Research Grants Studies

Section 1110 of the Social Security Act provides for a cooperative research grants program. The grants given by the Social Security Administration (SSA) under this program are to nonprofit organizations for research in the broad area of social security. Reports on six recently completed grants projects are summarized below, accompanied by a list of completed SSA research grants projects, with the name of the grantee and project director. Similar summaries will be published in the BULLETIN as the projects are concluded.

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INCOME-TESTED SOCIAL BENEFITS IN NEW YORK: ADEQUACY, INCENTIVES, AND EQUITY*

In general, the level of benefits under social programs has been raised over the years, reflecting the humanitarian goal of providing a reasonably decent standard of living for those in need. This increase in benefits led, however, to concern about the impact of the benefits on incentives to increase income through work, especially with regard to female-headed families in the aid to families with dependent children (AFDC) program.

The study, undertaken with SSA Research Grant No. 56074, was conducted by Blanche Bernstein with Anne N. Shkuda, and Eveline M. Burns as consultant. It examines a variety of federally, State, and locally funded income-tested programs available to individuals and families in New York City.

The study investigates the following programs: Public assistance, food stamps, school lunches, medical assistance, subsidized housing, day care, dental clinics and dental rehabilitation, foster care and homemaker services, and veterans' pensions for non-service-connected disabilities. The programs are dealt with individually and as they operate in various combinations. For each program the following elements are examined: The role of different levels of government in determining policy and operating rules and regulations; the income eligibility criteria; the value of benefits and how they are reduced as income increases; the definition of income for purposes of eligibility and how this relates to gross income as it is generally understood; and how eligibility criteria are administered.

The examination of these factors reveals where notches occur, that is, points at which increases in income result in a loss of benefits in excess of the gain in income after taxes and work expenses or where there is little or no net gain; whether there is equity of treatment of different types of families; and how reasonable the benefit schedules are in determining need and ability to pay for services. Finally, an overall evaluation is made of the adequacy of benefits available from different combinations of social programs to families at various income levels; the resulting impact on equity and incentive is assessed. Throughout the study the 4-person family is used as the basis for analysis.

For the 4-person family with no income, the annual public assistance grant including rent is $3,912, equivalent to a gross income of $4,700 taking account of taxes and work expenses. These benefits are reduced as income increases but the rate of reduction varies by family type. The cutoff points range from $4,700 for the intact family to as high as $9,400, for an AFDC mother who is working and benefiting from the $30 plus one-third of earnings disregard.[1] Families on welfare are automatically eligible for food stamps, school lunch, Medicaid, dental clinic, and day care benefits, as long as they receive some public assistance grant.

The annual food stamp benefit for nonwelfare families ranges from $312 for the 4-person family whose income is just at the welfare level down to $288 for the family whose gross income reaches the eligibility maximum of $6,000 a year. Free school lunches, valued at $95 a year per child, are available to all families whose gross income is no more than $5,000, and free care in a

*This report appears as Paper No 8 in the Studies in Public Welfare series published by the Subcommittee on Fiscal Policy, Joint Economic Committee, 93d Cong, 1st sess, July 8, 1973.

[1] The program rules permit a recipient who goes to work to deduct the first $30 of monthly earnings plus one-third of the remainder for purposes of computing her grant A working woman who applies for AFDC is not eligible for these deductions, however.

school dental clinic, valued at around $100 per child, is available to children from families with gross incomes up to $10,000 annually.

The family whose gross income is no more than $5,700 is considered medically indigent and eligible for Medicaid, but the level of benefits depends on family type. Some benefits are available for families whose incomes are above the medical indigency level, but the amount depends on the size and type of the medical expense in relation to the amount of the family's income.

The values of housing subsidies range from $156 to $2,100, but in the main they fall between $540 and $1,200 per year. Families with gross incomes of up to $25,000 a year may obtain annual housing subsidies of as much as $540.

Day care, valued at $2,600 a year per child, is available at minimal cost (about $115) to families with annual gross incomes up to $8,500, at $640 to families with incomes of $10,000, and at $1,313 to families with incomes of $12,000 or more.

The benefits provided from dental rehabilitation, foster care, and homemaker services are also valuable—approximately $1,500 for complete dental rehabilitation and $5,100 and $2,400 a year for some types of foster care and homemaker service, respectively. But, although the income limit for dental rehabilitation subsidies is around $11,400, families may continue to receive subsidized foster care and homemaker services with incomes as high as $20,000. Subsidies for more expensive types of foster care or homemaker services may be given to families with incomes substantially in excess of $20,000 per year.

