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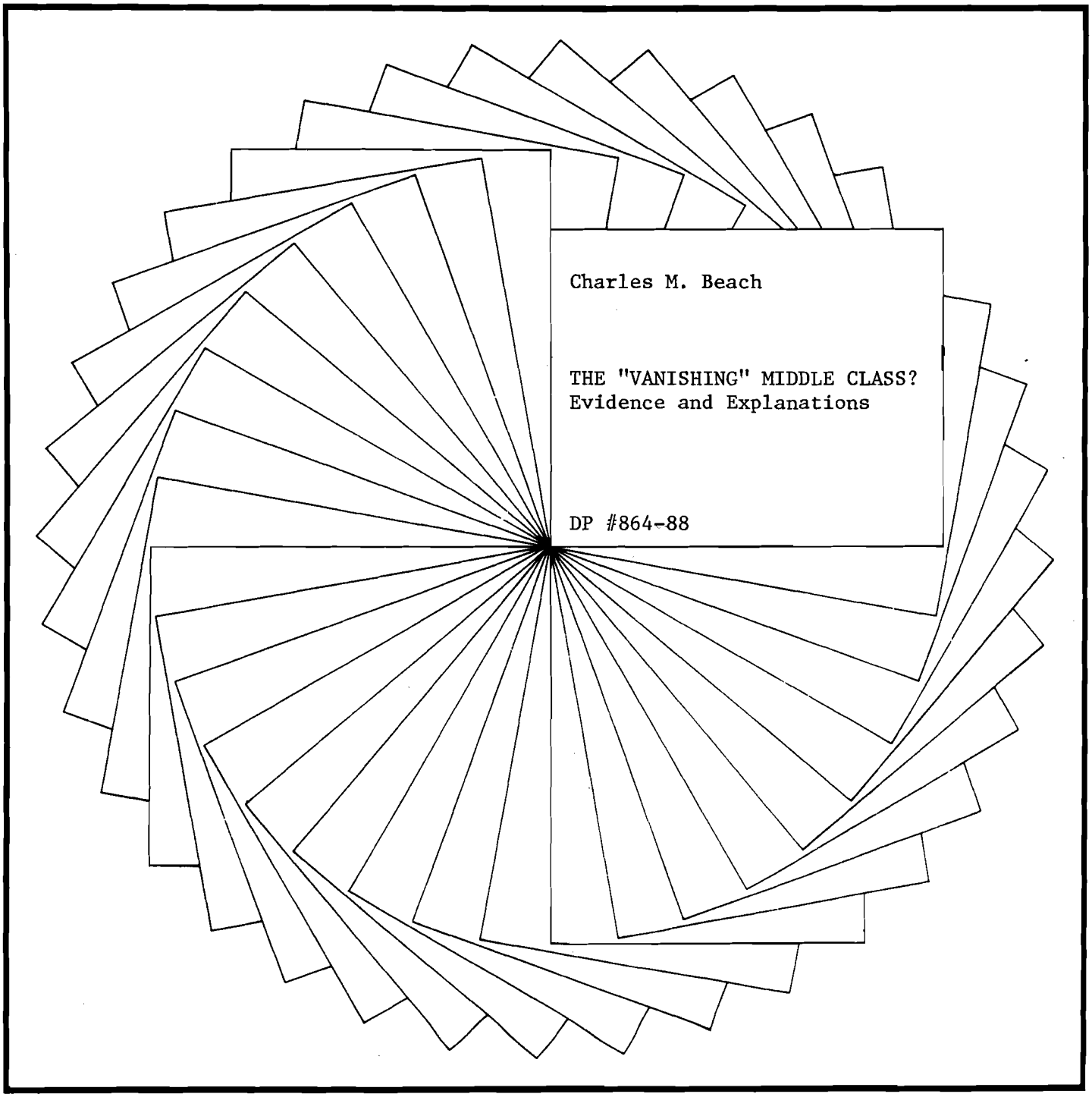

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The "Vanishing" Middle Class? Evidence and Explanations

Charles M. Beach
Department of Economics
Queen's University
Kingston, Canada

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Abstract

This paper reviews the literature on and evidence concerning (i) increasing inequality in U.S. family income; (ii) the shrinking middle class; and (iii) the association between new jobs and a more unequal distribution of earnings.

It examines nine hypotheses that deal with these changes in inequality. Four factors identified in the hypotheses appear to have significant effect: the rise of single-parent, female-headed households; major recessions in the period 1973-1983; industrial relocation from the Northeast and Midwest to the South and West; and an increase in part-time work. The effects of the last three are to some extent interrelated.

I. INTRODUCTION

A considerable body of literature has arisen lately on the so-called "vanishing" middle class. Studies by Bluestone, Harrison and others have raised the issues of deindustrialization and a growing low-wage economy. Debate on what has been happening to the United States income distribution and alternative explanations has been carried on in the popular press by Kuttner, Levy, and Thurow, among others. And the recent publication of a census monograph by Levy on Dollars and Dreams: The Changing American Income Distribution (1987) has highlighted the importance of ongoing distributional changes in broad historical context.

Discussion of recent distributional changes, however, is often confused by lack of agreement among authors on what the major changes are and by different authors forcefully advocating different explanations for these changes. The time seems ripe to bring the various strands of debate together to try to reach a consensus on what the key distributional changes are that raise social concern, and to identify as completely as possible the range of sources effecting these distributional changes. This paper attempts to move the debate in this direction. It identifies three separate phenomena that have motivated recent concern with the distribution of income. The paper then examines nine distinct hypotheses that have been suggested in the literature as explanations for one or more of these phenomena. The principal change that is highlighted is the so-called vanishing middle class. The alternative hypotheses are evaluated, with particular regard as to how important or successful they appear to be in explaining this particular change. The paper also seeks to provide a broad analytical perspective on how to organize the

disparate hypotheses in the recent literature. This may help to identify a research agenda to better evaluate and test the alternative hypotheses.

II. REVIEW OF ISSUES AND EVIDENCE

First of all, what are the principal phenomena that the recent literature has highlighted and tried to explain? To focus the discussion, I shall concentrate on three claims:

(i) increasing inequality in family income, particularly at the top and bottom ends of the distribution;

(ii) the shrinking middle class; and

(iii) new jobs, particularly for men, associated with a more unequal distribution of earnings; i.e., the replacement of high-paid, more egalitarian manufacturing jobs by typically low-paid, more unequal service-related jobs.

