impact of pensions in the cross-sectional analysis was isolated by focusing on the retirement savers. Pension variables (whose coefficients were not significant for younger groups) were shown to have indisputably negative coefficients for persons aged 55–65.

The implications of the dual-impact argument are quite significant. The apparent neutral influence of social security on saving has really been the net result of two strong but offsetting forces. Although the forces have just offset one another in the past, it is unlikely that this balance will continue in the future. The extraordinary decline in labor-force participation of the aged appears to have slowed, while the pace of benefit increases seems to have accelerated. Thus, with all other factors held constant, the net effect of social security in the future may be a serious decline in the savings rate.

## **CORRELATES AND CONSEQUENCES OF CHRONIC DISABILITY**

Persons who have had chronic disabling conditions are often limited in their activities, par-

ticularly in certain work activities. The disabling effects of a chronic condition and the impairment of work capacities and of personal earning power vary with different social and demographic characteristics of the disabled. The extent to which the condition causes various work limitations is best assessed from a broad perspective, since disability is not merely a medical problem but a social problem. Thomas T. H. Wan of Cornell University used SSA Research Grant No. 56095 to study the broad implications of chronic disability.

“Disabling condition” in this study refers to any abnormality in physical or mental condition of a person that requires some sort of modification in regular activities so as to cope with situations in a manner commensurate with his functional and physical capacity. The nature of a work limitation resulting from chronic conditions may be in part defined by the extent to which the disabling condition causes a change of work role and functionality and the extent to which the condition limits work activities and earning power.

The focus of this study is somewhat different from most epidemiological studies in the area of chronic disabling conditions because its aim is not to examine diseases per se nor to discuss how sociopathogenic factors cause the disability. Instead, the focus is on the severity of disability, current employment status, and personal earnings of the disabled. The research undertaken for this study deals with the following subjects: (1) Review and synthesis of the literature of work-limiting chronic conditions, (2) study of social and demographic correlates of disability, (3) formulation of a social epidemiological model of disability, (4) multivariate analysis of factors involved in severe disabilities, and (5) identification of specific priorities for disability programs dealing with differing disabled persons.

The data source for this study is the national Survey of Economic Opportunity conducted by the Bureau of the Census for the Office of Economic Opportunity in 1967. The sample consisted of 2,606 disabled men aged 25–64 who were family heads and unrelated individuals.

The review of current findings identified the general attributes of the disabled in terms of age, sex, race, work status, educational attainment, income, marital status and family relation-

ships, migration, and residence background. The results from the 1967 survey helped to verify the existence of sociodemographic differentials in chronic disability and its disabling effects on work.

To provide a better understanding of the disabling effects of chronic conditions, two factors were examined: (1) The relationship of social epidemiological factors to severe disabilities, and (2) the consequence of severe disabilities on current employment status and personal earnings. Data and the models and hypotheses formulated from them were examined by the automatic interaction detector analysis and the multiple classification analysis. The results showed that the severity of disability of disabled male adults varies with their social and environmental preconditions. Characteristics associated with a high risk of being severely disabled are: Mental illness, a nervous system disorder, or cancer; a secondary impairment; being disabled for less than 6 months; being a professional or manager, a laborer, or a service worker; less than 4 years of education completed; 55-64 years old; living in poverty conditions; being an urban nonmigrant; and being unemployed in an industry. Industry, length of disability, and poverty were the most important factors in determining the relative risk of being severely disabled.

The hypothesis that the propensity to work full time varies with the individual person was supported. The type of disability and its severity, however, had no apparent influence on current employment status. A high propensity to work full time can be characterized by: Disabling conditions such as diabetes, digestive disorders, or respiratory and related disorders; no secondary impairment; a short-term disability; 9-11 years of education; being a farmer or a farm manager; being white; 25-34 years old; a rural nonmigrant or a rural-to-urban migrant; not in poverty; employed in public administration; and not severely disabled.

The analysis of personal earnings of the disabled revealed that earning power was affected by the disabling attributes that limited work capacity and employability. Disabled men with high earning capacities had the following characteristics: Cardiovascular disorders, respiratory and related disorders, or diabetes; no secondary impairments; disabled for less than 6 months or

for 5 years or more; 12 years of education; employed as professionals or managers; white; a migrant, but not a rural-to-rural migrant; 35-54 years old; not in poverty; employment in an industry other than wholesale and retail trade; not severely disabled; and currently employed as a full-time worker.