The eligibility standards described above have been simplified greatly by converting all criteria into gross income. In fact, each program states eligibility in terms of its own definition of income—that is, "net," "adjusted," "countable," or "surplus"—allowing different deductions from gross income. Net income under public assistance allows work expenses, income, and social security taxes to be deducted from gross income as well as different earnings disregards that vary by type of family. The food stamp program definition of net income, however, does not allow deductions for work expenses, but certain medical costs, "excess" shelter costs, and "unusual" household expenses may be deducted. Medicaid defines net income as gross income minus income taxes, health insurance premiums, and court-ordered support payments but does not allow social security taxes to be deducted. In contrast, several of the housing programs allow a deduction to cover social security taxes or contributions to private pension funds, but none allows a deduction for income taxes. Among the 12 housing programs in New York City, however, there were no less than nine patterns of definitions of income for purposes of determining eligibility.

There are serious notches for the intact family on home relief or the AFDC household in which the mother is working when she applies for welfare and thus is not entitled to generous earnings disregards. When the intact family's gross income increases from $3,000 to $4,000, equal to a $691 gain in disposable income when taxes and work expenses are taken into account, welfare benefits are reduced by $922. A further income increase to $5,000, a $773 gain in disposable income, results in the loss of a $632 welfare grant. The AFDC family not benefiting from the large disregards is only slightly better off. Its benefits decline by only $571 when gross income increases from $3,000 to $4,000, but another increase to $5,000 is totally absorbed by a $773 reduction in the welfare grant. It is only the AFDC mother who has been receiving welfare and then becomes employed, entitling her to disregard the first $30 plus one-third of the remaining monthly gross income, who always has a net gain for each increase in income. The general disincentives found in the structure of welfare benefits are compounded by the fact that the family will continue to receive Medicaid, food stamps, free school lunches, and day care as long as it remains on welfare.

Serious notch problems also exist under Medicaid. As the female-headed family moves from the medical indigency level of $5,700 gross income to $7,000 gross income, even $500 of medical expenses will absorb over 50 percent of the family's additional disposable income and medical expenses of $1,000 would absorb the entire increase. Matters are worse for the intact family since they must pay a greater portion of medical bills. For the welfare family receiving full Medicaid benefits, the complexity of the regulations may in itself create disincentives to increase income in that the family may seek to retain its welfare status rather than face the incredibly

complex eligibility criteria for the medically indigent.

Other notches and disincentives are found throughout the programs. An increase of $372 in disposable income when gross income increases from $5,500 to $6,000 results in the loss of a food stamp benefit of $288. Families living in subsidized housing face significant notches once income exceeds the maximum limit for continued occupancy in a particular program, since even if the family remains eligible for another program, an apartment may not be available; rentals in the private housing market are substantially higher. At the present time, however, families are not being required to move when incomes exceed maximum limits. The dental rehabilitation program also contains a serious notch: a small increase in gross income from $11,400 to $11,500 results in a loss of potential benefits worth close to $1,000. Notches are less severe in the dental clinic and school lunch programs since the benefits are fairly small and eligibility procedures are flexible. In the day care, foster care, and homemaker programs, notches are largely avoided because of the gradual increase in fees and the provision of subsidies at higher income levels.

Serious questions of equity are also evident in many of the social programs. Perhaps the most dramatic is the inequity of the treatment of the intact and female-headed families in the public assistance program (where the latter is entitled to greater public assistance benefits because of more generous earnings disregards), followed closely by Medicaid, which offers more complete coverage of medical expenses to the female-headed family than to the intact family.

In summary, the present package of social programs provides neither equity among different groups in the population nor incentive to increase income. The bewildering variety of eligibility criteria, definitions of income, income disregards, and procedures for verifying income fails to assure either that those who are eligible will understand what they are entitled to receive or that those not eligible will be denied benefits. In addition the variety of policymaking bodies involved has led to serious inconsistencies regarding who should benefit and to what degree from various programs.

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EMPLOYMENT OPPORTUNITIES FOR NEGRO AND WHITE YOUTH

Many people believe that vocational opportunities for minority youth have become more open, more equal. Bernard Levenson of the Bureau of Applied Social Research, Columbia University, was given SSA Research Grant No. 164 to determine if this was in fact the case.

For his study he selected a group of vocational high school graduates with social security work history records: their employment and earnings records were followed for from 1 to 7 years after graduation. The sample was composed of 1,950 persons who graduated from the High School of Fashion Industries in New York City between June 1956 and June 1963. The author limited his study to one vocational school so that he could concentrate on just a few job skills, a few occupations, and a few industries.

The findings show that blacks and Puerto Ricans are not making great strides toward economic progress, that discrimination is not mainly a Southern problem, and that education is not able to solve racial inequalities and lift minorities out of their poverty.