Evidence for the first two points is presented in Table 1 from Levy (1987). The general shape of the quintile share distribution of (census) family income, as Levy points out, has remained fairly stable over the post-World War II period, but has shown two distinct periods of gradual change. From the late forties until 1967-69, the distribution became moderately more equal, the bottom income shares increasing and the top shares decreasing. Since then, however, a reversal has occurred, with a general increase in family income inequality, moving back to roughly what it was in the 1947-49 period.[1] If one defines the "middle class" as the middle three quintiles of the family income distribution, this group received 52.0 percent of family income in 1947, increased its share to 53.8 percent in 1969, and then lost ground to 52.4 percent in 1984. If one cumulates the quintile share figures for each year in Table 1, one

Table 1

Shape of the Family Income Distribution over the Postwar Period

	1949	1969	1984
Percentage of All Family Income Going to:			
1st Quintile (bottom)	4.5%	5.6%	4.7%
2nd Quintile	11.9	12.4	11.0
3rd Quintile	17.3	17.7	17.0
4th Quintile	23.5	23.7	24.4
5th Quintile (top)	42.7	40.6	42.9
Top 5%	16.9	15.6	16.0

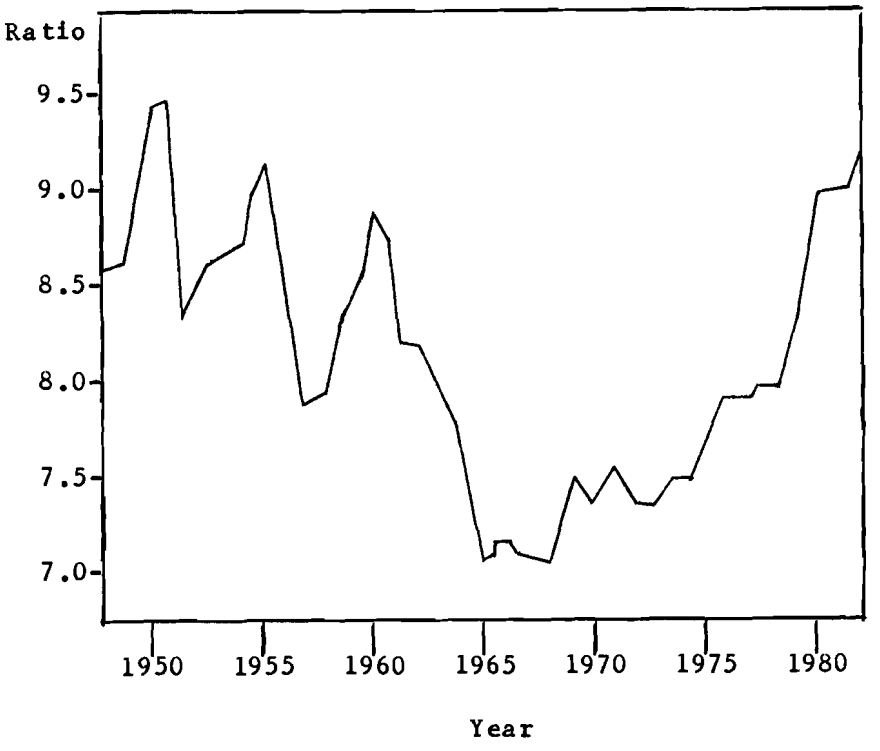
Source: Levy (1987), Table 2.1, p. 14 based on data from Bureau of the Census, Current Population Reports, series P-60.

finds that, in terms of quintile income groups, the 1969 Lorenz curve of family income lies uniformly above those for 1949 and 1984 and the Lorenz curve for 1984 lies uniformly below both of the others, including that for 1949. Under quite general conditions, the degree of family income inequality unambiguously decreased from 1949 to 1969 and then it became unambiguously greater by 1984, even compared to 1949. The figures can indeed be augmented by preliminary Current Population Survey (CPS) figures for 1986, which show the income share of the bottom quintile of families to be 4.6 percent, the top quintile share to have risen still further to 43.7 percent, and the share of the middle 60 percent of families to have declined further, to 51.6 percent. The resulting ratio of the top quintile income share to the bottom quintile share for census families is illustrated in Figure 1 from Burtless (1987) for 1947-85. Clearly, the evidence suggests a marked widening of relative income differentials between the upper and lower portions of the family income distribution.

The definition of middle class, however, is somewhat arbitrary, and empirical support here is not quite so clear-cut. Blackburn and Bloom (1987a), for example, define the lower middle class as 60-100 percent of median family income, the middle class as 100-160 percent of the median, the upper middle class as 160-225 of the median, and the upper class as families with incomes above 225 percent of the median.[2] The figures for selected years between 1967 and 1984 in Table 2 do not show any significant trend in the shares of the lower-middle- and upper-middle-class groups. For the middle class as more narrowly defined here, though, one can still detect a downward trend, suggesting that whatever is happening

Figure 1

Income Ratio of Top to Bottom Quintiles of Families
1947-1985



Source: Burtless (1987, Fig. 2, p. 12).

Table 2

U.S. Family Income Shares, Selected Years, 1967-1985

	Lower Middle Class	Middle Class	Upper Middle Class	Upper Class
1967	.203	.275	.143	.083
1969	.206	.258	.151	.091
1974	.198	.262	.143	.095
1979	.193	.230	.155	.115
1984	.202	.225	.145	.130
1985	.203	.213	.145	.142

Source: For 1967-84, Blackburn and Bloom (1987a, Table 1); for 1985, Blackburn and Bloom (1987b). The population in this table includes both census families and unrelated individuals.

Note: Class definitions are based on percentages of median income; see text.

to the middle-income share is concentrated in the region not far above the median. The marked rise in the upper share once again comes through strongly. More generally, Blackburn and Bloom (1985, 1987a) and Bradbury (1986) find that a declining middle of the family distribution is indeed robust to various alternative definitions for the middle class and income measures. The overall rise in inequality, however, does not seem to be so sizable as to warrant such terms as a "vanishing" middle class (Levy, 1987b) or a "surge" in inequality (Thurow, 1987). As pointed out by Blackburn and Bloom (1987a), "the concern over the so-called decline of the middle class related more to whether the trend will be ongoing rather than to the magnitude of the change that has occurred" (p. 356).

