Effects of Shifts of Aggregate Demand upon Income Distribution*

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I N THE United States a large portion of those living in poverty and an even larger portion of those living close to poverty do so because of the meager income they receive from work. The questions that need answering if, some day, a serious war on poverty is to be mounted relate to the distribution of income and the available policy tools which can affect the distribution of income in the relatively short run. The emphasis upon the short run makes programs based upon accelerated investment in humans irrelevant. It also means that the impact of economic growth upon the extent of poverty [1] is not germane. The policy problem is to affect the distribution of income, given the capacity to produce and the skills and locations embodied in the labor force.

Early in the preparations for a possible war on poverty, I was drawn into discussions dealing with the prospective campaign. My view was summarized in the subtitle of a talk at the Berkeley conference [6], a subtitle that was too flip for the editor of the published version. The subtitle was "Is This Trip Necessary?" I consciously ignored the poverty of those not expected to be in the labor force, which can be handled only by a sufficiently generous scheme of transfer payments. The argument of the paper, and of some subsequent writings, was that the achievement and

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sustaining of tight full employment could do almost all of the job of eliminating poverty.

My thesis was that tight full employment would help eliminate poverty in at least two ways: (1) by employing the unemployed and moving part-time workers to the fully employed class, and (2) by fostering labor market conditions such that low wages will increase at a faster rate than high wages.

Tight full employment as I defined it was neither achieved nor sustained during the 1960's. As an interim measure of tight full employment, I suggested a measured unemployment rate of 3.0 percent, considerably below the best we have achieved since 1953 but well above measured rates in Europe. In spite of a war added onto an investment boom, the lowest monthly unemployment rate achieved during the current expansion was 3.5 percent, and we never got far below 3.7 percent for a sustained period.

The events of the expansion indicate that we cannot rely upon "undirected" aggregate demand increases to do the job which I claimed it could do. This is because of two facets of what happened:

1. The crunch of August–September 1966 showed that a sustained expansion, or even sustained growth, breeds "stresses and strains" within the economy which make the continuation of the expansion or growth unlikely. Thus, sustaining tight full employment may require more than just an expansionary monetary and fiscal policy.

2. The distribution of relative wages did not appreciably improve during the expansion of the 1960's.

Thus, it may be that greater attention to the structure of aggregate demand is necessary if a desired change in relative wages is to be achieved. The question is whether "directed" demand can achieve the goal of greater equality or whether a system of direct controls is needed, with or without directed demand.

Income Distribution as a Policy Goal

After the summer of 1967, the "question" of the distribution of income, in all its dimensions and not only as measured money income, should be the leading domestic issue. One way of stating the problem is that there is some maximum inequality to the distribution of a generalized income that is compatible with social stability. It seems clear that a good wording of the leading social imperative is "to assure domestic peace and tranquillity."

The maximum inequality consistent with any set of social goals is not invariant. It is useful to conjecture, following Scitovsky [11], that in a technically sophisticated, highly urbanized society inequality of measured

income more truly reflects inequality of real or "subjective" income than in a less sophisticated, rural environment. In the dimensions not measured by the earning and spending of private income, life may be easier and the contributions of public and free goods more evenly distributed in a rural and small town setting than in our modern cities. Whereas the "inequality" in the distribution of private income may be partially offset by the distribution of free and public goods in some settings, in our modern urban ghettos the coverage of free goods has decreased and public goods typically are distributed so as to aggrevate the measured inequality of income. In addition, there are problems of perception and tradition: rural poverty may be associated with a belief in the inevitability of status differences, whereas urban societies are associated with a belief in social and economic mobility.

Another reason why a consensus that equity exists is required is that, in a modern urban society, for a broad set of occupations, public benefits exceed private benefits. The dependence of any particular unit's output upon the smooth working of other units is so obvious that observed difference in income received must correspond to some notion of "fairness."

Roughly speaking, there are two classes of policy instruments which can be used to affect income distribution: one set affects factor payments from production; the other affects disposable income by a system of transfer payments.

There has been much discussion of broadening the tax system to provide transfer payments by right, the so-called negative income tax [3]. Objections to the negative income tax are possible on two planes. One is that if the income guarantee is "adequate" a sizable disincentive effect may exist, therefore decreasing attainable real gross national product. The second set of objections is political and social: the creation of a large class of social remittance men and women is not conducive to either social cohesion or domestic tranquillity.