Within each of the four core curricula—fashion design (technical), fashion design (vocational), trade dressmaking (vocational), and garment operating—black graduates were more likely to be employed in manufacturing, and whites in wholesale and retail trade. Graduates of the same ethnic group showed greater similarity in job placement than did graduates of the same curriculum. Whether a graduate finds employment in manufacturing depends more on whether she is black or Puerto Rican than on whether she has completed a program in garment operating or trade dressmaking. Thus, the overall effect of the placement process is to put graduates in racially and ethnically more homogeneous working environments than the ethnic environments in the various curricula at the school. Four to six months after graduation this process is already quite marked.

When the earnings of the members of the more recent graduating classes are compared with those of earlier classes, no narrowing of the earnings gap is seen. In 1956–58 the odds that a randomly selected white trade dressmaker would earn more than a black trade dressmaker were

about 2 to 1; in 1962–63, the odds were even higher. Even though the garment operator curriculum requires less training and aptitude than does the trade dressmaker curriculum, the odds are 8 to 5 that a white garment operator earns more than a black trade dressmaker.

There is no evidence that differences in earnings narrow with increased experience on the labor market. In trade dressmaking (vocational), for example, the differences in earnings between whites on the one hand and Puerto Ricans and blacks on the other persist for at least 5 years after graduation.

The most interesting and perhaps the most important results of the study were derived from component analysis. This type of analysis permits the identification of the sources of differences in the rates of high earners among whites and blacks. The most important component was the differential mobility rates of whites and blacks in the first job. Curriculum placement at the school, which intuitively would have seemed to produce most of the differences between blacks and whites with respect to employment and earnings, turned out to be negligible. What this means is that if blacks were placed in the various curricula according to white rates and whites placed in the various curricula according to black rates, the effects on subsequent earnings would be minor. Differences in earnings rates were mainly due to mobility rates and level of first job placement.

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DRUGS AND PHARMACY SERVICES UNDER THE BRITISH NATIONAL HEALTH SERVICE

During 1971 community pharmacists in England dispensed more than 248 million prescriptions, valued at about £187 million, under terms of the National Health Service (NHS). This amount represented nearly 5 prescriptions per person during the year. The actual cost of the drugs issued on these prescriptions was approximately £137 million. This study, SSA Research Grant No. 56096 by Dr. Mickey C. Smith of the University of Mississippi, deals mainly with the remaining £50 million, the payment to the general practice pharmacist for supplying pharmaceutical services to England.

The British system works reasonably well there and differs in a number of respects from the pharmacy system in the United States. The much larger number of prescriptions in the United States, for example, creates potential problems not likely to be experienced in the United Kingdom. A variety of State and Federal regulations (e.g., maintenance of prescriptions on file) would make the present British system impossible to transfer "as is."

The pharmacist under the British plan has a comparatively simple administrative burden. All prescriptions from a physician or dentist are received on standard forms (with variations for the different types of practices) that the pharmacist stamps with his pharmacy identification. He certifies the package size from which the prescription was dispensed, and, if the prescription is exempt from the co-pay charge to the patient (as were 57 percent in 1971), he obtains the signature of the patient on the back of the form. The pharmacist sorts the prescriptions by names of physicians and then further into those for which the patient paid a fee and those that were exempt. He then counts the number of forms and the number of prescriptions and sends his count with the actual forms to one of the NHS pricing outstations of the Joint Pricing Committee for England. Thus, the pharmacist maintains no prescription files and engages in no pricing activities himself unless it is to give occasional information to the Joint Pricing Committee officials to assist them in pricing prescriptions for which little cost information may be available.

The 12 British checking bureaus work under the Joint Pricing Committee. The bureaus price the prescriptions and notify the Executive Councils of the total cash accruing to each pharmacist's account.

General checking is routine. Pricers are trained to look for excessive quantities, possible forgeries, and large orders for expensive items. It is general practice for the entire month's submissions from any one pharmacist to be dealt with by one pricer. From a security point of view, close attention is paid to the allocation of individual contractors prescriptions to particular pricers. Each succeeding level of processing acts, to a certain extent, as a check on the previous one. In addition, periodic and regular internal quality checks are made on the work of all personnel.

The pharmacists also keep a check on the pricing bureaus. The National Pharmaceutical Union maintains a Central NHS Checking Bureau. Through this bureau the Union reprices a representative sample of all prescriptions. The results of the repricing are made known to the National Health Service and to the pharmacists and financial adjustments are made. The amount of error found in this way has been remarkably low (well under 1 percent), a fact that has given the pharmacists great faith in the mechanics of the pricing system.

The total remuneration per prescription consists of the following: The cost of the container + ingredient cost minus any discount + on-cost payment + professional fees. Negotiated elements include the container allowance, profit percent, and proprietor's notional salary.

The container cost allowance is currently 1 pence for each prescription regardless of actual container cost (if any).

The drug cost is determined by negotiation and may be discounted. The principle of discounting is based on the manufacturer's practice of giving purchasers price reductions for drugs bought on large orders. Accordingly, a discount is applied to the drug price component once a monthly volume of 1,000 prescriptions per contractor-establishment has been reached. The discount operates on a sliding scale according to the number of prescriptions dispensed, starting at 0.1 percent and rising to 3.5 percent when 7,001 or more prescriptions have been dispensed in the month.