Some international perspective may be provided by a comparison with family income share figures for Canada,[3] an economy closely linked with the United States, having a broad industrial structure, and sharing many similar experiences such as the postwar baby boom. As the figures in Table 3 indicate, there appears to have been a more marked change in the shape of the U.S. income distribution than of the Canadian distribution. Any drop in the share of the middle three quintiles in the case of Canada appears to have been largely cyclical in nature, associated with the 1980-82 recession. A rise in the top quintile share, though, is noticeable since about 1977 and shows that this phenomenon is not unique to the United States.

Concerning the evidence on new jobs, one can turn to the work of Bluestone and Harrison (1986). They divide jobs into three groups according to a low-wage cutoff of 50 percent of median annual wages and salaries in 1973 and a high-wage cutoff of 200 percent of median wages

Table 3

Canadian Family Income Shares, Selected Years, 1965-1985

	Bottom 20%	Middle 60%	Top 20%
1965	6.2%	54.7%	39.0%
1969	6.2	54.0	39.7
1975	6.2	55.1	38.8
1979	6.1	55.7	38.3
1982	6.3	54.7	38.9
1985	6.3	54.3	39.4

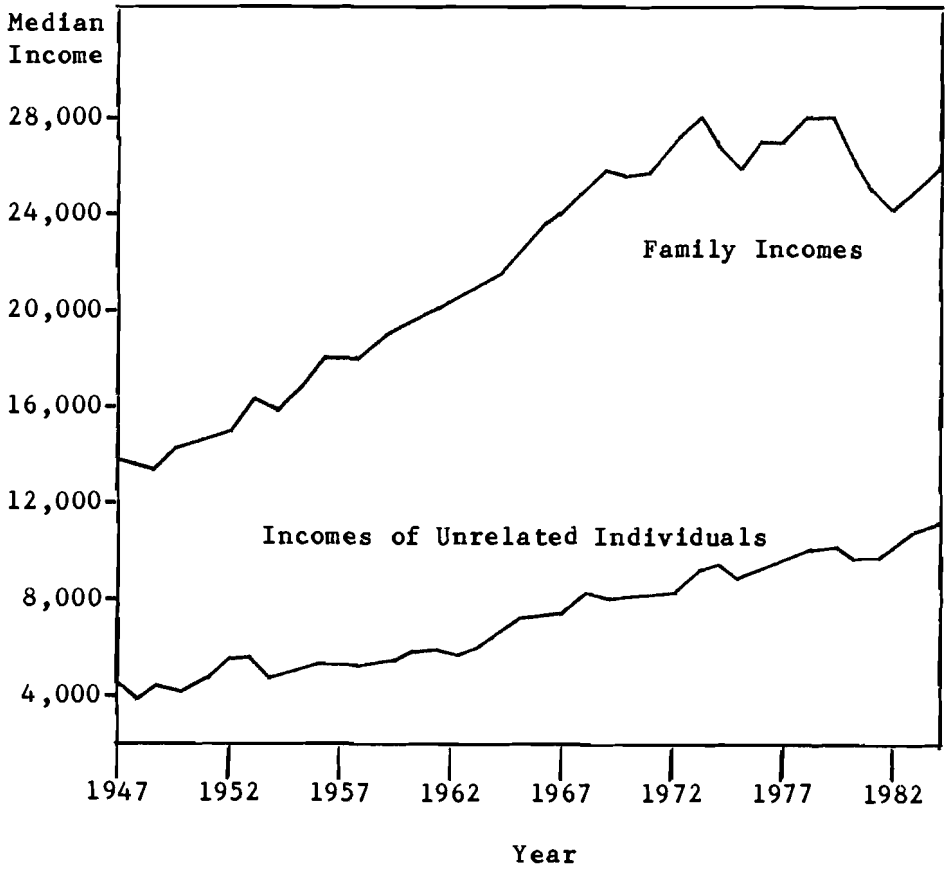
Source: Statistics Canada, Income Distribution by Size in Canada, 1985.

and salaries. The two cutoff levels are then extended to later years by multiplying by the rate of CPI inflation. Three strata of jobs--low, middle, and high--are designated according to the two cutoffs, and the authors examine how net employment in each of these job strata has changed between the periods 1973-79 and 1979-84. They find that the greatest growth in employment within the latter period has been in the low stratum of jobs (58 percent in 1979-84 vs. 20 percent in 1973-79), and that there has actually been a decrease in the net change of high-stratum jobs (-5.5 percent vs. 16 percent).[4] More sophisticated analyses by Dooley and Gottschalk (1985) and McMahon and Tschetter (1986) obtain generally similar or consistent results.

Perhaps the principal issue of Levy's book (as well as of his recent papers; see Levy 1987a,b) is the eroding middle class. While he reviews the statistical evidence up until 1984, he feels that the percentage declines have been rather minor. Yet the issue has come to the fore in a much more forceful fashion than the basic income share statistics suggest, he feels, for perceptual reasons. The postwar trend in (median family) income levels--as seen in Figure 2--also shows two distinct periods. From 1947 to 1973, median (census) family income increased quite steadily from $14,000 (in 1984 dollars) to $28,200--essentially doubling over the twenty-six year period. But after 1973, real incomes basically stagnated through two cycles and by 1984 stood at $26,433. The proportion of husband-wife families receiving over $30,000 (in 1984 dollars) fell from 51 percent in 1973 to 45 percent in 1984. With the falloff in growth of real incomes after 1973, in spite of the increasing proportion of dual-earner families, many workers, Levy argues, feel as if

Figure 2

Median Income of Families and Unrelated Individuals
1947-1984
(in 1984 dollars)



Source: Levy (1987, Fig. 2.1, p. 18).

they are losing ground or that it is becoming more difficult to keep up with a perceived middle-class standard of living. However, recent evidence of the last two years has further strengthened earlier trends. So, whatever is going on to bring about these changes in the distribution is more than just perceptual. A number of the leading hypotheses that have been offered concerning the sources of such changes will be examined below and evaluated in light of current findings. What they may imply about the transitoriness or likely permanence of the changes is also examined. We begin by looking at traditional supply-side explanations, and then shift in the following section to more recent demand-side explanations.[5]

III. SUPPLY-SIDE EXPLANATIONS

The two traditional supply-side explanations for distributional changes in the last ten years have been the labor market effects of the baby boom and the increasing proportion of working women entering the labor force. These as well as several others are addressed in turn.