The virtues of the negative income tax are that it eliminates the stigma and costs of case-load welfare and that in principle it could provide adequate incomes for the economically inactive portion of the population. More nearly adequate welfare and pension schemes and, in addition, some way of guaranteeing such income protection as a right are necessary. But it is an admission of an inability to make the production process respond to social goals to resort to taxation transfers as a substitute for income from factor payments.

On the other hand, the position hypothesized by Henry Simons [12, 13] that an enterprise economy tends to generate a distribution of income and wealth that is inconsistent with the continuation of political democracy seems particularly timely. The solution to this dilemma proposed by Si-

mons, an effective system of progressive income taxation and transfers, is as relevant for our time as it was for his.

The "Crunch" and the Limitation to Aggregate Demand

The 1960's witnessed the apparent victory of Keynesian policy. However, the successful application of Keynesian policy may result in an economy that is inherently unstable. This instability is not the result of a tendency to stagnate or enter into a deep depression state; rather, it is due to a tendency to explode.

Between the end of World War II and the crunch of 1966, the American economy operated within an expectational climate in which decision makers were increasingly expecting reasonably full employment to be maintained and to an increasing extent both households and business were expecting next year to be better than this year. This trend in the expectational climate resulted in an explosively increasing demand for private investment in the mid 1960's.

Rising investment generates savings. During the 1950's, when a nascent investment boom took place, the savings took place as a result of changes in the federal government's budgetary position. This was due to the application of conventional fiscal precepts in designing tax and spending programs. In the 1960's, as a result of the combination of "modern" fiscal policy ideas and an accidental war, government revenues did not rise rapidly relative to government spending when private investment "exploded." Thus, the savings to offset the explosion of private investment had to come from the private sector.

The "Kaldorian" relation [4], in which the propensity to save out of profits is greater than the propensity to save out of household disposable income, means that income distribution shifts towards profits whenever savings must be generated in the private sector. One way in which this change in the distribution of income can take place is through inflation. A rise of prices in excess of the rise in money wages lowers real wages. This classical inflation pattern, in which savings are forced by rising prices, was evident during 1966 and is an element in the continuing price pressure of 1967. Thus, not only does the "classical" (wages and profits) distribution of income "deteriorate" during an investment boom but also the deterioration is associated with a politically unpalatable inflation.

The contention that a measured 4-percent unemployment rate is full employment apparently was borne out by the accelerated rise in prices during 1966 and 1967. However, as wage increases were modest throughout most of 1966, the guidelines broke more on the price than the wage front; the mechanism of the inflation was not that of the Phillips curve [8].

Private investment lagged in the first three years of the current expansion and virtually exploded in the second three years. This investment explosion put serious pressures upon financial markets even in the absence of Federal Reserve action. When the Federal Reserve System applied some constraint, a "mini-panic" occurred.

The "mini-panic" of 1966 can be interpreted as evidence that sustained full employment may result in such an explosive increase in investment demand that it becomes impossible to achieve the sustained growth in demand necessary for continuing full employment. This is so because the investment boom is due to an "euphoric" expectational climate, and to break the investment boom it is necessary to change the expectational climate. Once the expectational climate is changed, all of the private sectors become sluggish. Only by accident would public demand increase sufficiently quickly so that a relatively deep recession would not follow such a change in expectations. Of course the deep depression ratifies the changed expectations and thus it will take time to rebuild confidence.

The destabilizing investment boom of the 1960's took place before unemployment rates were lowered to the levels which I characterized as tight full employment. If such explosive investment booms are a characteristic of American capitalism and they occur prematurely, then, in order to achieve and sustain tight full employment, it is necessary to contain the potential investment boom. One possible way is so to direct demand that it does not generate a large inducement to invest. Another possibility is to control investment directly, either by licensing investment or by licensing access to financial markets.

Impact of the Great Expansion upon Income Distribution

An important characteristic of the present-day American economy is the widespread belief, which has been validated by the overall performance of the economy since World War II, that next year will be better than this year. One way in which this "betterness" appears is in higher money incomes. Thus, the convention of annual "improvement" factors in union contracts. As long as a pattern of annual wage increases exists, changes in income distribution among wage earners will be due to the pattern of wage increases.

The evidence presented by Ulman [14], mainly for post–World War II years prior to the recent expansion, is that a significant positive correlation exists between the original level of gross hourly earnings and the percentage change in gross hourly earnings. This contrasts with the finding for the depression and war years [9].