The "on cost" allowance and the professional fee are both based upon surveys (recently conducted at 3-year intervals) to determine average overhead and labor costs for pharmacies. These surveys gather data from about 210 pharmacies statistically selected to represent pharmacies throughout England and Wales. The surveys include both analysis of financial records and the use of work sampling techniques as a labor allocative mechanism. Again, the National Pharmaceutical Union has an opportunity to review survey methods.

One element of the labor cost, the proprietor's "notional" (or hypothetical) salary requires special elaboration. This notional salary is designed to reflect the combination of the "going rate" for a pharmacy manager plus a figure, mainly the "proprietorial lead" (supposed to reflect the special efforts and other considerations normally ascribed to pharmacy ownership above and beyond that of a manager). In fact, the notional salary, plus the level of profit, are the basic points of negotiation.

The principal checking procedure with regard to the pharmacist (other than unusual quantities or drugs noted by the Pricing Bureau) is with regard to his endorsement of package size. Payment for ingredient costs is based in part upon the package size (e.g., 100 or 500 tablet bottles) from which the pharmacist indicates a prescription was dispensed. A check is made of the pharmacist's submission for the month and if these data indicate that his usage of a drug is sufficient to warrant a larger package size, a notice to that effect will be issued to him, although on his first and second notice he will be reimbursed based on the smaller package size. Repeated notices result in reduction of fees appropriately. The nature of the pricing process makes it difficult, however, to monitor these figures on any longer term than a single month.

So many factors are involved in the demand for prescription drugs that it is not completely possible to isolate the effect of the charges on consumption. It is notable, however, that a 7-percent reduction in prescription numbers occurred in the 12-month period following reintroduction of prescription charges in June 1968. One effect is clear although difficult to quantify—when a charge for prescriptions is imposed the number of prescriptions dispensed falls, and the reverse is also true.

Some State programs in the United States have already relieved the pharmacist of the burden of pricing. Before this could be applied to the United States in general, however, a mechanism through which the pharmacist could check the pricing—such as the checking bureaus in England—would have to be established.

Other comparisons of the British and the U.S. systems are worth noting. One of these is the copayment mechanism. The 20 pence charge per prescription is paid by about half of all patients (there are many categories of patients eligible for exemption, principally those aged 65 and over and children under the age of 15).

Most of the major problems associated with the NHS drug program have been financial ones. In 1961, the Minister of Health stated that phar-

macists had been and were being overpaid. There was serious talk of a "strike" by the pharmacists, but this failed to materialize. Negotiations that followed resulted in a drastic cut in the on-cost allowance. A much more sophisticated scheme for obtaining data on overhead and labor costs in the pharmacy also resulted.

Other financial disputes have continued over the years with one of the more serious being that brought about by a proposal to relate the charge made to the patient to the total cost of the prescription. Again the pharmacists threatened a policy of noncooperation. They were supported by other health professionals and the proposal was eventually dropped.

It is expected that there will always be a state of "creative tension" between the negotiating parties for the NHS drug program. With the development of sophisticated administrative research studies within pharmacy in the United Kingdom it may also be expected that the pharmacy's remuneration claims may become even more solidly based.

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EFFECTS OF INTERSTATE MIGRATION IN THE UNITED STATES

Differential earnings changes of interstate migrants, compared with nonmigrants, were estimated from Social Security Administration data for 1960–65 and 1965–70 by fitting separate multiple classification analysis equations for migrants and nonmigrants by race and sex. Explanatory variables in those equations included age and differences in regions of residence, industries of employment, and size of communities of residence at the beginning and end of the periods. The difference between the equation for migrants and the equation for nonmigrants is the estimated effect of migration on earnings. When age, region, industry, and community-size effects are ignored, migrants had differential earnings changes ranging from $157 for white women to $431 for white men during 1960–65 and from $192 for white women to $526 for white men during 1965–70. These amounts represent earnings changes over and above earnings changes of nonmigrants in the same race-sex group.

The author, Gene Laber of the University of Vermont (using SSA Research Grant No. 56103), calculated differential earnings changes of migrants for five age groups and each race-sex group, and capitalized these estimates to produce working-life values of the earnings increments resulting from interstate migration. In both periods, capitalized returns were markedly higher for Negro men and women under age 25 than for other demographic groups. Capitalized returns for Negro men exceeded $18,000 in both periods. Among white men, returns in both periods were higher for those age 25–35 than for any other age group, averaging about $5,000 for the two periods of migration. For all race-sex groups, returns became negligible or negative after age 55.

