

Federal Reserve Bank of Philadelphia

1968

# Business Review

August



The Wealth of a Nation and the Ubiquitous Poor

Deposit Variability

## The Wealth of a Nation and the Ubiquitous Poor

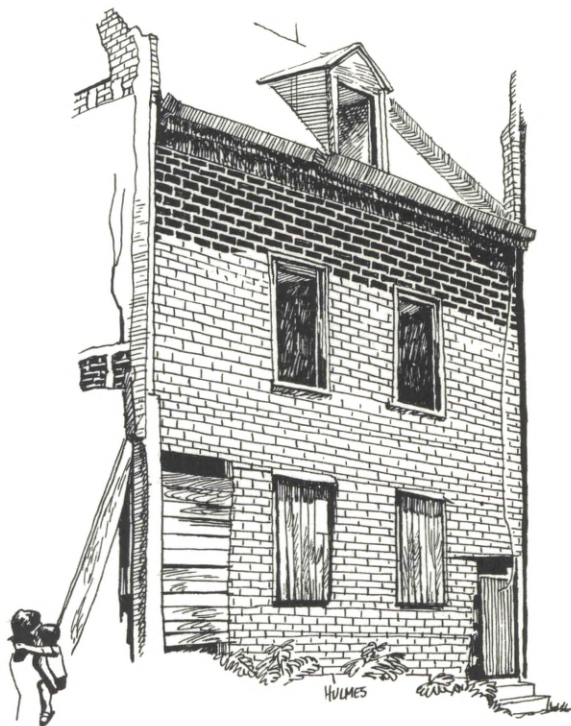
*. . . Traditional responses to the challenge of poverty are being subjected to growing scrutiny and reappraisal. New ideas and approaches are emerging.*

## Deposit Variability

*. . . Changes in size and composition of Third District bank deposits have helped reduce their variability; not sufficiently, however, to justify major changes in bank asset policies.*

# The Wealth of a Nation and the Ubiquitous Poor

by Sheldon W. Stahl



In the first six months of 1968, the Gross National Product—the dollar value of all final goods and services produced—rose by \$40 billion to an annual rate of more than \$850 billion. Within this same period of time, the nation's capital again served as reluctant host of a poor people's march, reviving memories of Coxe's Army of the late 19th century and the veterans' Bonus Marchers routed from the capital less than four decades ago.

It may seem paradoxical that the subject of poverty should share the spotlight with economic affluence today. Yet, the two clearly are related. Not only is a growing economy necessary for the elimination of poverty but advancing affluence in America further serves to dramatize the plight of the poor.

The Great Depression is more than three decades behind us. The intervening years have witnessed a proliferation of public programs designed to improve standards of living for all our citizens, poor and nonpoor. Still, many have not been reached and the poor remain. Twenty years after passage of the Employment Act of 1946 the goal of maximum employment to which it was addressed remains highly elusive for many of our citizens. Four years ago, in passing the Economic Opportunity Act of 1964, Congress declared that it should be a national goal and policy of the United States:

*... to eliminate the paradox of poverty in the midst of plenty in this Nation by opening to everyone the opportunity for education and training, the opportunity*

*to work, and the opportunity to live in decency and dignity.*

And four years later, poverty commands the center stage with affluence.

There has been, of course, progress made in eliminating poverty. Throughout the postwar period the ranks of the poor have been thinned. Since 1964 alone the record has been impressive as the combination of rapid economic growth and a doubling in Federal spending for the poor has reduced their numbers by more than one-fifth. However, the more than 26 million poor still remaining in the United States in 1968 bear eloquent testimony to the unfinished nature of the war on poverty. Although Resurrection City has disappeared from Washington, the idea which gave it substance—that poverty in the midst of plenty cannot and should not be permitted to

#### WHAT IS POVERTY?

Webster has defined poverty as "a lack of money or material possessions." In this respect, perhaps we all might consider ourselves poor since what we have in the way of money or possessions typically falls short of what we should like to have. This kind of poverty largely is not the concern of this article.

The Social Security Administration defines poverty by relating it to the cost of a minimal consumption standard. Households are defined as "poor" if their incomes fall below this minimum level. Currently, the minimum level of subsistence for a nonfarm family of four is set at \$3,335 in current prices; for a nonfarm couple under 65 years of age, \$2,185; and for a single person, \$1,635. Families residing on farms are estimated to require 40 per cent less cash income for subsistence than nonfarm families. It is these measures of poverty to which this article is addressed. However, both definitions clearly point up the fact that poverty is a relative phenomenon. Just as individual aspirations change over time, society as a whole changes its views as to what constitutes adequate subsistence levels. It is to be expected that a combination of rising aspirations and a growing capability to alleviate poverty will result in a continual reappraisal of how poverty should be defined.

exist in the richest country on earth—is finding a degree of acceptance which can only serve to insure its permanence on the American scene.

This article will examine some of the dimensions of poverty and the responses which this problem has evoked. Newer approaches, such as the negative income tax, may be seen as less revolutionary, and more evolutionary, when viewed as one of an array of measures which have been advanced to deal with the needs of the poor.

#### THE AGGREGATIVE APPROACH

Although this country had experienced economic recessions before, the protracted economic depression of the 1930's shaped the new philosophy embodied in the Employment Act of 1946. The idea that public policy might contribute to a guarantee of a high level of national income was unique for us. At the same time, it was not out of step with our work-oriented cultural heritage. For implicit in the Act was the notion that high rates of economic growth and maximum employment could enhance our well-being by extending the level of economic participation to ever-larger numbers. Thus, the route from poverty involved becoming a productive member of society and receiving economic rewards, or income, commensurate with one's contribution to total output.

Not quite 20 years later, as a corollary to the policy of attempting to maximize employment, Congress passed the Economic Opportunity Act of 1964. This measure was in response to a growing awareness that as long as some were denied jobs because of discrimination or lack of education or requisite skills, the market economy could not serve as a wholly satisfactory vehicle to alleviate poverty. The focus of the Act, therefore, was on the twin goals of increasing job opportunities by eliminating discriminatory hiring practices, and by educational and vocational

training of low-productivity workers to enable them to enhance their income potentials. Thus, the goals of promoting equality of opportunity and of upgrading job skills through manpower training programs evolved from failure of the broad-gauged approach completely to eliminate poverty via the path of high economic growth.