The pattern of arithmetic increases in wages that occurred during World War II translates into geometric increases that are inversely related to the original wage level, thus decreasing the range of relative

earnings. During the early postwar period, the range changed but little. Between 1953 and 1960, the years of increasing overall slack in labor markets, the range widened. Between 1960 and 1966, the range of weekly wages has shown no real change, even though the dispersion of hourly rates as measured by the coefficient of variation has shown some narrowing over this recent expansion.

The initial observation for what follows is 1948. This year may be too close to the end of World War II, with its elaborate wage and price controls, to serve as a "model" for relative wages. Between 1953 and 1961, the trend was toward higher unemployment rates. The expansion of 1961–1966 saw aggregate unemployment rates fall from 6.7 percent to 3.8 percent. Does chronic and growing labor market slack widen the range of weekly earnings among industries, whereas a period of labor market tightening or tightness narrows the spread?

Relative earnings in the 21 two-digit manufacturing industries plus mining, contract construction, wholesale trade, and retail trade were examined. For each year, the average weekly wage in each of the 25 sectors was divided by average earnings in all manufacturing to get relative wages.

In 1948, weekly earnings in four industries (Table 1) were in excess of 120 percent of the average earnings, and three industries exhibited earnings that were less than 80 percent of the base. In sharp contrast, in 1966, weekly earnings in six industries were in excess of 120 percent of all the manufacturing earnings, and earnings in six industries were below 80 percent of the base. Whereas in 1948, of the 25 industries, 18 were in the range "weekly earnings in all manufacturing ±20 percent," in 1966 only 13 were in this range. (If "±10 percent of all the manufacturing earnings" is used as the central group, 12 of the 25 industries were in the range in 1948, whereas only 9 were in 1966.)

Not only has there been a market thinning out of the middle of the range of weekly earnings by industry, but also the minimum average weekly income as a ratio to the average has decreased. In 1948, weekly earnings only in tobacco manufactures were below 70 percent of the average. In 1966, three industries exhibited weekly earnings lower than 70 percent of all manufacturing: these were leather and leather goods, apparel and related manufacturing, and retail trade.

Of the ten industries with the highest weekly earnings in 1948, seven had increased their relative earnings by 1966, one exhibited no serious change, and two (mining, and printing and publishing) had suffered substantial relative declines.

Of the eight industries with the lowest relative wages in 1948, seven had experienced a substantial decline in their relative wages by 1966. The exception, tobacco, had the lowest average weekly earnings in 1948 (69

Table 1. Average weekly earnings as a ratio to average weekly earnings in manufacturing, 1948, 1953, 1960, and 1966

Industry	1948	1953	1960	1966
Mining	1.234	1.178	1.175	1.158
Contract construction	1.228	1.226	1.259	1.293
Ordnance & accessories	1.078	1.108	1.208	1.209
Lumber & wood products	0.896	0.862	0.821	0.825
Furniture & fixtures	0.919	0.893	0.838	0.813
Stone, clay, & glass products	1.001	0.995	1.031	1.018
Primary metal industries	1.151	1.198	1.221	1.230
Fabricated metal products	1.060	1.085	1.096	1.084
Machinery	1.136	1.173	1.165	1.202
Electrical equipment	1.026	1.000	1.011	0.969
Transportation equipment	1.162	1.210	1.242	1.267
Instruments & related products	0.989	1.030	1.040	1.010
Miscellaneous manufacturing	0.904	0.873	0.827	0.791
Food & kindred products	0.920	0.901	0.959	0.925
Tobacco manufactures	0.689	0.675	0.723	0.758
Textile mill products	0.822	0.754	0.708	0.731
Apparel & related products	0.822	0.691	0.627	0.613
Paper & allied products	1.030	1.019	1.060	1.063
Printing & publishing	1.226	1.167	1.147	1.092
Chemicals & allied products	1.041	1.053	1.150	1.118
Petroleum & related products	1.304	1.282	1.322	1.288
Rubber & plastic products	1.004	1.031	1.031	0.995
Leather & leather products	0.773	0.722	0.674	0.667
Wholesale trade	1.009	0.978	1.011	0.990
Retail trade	0.784	0.705	0.695	0.611

Source: Computed from *Manpower Report of the President*. Table C-6, "Gross Average Weekly Earnings of Production or Non-Supervisory Workers on Payrolls of Selected Industries Annual Averages."

percent of the all manufacturing average earnings). By 1966, this ratio for tobacco was 76 percent, and tobacco manufactures were fifth from the bottom in weekly earnings.