Estimated returns from migration were placed in two perspectives: (1) The effect of interstate migration on economic growth of the Nation was assessed; and (2) the impact of interregional migration on human-capital stocks of the four regions of the United States (as defined by the Bureau of the Census) was estimated.

With respect to economic growth of the Nation, it is estimated that interstate migration increased the total stock of human capital in the United States by about 0.12 percent a year during the period 1960–65, and 0.14 percent a year during 1965–70. Among age-race-sex groups, the annual increase ranged from zero percent to 0.50 percent or more. By placing those changes in a growth equation, it is estimated that interstate migration added 0.09 percentage points to the growth rate of output during 1960–65 and 0.11 percentage points during 1965–70.

Three of the four regions lost more workers than they gained during the 1960–65 period, according to Social Security Administration data. Two of the four regions lost workers in the 1965–70 period. Estimates were made of the human-capital values associated with the interregional movements of these workers. Losses of human capital were often proportionately less than the loss of labor in regions experiencing net outmigration. The South, for example, actually gained human capital during the 1960–65 period when it lost labor.

In both periods of migration, gains and losses of human capital summed across regions pro-

duced net gains of human capital nationwide. In 1960–65 this gain amounted to $4.7 million, and in 1965–70 it amounted to $7.7 million.

Overall, the effects of interstate migration are estimated to be relatively important when compared with other actual and potential sources of growth. At a higher geographic level, flows of labor among regions on balance creates human capital and tends to mitigate the losses of labor experienced by some regions.

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FINNISH AND SWEDISH PENSION REINSURANCE PROGRAMS

During the summer of 1972 Joseph Krislov of the Department of Economics of the University of Kentucky visited Sweden and Finland to obtain information on their pension systems. He interviewed program administrators, management leaders, insurance company executives, trade unionists, employee groups, and government officials. The study, SSA Research Grant No. 56080, was undertaken with three objectives: (a) To analyze the actual experience of the two systems, (b) to determine the attitudes of various interest groups toward the programs, and (c) to assess the relevance of these programs to the programs being proposed in the United States.

Current proposals for pension reform in the United States call for mandatory vesting provisions, funding requirements, and reinsurance programs for plans that are terminated. The latter proposal is of considerable interest since some workers lose their benefit rights when their employer goes bankrupt, merges with another employer, or simply goes out of business. Proponents of reinsurance often cite the Swedish and Finnish programs as models for the type of program the United States should adopt.

The reinsurance programs in Finland and Sweden differ considerably, but both have functioned well for more than a decade. They have paid all outstanding claims, and yet have accumulated substantial reserves despite recessions in the 1970's. (The author notes that it is possible that the programs may have some difficulties within the next few years because of plant dislocations as the countries develop new economic relationships with the Common Market.)

Both programs developed as a result of extensive negotiations between labor and management and were designed to enable the parties to reach different goals. Security of pension benefits was labor's major objective; management wanted to retain within the firm the normal pension contributions instead of paying this money to an insurance company, as existing arrangements required. Both groups were able to incorporate their goals into the programs, and, as a result, are very satisfied with the programs.

Several conditions are present in Sweden and Finland that do not prevail in the United States. Actuarial practices there, for example, are prescribed by government agencies. The private pension system in the United States has developed without extensive actuarial supervision and thus these practices vary widely. The author believes that it is very unlikely that the actuarial supervision presently prevailing in Sweden and Finland would be politically possible in the United States at this time. Alternate proposals to such supervision would be: (1) To prescribe a standard funding model and a simple set of widely used actuarial assumptions, (2) to permit plans to petition and attempt to justify alternate actuarial assumptions, or (3) to prescribe an actuarial method that would permit the plans to choose their assumptions and to justify these assumptions.

The insured premiums in Sweden and Finland are uniform, resulting from governmental action in Finland and collective bargaining in Sweden. For the United States such a flat-rate premium would obviously be the simplest to administer, but some proponents of reinsurance for the United States want higher rates for "termination prone" companies and industries. If a differential premium rate system were adopted, the administering agency would be required to make judgments regarding a single employer's financial position. These judgments require the collection and evaluation of a considerable amount of data.

The author concluded that the reinsurance programs in Sweden and Finland have worked well because everyone there wants them to work. The United States could adopt a comparable program with the cooperation and determination of management, labor, and funding institutions.

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EFFICIENCY IN THE PRODUCTION OF HOSPITAL SERVICES

Ralph E. Berry, Jr. and John Carr, Jr., both of Harvard University, used SSA Research Grant No. 56002 to complete a detailed analysis identifying and measuring the effects of factors that significantly influence the cost and efficiency of short-term general hospitals in the United States. Their study consisted of three related parts designed to: (1) Name the factors affecting hospital costs, (2) identify and analyze characteristics of hospitals that have unusually high or unusually low costs (after allowances for such factors as output, quality, product mix, and factor prices), and (3) analyze cross section and time series data on general short-term hospitals in order to evaluate the role of economic evolution in the selection of efficient institutions for survival and to determine factors affecting the supply of hospital facilities.

