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Collective bargaining in 1981

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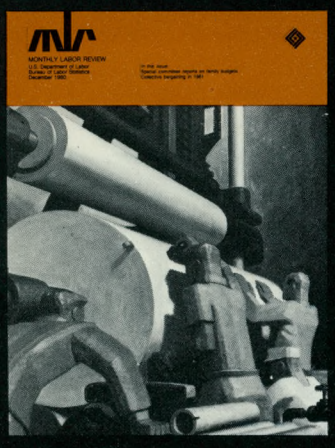

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MONTHLY LABOR REVIEW

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Henry Lowenstern, Editor-in-Chief
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Labor Month In Review

UNDERSTANDING THE CPI. In an effort to promote better public understanding of Canada's Consumer Price Index, the Economic Council of Canada has published an excellent booklet explaining the CPI in non-technical language. The booklet will be of interest to U.S. as well as Canadian readers because the Canadian and U.S. indexes, though different in some respects, share many concepts, uses, limitations, and problems, as the following excerpts demonstrate:

Weights. Once Statistics Canada assigns weights to the many items of the CPI, the weights do not change until the index is revised on the basis of new family spending surveys. Thus, between revisions, the CPI "basket" always measures the same quantity of whatever is surveyed, giving it the same importance, to make valid comparisons of price change over time. By holding the quantity and importance of individual items "constant"—necessary for the sake of comparability—the CPI assumes that consumers do not reallocate the elements of their budgets in response to price changes. Such an assumption breaks with reality, of course, but all consumer price indexes in the industrialized world give up a little realism in the interest of creating a useful measurement which give comparisons over time. The risk, naturally, is in losing touch with reality and for that reason Statistics Canada makes revisions, based on family spending surveys, to catch up with events and incorporate them into the CPI.

Substitution. One difficulty inherent in the CPI is that it has no scope for substitution once weights are assigned to the contents of the "basket." However, consumer buying habits are continually in flux as technology improvements and taste changes bring new products on the market and as incomes rise or fall. The faster these permutations in spending patterns, the more the CPI drifts away from reality. Trends such as eating more convenience foods are only incorporated at the time of revision—and then are held constant in the basket until the next revision. In the meantime, incomes tied to changes in a "fixed" CPI will be over-compensated if, in practice, they have substituted cheaper products and services. The CPI measures rising energy prices but does not recognize until the next revision that consumers may be using less energy through conservation or cheaper alternatives; as a result, consumers may have more income left over than what appears from a reading of the CPI.

Housing. Statistics Canada's treatment of housing in the CPI still does not solve the controversial issue—for index purposes—of housing as an asset whose value is changing. But as the CPI measures only price changes in consumption, increasing capital values can be ignored. Certainly this may not be true for individual owners who sell their houses and make a capital gain, but the purpose of the CPI is to reflect—not speculate on—changes in consumer prices.

Deflator. Another widely used application of the CPI is as a tool to calculate "real" income, which provides a view of what happens once the effect of inflation has been removed. Use of the CPI as a "deflator" enables analysts to determine retail sales figures, average weekly wages, and personal expenditures with the inflation factor removed. But there are risks in using the CPI as a "deflator" because, in some circumstances, it may present an inaccurate picture. For example, some but not all taxes are included in the CPI and it may be inappropriate to use the index as a "deflator" for pre-tax wages. Because income tax is not included in the CPI, it is not affected by any changes which may occur in income tax payments. As a result, the CPI is best equipped to deflate after-tax income.

Using the CPI to deflate other concepts of wage income may introduce biases. If governments choose to decrease sales taxes (included in the CPI) and increase income taxes (excluded from the index), then there appears to be an increase in real wages even though the consumer is no better off in real terms than before. In a similar vein, deflation of retail sales may produce incomplete conclusions about what appears to be happening in the economy. If, for instance, increases in energy prices drive up the CPI, it would appear to deflate retail sales even though energy may not be a significant component of those sales. Thus, the CPI as a "deflator" would overcompensate for changes which had not occurred in retail sales.