The more traditional solution for eliminating poverty has stressed the productive capabilities of the American economy. Use of public policy to promote a high level of national income represents an extension of reliance on the economy to raise income levels for individuals. Although this process of economic growth and the changes

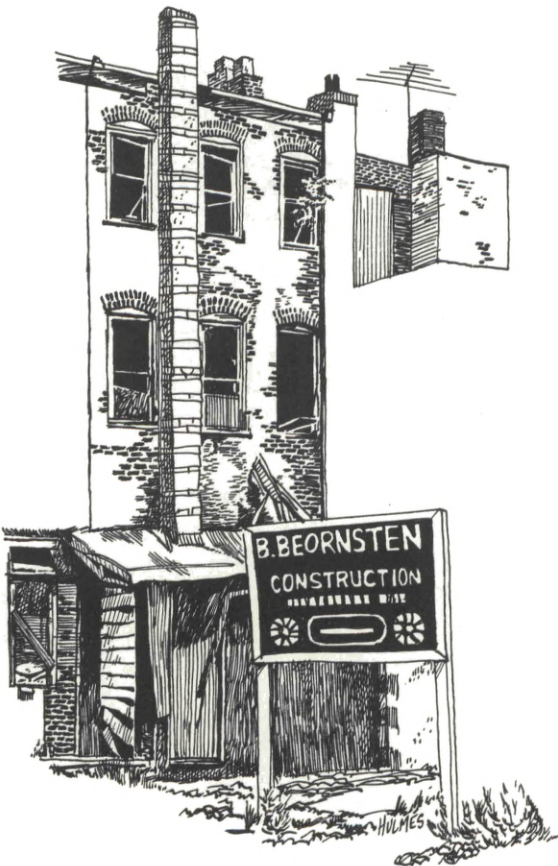
which it entailed have produced substantial progress in eliminating poverty, paradoxically this same process has contributed to poverty.

### THE ROOTS OF POVERTY

As our economy grows, its structure continually changes. This process permeates whole industries and occupations, marking some for rapid expansion and others for stagnation or decline. Similarly, geographic regions may undergo transformation, either growing in economic viability or sinking into a state of depression. This changing structure of employment opportunities, and the unevenness with which it proceeds, has simultaneously created and redistributed both poverty and affluence.

One of the most significant changes is that which has occurred in agriculture, a change characterized by a phenomenal rise in labor productivity and mechanization which has freed vast numbers of human resources from the soil. This, coupled with the growth of nonfarm employment opportunities in the industrial sector, led to a continuous wave of out-migration from rural areas. For many who were able to respond to and take advantage of this change, rural poverty gave way to more adequate income levels. In their wake, however, there remained those who could not seize the opportunity to improve their economic status for reasons of age, physical disability, immobility, lack of education, broken families, and discrimination.

Geographically, poverty has become more concentrated. As the exodus from the farms continued, many with little or no skills were forced to seek employment in the industrial areas of the large cities. Increasingly, the urban ghettos in the central cities of larger metropolitan areas continue to be repositories for those on the low end of the economic totem pole. Occupationally,



**Table 1**  
**NUMBER OF POOR HOUSEHOLDS AND INCIDENCE OF POVERTY, 1959 AND 1966**

Characteristics of Head of Household	No. of Poor Households		Incidence of Poverty	
	1959 (Millions) <sup>a</sup>	1966	1959 (Percent) <sup>b</sup>	1966
Nonfarm .....	11.6	10.3	22.5	17.6
White .....	9.0	7.9	19.6	15.3
Male head .....	5.0	3.9	13.4	9.4
Under 65 years .....	3.3	2.4	10.2	6.8
Aged (65 years and over) .....	1.7	1.5	34.0	24.7
Female head .....	4.0	4.0	45.2	37.7
Under 65 years .....	2.2	2.0	37.8	30.5
Aged (65 years and over) .....	1.8	2.0	59.3	48.9
Nonwhite .....	2.6	2.4	48.9	37.5
Male head .....	1.4	1.2	39.7	26.9
Under 65 years .....	1.2	.9	36.7	23.3
Aged (65 years and over) .....	.2	.3	64.4	51.4
Female head .....	1.1	1.2	69.4	60.8
Under 65 years .....	.9	.9	68.1	58.8
Aged (65 years and over) .....	.2	.2	76.3	69.9
Farm .....	1.8	.6	40.9	20.8
White .....	1.3	.5	34.7	16.9
Nonwhite .....	.4	.2	85.0	69.7

<sup>a</sup> Households are defined as the total of families and unrelated individuals

<sup>b</sup> Poor households as a percent of the total number of households in the category.

Note: Poverty is defined by the Social Security Administration poverty-income standard; it takes into account family size, composition, and place of residence. Poverty-income lines are adjusted to take account of price changes during the period.

Detail will not necessarily add to totals because of rounding.

Source: **Economic Report of the President**, February, 1968.

farm poverty has commingled with that stemming from declining employment opportunities in resource-based industries such as mining. In economically depressed rural areas, such as Appalachia, resource exhaustion has left whole communities and economic regions stripped of adequate income sources. And within industries, shifting patterns of demand and rapid technological change have resulted in relative declines and obsolescent skills for many who formerly enjoyed gainful employment and decent incomes.