The statistical analysis of the cost of providing short-term hospital care has provided insight into the factors affecting hospital cost. The authors drew a number of inferences concerning the relationships among average costs, the level of output, the quality of services, product mix, factor prices, and relative efficiency. First, the types of hospital services produced are subject to economies of scale initially and decreasing returns eventually. Second, the quality of services offered affects hospital costs. Hospitals that are accredited, for example, have higher costs than those that are not. Third, product mix differences —differences in the complexity of the scope of services—affect hospital costs in several ways. Teaching hospitals and hospitals that have more complex inpatient services and provide community medical services have higher costs than other hospitals. Fourth, in all the analysis undertaken in this study, differences in wage rates have consistently been the most significant variable for explaining average costs. Differences in construction costs, on the other hand, are not consistently significant in explaining differences in average costs. And fifth, although costs in proprietary hospitals are somewhat higher per day than costs in voluntary hospitals, the average length of stay in proprietary hospitals is generally lower. The authors believe that this is because proprietary hospitals utilize their inputs more intensively per patient per day and consequently incur a higher cost of care per day but a lower cost per patient.

The authors also dealt with the subject of product differences within the hospital industry. Whatever else may be characteristic of them, the units of production in the hospital industry certainly do not produce a homogeneous product, and hospitals should be viewed as multiproduct firms in both the sense of patient care-teaching-research and the complexity of each.

Three separate although related analyses were undertaken specific to the product difference aspect of the production of hospital services, its effect on hospital cost analysis, and techniques that can be employed to account for product mix. The results of these analyses were consistent and reinforcing. They serve to emphasize the importance of product mix and the implications of product differences.

First, a factor analysis served to delineate the dimensions of product mix in hospital output. Eight common factors were generated that explained a significant proportion of the variation in the variables related to product mix. Among the more significant factors identified were: The presence of a medical school, the type of basic services provided, the type of complex services provided, the length of stay, and the type of outpatient activities available.

Second, an analysis of the available data served to indicate a systematic pattern to the expansion of facilities and services in short-term general hospitals. There is such a thing as a basic service hospital. As hospitals add facilities and services there is a strong tendency to first add those that enhance the quality of the basic services. Only after the services that enhance the quality of the basic services have been acquired do short-term general hospitals display a tendency to expand the complexity of the scope of services provided. The final stage of the expansion process for certain hospitals occurs when they add those facilities and services that essentially transform them from inpatient institutions to community medical centers.

Finally, a comparative analysis was made of the extent to which hospital costs are explained by what hospitals have the capacity to provide and by what they actually do provide. The results indicated clearly that the capacity to provide services explains hospital costs much better than actual services provided explains them.

Cooperative research grants program: Final reports available as of March 1, 1974

Number	Title	Grantee and project director
007	Helping the Poor Housekeeper in Public Housing	Friends Neighborhood Guild (Philadelphia), Mildred Guinessy.
009	An Exploratory Study of Welfare Programs and Needs in the Upper Peninsula of Michigan.	Northern Michigan College, Jean Pearman.
013	Family Problems in an Area of Rapid Social Change	University of Georgia, Raymond Payne and Stanley Fowler.
017	Effectiveness of Services in Changing Values Among Negro Boys of AFDC Families.	Goodrich Social Settlement (Cleveland), John Cox.
019	Credit Union Use Among Income Groups; Credit Union Members by Income Groups; and the Use of Credit Unions by Low-Income Groups.	University of Notre Dame, John Croteau.
034	Longitudinal Study of Retirement	Cornell University, Gordon Streib.
037	Decisions Leading to Institutionalization of the Aged	North Texas State University, Hiram Friedsam.
042	Profiles in Poverty. An Analysis of Social Mobility in Low-Income Families.	Syracuse University, Louis Kriesberg and Seymour Bellin.
047	The Florida Suitable Home Law—A Statistical Analysis of 17,999 Aid to Dependent Children Cases Affected.	Florida State University, Robert Lansdale.
058	Private Pensions and Individual Saving	University of Michigan, George Katona.
067	When People Are Forced to Move	The Menninger Foundation (Topeka, Kans.), William Key.
078	A Future for the Aged—Victoria Plaza and its Residents	Trinity University (San Antonio), Frances Carp.
085	The Geographic Mobility of Labor: A First Report (*see 246*).	University of Michigan, John Lansing and Eva Mueller.
099	Evaluation Report on the Pruitt-Igoe Demonstration on Service to Assistance Families—St. Louis, Missouri.	Missouri Department of Public Health and Welfare, Virginia Turner
107	Economic Status, Unemployment and Family Growth	University of Michigan, Ronald Freedman.
110	A Research/Demonstration Program to Protect Low-Income Consumers.	Joint Settlement Committee (New York, N.Y.), Kenneth Lenihan.
115	The Neglected Dropout: The Returnee and Residential Characteristics of School Dropouts.	Syracuse University, S. M. Miller.
125	Extended Kinship and Occupational Mobility	Bureau of Social Science Research, Inc. (D. C.), Leonard Goodman.
127	The Culture of Poverty in Puerto Rico and in New York	University of Illinois, Oscar Lewis.
148	Big City Dropouts	Teachers College, Columbia University, Robert Dentler.
158	The Aged Family and Friends	Western Reserve University, Irving Rosow.
160	Discharge and Duration of Stay Experience in Nursing	University of Michigan, Kenton Winter (deceased).
164	Employment Opportunities of Negro and White Youth	Columbia University, Bernard Levenson.
170	A Study of Migratory Workers in Cucumber Harvesting	University of Wisconsin, Elizabeth Raushenbush.
171	Patterns of Withdrawal from Occupational Roles Among Older Men.	Iowa State University, Jon Doerflinger.
193	Poverty, Aging and Social Isolation	Bureau of Social Science Research (D. C.), George S. Rosenberg
246	The Geographic Mobility of Labor	University of Michigan, John B. Lansing and Eva Mueller.
255	Age-Income Profiles of Americans	Florida State University, Marshall Colbert.
266	Changing Patterns of Income at Retirement from the Labor Force (3 parts).	University of Wisconsin, Martin David and H. Groves.
283	Family Planning and Birth Control Among Poverty-Level Negro Females.	Bowman Gray School of Medicine (North Carolina), Clark E. Vincent.