1. Baby-Boom Effect

The entrance of the large number of baby boomers into the labor market may have increased income inequality (see, e.g., Lawrence, 1984) and contributed to the decline in the income share of the middle class. Young workers typically have high (within-cohort) wage dispersion (Mincer, 1974). The advent of a large cohort of young workers also widens between-cohort differences in wages, steepens experience-earnings profiles and widens experience-skill differentials, particularly for men

and college graduates (Freeman, 1979; Berger, 1985; Connelly, 1986). Young cohorts may also experience higher amounts of unemployment, thus further widening annual age-earnings differentials in the economy (Bloom and Freeman, 1986). However, to the extent that the baby boom cohorts are getting older and now moving into middle-age, higher-earnings stages, this source of increased inequality may be transitory.[6] Indeed, the percentage of workers who are young (aged 16-34) has started to decrease over the 1978-84 period. So Bradbury (1986), using a shift-share analysis, now finds that the change in the age distribution of family heads over 1973-84 has raised median family income slightly and increased the share of the middle class. Further, Thurow (1987), also using shift-share analysis, finds that aggregate inequality increases are largely the result of growing earnings inequality <u>within</u> each age group. For every age group but the elderly, Bradbury (1986) finds lower median family earnings and a reduction in the proportion of families who belonged to the middle class. Clearly, there is more going on than just a baby boom effect.

2. Changes in Family Composition

The baby boom cohorts also postponed marriage and family formation relative to earlier cohorts, and more elderly people live in single-person households. Single-person households and households containing unrelated persons increased from about one-quarter of all family units (families plus unrelated individuals) in 1973 to about a third by 1984. Median income among unrelated individuals rose between 1973 and 1984,

though this was due to rising real incomes among older individuals, particularly the elderly, not among younger workers. Based on several counterfactual examples, Bradbury (1986) concludes that, if family formation had continued at its previous pace, the decline of the proportion of families in the middle class would likely have been less pronounced.

A second source of change in family composition, already remarked upon, is the rapid growth in single-parent families, particularly those headed by women, and the corresponding decline of the "traditional" husband-wife family. For example, Blackburn and Bloom (1985) report that between 1969 and 1983 the proportion of middle-class families headed by a married couple dropped from 86 percent to 68 percent; in the bottom income class, it declined from 37.5 to 28 percent; whereas in the top income class it rose from 86 to 89.5 percent. Since female-headed families typically have low incomes, the shift away from husband-wife families may be expected to increase the number of low-income families and reduce the middle-class income share. Indeed, Bradbury (1986) estimates that the decline in the proportion of husband-wife families has reduced the middle-class share of all families by an amount more than four times the effect of the change of the age of the family head over the 1973-84 period. It is also estimated to have reduced median income among all families by 2.9 percent (compared to the effect of a 0.4 percent increase from the changing age of family head). In its depressing effects on middle and lower income shares, it appears that this factor has come to clearly dominate the aging effect of the baby boom.

3. More Working Women

The marked and steady rise in the female labor force participation rate, particularly that for married women, has also likely had several distributional effects. Between 1967 and 1984, for example, the participation rate of married women increased from 37 percent to over 52 percent. Since women typically earn substantially lower wages than men, at least partly because of lower average amounts of labor market experience, but controlling for factors such as part-time work activity, the direct effect is a widened dispersion and lower average earnings among individual workers overall. But Berger (1983) finds that women on average are to an extent substitutable in the labor market for younger and less educated males. So the marked increase in women's participation may have contributed significantly to the decline in earnings of younger relative to older workers without college degrees, helped widen experience-skill differentials, and steepened observed age-earnings profiles of workers as a whole. In a set of interindustry wage change regressions over the period 1970-82, Bell and Freeman (1987) find a highly significant dampening effect of the level and change in the percentage of women workers over the period, but a nonsignificant (dampening) effect of the change in the percentage of young workers (with a coefficient half the size of that on the change in the percentage of women workers).

But the increased labor force participation of wives increases the frequency of two-earner families. Has this since 1973 had the effect on family incomes of depleting the middle class by lifting upper-middle-class family incomes into dual-earner, high-income families or of

augmenting the middle class by having a second earner as necessary to prevent a lower-middle-class family slipping into a lower-income class because of the eroding of individual workers' incomes? Blackburn and Bloom (1985) argue that the upper-income class has undoubtedly benefited from the increase in two-earner families. Whereas in 1969 only 14 percent of multi-earner families were in the upper-income class, by 1983 the proportion had risen to 26 percent. However, Danziger (1980) and Betson and van der Gaag (1984) conclude, on the basis of a comparison of actual incomes of married-couple families with simulated incomes obtained by setting the wives' earnings to zero, that the advent of working wives has had a slightly equalizing effect on married-couple family income inequality. The latter effect appears to slightly dominate the former. When all families are included in the analysis, rather than just married-couple families, Blackburn and Bloom (1987a) find a similar but weaker equalizing effect overall that may even have become neutral in recent years. On the other hand, Bradbury (1986) finds, again on the basis of shift-share analysis, that the increased participation rate of wives between 1973 and 1984 markedly increased the size of the middle class, almost to an extent to offset the depressing effect of the rise in single-parent families. Since the rising labor force participation rate of women is expected to continue, this should help soften any further erosion in the position of the middle class. But, to the extent that the participation rate of women cannot keep rising indefinitely at the current rate until it approaches that of men and its equalizing effect may be becoming attenuated, its role in softening any further middle-class erosion may itself attenuate.