#### Who are the poor?

Table 1 provides some of the demographic characteristics of the poor. It shows that although the absolute decline in number of poor farm and

nonfarm households between 1959 and 1966 was about equal, the relative decline in poor farm households was more than six times greater. This is reflected in the dramatic fall in incidence of poverty among farm households, down 50 per cent, as compared to a declining incidence of poverty in nonfarm households at less than half that rate. Since this period was marked by faster economic growth than in the preceding decade, the out-migration of employables from the farm to the nonfarm sector probably took place at a faster pace than during earlier periods of adjustment. While the incidence of farm poverty still remains relatively greater than nonfarm poverty, in terms of absolute numbers of households it is clearly the nonfarm sector which poses the

**Table 2**  
**THE POOR AND THEIR WORK EXPERIENCE, 1965-1966**  
 (Millions)

Age and Work Experience of Head of Household	1965		1966	
	Male Head	Female Head	Male Head	Female Head
Total poor households <sup>1</sup> . . . . .	5.8	5.4	5.6	5.4
Aged (65 years and over) . . . . .	1.7	2.4	1.9	2.4
Under 65 years . . . . .	4.1	3.0	3.7	3.0
Did not work . . . . .	.7	1.5	.7	1.4
Ill or disabled . . . . .	.3	1.3	.3	1.1
Worked at part-time jobs . . . . .	.5	.5	.6	.6
Worked at full-time jobs . . . . .	2.8	1.0	2.4	1.0
Employed 39 weeks or less . . . . .	.7	.5	.6	.5
Employed 40-49 weeks . . . . .	.4	.1	.3	.2
Employed 50 weeks or more . . . . .	1.7	.4	1.5	.4

<sup>1</sup> Households are defined as the total of families and unrelated individuals.

Note: Poverty is defined by the Social Security Administration poverty-income standard; it takes into account family size, composition, and place of residence. Poverty-income lines are adjusted to take account of price changes during the period.

Detail will not necessarily add to totals because of rounding.

Source: **Economic Report of the President**, February, 1968.

greater problem for any war on poverty.

Not only is poverty unevenly distributed between the farm and nonfarm sectors but this unevenness cuts across such characteristics as age, sex, and color of the poor. Although poverty had declined in nearly every instance from 1959 to 1966, the same basic relationships among these categories persisted over the period. Thus, households headed either by women, by the aged, or by nonwhites were more likely to be poor in both 1959 and 1966 than were those headed by whites, males, or individuals under sixty-five. In fact, it was in those households headed by males under 65 years of age that the most substantial reduction in nonfarm poverty occurred—and at the same pace for nonwhites as for whites. Yet, despite the smaller absolute numbers of nonwhite poor, the relative burden of poverty clearly rests more heavily on the shoulders of nonwhites than on their white counterparts.

#### Do they work?

Table 2 provides information on work experi-

ence, in addition to the criteria of age and sex, to help analyze the poor. Although the data are not given in this table, the point that relative unemployment is far higher for nonwhites, male and female, than for whites scarcely requires special documentation here. It is this factor largely which makes for such a heavy poverty burden to be borne by nonwhites. Despite the absence of such data, however, the table does offer some basis for dispersing some of the fog surrounding attitudes regarding the nature of the poor.

It can be seen, for example, that advanced age is one of the single most important reasons why a large proportion of poor household heads, especially women, do not work. For those household heads of working age (under 65 years of age), about half of the males who did not work were either ill or disabled. These factors were far less relevant in the case of nonemployed women of working age, many of whom were attempting to support families under the public assistance programs for poor families with children. Formerly,

a 100 per cent tax rate on outside earnings served to reduce benefits by \$1 for every dollar earned by adult members of the household. Since 1967 the regulations have been liberalized modestly, with a decline in the marginal tax rate to 67 cents for each \$1 of income earned over the first \$30 each month. This still scarcely provides a meaningful incentive to work.

Far more significant than explanations of why the poor did not work, however, is the striking fact that upwards of 80 per cent of working-age males did in fact work. Not only did they work, but more than two out of every three worked at full-time jobs. This strongly suggests that although a job may be universally viewed as the means of escaping poverty, it will not accomplish the task unless it provides enough income to raise one above the poverty line.

#### WHAT IS BEING DONE?

In short, poverty is complex. It has geographic, occupational, and demographic dimensions. It



transcends local and state boundaries, and challenges the capacities of state and local governments. Although such governmental units have legitimate roles to play, the problem truly is national in scope and, as such, requires a national

commitment for its ultimate resolution. In addition to the essential aggregative approach of promoting high levels of national income and equalizing opportunity, the Federal Government, often in conjunction with state and local governments, has continued to work toward assuring adequate levels of individual income for those who may be unable to secure an adequate income through their own efforts. Such efforts on the part of government are in the realm of income maintenance.

#### Social insurance

For a large number of Americans who spend most of their adult life in gainful employment, programs of social insurance can provide some protection against loss of income as a result of death, disability, old age, or unemployment. Such programs include the Federal Old-Age, Survivors, and Disability Insurance system—more commonly referred to as Social Security—and unemployment insurance. These are national in scope and are financed by payroll taxes with benefits fixed by a formula, usually related to wages. The benefits, because they are “earned,” do not involve any stigma and are payable to the beneficiary as a matter of “right” without any prior demonstration of “need” required. Poor and nonpoor alike are entitled to benefits if they meet program qualifications.

#### Public assistance

A second approach to income maintenance involves public assistance programs. These attempt to provide a minimum income principally to families without an earner, on the basis of demonstrable and certifiable need, not as a “right.” Beneficiaries of this assistance include the aged, blind, totally disabled, and families with dependent children. Administration of the programs rests with state and local governmental units;



## OTHER FORMS OF INCOME GUARANTEES

For a great many of the poor, low wages, and not unemployment, have been a major factor accounting for their poverty. A response to that problem both at the federal level and for many state governments has been the imposition of minimum wage legislation designed to eliminate substandard wages among low-productivity workers. Such an approach rests largely outside the realm either of aggregative measures to maintain high levels of economic growth, or of social insurance or public assistance schemes such as those discussed in this article.

Rates imposed under federal minimum wage laws have been raised on eight occasions since their inception 30 years ago from a 1938 level of 25¢ an hour to \$1.60 in February of this year. At the same time, coverage has been extended to larger numbers of workers. If one assumes a single breadwinner in a family works 40 hours a week for a full 52 weeks a year at the present minimum, gross annual income would total only \$3,328. This compares with \$3,335 currently established as necessary to maintain a minimum level of subsistence for a nonfarm family of four. For those who may view further rises in the minimum as the obvious solution, the ever-present danger of adverse effects on employment should be considered. The result for many low-productivity workers might likely be no wages rather than low wages. Thus, it is clear that minimum wages do not represent an easy device for eliminating poverty.