Cooperative research grants program: Final reports available as of March 1, 1974—*Continued*

Number	Title	Grantee and project director
284	Economic Effects on Internal Migration: An Exploratory Study.	West Virginia University, Betty G. Fishman.
289	Public Attitudes Toward Social Security: 1935-65	University of Chicago, P. Rossi and M. Schiltz.
292	Skill, Aging, and Unemployment	Columbia University, Arnold Katz.
308	Factors Involved in the Identification of Poverty in a Rural Area.	University of North Dakota, Ronald Johnson.
309	Life Style Emeritus: Tomorrow's Retirement	Columbia University, A. J. Jaffee.
312	Social and Economic Correlates of Family Building Patterns in Detroit.	University of Michigan, Ronald Freedman and Lolagene Coombs.
345	Validity of Interview Responses of Welfare Mothers	Columbia University, Carol Weiss.
362	Determinants of Family Living	Cornell University, Gwen Bymers.
384	Rationality and Welfare: Public Discussion of Poverty and Social Insurance in the United States 1875–1935.	Goshen College (Ind.), Theron Schlabach.
403	Direct Tax Burdens on the Poor and on the Elderly	University of California, Yung-Ping Chen.
408	An Analysis of Costs in Short-Term General Hospitals	Harvard University, Ralph E. Berry.
418	Automation of Vendor Drug Claims	University of Mississippi, Mickey Smith.
445	Factors Related to Retirement and Medical Care Among the Aged: A Multivariate Analysis.	Duke University, Erdman Palmore.
463	The Federal Income Tax and the Poor: Where Do We Go From Here.	University of Michigan, Harvey Brazer.
56000	Standards for the Audit of Medical Services	Yale University, Isidore Falk and Hyman Schonfeld.
56002	Efficiency in the Production of Hospital Services	Harvard University, Ralph Berry.
56022	Growth of the Black Population	University of Michigan, Reynolds Farley.
56024	The Benefits-to-Risks as a Factor in Drug Choice by Physicians.	Ohio State University, Deanne Knapp.
56029	Determinants of Interstate Migration of the Elderly	University of Arizona, Steve Barsby.
56031	Effects of Coinsurance on Medical Care Utilization	Palo Alto Medical Research Foundation (California), Anne A. Scitovsky.
56032	The Economics of Non-Hospital Clinical Laboratories	University of California, Berkely, Richard Bailey.
56047	Work after Retirement: Some Psychological Factors	Duke University, George L. Maddox.
56051	Variations in Prescription Markups-on-Retail	Ohio State University, Christopher A. Radowskas.
56074	Eligibility Requirements for Income Maintenance and Related Benefits.	Center for New York City Affairs, Blanche Bernstein.
56080	Finnish and Swedish Pension Re-Insurance Programs	University of Kentucky, Joseph Krislov.
56095	Disabling Effects of Chronic Conditions of Male Family Heads.	Cornell University, Thomas H. Wan.
56096	Drug Programs under British National Health Services	University of Mississippi, Mickey C. Smith.
56106	The Effect of Social Security on Personal Saving	Harvard University, Alicia H. Munnell.