The severity of disability is more strongly affected by personal characteristics of the disabled than by the type of disability or environmental factors—irrespective of race. For this analysis the 2,286 disabled men who were family heads were put in two groups—white and nonwhite. The characteristics of the men in each group were analyzed using binary variables in a multivariate analysis. The findings revealed that eight social epidemiological factors accounted for more than 40 percent of the variation on the severity of disability—46 percent for whites and 43 percent for nonwhites. The personal characteristics of both disabled populations exerted more impact on severe disabilities than did the type of disability or environmental factors. These findings underscore the urgent need to account for the differential effects of disabling factors in various disabled populations.

Since disability is considered not merely a medical problem but a social problem as well, most of the disabled and their families suffer the psychological, social, and economic effects of chronic disability. Many researchers, however, have suggested that the chronic condition by itself is of limited relevance in assessing disability. The study has verified some of these statements and has further examined the relationship between severity of disability and the chronic condition by controlling significant social and demographic variables. The findings do indeed show that condition classification is an insufficient predictor of the likelihood of severity of disability.

The findings from this research point out the difficulties in formulating any causal ordering of the extent of disability that would involve a multiplicity of factors. A pathanalytic technique that accounts for direct and indirect causal effects might prove to be a more accurate method for determining the causal sequence leading to severity of disability and its consequences. Factor analysis may be useful in formulating composite indices of epidemiological components.

More precise measurements of variables and the inclusion of new predictor variables may be important in accounting for the unexplained variance. For example, psychological factors such as work-motivation, self-concept, and work-satisfaction may help predict what the outcome of the disability will be.

The emphasis of this study is on the consequences of chronic disability. Results show that severity of disability alone does not determine the disabling consequences since current employment status and personal earning are influenced by other social and demographic factors. The recurring importance of industry of employment in the statistical analyses indicates that more concern should be given to the working environment of the disabled when ascertaining their needs. Industries vary greatly according to work requirements, work conditions, benefits for employees and union members, etc. The criteria for judging severity of disability should include not only work limitations but other factors that influence the degree to which the disabled are dependent on those around them for economic, social, and psychological well-being.

The prospects for future research in disability rest on a social epidemiological understanding of risk factors that directly contribute to the severity of the disabling condition. Part of this understanding will be obtained by collecting complete social-demographic information about the disabled through survey research, but a significant proportion of knowledge must come from an investigation of disabling factors in a social-psychological perspective. It is important to gain insight into the conditions of the disabled that distinguish them from the general population. A fruitful approach is the utilization of comparative groups with respect to differing levels of functional limitations. By using this approach and, more specifically, by focusing attention on the individual with the functional limitation and not the disabling condition itself, those characteristics of the disabled that render him prone to severe disability can be identified. Perhaps the researcher's necessary classification of the disabled in terms of severity of disability, however, limits him to an analysis of medical conditions and prohibits him from discussing the disabled's social conditions.

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## Social Security Abroad

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### Constant-Attendance Allowances for Non-Work-Related Disability\*

Since 1961, 22 countries have adopted constant-attendance allowances payable under the disability provisions of old-age, survivors, and invalidity insurance programs. A total of 47 countries now provide these benefits, in part a reflection of a growing effort to contain the spiraling cost of providing long-term hospital or nursing-home care by cash assistance designed to keep the beneficiary at home.

Constant-attendance allowances are cash benefits paid on behalf of permanently disabled persons who require either full- or part-time care by another person at home. Since the early part of this century, these benefits have been almost exclusively awarded to incapacitated workers who qualified for a disability pension under workmen's compensation programs. Thus, coverage was for permanent disability resulting from diseases or accidents that were work-related. In the post-World War II era and as early as the 1930's, however, many countries instituted constant-attendance allowances under the provisions of old-age, survivors, and invalidity insurance programs for persons whose disability was not work-connected.

Most wage earners and heads of families who become disabled receive workmen's compensation. The constant-attendance allowance under invalidity insurance programs, however, is usually aimed at covering persons with non-work-related disabilities, including children and the aged. In effect, the invalidity provisions eliminate cause as a qualifying condition for constant-attendance allowances.

#### BACKGROUND

Although payments of cash allowances for constant attendance under invalidity programs

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\* Prepared by Martin B. Tracy, International Staff, Office of Research and Statistics.