Two other approaches related to income maintenance are wholly nongovernmental in nature. These are supplemental unemployment benefit (SUB) plans and wage-employment guarantees. Both are meant to afford workers income security. SUB plans are designed primarily to provide workers weekly benefit payments supplementing state unemployment insurance benefits for those laid off by their regular employers. Wage-employment guarantees, on the other hand, assure workers who either start work or are available for work a specified minimum amount of work or pay, with the guarantee period varying from as little as a week to as long as a year.

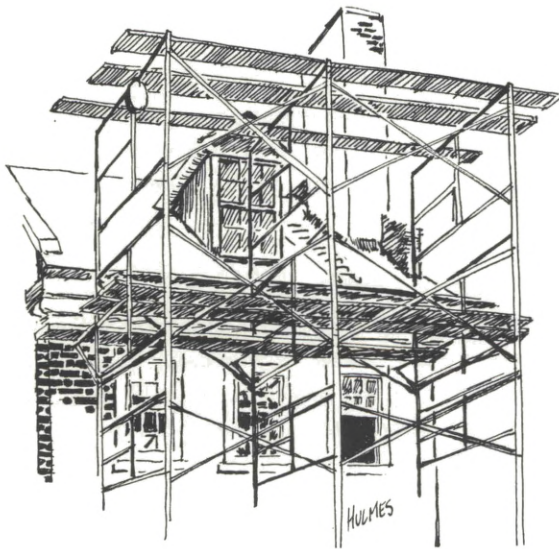
Unlike minimum wages discussed earlier, SUB and wage-employment guarantees are scarcely addressed to the low-wage, low-productivity worker. They are found in industries which are strongly union-organized and which pay wage rates well in excess of the statutory minima. Although these plans do represent attempts to "guarantee" or maintain income for relatively short terms, they are a response by the private sector for dealing with problems of income variation unique to particular industries. As such, they cannot be considered a basic weapon in combatting poverty.

however, more than one-half of the requisite financing comes from matching grants-in-aid made by the Federal Government. In contrast with the usual method of funding social insurance programs, public assistance is financed out of general revenues. The 1965 Medicare program, however, involved some use of general revenue funding and represented a departure from the exclusive use of payroll-based taxes to finance a program of social insurance.

## Shortcomings

Although the income maintenance programs discussed here undoubtedly have helped to deal with the consequences of an inability to earn income, they still have a number of serious shortcomings. The failure to promote work incentives or to enhance self-help motives on the part of welfare recipients has already been alluded to. Along these same lines, many communities may withhold payment of benefits to households under the Aid to Families with Dependent Children program if an able-bodied adult male is in residence. In many instances, the consequence has been to encourage low-earning fathers to desert, their poor families in order that the families may qualify for public assistance. At the same time, the need tests for assistance frequently have been criticized as too severe and the size of payments as too small. Additionally, even those modest payments may be unavailable to large numbers of the poor because of variations in state eligibility rules. In families marked by chronic unemployment or where the head of the household is temporarily disabled or a victim of mental illness, drug addiction, or alcoholism, little or no assistance may be available. In the case of social insurance plans such as Social Security, despite liberalization of benefits on a number of occasions, including this year, benefits generally have

tended to lag behind gains in real income for the over-all economy, and benefit standards frequently have been criticized as being inadequate. Finally, for the millions of families where the breadwinner earns too little to lift the family out of poverty, income maintenance programs such as those discussed here are of little or no consolation. For these reasons, the entire system of income maintenance has been subjected to growing



scrutiny and new ideas have been stirring. Probably the most talked-about new idea, and one which shows great promise of making significant inroads in closing the poverty gap, is the “negative income tax.”

### The negative income tax

The public may justifiably be excused for failure to understand just what the concept of a negative income tax entails. The word “negative” implies an absence or loss of income and “tax” clearly suggests a payment from the taxpayer to the Treasury. But the negative income tax proposes to do precisely the opposite. Rather than paying

money to the Treasury, the poor household would be paid by the Treasury enough either to reduce or close the gap between what it earns—its reported income—and some explicit minimum level of income, the poverty line. The intent of the proposal is to raise the low income of poor households by means of subsidies, or transfer payments—payments by the Government without any corresponding good or service provided in return. The scheme would make the income tax system symmetrical by providing for continuity on the minus side of the zero income point. Thus, transfers *from* the Treasury to a recipient who reports a level of income below the poverty line—in effect, a negative income—as well as tax payments *to* the Treasury based on a reported positive income level would relate to income, family size, and other deductions which are now permissible in filing income tax returns.

A number of such proposals have been made. Although they may differ in varying degrees, certain common threads run through them. First, the Treasury and the Internal Revenue Service would be the agencies through which poor households would be subsidized, thereby expanding the role of the tax system from merely collecting revenues. Second, income deficiency alone would serve as the criterion for establishing eligibility for subsidy. The plethora of existing criteria for public assistance such as physical disability, age, and residency, for example, would become irrelevant, at least for this program. Poverty would confer the right to income subsidies, since poverty would simultaneously establish need. A third common element is that the income guarantee would be either a fractional or a total guarantee insofar as the amount by which reported income falls short of the upper limit income established by the plan. For example, if the upper limit were set at \$3,000 and a poor family reported income

of zero, under the 100 per cent guarantee the subsidy would equal \$3,000. Under a fractional guarantee, the amount of the subsidy would depend upon the fraction chosen. A 50 per cent guarantee for a family reporting no income would result in a \$1,500 subsidy.