Limits. The index tells only of the rate of change, not of absolute price increases and will never match one person's monthly shopping basket. However, as a guide to inflation at one level of prices, the CPI is a convenient and useful tool for all the economic partners: government, business, labour, and consumers. In their search for an equitable arbitrator for inflation, they have turned to the CPI because its features lend easily to annual or quarterly adjustments for inflation. As a result, however, the CPI increasingly is assumed to be the final word about inflation, when, in fact, it is only one word.

The 32-page *Toward a Better Understanding of the Consumer Price Index,* by M. C. McCracken and E. Ruddick, is available from the Canadian Government Publishing Centre, Supply and Services Canada, Hull Quebec, Canada K1A0S9. Price is $3.50 in Canada, $4.20 in other countries. □

Special panel suggests changes in BLS Family Budget Program

Committee proposes four budget levels applicable to six different types of families, and based on median expenditures, rather than detailed commodity lists

HAROLD W. WATTS

The Bureau of Labor Statistics' Family Budget Program produces one of the most popular and widely publicized series in the repertoire of labor statistics. It provides annual estimates of the cost of purchasing hypothetical "market baskets" of goods that represent "lower," "intermediate," and "higher" standards of living. The budgets are styled for the traditional four-person family, and for a retired couple. For the worker's family, they estimate a corresponding total income, which provides for taxes and expenses consistent with the three consumption expenditure levels. These budgets are replicated for major cities and for regional averages. They provide the only available basis for inter-area comparisons of living costs or "real" income levels.[1]

In 1978, the Bureau of Labor Statistics contracted with the Wisconsin Institute for Research on Poverty to recommend revisions in the Family Budget Program. The Institute appointed the Expert Committee on Family Budget Revisions, which embodied a wide range of experience related both to methods of developing budget standards and to uses of the standards. The Bureau used similar outside expertise when it reviewed the budgets in 1948 and 1967. The committee and staff, which included members of the Poverty Institute, reviewed the existing program in detail, analyzed new evidence on spending patterns based on the 1972–73 Consumer Expenditure Surveys, and assessed the enlarged possibilities provided by the projected continuous Consumer Expenditure Survey. The panel heard testimony from government experts familiar with the development of the current budgets and commissioned several papers by other experts.

The committee recommended that four American Family Budget Standards be developed in place of the current three budgets. The revised standards have been designed to take advantage of the new information on family behavior collected in the new Consumer Expenditure Surveys. These recommendations have been submitted in the committee's report to the Commissioner of Labor Statistics and are now being considered.

This article explains the basic recommendations and the reasoning behind them. Although the proposed new standards are based on methods that diverge from past practices, they will yield budget totals that are very much in line with the existing series. But a more important continuity—the aim to express normative and quantitative standards that can be used to evaluate relative levels of living among groups, between times and across regions—has been maintained. Because such comparisons yield valuable insights and are widely used in the design and implementation of policy, it is important that they be based on clear and understandable principles. The committee, with only one dissenting vote, believes this report proposes a sound and improved basis

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for such comparisons and unanimously recommends a program to study the direct estimation of standards from household attitude surveys. Refinement and validation of the direct methods hold the promise of still further improvements in the Family Budget Program.

Principal recommendations

Budget levels. The committee recommends four levels to replace the existing three budgets:

- Prevailing Family Standard
- Social Minimum Standard
- Lower Living Standard
- Social Abundance Standard

The Prevailing Family Standard, designed to reflect the level of living achieved by the typical family, is set at the median expenditure of two-parent families with two children. In the judgment of the committee, this standard affords a family full opportunity to participate in contemporary society, and to enjoy the basic options it offers. This level is the conceptual descendant of the intermediate budget, but it is also closely related to the traditional "modest but adequate" level of living or the "prevailing standards" of ordinary moderate living.

The other three levels are determined in fixed proportion to this basic standard; standards for other family sizes or types are also expressed relative to the archetypical four-person family. The Lower Living Standard, set at two-thirds of the Prevailing Family Standard, is a successor to the current lower budget. It represents a level that the committee regards as requiring frugal and careful management, leaving little room for choice in achieving what Americans regard as an acceptable standard of living. The Social Minimum Standard is set at half of the Prevailing Family Standard and lies, in the committee's judgment, in a boundary zone below which issues of deficiency and deprivation are appropriate matters of social concern. The Social Abundance Standard, set 50 percent higher than the Prevailing Family Standard (or three times the Social Minimum Standard), rounds out the set by providing a balancing view of a higher living standard. The committee regards this standard as marking the beginning of the expenditure range that increasingly affords choices in the luxury categories of consumption.