As a separate though related issue, one may question whether increased early retirement (i.e., before age 65), principally on the part of men, also has had a distributional effect. If those who retire early are largely in the upper middle class of the distribution where private pensions or healthy early-retirement incentives may occur, the expected effect would be to reduce mean incomes, particularly in the middle-class region of the distribution. This author, however, is unaware of any formal investigation of this issue or evidence on the relative importance of such an effect.

Two studies which consider a range of demographic effects on overall inequality are Bradbury (1986) and Tilly, Bluestone, and Harrison (1987). After adjusting individually for the major factors considered above, Bradbury concludes that "demographic changes are not responsible for the bulk of the 1973-84 decline in the size of the middle class or in median family income" (p. 52). She finds decreasing proportions of families with middle-class incomes in virtually all demographic groups, and concludes that "this study eliminates demographic change from the list of major causes of the decline of the middle class" (p. 53). Similarly, on the basis of a series of variance decompositions of individual wage and salary incomes for the years 1978 and 1984, Tilly, Bluestone, and Harrison (1987) find that "demographic changes in the workforce account for essentially none of the growth in wage and salary inequality. That is, all of the changes in inequality took place within race, age, and gender groups" (p. 3). They interpret their results as indicating that it is essentially demand-side changes in the labor market that have driven increased wage and salary inequality over this period. Both

studies lack desirable controls, and results are based on series of univariate adjustments. Nonetheless, they strongly suggest that other factors are likely at work, and observed inequality changes cannot be dismissed as solely demographic in origin. But, before shifting to demand-side explanations, one further factor should be investigated.

4. Falling Share of Labor Market Income

The major component of family income is wages and salaries, and it is also much more equally distributed than capital income and its various components. But in recent years, this income share has been declining. The figures in Table 4 show that (adjusted) labor's share in national income fell from 82.2 percent to 77.5 percent over the period 1970-84 while (adjusted) property's share rose correspondingly. The largest component rise among property income sources was interest income, which has been rising steadily, from 1.8 percent in 1955 to 5.1 percent in 1970 to 9.6 percent in 1984. Since property or capital income is highly unequally distributed among families in the economy, the expected effect of this shift in income shares would be to increase the income share of upper-class families and reduce the income share of the middle class. Investigation of the relative importance of this source of distributional change, however, has not appeared in the literature, to the author's awareness. One could, perhaps, update the work of Mirer (1973) on the disaggregative distributional effects of such shifts in income shares to tackle this issue. It is also not clear yet whether the decline in labor's share will continue or reverse itself.[7]

Table 4

Percentage Shares of National Income, United States 1970-1984

	Employee Compensation	Adjusted Labor Share[a]	Net Interest	Rent + Profit + Interest	Adjusted Property Share[a]
1970	75.5	82.2	5.1	16.3	17.8
1975	75.1	81.0	6.8	17.6	19.0
1980	75.6	80.0	9.1	18.9	20.0
1984	73.4	77.5	9.6	21.4	22.5

Source: Statistical Abstract of the United States, 1984, Table 745; Survey of Current Business, Oct. 1985, Table 1.11. Figures include stock appreciation and capital consumption adjustments.

[a]The adjusted shares are calculated by dividing up self-employment income (which fell from 8.2% to 5.2% over the period) between labor and property income in proportion to the economywide shares of labor and property (in an approximate ratio of 4-to-1).

IV. DEMAND-SIDE EXPLANATIONS

The principal demand-side explanations for distributional changes, particularly since the 1980-82 recession, have been the severe business-cycle fluctuations and the persistent high unemployment that followed, and the so-called deindustrialization hypothesis. We proceed to examine both of these.

5. Traditional Business-Cycle Effects

A considerable body of literature has developed, since the "trickling down" debate of the mid-sixties, on the distributional effect of macroeconomic fluctuations. Theoretical and empirical contributions are reviewed in Beach (1988). Perhaps the most succinct empirical results on the cyclical fluctuations of family income shares for the United States are by Blinder and Esaki (1978), updated by Blank and Blinder (1986). The latter run OLS regressions over the period 1948-83, in which the dependent variables are the set of quintile income shares and the regressors include a potential quadratic in the (prime-age male) unemployment rate, the rate of inflation (of the CPI), and a lagged dependent variable. Both Blinder and Esaki (1978) and Blank and Blinder (1986) find that "high unemployment has significant and systematically regressive effects on the distribution of income: the poorer the group, the worse it fares when unemployment rises" (Blinder and Esaki, 1978, p. 13). The lowest two quintiles lose out significantly, the third and fourth quintiles experience negligible effects, and the top quintile receives the principal gain (Table 5). The result of the rising unemployment over the decade 1973-83 has thus been to widen the degree of inequality in the distribution of family income. Blackburn and Bloom

Table 5

Steady-State Effects of Unemployment on Family Quintile Income Shares: United States, 1948-83
(standard errors in parentheses)

	Regression Coefficients		
	Unemployment	Unemployment Squared	Steady-State Effect of One-Point Rise in Unemployment
Bottom Quintile	-.100 (.023)		-.185
2nd Quintile	-.238 (.050)	.019 (.005)	-.160
3rd Quintile	-.033 (.016)		-.033
4th Quintile	.030 (.016)		.053
Top Quintile	.198 (.046)		.289

Source: Blank and Blinder (1986).

(1987a) also find, just from inspection of the proportion of families in different income-class groupings from year to year, that the proportion of families falling in the lowest income class varies strongly countercyclically. At the top end of the distribution, however, no clear cyclical pattern appears evident; there is only a steady upward trend.

When account is taken of (i) the differential unemployment experience of different types of household heads, (ii) what happens to work and earnings receipts of secondary workers within the family, and (iii) how income transfers help supplement reduced family earnings in response to a rise in the aggregate unemployment rate, Gramlich (1974) uses longitudinal PSID data over 1967-72 to estimate the resulting reduction in family incomes. Table 6 from Gramlich (1974) shows the percentage reduction in family incomes for three family types--those with a white male head, black male head, and female head--and three income groups. Once again, lower-income families experience a relatively larger reduction in income from higher unemployment rates. But also, families headed by black males face a much greater exposure to income losses than those headed by white males, and both effects are much greater than that for families with a female head. Similar results are also found more recently by Blank (1985). While transfer payments serve to cushion the earnings decline of low-income and female-headed families, they have a relatively weaker cushioning effect for higher-income male-headed families. Updated results are provided in Gramlich and Laren (1984).