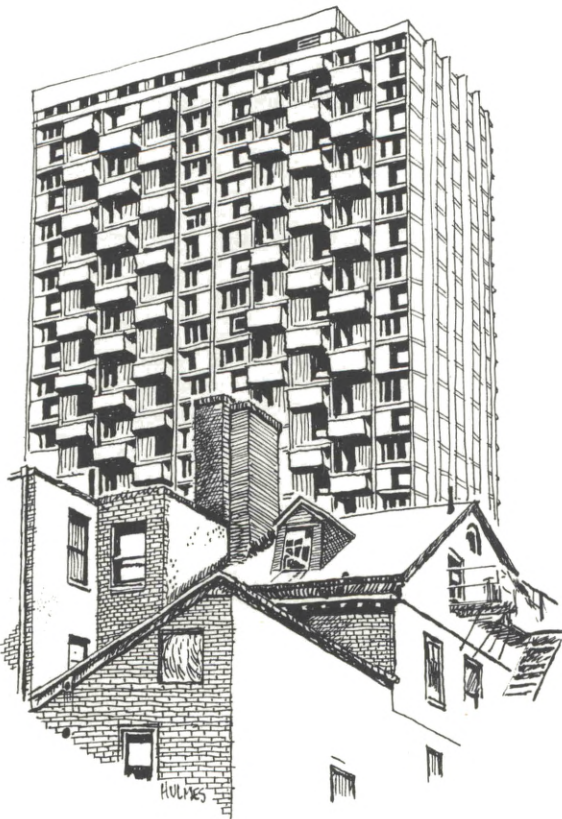
Finally, all negative income tax plans recognize that unless some offset to the subsidy is made for other income which households may earn from work or property, the result would be a universal system of income guarantees which all households could claim irrespective of size or income. For example, if we assume the same fractional guarantee—50 per cent or \$1,500—as in the above case, and other income for the

household were \$1,500, a fraction of this—perhaps one-third—might be charged against the subsidy. Total disposable income for that household would equal \$2,500 [ $\$1,500 + \$1,500 - (1/3 \times 1,500)$ ]. The subsidy is in effect reduced, and the higher the rate of offset the smaller would be the subsidy. However, the effect of raising the offset rate reduces work incentives at the same time as it lightens the subsidy cost to the Treasury. One of the more crucial considerations in this kind of proposal, therefore, is that which relates to the joint problem of work incentives and an appropriate offset rate. However, the major proponents of negative income tax proposals do not consider this to be an insurmountable problem.

#### REVOLUTION OR EVOLUTION?

The response of our society to the challenge of poverty in the midst of plenty has taken several paths. Yet each of these paths has evolved in response to a growing awareness of the complex nature of poverty and the added recognition that raising people above the poverty line involves a multi-faceted approach at the level of the national economy as well as at the level of the individual poor themselves. One of the more promising approaches—the negative income tax—may seem revolutionary to many. The idea of separating work and income, of assuming responsibility for a minimum level of income, and of subsidizing the poor with cash represents to many a sharp break with the past.

Yet, on closer inspection these ideas are not really a radical departure. The element of subsidy in the plan which serves to separate work and income is not unique. Government subsidies or gifts to various economic groups to promote the public interest have a lengthy history in the United States. Examples of this include mail-



carrying subsidies, shipbuilding differential subsidies, land grants and cash contributions for railroad construction, farm commodity price supports, depletion allowances to mineral producers and other extractive industries, and protective tariffs to prohibit or curtail importation of foreign goods. Present assistance schemes clearly do little to encourage work in return for their benefits. If the subsidy aspects of the negative income tax involve a departure from conventional approaches, it is in the implicit assumption that the poor are equally worth subsidizing as are the various special interests represented above.

As for assuming responsibility for a minimum level of income, the fact is that government at various levels has long done this through its growing public assistance programs. The relevant question is whether, given acceptance of such an objective, the job can be done more efficiently. Proposals such as negative income taxes may have real promise not only of more effectively reaching the poor, but of doing it at a lower over-all cost while at the same time expanding work incentives and encouraging self-help.

Finally, what may be a truly revolutionary aspect to such proposals is the idea that in guar-

anteeing income to the poor we do it in the form of an "unencumbered" payment of cash. For what this would mean in practical terms is that we will have come to accept the poor as being essentially no different, other than by virtue of their poverty, than the nonpoor. It would mean that we can afford to the poor the same freedom of choice as the nonpoor without impugning their morality or questioning their sense of social responsibility.

To be sure, the negative income tax proposals are not without problems or subject to criticism. In addition to the purely technical problems of implementation, the proposals raise for many problems of a deep philosophical nature. Despite these considerations, however, the increasing attention given to the negative income tax suggests that we are beginning to recognize that the poor should not remain hidden from the rest of society. And it may turn out that the poor, rather than being a national liability, are a vast wasted resource deserving of economic development to make them net contributors to society. Eliminating poverty may carry with it the reward of a richer and more durable society for all its members.

---

# Deposit Variability

by Hugh Chairnoff

To bankers, paradise could be a place where deposits are always growing, and growing steadily. Unfortunately, on this side of paradise deposits at commercial banks usually move up and down in fits and starts, causing perennial liquidity problems for bankers.

Most banks have changed considerably over the past several years. Mainly, their total deposits have grown rapidly and their time and savings deposits have become relatively much more important. Alert bankers may suspect these changes have helped reduce variability of their deposits and therefore have made changes in their asset policies possible.<sup>1</sup> In order to confirm or invalidate bankers' expectations, we have analyzed the behavior of deposit variability over a recent six-year period for a sample of Third District banks.

## Reasons for bankers' expectations

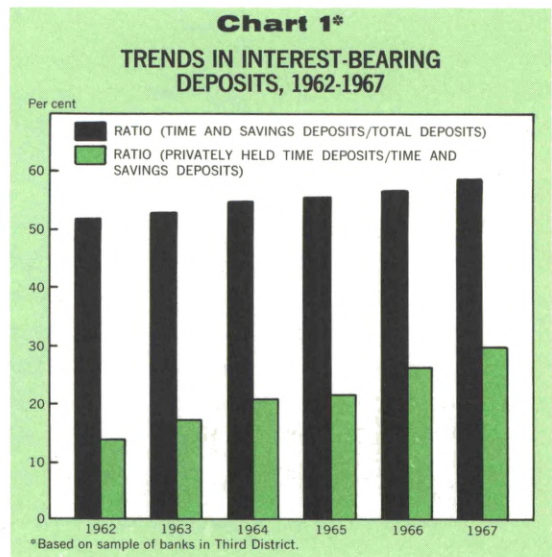
Why might bankers suspect that variability of their total deposits has declined during the 1960's? One reason is that interest-bearing deposits have become increasingly popular. As Chart 1 shows, time and savings deposits at the sample banks increased from about 52 per cent of total deposits in 1962 to 57 $\frac{3}{4}$  per cent in 1967. If we exclude savings deposits to get a measure of privately held time deposits, a kind of deposit particularly important to larger banks, we find a sharp increase from 13 $\frac{1}{4}$  per cent of total time

<sup>1</sup>Deposit variability is a measure of fluctuations in the level of deposits. It is defined as the ratio of the average fluctuation in deposits to the average level of deposits for the period. For a further explanation of the concept, see "Deposit Variability: A Banker's Headache" in the Business Review of the Federal Reserve Bank of Philadelphia, September, 1967.

and savings deposits in 1962 to 28 $\frac{1}{2}$  per cent in 1967. Since time and savings deposits tend to be less variable than demand deposits, the more there are of them, relatively speaking, the lower variability ought to be.