Table 1. Recommended equivalence scale and updated values of American family expenditure standards for 1979

Number of persons	Equivalence scale	Social Minimum Standard	Lower Living Standard	Prevailing Family Standard	Social Abundance Standard
1 aged	.50	$ 4,032	$ 5,376	$ 8,064	$12,096
1 nonaged	.54	4,355	5,806	8,710	13,064
2 aged	.61	4,919	6,559	9,839	14,758
2 nonaged	.67	5,403	7,204	10,806	16,210
3	.80	6,452	8,602	12,903	19,355
4	1.00	8,064	10,753	16,129	24,193
5	1.20	9,677	12,903	19,355	29,032
6	1.39	11,210	14,946	22,419	33,629
7	1.57	12,661	16,882	25,323	37,984
8	1.74	14,032	18,710	28,064	42,097
9	1.90	15,322	20,430	30,645	45,968
10	2.05	16,532	22,043	33,064	49,597
11	2.19	17,661	23,548	35,323	52,984
12	2.32	18,710	24,946	37,419	56,129
13+	2.32+ .12 for each over 12	18,710+ 967 for each over 12	24,946+ 1,290 for each over 12	37,419+ 1,935 for each over 12	56,129+ 2,903 for each over 12

NOTE: Assumes no real growth in median income from 1978 value for four-person household.

The interfamily equivalence scales. To allow for different family sizes, the expenditure standards for the four-person household are varied using an equivalence scale. The scale recommended has been adapted from the updated "poverty cut-offs" developed by Mollie Orshansky and Carol Fendler, which rely in turn on the relative cost of the "Thrifty Food Plans" provided by the U.S. Department of Agriculture.[2] The proposed scale sets the current expenditure levels for an aged single-person household at 50 percent of the four-person reference standard. A non-aged couple's standard is set at 67 percent of a four-person standard, and that of a family of eight at 174 percent. Table 1 shows the equivalence scale and the full set of levels evaluated for 1979.

The following estimates, based on the 1972–73 Consumer Expenditure Survey, give some idea of the distribution of the population relative to the proposed standards. More than two-thirds of the population lives

The committee members

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between the Social Minimum Standard and the Social Abundance Standard; 13 percent are below the Social Minimum Standard, and 18 percent are above the Social Abundance Standard; more than one in four persons live below the Lower Living Standard. The all-too-familiar finding of lower incomes for black persons shows here as a rate of 36.1 percent below the Social Minimum Standard, in contrast to only 10.4 percent for nonblack persons. Children and older persons also show distinctly higher likelihood of living below the minimum and lower chances of living in abundance.

Methods of annual updating. A major objective in developing the recommendations was to provide continuous updating of the standards, based on current information and relatively free of discretionary choices. The recent BLS decision to conduct Consumer Expenditure Surveys on a continuous basis provides a way to keep the budgets up to date that has not existed in the past. The committee recommends that the median expenditures for the reference family type be estimated directly from the annual waves of survey data (using adjacent size groups if needed to enhance precision). For the interim until the survey estimates are available, an estimated expenditure can be obtained by adjusting annual income medians from the Current Population Survey.

Linking the structure of expenditure standards to the median level of the four-person reference family assures that the standards will not be made obsolete by changing economic conditions. Short-run variations in median expenditure levels should not, however, be reflected in norms or standards that gain much of their usefulness from their stability. Consequently, the committee recommends that the expenditure standards be maintained at their previous peak in real terms until a higher real median level is observed. This feature is called a "ratchet." The Consumer Price Index would be used for making the required estimates of real expenditure, thus preventing any decline in the real level of the various standards. During periods of constant or declining real median expenditures the nominal standards would continue to rise in tandem with the general price level, thus staying constant in "real" terms.