These results have significant policy implications. The results are not profound, or even surprising, but they do lend support to the position that hospital costs depend much more on what hospitals "gear up to do" than on what they actually end up doing. It would seem that much more attention needs to be paid to the question of what the appropriate mix of available capacity is and how public policy might best control that mix.

Much hospital cost analysis has been preoccupied with the question of what is the optimal size of hospitals. A more fundamental question

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TABLE M-9.—OASDHI cash benefits: Monthly benefits in current-payment status, by program, 1940–74

[Data contain some duplication arising from dual entitlement, see the *1971 Annual Statistical Supplement*, p. 9]

At end of selected month	Number			Amount (in thousands)		
	Total	OASI [1]	DI [2]	Total	OASI [1]	DI [2]
December:						
1940	222,488	222,488	----------	$4,070	$4,070	----------
1945	1,288,107	1,288,107	----------	23,801	23,801	----------
1950	3,477,243	3,477,243	----------	126,856	126,856	----------
1955	7,960,616	7,960,616	----------	411,613	411,613	----------
1960	14,844,589	14,157,138	687,451	936,321	888,320	$48,000
1965	20,866,767	19,127,716	1,739,051	1,516,802	1,395,817	120,986
1966	22,767,252	20,796,930	1,970,322	1,638,548	1,502,863	135,685
1967	23,704,987	21,564,773	2,140,214	1,723,479	1,575,646	147,831
1968	24,560,397	22,225,263	2,335,134	2,062,550	1,880,601	181,949
1969	25,314,062	22,826,514	2,487,548	2,160,256	1,964,275	195,982
1970	26,228,629	23,563,634	2,664,995	2,628,326	2,385,926	242,400
1971	27,291,508	24,361,500	2,930,008	3,058,957	2,763,022	295,934
1972	28,476,028	25,204,542	3,271,486	3,916,203	3,514,741	401,462
1973	29,871,751	26,311,045	3,560,706	4,270,038	3,821,224	448,814
1973						
January	28,674,540	25,300,475	3,274,065	4,014,597	3,611,742	402,856
February	28,758,568	25,436,830	3,321,738	4,048,336	3,637,894	410,442
March	28,748,747	25,407,997	3,340,750	4,050,243	3,636,768	413,474
April	28,860,401	25,479,822	3,380,579	4,071,537	3,652,897	418,639
May	28,903,629	25,501,353	3,402,276	4,082,169	3,659,718	422,451
June	29,073,155	25,656,746	3,416,409	4,112,610	3,687,103	425,507
July	29,040,632	25,630,503	3,410,129	4,117,197	3,690,843	426,354
August	29,138,731	25,767,189	3,371,542	4,141,018	3,719,255	421,763
September	29,308,223	25,874,273	3,433,950	4,171,071	3,738,953	432,119
October	29,385,553	25,929,623	3,455,930	4,185,922	3,750,198	435,723
November	29,749,129	26,211,173	3,537,956	4,245,661	3,800,109	445,552
December	29,871,751	26,311,045	3,560,706	4,270,038	3,821,224	448,814
1974						
January	29,966,052	26,404,224	3,561,828	4,294,766	3,844,891	449,875

[1] Benefits paid from the OASI trust fund to retired workers and their dependents and to all survivors Includes special benefits authorized by 1966 legislation for persons aged 72 and over not insured under the regular or transitional provisions of the Social Security Act

[2] Benefits paid from the DI trust fund to disabled workers and their dependents

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is the optimal mix of complexities of scope of services or what is the optimal mix of types of hospitals.

The authors identified several characteristics of high cost and low cost hospitals. Low cost hospitals were more likely to be administered by medically qualified persons—physicians, dentists, registered nurses. Average hospital costs also varied by region: the New England and Pacific States tended to have high cost hospitals, the South, low. The ratio of personnel expense to total expense was higher in low cost hospitals (0.656, compared with 0.558 in high cost hospitals). Hospitals with relatively high occupancy rates were likely to have lower costs. The median occupancy rates for low cost hospitals was 70.7 percent, and for high cost hospitals it was 64.5 percent. Low cost hospitals tended to have a "medium" number of beds; high cost hospitals tended to have very few beds or very many beds relative to the average bed size.

In order to analyze cross section and time series data, the authors constructed two basic types of economic models—one of a completely centralized planning system and the other of a pure market system. They then used simulation analysis to determine the relative efficiency of these two methods of resource allocation under conditions likely to prevail in the provision of hospital services. The planning method showed the greater potential of being more efficient in a technical sense. The authors noted, however, that the real alternative to the pure market system is not a theoretically perfect planning scheme, but rather a system of basing decisions on an abstraction of a complex reality operating within a political-bureaucratic context. Nonetheless, their comparison of planning and the pure market as mechanisms for resource allocation in the hospital system should provide some basis for policy in this area.