Second, total deposits at the average bank in the sample increased from \$12.9 million in 1962 to \$18.5 million in 1967, an average annual rate of increase of 7 $\frac{1}{2}$  per cent.<sup>2</sup> Because larger banks tend to experience less deposit variability than smaller banks, increases in average bank size should tend to reduce total deposit variability.

<sup>2</sup>The geometric mean was used to represent average bank size because over three-fifths of the banks had total deposits of \$20 million or less, yet accounted for 6 per cent of total deposits in the sample. The geometric mean reflects numerical dominance of smaller banks in the sample, whereas the arithmetic mean reflects concentration of deposits at the fewer large banks in the sample.



At least partially offsetting the decline in variability caused by these two developments has been the effort by businesses and individuals, attracted by higher interest rates, to reduce their idle demand balances. This trend may increase variability of deposits because it increases the influence of more volatile types of deposits such as those held by the U.S. Government and other commercial banks.

To gauge the impact of these developments on deposit variability, we measured the relationship between variability and each of the following factors for each of the years, and for the entire period of 1962-67.<sup>3</sup>

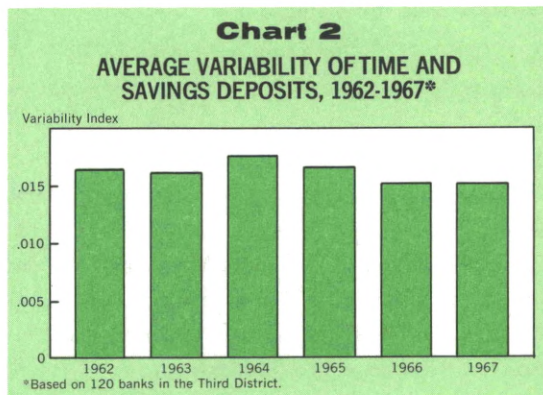
1. Proportion of interest-bearing deposits in the deposit structure.
2. Ratio of privately held time deposits to total interest-bearing deposits.
3. Size of bank.
4. Ratio of U.S. Government and interbank deposits to total demand deposits.

In summary, the analysis confirms the expectation that increases in average size of bank and the trend toward interest-bearing deposits contribute to lower deposit variability. Also, it indicates that the presence of volatile types of demand deposits can increase deposit variability under certain conditions.

### Impact of time and savings deposits

Because time and savings deposits generally fluctuate less than demand deposits, the greater the relative importance of these deposits, the lower the variability of total deposits. Another way time and savings deposits can reduce variability of total deposits is if their own variability declines. The facts indicate that there is little or no tendency for variability of these deposits to

<sup>3</sup>The reader is referred to the technical appendix shown at the end of this article for details of the relationships that are measured.



change much in either direction (see Chart 2), so the contribution of time and savings deposits to declining variability derives from their relatively greater importance to the sample banks.

Deposit variability, in fact, is quite sensitive to increases in the proportion of time and savings deposits. Over the entire period, 1962-67, each one per cent increase in the proportion of time and savings deposits tended, on average, to reduce deposit variability by 1.13 per cent.<sup>4</sup>

Despite the major influence of time and savings deposits on variability, bankers should remember that they are costly. The average interest rate paid on these deposits rose from 2.79 per cent in 1962 to 3.63 per cent in 1967 in the Third District. So, the trend toward more interest-bearing deposits in the deposit structure may increase pressure on bank profits through rising deposit costs yet provide only a small reduction in total deposit variability.

<sup>4</sup>How much influence the proportion of time and savings deposits has on variability for a specific bank depends on the level of that proportion. For example, banks with a small proportion of such deposits experience a more than proportional decline in variability when small increases in the proportion take place. On the other hand, banks with a large proportion of these deposits experience only a modest decline in variability when increases in the proportion occur.

### Privately held time deposits

It is generally believed that variability of time deposits is less than that of savings accounts because of the fixed maturity of time deposits. On the other hand, many bankers have learned that time deposits can be more unstable than demand deposits during periods of financial strains. Consequently, the presence of time deposits has an uncertain impact on variability.

Our analysis shows that the presence of privately held time deposits may reduce deposit variability, though their impact is quite modest. Each one per cent increase in the proportion of privately held time deposits reduced variability by 0.03 per cent over the six-year period.

### Average bank size

Increasing average bank size tends to reduce deposit variability. However, the impact of increasing size is substantially less than that of the trend toward interest-bearing deposits. Each one per cent increase in average bank size reduced variability by only 0.08 per cent over the period, 1962-67.