Once again, however, there is no clear analysis of or results on the relative importance of the traditional business-cycle effect in the distributional changes of the past fifteen years. By its very nature,

Table 6

Percentage Change in Family Income Caused by a One-Percentage-Point Increase in the Unemployment Rate

	Not Accounting For Transfer Payments			Accounting for Response of Transfer Payments		
	White Male Head	Black Male Head	Female Head	White Male Head	Black Male Head	Female Head
Family Income at Poverty Line	2.9	3.9	1.0	2.0	2.5	0.4
Family Income Three Times Poverty Line	1.4	2.0	0.8	1.2	1.7	0.5
Family Income Five Times Poverty Line	0.9	1.3	0.5	0.8	1.1	0.4
Average	1.1	2.7	0.9	0.9	2.1	0.5

Source: Gramlich (1974).

this effect is not long run. One would expect it to have played a major role during the strong 1980-82 recession and shortly thereafter as unemployment rates remained high. But the distributional trends that Levy highlights were already on the way before the recession and are continuing apace even in recent years when the unemployment rate has significantly dropped from its 1982-83 peak. Analysis of the detailed distributional burden of the 1980-82 recession would clearly be of interest. But it would likely show this effect to be only one contributing factor to the longer-run pattern of distributional changes under inquiry.

Indeed, Summers (1986) has drawn attention to the changed nature of unemployment over the past fifteen years, and particularly since 1978. He reviews evidence to show that, between 1978 and 1985, unemployment increased relatively much more markedly among prime-aged males than among other demographic groups, and among married and formerly married men. "The amount of unemployment attributable to teenagers has declined, . . . and the bulk of the increase in unemployment in recent years is attributable to men aged twenty and above" (p. 351) and is the result of job loss resulting in a significant increase in long-term unemployment. "In fact, the increases in unemployment have been relatively greatest for mature men with dependents. And they have resulted primarily from job loss and increases in duration of unemployment" (p. 355). The evidence suggests, Summers speculates, structural changes that have shifted employment from high- to low-wage sectors. It is along this line of inquiry that the so-called deindustrialization debate is pursued.

6. The Deindustrialization Hypothesis

The deindustrialization hypothesis was the first and perhaps best known among several hypotheses concerning the distributional effects of industrial restructuring. The hypothesis is strongly forwarded in the work of Bluestone and Harrison (1982, 1986), Harrison, Tilly, and Bluestone (1986), and Tilly, Bluestone, and Harrison (1987), has been picked up by numerous others (e.g., Mishel, 1986), and served as the basis for a special issue on the "structuralist debate" in Industrial Relations (Spring 1986). The basic idea is that, since the late 1960s, employment in traditional manufacturing industries (particularly durable goods manufacturing) has declined as manufactured imports increase and as goods-producing firms seek to reduce costs by direct investment abroad, foreign "outsourcing," streamlining, and automation, while new low-wage jobs opening up have been primarily in the service industries. The concern is that this trend has accelerated with the severe 1980-82 recession and the high U.S. dollar on world markets. Since wages in manufacturing generally have a higher mean and lower degree of dispersion, whereas wages in the service sector tend to have a lower mean and greater degree of dispersion (Blackburn and Bloom, 1986b; Levy, 1987, p. 96), the result of such displacement of labor is to generate greater earnings inequality, increased relative employment in lower-paying jobs, and a reduction in traditional middle- and upper-middle-class jobs.[8] If this effect is not primarily cyclical but is a long-term trend, then it suggests a continuing pattern of increased dispersion and reduced middle-class incomes for the future.

Note, immediately, that the focus of the discussion has shifted away from the family unit to the distribution among individuals. The discussion has also shifted away from income in general to earnings or wages and salaries. These readjustments of focus actually raise a whole new set of conceptual and data issues and associated literature on what has been happening to the distribution of earnings or wages and salaries among individual workers. The reader may find a helpful critical guide through this literature in Blackburn and Bloom (1987b). The first issue to consider here is what has been happening to the distribution of earnings among workers. Tilly, Bluestone, and Harrison (1987), looking at the variance of the log (an inequality measure that is relatively sensitive to changes at the lower end of a distribution) of annual wage and salary income among all earners form the March CPS files, find evidence of a marked U-turn in inequality, with a broad decline over 1963-75, a trough during the period 1975-78, and then a sharp rise over 1978-84. Blackburn and Bloom (1987b) review the evidence from a number of studies that use other inequality measures and also break down the population into male and female workers and into full-time, year-round workers. They conclude tentatively that

> The weight of the evidence [seems] . . . to suggest an increase in male earnings inequality and a decrease in female earnings inequality over the years 1967-1975. It also appears that male earnings inequality increased from 1975 to 1983, while the results for females and all earners do not strongly support any conclusion (p. 22).

In their own empirical work based on the March CPS files for 1968-86 with less restrictive measures of inequality, Blackburn and Bloom (1987b) find that earnings inequality for men (both full-time, year-round and all

workers) increased over the period, whereas it did not change significantly for women who were full-time, year-round workers, and actually fell among all women workers. Across all workers, earnings inequality does not appear to have changed significantly since the late 1960s.[9]

The second issue to consider is the extent to which these inequality changes in individual earnings are the result of industrial shifts. Tilly, Bluestone, and Harrison (1987) perform an analysis of variance decomposition of the difference in the variance of log of annual wage salary income among all individual workers between the two years 1978 and 1984.[10] They find that about two-thirds of increased inequality over the period is due to greater dispersion in hourly wage rates, and that 22 percent of the rise in annual wage and salary inequality is due to interindustry shifts in employment. Blackburn and Bloom (1987b), also employing a variance decomposition of the mean log deviation of annual earnings among all full-time, year-round workers, find that 40 percent of the inequality change between 1967 and 1984 was due to interindustry employment shifts. The inequality change on which this is computed, however, is an insignificant amount, so that the figure is tentative at best. They conclude that

> Although high-inequality industries increased their share of total employment from 1967 to 1984, this change can only account for a small fraction of the small increase in earnings inequality over those years. Thus, our results provide little support for either part of the compound hypothesis that earnings inequality has increased and that the increase was primarily the result of sectoral shift in the U.S. economy (p. 36).