Detailed budgets and total income estimates. The new standards have been defined and expressed in terms of expenditure totals. But for many kinds of comparisons and to communicate the meaning of the standards more clearly, further detail is needed. An allocation of expenditures among major categories can be derived from the Consumer Expenditure Surveys. Average allocation patterns can be estimated for each of several types of families at each of the expenditure standards. It must be noted that for any level of total expenditure apparently identical families spend their money differently. These differences are surely due in part to different, but unobserved, circumstances, but there are also differences in tastes and preferences that lead a household to favor one line of consumption over another. Such differences have no apparent ill effect on the interests of the general public and are evidently preferred by the individuals concerned; consequently, the committee feels that to invest the average, or any other allocation, with normative or prescriptive significance is unjustified. The average patterns recommended show plausible allocations because they are based on observed behavior. However, equally plausible allocations can be obtained by trading some expenditures for others, and within a wide range there is no basis for authorative judgment that one is better than another.

The committee proposes that detailed allocations be developed and displayed for six different types of families:

- Two parents and two children (the reference family)
- An aged couple 65 and over
- A non-aged single person
- A one-parent, two-child family
- A two-parent, five-child family
- An aged single person

The budgets would be shown in detail for all four standards, except that the Social Abundance Standard should be omitted for the last three types. There are too few families of those kinds at that level to permit reliable estimation of allocation patterns.

For the non-aged family types, it is also necessary to estimate the level of gross income that will enable a worker's family to spend the amount specified for a given standard. Several adjustments apply here, but income and payroll tax adjustments are the most important and vary from State to State. The committee proposes that calculations based on current Federal and State laws be carried out to determine the tax adjustments needed to arrive at the appropriate equivalent gross income for each State.

Interarea differentials. The committee recommends the introduction of an interarea price index program based on fixed-weight or market-basket procedures. This program should provide price comparisons among all city and regional aggregates for which sufficient price data are regularly collected. While basic price comparisons are useful for many purposes, they do not show the cost of achieving equivalent living levels in different places. This second problem, the "true cost of living" question, cannot be directly resolved by reference to price data *or* to observed expenditure patterns. The committee urges continuing research on this problem, but for the imme-

One committee member dissents

The present BLS Family Budgets are based on detailed cost estimates of items necessary for a worker's family to maintain or achieve specified living standards. Under the proposal of the majority of the Expert Committee on Family Budget Revisions, these would be replaced by a set of declaratory judgments by the committee as to levels of total expenditure, tied to median consumption, that are designated as representing particular living standards.

Even the committee appears rather uncomfortable with this. It produces an ultimate proposal for surveys, that would ascertain public opinion on what is needed to maintain various living standards. Such a project has many useful possibilities as an adjunct to family budget research, and I support it. However, I do not believe it can substitute for systematic budget cost calculations from customary statistical data. In any case the results of such explorations lie far in the future. The immediate question is whether to adopt the committee's specific proposals, based on its judgments.

Why should we accept the committee's judgments? Its answer, in effect, is that the present budgets are equally based on judgments, although less obviously. Thus is discarded a history of Bureau budget-making and evolutionary development that spans more than 70 years. Has the Congress, in commissioning, accepting, and using such budgets, been fooled all this time?

The committee majority objects to the present budgets for their commodity lists, their use of scientific standards and expert opinion, and their elements of relativism. This fails to recognize the purpose of budget-making: estimating costs and making their nature explicit in terms of specific items of purchase, quantity, and price. Necessary costs for a given standard of living are not a mirror image of expenditures taken from a Consumer Expenditure Survey.

The Bureau's work in budget-making, in accordance with Congressional directives, has been skilled and honest. I would have interpreted the mandate of the committee as that of recommending improvements in the methodologies for selecting goods and services to be priced for the worker budgets, not that of overturning the bases of the present budgets in their entirety.

It would be difficult to describe the committee's declaratory judgments on expenditure totals as "methodology." The judgments were not, however, picked out of thin air. Essentially, they were arrived at by consulting the results of other people's judgments, including those of the rejected BLS budget-makers, and converting them to percentage relationships with median consumption figures. It was felt to be important not to have the dollar results diverge markedly from existing numbers that have already been accepted. With acceptable "number" results, the methodology, or lack of it, would not matter.