### Structure of demand deposits

Normally, bankers can expect fluctuations in components of demand deposits to offset one another to some extent. That is why larger banks, despite a higher proportion of volatile deposits

of the U.S. Government and other commercial banks, tend to experience less variability of their demand deposits than do smaller banks. But during 1966, there was an apparent change in the relationship among deposit flows in these types of deposits. During 1965, for example, Government deposits moved in the opposite direction from interbank deposits. In 1966, however, deposits in these two categories moved in the same direction. As a result, the presence of these volatile types of demand deposits increased total deposit variability in 1966.<sup>5</sup>

### Offsetting deposit fluctuations

The more deposit flows between demand and interest-bearing deposits offset one another, the lower variability of total deposits will be. To see what happened to the offsetting relationship among demand and interest-bearing deposits over the six-year period, we compared the sum of the average fluctuation of demand deposits and interest-bearing deposits to the average fluctuation of total deposits. The higher this ratio, the greater the tendency for deposit flows to offset one another. As Table 1 indicates, fluctuations in demand and time deposits increasingly offset one another, thus contributing to lower variability.<sup>6</sup>

### Trend in deposit variability

The top half of Chart 3 summarizes what happened to deposit variability for the sample of

**Table 1**

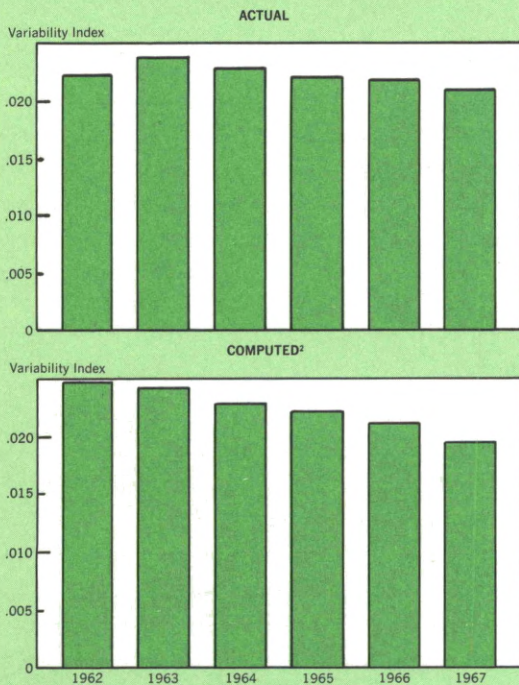
**RATIO OF AVERAGE FLUCTUATION OF DEMAND PLUS TIME AND SAVINGS DEPOSITS TO AVERAGE FLUCTUATION OF TOTAL DEPOSITS**

Year	Ratio
1963	1.663
1964	1.699
1965	1.715
1966	1.607
1967	1.841

<sup>5</sup>It was not the proportion of these deposits in the demand deposit structure that was the villain. For the average bank, the proportion of these two types of deposits fluctuated in a narrow range over the period. Rather, a change in the relationship between deposit flows in the U.S. Government and interbank categories due to extremely tight monetary conditions and a large appetite for funds by the Federal Government caused the increase in variability.

<sup>6</sup>Again, 1966 was the exception. Extremely tight monetary conditions contributed to the temporary reversal of the trend toward greater offsetting of deposit flows.

**Chart 3**  
**ACTUAL AND COMPUTED AVERAGE TOTAL DEPOSIT VARIABILITY, 1962-1967<sup>1</sup>**



<sup>1</sup>Sample of banks in the Third District.  
<sup>2</sup>Based on regression analysis data in Technical Appendix.

Third District banks over the period, 1962-67. There was a slight, but noticeable, downward trend. This downward tendency is consistent with the relationship between variability and the factors we have been discussing.

The bottom half of Chart 2 shows what should have happened to deposit variability based on the technical analysis and if the factors that have been discussed were the only ones affecting deposit variability.<sup>7</sup> The downward trend in variability is quite noticeable (computed variability declined 21 per cent over the period). However,

<sup>7</sup> What should have happened to deposit variability was determined by multiplying the average relationship over the six-year period between variability and each of the factors (from the technical analysis) by what happened to each of the factors.

actual deposit variability declined only 3 per cent over the six-year period. The reason for the discrepancy between what actually happened and what should have happened is that the analysis did not account for all of the factors that may affect deposit variability.

**Conclusions**

The analysis confirms bankers' expectations that deposit variability should have declined during the 1960's because of the rapid growth of total deposits and the trend toward interest-bearing deposits. In fact, if these factors were the only determinants of deposit variability, it would have declined by a substantial amount over the six-year period, 1962-67.

The factors discussed here did not have a uniform impact on deposit variability. Based on what should have happened to deposit variability over the period, the factors we have been discussing accounted for the following proportions of the decline in variability:

Proportion of time and savings deposits	60 per cent
Increase in average bank size	17 per cent
Proportion of privately held time deposits	15 per cent
Proportion of U.S. Government and other commercial bank deposits	8 per cent

Though bankers were right to expect a downward trend in total deposit variability, the actual trend was not so striking as to justify major departures in liquidity and asset management. During the 1960's most bankers were focusing their attention on time deposits. Since the impact of time deposits on deposit variability is only a fraction of the impact that total time and savings deposits have on variability, bankers should be wary of initiating changes in asset policies based



on the presumption that time deposits and savings deposits are equivalent in their effect. Besides, what happens to deposit variability is only one

factor, and probably not the most important factor, in assessing the value of making new major departures from current asset management policies.