A third issue is that, whatever employment shifts have occurred between industries, there have also occurred significant inequality

increases within industries as well. Blackburn and Bloom (1987b) find that a Gini index of within-industry inequality of earnings among full-time, year-round workers increased for both manufacturing and "traditional services" sectors between 1967 and 1984. Tilly, Bluestone, and Harrison (1987) estimate that 78 percent of inequality change in wage and salary income among all workers is due to within-industry inequality increases and all but one industry out of fourteen between 1978 and 1984 showed an increase in its variance. Similarly, Levy (1987) also remarks that "the problem was not that male workers shifted to services: rather, earnings inequality among full-time workers grew in both the goods- and the service-producing sectors" (p. 97). Consistent evidence is also found in Lawrence (1984), McMahon and Tschetter (1986), and Bell and Freeman (1987).

Conclusions with respect to these issues are still tentative. However, it does appear that, first, on the basis of household survey data, evidence for a markedly increasing trend in earnings inequality across full-time workers is not robust, though there does appear to be an upward trend in earnings dispersion for men. Second, only a relatively small fraction of such inequality trends appear to be attributable to interindustry employment shifts and the increased employment of service workers. Third, increases in within-industry earnings dispersion appear to have a much more dominant effect and to be pervasive across a broad range of industries, including both manufacturing and services. All in all, the evidence does not appear very supportive of the deindustrialization hypothesis as a major source of distributional change, and is suggestive of more pervasive forms of structural adjustment[11] and changes in organizational structure and work patterns.

7. Thurow's Trade-Based Industrial Shift Hypothesis

A more sophisticated version of the deindustrialization hypothesis has been provided by Thurow (1985, 1986, 1987). Using input-output techniques, he divides U.S. industries into those that are exporting or import-competing and the rest. He then finds that the distributions of earnings among individual workers in exporting and particularly import-competing sectors have both higher median earnings levels and lower dispersion than the rest of the economy grouped together. He concludes:

> The meaning of these statistics is that when exports fall and imports rise to create a trade deficit, the distribution of earnings moves toward inequality. Jobs are lost in both exporting and import-competing industries and are replaced by jobs with lower, more unequal earnings in the rest of the economy. This factor is principal reason for the observed decline in earnings of males (1987, p. 34).

A declining U.S. dollar and the prospect of reduced foreign-trade deficits over the next few years would suggest that this effect, while possibly of significance over recent years with the large trade deficit, is less likely to persist in the future than some of the other considerations.

This hypothesis leaves a number of questions unanswered and raises several issues one would wish to test. First, why should there be a smaller degree of dispersion in exporting and import-competing industries than elsewhere in the economy? Thurow (1985) makes reference to the factor price equalization theorem, but readily points out that there are complexities in applying it to this situation. One would also wish to test the limits of this hypothesis with data from a range of different countries. Second, it is not at all clear exactly which industries fall

into each of the three categories or what the criterion is for allocating the industries into categories. Third, the earnings distributions cited for the three categories do not appear to control for gender, degree of unionization, or incidence of part-time work activity. Consequently, one would wish to test further whether the smaller dispersion in the exporting and import-competing industries could be due to greater unionization, fewer women workers, fewer part-time workers, or even more homogeneously aged workers. Fourth, the timing of the effect is off. Thurow associates this effect with the advent of the large U.S. trade deficits in recent years, whereas we have seen that earnings inequality increases among men date back at least to the early 1970s. While the trade-based industrial shift hypothesis may have contributed in recent years to a broader ongoing process of structural adjustment among industries, it does not appear to be the whole story.

8. Industrial Relocation Hypothesis

An alternative hypothesis that could be offered on the basis of the work of Crandall (1986) is that U.S. industry, and particularly manufacturing, is shifting away from the traditional heavy manufacturing regions of the Northeast and Midwest to new locations in the South and West. The manufacturing sector is not dying, since its output share of GNP has remained relatively stable since the late 1940s. But it is dramatically shifting location to regions that offer faster-growing markets, Pacific and southern port access, lower wage and energy costs, lower tax rates, and a lower degree of unionization resulting in more flexibility in manning rules. Crandall (1986) presents evidence that, between 1967 and

1982, manufacturing employment in New England, Mid-Atlantic, and East North Central regions declined by between 4 and 26 percent; while in the West South Central, Mountain, and Pacific regions, it rose by between 24 and 87 percent. "It is no exaggeration to say that the problems of U.S. manufacturing are generally problems of Northeastern and Midwestern establishments and the communities that they support. Elsewhere, the manufacturing sector has not only failed to decline, but it has grown rather rapidly" (Crandall, 1986, pp. 122-3).

The distributional implications of this shift are potentially substantial, but have yet to be worked out in the literature. Employment shifts to regions with lower mean wages and greater degree of wage dispersion such as the South would be expected to have results that have been reviewed under item (6) above and would go towards explaining increased intra-industry wage dispersions across a broad range of industries. The accompanying shift toward a lower degree of unionization would also have the effect of lowering mean wages and widening skill differentials and thus wage dispersion. Empirical evaluation of these distributional effects remains to be undertaken. Since this regional migration of industry is likely to continue so long as the cost advantages persist, one would expect these effects also to continue as a long-run trend.

9. Increased Part-Time Work Hypothesis

It should not be surprising that the degree of inequality among full-time workers is considerably less than that among full-time and part-time workers combined. Blackburn and Bloom (1987b) also found that changes in

inequality (separately for men and women) appeared generally less significant for full-time, year-round workers than for all workers. An increase in the degree of part-time work in the economy, particularly in periods of recession, would thus have the effect of reducing mean earnings (to the extent the part-time jobs do not go to multiple-job holders) and, once again, increasing dispersion of earnings among workers. Between 1973 and 1982, the proportion of workers on part-time work schedules (on the basis of CPS data) increased from 17.0 percent to 20.5 percent (McMahon and Tschetter, 1986). By 1985, it had moved back to 19.0 percent.