Thus, the choice of median consumption to represent the Prevailing Family Standard rests essentially upon the present Intermediate Family Budget, which the committee observes to have fallen historically "within the middle range of family incomes." The establishment of the Lower Living Standard at two-thirds of median consumption is pegged at the consumption level of the existing Lower Budget, and is further buttressed by Gallup poll opinion data on "how much it takes to get along." The Social Minimum Standard, set at 50 percent of the consumption median, is similar to other estimates for poverty threshold. When nonconsumption items and taxes are included, it will also be about 70 percent of the Lower Living Standard as referenced in the Comprehensive Employment and Training Act. The Social Abundance Standard, at 150 percent of the median, is simply the obverse of the Social Minimum and rests upon no particular observations or other reference data.

The committee's living standard lines essentially are derivative judgments based on existing estimates, rather than

diate future, it recommends that adjustments in fuel and clothing that can be explicitly related to climate differences be recognized as the only basis for interarea adjustments. It is likely that additional adjustments are warranted, but in the absence of consistent evidence of their direction or size, differentials that are based on conjecture may cause more mischief than no adjustments at all.

Measuring popular conceptions of norms. The principles and basic notions that have inspired the new standards suggest the possibility of eliciting normative standards through general public surveys. Recent work in Europe and the United States suggests that people can be asked how much it takes to live comfortably, for example, or to just get along. Their answers can be related to their own income or expenditure levels. From these relationships a consensus can be derived that directly reflects popular views about standard living levels.

Potentially, a measure of this kind could replace the median expenditure standard that forms the basis of the committee's recommendations. All four standards might be estimated separately, for example, and the proportional relationship among them validated or improved. The system of interfamily equivalence scales could also be examined in light of directly expressed requirements of differently composed households. Direct survey questions could also produce independent evidence of interarea differentials.

But at present these approaches need further study and experimental implementation. The committee urges an extensive effort to evaluate these promising new methods. An experimental survey program is practical because the questions required could be added to both the new Consumer Expenditure Survey and other large-scale surveys. The survey program should be carefully designed to identify the best form for the questions. A coordinated analytic program, inside or outside the Bu-

resting upon independent findings or methodologies developed by the committee.

The percentages arrived at are further mandated to remain indefinitely in the same fixed relationships. The Social Minimum is always to be 50 percent of the current year's median, the Lower Living two-thirds, and so forth.

The postulate that adequacy at prevailing levels of living is always at median consumption, and that other standards remain in fixed percentage relationships to the median, is inherently insupportable. In a very poor society, for example, or even our own at different periods in history, median consumption may be the minimum of needed consumption. At other times, median consumption may be well above such a minimum.

The committee's formula is particularly troublesome to contemplate in what may become an era of falling real living levels. There is no genuine safety net to protect whatever is represented in terms of necessary consumption, particularly at the Lower and Social Minimum levels. For the short term, the committee has devised a "ratchet" mechanism. This would obviate the problem by mandating that the median will always be at the real levels of 1972–73, or any subsequent higher real level, as determined through the Consumer Price Index. Under this specification, the "formula" median can readily exceed the actual median, producing a need for complicated explanations. If real living levels are reduced over a long period, the Bureau of Labor Statistics must drop the ratchet and presumably revise the percentages. No guidance is offered concerning when to drop the ratchet or what to do about the percentages. Quantity-cost budgets would no longer be available for guidance.

Regarding geographical or place-to-place variations for national median consumption, the logic of using expenditure totals instead of calculated costs is questionable. Obviously the committee would not want area median expenditures to be the basis for area variations from the national total. This is a problem the committee has not truly resolved, and on which it urges "continuing research." It has endorsed development of an interarea fixed-weight price index, which would ignore local area usage differences for such items as fuel, transportation, clothing, and food preferences. On a separate track, it suggests "climate adjustments" for home fuel use (and possibly clothing) based on degree days in each State; this to represent "living cost" differences on a State basis. The recommendations are incomplete and ad hoc.

The production of equivalent consumption totals for families of different sizes through use of the Orshanky scales is not necessarily objectionable. But, as the committee itself recognizes, this entails no real advance over existing methodologies, all of which are tied to food consumption. The main defect is the failure to detail what any of the budgets actually contain, in terms of tangible goods and services. In the committee formulations, "detail" consists only of percentages allocated to different categories, such as food, clothing, and housing.