**TECHNICAL APPENDIX**  
**Analysis of Some Determinants of Total Deposit Variability<sup>1</sup>**

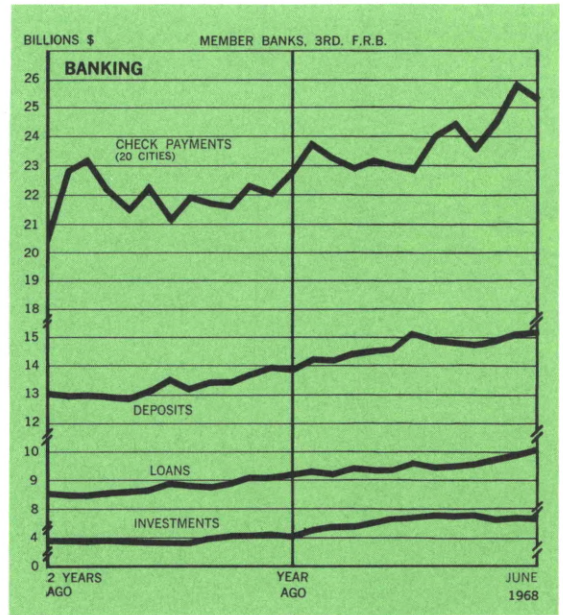
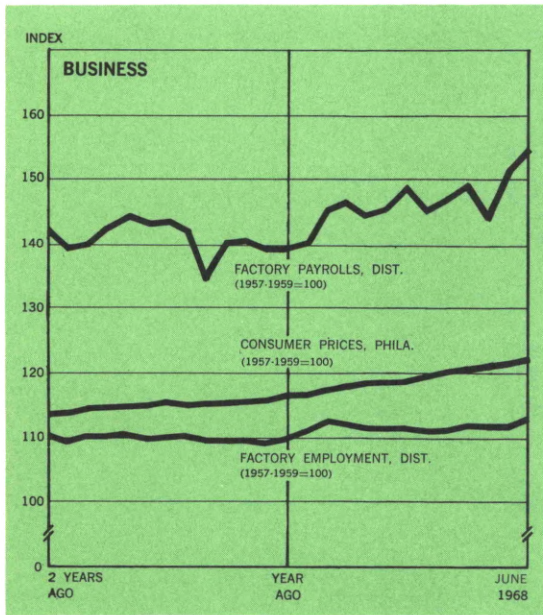
	1962	1963	1964	1965	1966	1967	1962- <sup>3</sup> 1967
Log Bank Size <sup>2</sup>	-2.6397 (2.3628)	-2.1554 (2.1140)	-1.7056 (1.3778)	-2.6098 (2.5663)	-3.2111 (3.6657)	-3.2190 (4.0542)	-2.4428 (6.2161)
Ratio of Time and Savings Deposits to Total Deposits x 1000	-0.0536 (5.6722)	-0.0410 (4.0368)	-0.0656 (5.7453)	-0.0610 (6.7906)	-0.0526 (6.2774)	-0.0585 (6.8348)	-0.0536 (14.4666)
Ratio of Privately-held Time Deposits to Total Time and Savings Deposits x 1000	-0.0003 (0.0340)	0.0108 (1.2555)	-0.0123 (1.4881)	-0.0187 (2.8191)	-0.0056 (1.0503)	-0.0104 (1.9002)	-0.0052 (1.9244)
Ratio of Interbank and U.S. Government Deposits to Total Demand Deposits x 1000	0.0275 (0.9544)	0.0020 (0.0670)	-0.0122 (0.3734)	0.0256 (1.0199)	0.0496 (2.2717)	0.0089 (0.4234)	0.0153 (1.4918)
Constant Term x 1000	67.0048	58.6213	74.0850	77.2365	73.8423	81.8686	69.7153
R <sup>2</sup>	.3036	.1714	.2591	.3238	.3114	.3306	.2530
Number of Banks	100	111	102	113	110	113	649

<sup>1</sup> This analysis only includes those banks with U.S. Government, commercial bank, and privately-held time deposits. Total deposits were adjusted for trend before computing variability.

<sup>2</sup> t-values are in parenthesis.

<sup>3</sup> The relationships were not significantly different among the years.

# FOR THE RECORD . . .



SUMMARY	Third Federal Reserve District			United States			
	Per cent change			Per cent change			
	June 1968 from		6 mos. 1968 from year ago	June 1968 from		6 mos. 1968 from year ago	
	mo. ago	year ago		mo. ago	year ago	mo. ago	year ago
<b>MANUFACTURING</b>							
Production .....			+ 2	+ 5	+ 4		
Electric power consumed .....	0	+10	+10	.....	.....		
Man-hours, total* .....	+ 2	+ 4	+ 1	.....	.....		
Employment, total .....	+ 1	+ 3	+ 2	.....	.....		
Wage income* .....	+ 2	+11	+ 7	.....	.....		
CONSTRUCTION** .....	-32	-10	+24	- 9	0	+12	
COAL PRODUCTION .....	+ 7	+ 9	- 1	- 3	- 2	0	
<b>BANKING</b>							
(All member banks)							
Deposits .....	0	+10	+10	+ 2	+ 8	+ 9	
Loans .....	+ 2	+10	+ 9	+ 3	+ 9	+ 8	
Investments .....	0	+15	+17	- 1	+10	+13	
U.S. Govt. securities ....	0	+11	+10	- 3	+ 7	+ 8	
Other .....	- 1	+19	+25	0	+12	+19	
Check payments*** .....	- 2†	+12†	+12†	+ 4	+20	+16	
<b>PRICES</b>							
Wholesale .....	.....	.....	.....	0	+ 2	+ 2	
Consumer .....	0‡	+ 5‡	+ 4‡	0	+ 4	+ 4	

LOCAL CHANGES	Manufacturing				Banking			
	Employment		Payrolls		Check Payments**		Total Deposits***	
	Per cent change June 1968 from		Per cent change June 1968 from		Per cent change June 1968 from		Per cent change June 1968 from	
	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago
Standard Metropolitan Statistical Areas*								
Wilmington .....	+ 1	0	+ 1	+11	- 7	+31	+ 5	+11
Atlantic City .....	.....	.....	.....	.....	+ 4	+ 8	+ 1	+ 3
Trenton .....	0	- 3	+ 2	+ 8	-26	- 2	- 1	+ 9
Altoona .....	+ 1	+ 3	- 1	+12	- 2	+13	- 1	+ 9
Harrisburg .....	+ 2	+ 2	+ 3	+ 9	- 5	- 3	+ 2	+16
Johnstown .....	+ 2	+ 3	+ 5	+10	- 6	+11	0	+ 9
Lancaster .....	+ 2	+ 7	+ 3	+16	+ 2	+ 6	- 1	+ 8
Lehigh Valley ..	+ 2	+ 1	+ 2	+10	+ 1	+12	0	+12
Philadelphia .....	+ 1	0	+ 2	+ 6	+ 2	+10	0	+10
Reading .....	+ 2	+ 4	+ 2	+14	+17	+26	0	-25
Scranton .....	+ 1	0	+ 1	+ 7	- 2	- 1	+ 1	+12
Wilkes-Barre ....	+ 2	+ 2	+ 1	+10	- 3	+11	0	+14
York .....	+ 2	+ 2	+ 2	+12	- 4	+ 6	0	+ 6

\*Production workers only  
 \*\*Value of contracts  
 \*\*\*Adjusted for seasonal variation

†15 SMSA's  
 ‡Philadelphia

\*Not restricted to corporate limits of cities but covers areas of one or more counties.  
 \*\*All commercial banks. Adjusted for seasonal variation.  
 \*\*\*Member banks only. Last Wednesday of the month.