Clearly, part-time and part-year work activity reflect both demand- and supply-side behavior. More youths and women who would not otherwise be in the labor market may be seeking work with more flexible hours. The additional-worker effect may induce wives to enter the labor market for part-time or temporary employment when their husbands lose work. Older workers may ease into retirement through part-time work arrangements and self-employment activities. On the other hand, more part-time or temporary jobs may be created by firms by a shift toward increased outsourcing and subcontracting to reduce ongoing labor commitments, to avoid extra labor costs such as fringe benefits, and perhaps to escape labor union restrictions. Between 1973, 1982, and 1985, voluntary part-time employment is estimated (again from CPS data) to have changed relatively little--from 14.0 percent to 14.3 percent and then down to 13.8 percent. Employment that is part-time "for economic reasons," however, manifests very significant fluctuations over the same period, from 3.0 percent, up to 6.2 percent, and then back somewhat to 5.2 percent (McMahon and

Tschetter, 1986).[12] Evidently, "involuntary" part-time employment has shown a dramatic increase in the 1980s.

Evidence on the relative importance of the hours-worked effect can be found in Tilly, Bluestone, and Harrison (1987). Using a variance decomposition of the log of annual wages and salaries, they estimate that between 1978 and 1984, 42 percent of the increase in inequality of annual wage and salary income is due to the combined effect of a higher proportion of part-time workers[13] and lower average annual wages of part-time workers relative to others. A similar decomposition by weeks worked per year[14] finds that this dimension contributes little to the inequality change. Thus increased part-time, but not part-year, work experience appears to be a significant determinant of increased wage and salary inequality in the 1980s. Indeed Levy (1987, p. 95) argues that it is differences in the frequency and role of part-time work activity that essentially accounts for the distributional effects of the shift in employment from manufacturing to the service sector in recent years.

Tilly, Bluestone, and Harrison (1987) also examine the reasons for increased part-time work activity. Using their definition of part-time the hours usually worked per week in the previous calendar year, they find from the March CPS data that 40 percent of workers who reflected the net increases in part-time work between 1978 and 1984 stated that they were working part-time "for economic reasons."[15] They conclude that a substantial part of the increase in part-time work activity is driven by the demand side. These results are clearly tentative, because of the paucity of controls, the use of only two end-point years of data, and reliance on a log variance inequality measure. But they do suggest that,

to the extent that such increases in part-time work activity are cyclical, this source of contribution to inequality increases in the 1980s would be expected to attenuate as the current expansion continues.

V. CONCLUDING REMARKS

We have reviewed the major evidence on the rising degree of income inequality and the declining middle class, and examined nine hypotheses in the literature that claim to explain, at least in part, these changes in inequality. Of the nine hypotheses, four appear to have significant impact. Among the supply-side hypotheses, it appears that changing family composition and particularly more single-parent, female-headed households is having an important effect on reducing the middle class and increasing the number of low-income family units. This effect appears to dominate the baby boom effect, which is now contributing to growth of the middle class and an increase in labor market involvement of married women, which on net may have close to a neutral distributional effect.

On the demand side, several major interacting effects appear to be at work. The distributional experience of the 1980s has been severely marked by the major recession and subsequent labor market adjustments that augmented or accelerated several underlying structural trends. The dramatic degree of industrial relocation from the Northeast and Midwest to the South and West appears to have broader and more significant distributional impacts than those of the deindustrialization hypotheses that have drawn public attention. The increased importance of part-time work schedules in the 1980s, particularly among men who find themselves in part-time work involuntarily and would prefer full-time work, also

appears to have had significant distributional impacts. The latter three effects (5, 8, and 9) may be hard to disentangle fully.

Are the current inequality trends transitory or likely to carry on for some time? The patterns of changing family composition and industrial relocation appear to be carrying on apace, so that these stimuli for widening income inequality are expected to continue. However, the business cycle and part-time work effects should help attenuate the widening inequality so long as the current cyclical expansion continues. But if the U.S. economy slips into recession, these effects would likely start reinforcing the trend towards greater inequality. The outlook then, at least for the near term, appears not optimistic for a reversal of the current trends.

Notes

[1]These broad trends appear to hold up after adjusting for taxes paid and nonmoney income received (Levy, App. D), although after such adjustments the 1984 family income distribution appears slightly more equal than in 1949.

[2]For a more extensive discussion of definitional and conceptual issues, see Blackburn and Bloom (1985, 1987a and b) and Bradbury (1986).

[3]On further international comparisons, see Burtless (1987).

[4]Note, however, that since wages have generally not kept pace with inflation since 1973 (the year real incomes peaked), the construction of the cutoff points means that more and more jobs are brought into the low-wage category.

[5]Government policy changes over recent periods and their likely distributional effects are not examined in the space of this review.

[6]Though the depressing effect of large cohort sizes on these cohorts' own relative earnings may continue, perhaps gradually attenuated, throughout their careers.

[7]This is further complicated by evidence of a beginning rise in the share of self-employment income (Blau, 1987; Borjas, 1987).

[8]Levy, in his book, also argues that manufacturing jobs are beneficial because of the well-paying job opportunities they provide to less educated labor and because of the interdependencies of goods production with accompanying service jobs (1987, p. 88).

[9]Using wage data from establishment sources, rather than from household survey sources, however, Bell and Freeman (1987) present evidence that dispersion in wages and compensation (as measured by the log

variance) across all workers has risen persistently since around 1970 to 1985.

[10]They argue that these two years occupy similar expansionary periods in the business cycle, and hence go some way towards controlling for cyclical effects.

[11]For example, increased contracting out for goods and servies, particularly in wake of the 1980-82 recession (McMahon and Tschetter, 1986, p. 26).

[12]A generally similar pattern can be found in Bureau of Labor Statistics data as well. See Mishel (1986), Table 3, p. 20.

[13]Defined as less than 30 hours usually worked per week.

[14]That is, part-year workers (less than 50 weeks) vs. full-year workers (50-52 weeks).

[15]Based on the BLS definition for part-time work (less than 35 hours worked in the previous week), and on BLS data, the corresponding figure they find to be 78 percent. Indeed these data are the basis of such remarks in the public press that "between 1979 and 1985, part-time jobs grew twice as fast as full-time jobs, accounting for nearly 30 percent of total net employment growth" (Bluestone and Harrison, 1987).

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