Some of the declines in relative weekly earnings were really substantial. Earnings in apparel fell from 82 percent to 61 percent of the average of all manufacturing, furniture from 92 to 81 percent, leather from 78 to 67 percent, textiles from 82 to 73 percent, and lumber from 90 to 83 percent. In addition, retail trade fell from 78 to 61 percent and miscellaneous manufactures from 90 to 79 percent.

The seven industries that ranked from eleventh (paper and allied products, relative earnings 103 percent) to seventeenth (food, relative earnings 92 percent) in 1948 tended to show but slight changes in their relative earnings in the period to 1966. The relative earnings of electrical equipment dropped 6 percent; all the others remained approximately unchanged in relative earnings: that is, the terminal-year relative earning was ±3 percent of the initial relative earnings.

Thus, over the period 1948–1966, for the industries examined, the rich tended to get richer, the poor tended to get poorer, and those in the middle tended to hold their own.

If 1948–1966 is broken into three subperiods, 1948–1953, 1953–1960, and 1960–1966, the spreading of relative weekly earnings and the thinning out of the middle range occurred during each period, although it has occurred at an accelerated rate since 1953. Whereas weekly earnings in 18 industries in 1948 were in the middle range (80 percent to 119 percent of the average in all manufacturing), 17 industries in 1953, 15 industries in 1960, and 13 industries in 1966 were in this range (Table 2).

Table 2. Average weekly earnings in 21 manufacturing industries, mining, construction, and trade: distribution of relative wages (all manufacturing = 100), 1948, 1953, 1960, 1966

Weekly wage as a percentage of all manufacturing	Number of industries			
	1948	1953	1960	1966
120.0 and over	4	3	5	6
110.0–119.9	3	5	4	2
100.0–109.9	8	6	7	5
90.0– 99.9	4	3	1	4
80.0– 89.9	3	3	3	2
70.0– 79.9	2	3	2	3
69.9 or less	1	2	3	3

Source: Table 1

The increase in the spread since 1948 seems to be mainly due to the relative retardation in the increase in earnings in what were already low-wage industries. The relative retardation of what were two high-earning industries in 1948—mining, and printing and publishing—is perhaps mainly due to technological changes, although the relative retardation of earnings in mining is a part of today's rural poverty scene.

Many of the industries in which relative wages declined between 1948 and 1966 were "sick" for part or all of this period. In the case of the textile, apparel, leather, and furniture industries, one response to difficulties was a rather large-scale migration from major metropolitan centers and their historical areas toward small towns and the South.

A theorem seems to fall out of the experience of the postwar period. Marked declines in relative wage earnings in an industry will be accompanied by changes in the location of the plants in the industry.

The maintenance, or even a continuation of the thinning-out trend, during the expansion of 1961–1966 is evidence that the supply curves of labor to the industries with low relative wages remained highly elastic as the overall unemployment rate decreased. This may reflect their locational

advantages: with rural areas as a continuing source of labor, the advantageously located low-wage industries may in fact be operating with a huge reservoir of labor, responsive to job opportunities at unchanging mark-ups over rural incomes.

As measured by the coefficient of variation, the spread of hourly earnings decreased slightly between 1960 and 1966, after increasing between 1948–1953 and 1953–1960. In spite of this, the coefficient of variation for weekly earnings increased between 1960 and 1966. Thus, hours worked were positively correlated with earnings so that the distribution of weekly earnings had a wider range than the distribution of hourly earnings. Inasmuch as it is earnings over a period, not the hourly rate, that is important in income distribution, the minor drawing together of hourly rates that occurred during the expansion is not especially significant.

Leading Sectors in Generating Aggregate Demand and Income Distribution

Aggregate demand has a structure which, in turn, generates the particular (including regional) demands for products and factors. The government impact upon aggregate demand also has a structure. As long as income distribution is a "minor" or, better, an "unmentionable" policy goal, then the impact upon income distribution of the particular structure of government programs can be ignored. Once the achievement of some maximum inequality becomes a recognized social imperative, then the way in which government affects income distribution becomes a factor in policy decisions.

A number of factors have combined to create the "shortages in the midst of surpluses" labor markets of the past 10 to 15 years, and the resultant spreading of relative incomes. One has been the peculiar pattern of government demand. It is only necessary to note how government spending on research and development has grown and to combine this with the growth of spending on education to recognize that leading sectors, in terms of the growth of aggregate demand, have generated initial demand for highly skilled professional and technical labor. Even though to a large extent the impact of government has been of a stop–go nature, the research-plus-education growth has been fairly steady.