In conclusion, I believe that abandonment of the Bureau's traditional quantity-cost budgets would be a grave loss. The budgets have made an independent and substantial contribution to studies of income adequacy. The explicit lists they provide of the commodities and services that go into the budgets are a crucial part of their value. People can judge for themselves whether the lists are reasonably representative of living standards at specified levels.

—ANNE DRAPER
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reau of Labor Statistics, should also be developed in order to explore all possible uses of directly elicited living standard estimates.

New socioeconomic report. The final recommendation calls for the design of a new report that can take advantage of the evidence in the continuous Consumer Expenditure Survey, as well as other major Federal surveys, to illuminate the condition of American families and households as consumers. The new budget standards provide a framework in which the population of households and persons can be distributed and the latest information on spending patterns can also be displayed. Such a report would also explicate the annually updated living standards and combine them with revised tax and related adjustments in order to determine the income standards appropriate for each State. In addition to reporting on standard annual series, the report could offer interpretative analytical articles based on expenditure data and methodological articles on possible improvements to the Family Budget Standards Program.

Rationale for the changes

To the small and select group of individuals closely familiar with the Family Budgets Program, it will be evident that these recommendations depart sharply from existing practices. For readers who have used and followed the budget series, but are less familiar with the details of the series construction, this section will point out the main contrasts. The reasoning behind the changes is presented for both groups of readers.

Dollar totals vs. shopping lists. A major and far-reaching departure is proposed in the basic formulation of the budget. The existing budget total can be regarded as the cost of a specific list of goods and services drawn from a variety of sources to characterize a "modest but ade-

quate" standard of living. The proposed Prevailing Family Standard aims at the same general level, but arrives at it by: (1) examining the living standards of a specified and familiar category of household spending a median number of dollars on current consumption relative to others of that type; and (2) taking that level as typifying the ordinary concept of prevailing living standards. Subtotals of expenditure for categories of consumption such as food, shelter, or clothing can be based upon average patterns observed for households at the median level. Illustrative lists of quantities of goods affordable within those totals can also be compiled on the basis of average price data. The critical difference is that the new procedure abandons the notion of a rigidly fixed list of things that are interpretable as minimum *needs* in achieving a given level of living.

Because of evidence that different families commanding the same set of choices select rather different commodities without apparent deterioration in health, vitality, or human dignity, the committee found mistaken the belief that there is a best or unique "recipe" for attaining a living standard. More important, careful examination showed that the existing lists of commodities were in fact not based on objective assessment of needs.

The idea that there are experts who can prescribe what is necessary for a working family to live decently is both widespread and attractive. It promises a basis for claims to "just wages" or "fair treatment" that are apparently supported by the absolute authority of science. Such claims are generally regarded as harder to refute than those based on relativistic standards such as the ones proposed by the committee. The committee might have embraced a set of well-authenticated needs that could be translated directly into costs. But no experts could be found who were willing to formulate such requirements. Nutritional experts can combine agreed-upon nutritional requirements (that can, in themselves, be satisfied at very low cost) with palatability limits and evidence related to food preferences to produce any number of need-filling food quantity lists. These lists have differing costs, and most people would prefer a higher cost "food plan" over a lower one. But the nutritional criteria provide no basis for choosing one plan over another, and the actual choice of a plan for the existing budget depends on relativistic measures that are no less arbitrary than the committee's proposal to assign median total expenditure as a standard of comparison.

Physical standards for housing have also been used in forming the budgets but, again, the standards do not determine a unique cost. The selection from among the wide range of values and prices of units that meet the standard is made by applying arbitrary and relativistic standards. Yet food and housing are usually considered the best cases for application of expert or scientifically sanctioned standards. The same recourse to arbitrary and essentially relative criteria was apparent at all stages of development of the quantity lists currently used for the family budgets.

The majority of the committee concluded that the main claimed advantage of lists of qualities of goods and services—that such lists assure the meeting of authoritatively established needs—was in fact illusory. Any cost total derived from lists of commodities has perforce been based on a myriad of individual judgments. Consequently, the committee majority, recognizing that a judgment based on individual values and *not* on scientific requirements must be made at some stage whatever the method used, decided to exercise that judgment in the choice of an expenditure *total* rather than in several hundred item choices.