A second factor in determining the changes in relative incomes has been the rapid migration from rural areas, in particular the movement of Negroes from the rural South [7]. This has generated a large—nay, an infinitely elastic—supply of unskilled and semiskilled workers in the cities. The disturbing results reported by Batchelder [2], that Negro male incomes deteriorated relative to white male incomes between 1950 and 1960 within the relevant cells, indicates that the data on average wages by industry may obscure increasing spreads of incomes within each industry.

A third factor tending to spread relative earnings has been the stop–go nature of many facets of the economy since World War II. Over this period, on the whole, the American economy has done well. However, this overall "smoothness" has been the result of a series of stop–go developments in various sectors. Not only has the country engaged in two "minor" wars, but also the leading sectors have shifted with great rapidity from general defense, to missiles, to space, to private investment. Each time a new government program, be it highways or aid to education or moon shots, gets under way, local excess demand for labor is generated.

The impact of new leading sectors upon wages is different from a rise in employment that takes the form of rehiring previously employed workers and from the expansion of conventional industries. Whenever local demand for labor exceeds supply, wages rise [5, 10]. In addition, wage increases in a sector spill over to other sectors, even in the face of overall labor market slack. This is so because productivity of labor is a function of "morale," and a decline in relative wages adversely affects morale. However, in the presence of slack, wage increases in the following sectors will be lower than in the leading sectors.

If a series of stop–go shocks occurs and if these shocks all have their major initial labor market impact upon a restricted set of labor markets, then the wage in this restricted set will rise relative to others. If these repeated impacts occur upon what are already high-wage industries and occupations, then the distribution of income will be adversely affected.

A test of whether the pattern of aggregate demand creation has affected the distribution of income, by a succession of such impacts upon the demand for particular classes of workers, is needed. Detailed occupational income data and a way of transforming each period's leading sector into demand for labor in particular categories are required for such a test.

Policy Suggestions

From the above, I extract two propositions relevant to policy formation:

1. The American economy as presently organized is not capable of achieving and sustaining tight full employment.

2. Within the employment limitations of the economy, there is no significant tendency toward a narrowing of the spread of relative income from labor.

I add to the above that a narrowing of the spread of income from labor is necessary.

If the post–World War II pattern of shifting leading sectors determining aggregate demand leads to perverse changes in the distribution of income, then we ought to consider changing the pattern of leading sectors.

A suggestion of real merit is that the government become an employer of last resort.

One attribute of such a tap employer is that, when the terms upon which it will employ are set, the minimum wage for all is determined. There is no longer any question about the "coverage" of minimum wage legislation. In addition, the minimum wage set in this manner does not have an adverse effect upon employment, as may be true for the present minimum wage legislation. The relative size of the wage set by the employer of last resort determines the division of the labor force between the private and the public sectors.

In a world where nominal wages are expected to increase each year, some improvement factor needs to be included in the terms upon which the employer of last resort hires. If the improvement factor for the employer of last resort rises at a faster rate than average and above-average wages, the range of relative wages decreases. In time, if such differential rates of change are sustained, a target ratio between the minimum and average can be achieved.

To the extent that the high-wage workers' nominal income rises at some "productivity rate," the low-wage workers' nominal income will need to rise at some faster rate: there may be an inflationary bias in an incomes policy that takes as one of its imperatives the achievement of greater equality. In addition, it will be necessary to restrain profits and investment; in particular, the highly destabilizing tendency for investment demand to explode will have to be brought under control.

Although we currently view the crisis in income distribution as centering around the urban ghettos, much of poverty is rural. An employer of last resort, willing and able to hire all who offer to work, will have a large impact on the poorer rural areas. One effect of such a national employment policy will be to slow down the pace of migration to the urban complexes. Inasmuch as many of the urban problems are related to the rapid rate of migration, such a retaining effect following from an employer of last resort will be an added virtue.

Much experimentation with tap employment policies, and its equivalent, the creation of programs which will have their major initial impact upon present unemployed labor, will be needed. However, the objective is clear: it is to take the labor force as it is and make sure that fitting jobs are available. Instead of the demand for the low-wage worker trickling down from the demand for the high-wage worker, such a policy should result in increments of demand for present high-wage workers "bubbling up" from the demand for low-wage workers.

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