It must be emphasized that the decision did not involve rejection of scientific or expert-based cost of living criteria. What was rejected was a complex and often obscure set of judgmental choices that has often and mistakenly been confused with scientific or expert-based standards. The theoretical and practical possibility of deriving genuine scientific quantity standards was also explored, but no promising new approach to determining detailed quantity lists was discovered. Finding no alternative to relying on its collective experience and judgment in assigning numerical totals to the more abstract notion of living standards, the committee chose an alternative that makes the exercise of judgment both explicit and "out front." The committee believes that family budgets based on its recommendations will be at least as useful as the current budgets but very much hopes that unsupportable claims will *not* be made by those who use them.

However, the family budgets do need an explicit conceptual base, and if the authoritative list of needs is abandoned, what is the alternative that informs the recommendations? The alternative is the notion of a popular or democratic consensus about norms or standards of comparison. The committee asserts that there is a general consensus about how much it takes for an ordinary family to "get along"—perhaps not an exact figure, but rather a range or "band" of total expenditure levels that contains what most people would agree is the "get along" amount. Similar consensus may be defined for thresholds for deprivation or abundance, and survey research, both in Europe and the United States, has been able to measure these levels.[3]

Assuming the existence of such norms as social facts, the committee addresses the task of finding acceptable ways of eliciting and expressing them in quantitative detail. The majority of the committee believes the reason the existing practice has been acceptable is that the numbers arrived at are consistent with the popular norms, not that they were derived from expert judg-

ment. If "experts" had decided that everyone must have new shoes every week, for example, resulting budgets would have been widely rejected as outside the consensus for such norms. But it also follows that any method of establishing norms that succeeds in approximating the consensus will be reasonably well-received and found useful.

But this view of norms also suggests that a more direct way to elicit them would be to inquire about them in surveys. For this reason the committee recommends a major effort to evaluate and perfect the survey method so that it eventually may be considered in designing possible alternatives for the methods already recommended in this report.

In short, this report recommends a basic shift toward a more populist or democratic framework—the notion that ordinary people, not experts, know what they need in order to get along or to prosper. Thus, recommendations for new measurement are directed toward the task of finding stable and reproducible estimates of those levels.

Related differences. There are several implications of the basic change. First of all, in order to determine the cost of the shopping list, the existing budgets require current price data on the listed items; the process of updating the cost, between list revisions, similarly depends on a continuous flow of appropriate price data. The proposed approach does not require price data to establish a "bottom line" total cost number, but it does require continuous survey data on household expenditure behavior both for the total cost and for the current allocation among different lines of expenditure. Since price data would no longer be needed for the Family Budget Program (except for the "ratchet" computation which prevents reductions in real budget levels), the committee recommends that fixed-weight price index numbers be developed for inter-city and inter-regional comparisons. The existing budgets provide cost differentials that are often used as price differentials. The committee urges that the price data be kept separate from the budgetary norms but recognizes that each has its legitimate use and urges that both be surveyed and published.

Unlike the existing budgets which are shown only for specific cities and for regional aggregates that do not have homogeneous tax laws or climate, the new budget standards would be designed to cover all areas, State by State. In the event that dependable and consistent estimates of differential living costs according to urbanization can be formed, they could be added to the array of variations. But this should be done on a size or type-of-place basis rather than for specific cities. Because price data are collected only for specific cities, the committee recommends that the price comparisons be limited to those same cities.

The change in concept also implies a shift from an "absolute" to a "relative" standard, at least to the extent that the underlying, popularly conceived norms will be based on what the individuals are experiencing directly and on what they see going on around them. If the underlying norms can be faithfully reflected in the family budgets, they will automatically keep pace with the constantly changing levels and patterns of expenditure that correspond to the different standards. The absolute standards embodied in detailed lists of commodities must be overhauled periodically; only for a very short time do they approximate the patterns and items of actual current spending. (Pedal pushers, for example, are among the anachronistic items in the current budgets.)

Equivalence scales and family types. The proposed approach to the family budgets allows for extension of the budget levels and allocations to as many family types as desired. The committee recommends only six, but it would be possible to prepare other budgets of the same type on short notice if needed for special purposes. The equivalence scale provides an adjustment factor for calculating the appropriate budget total for any kind or size of family, and the most recently estimated expenditure allocation system will yield average patterns of spending for each. Finally, the tax and "other expense" categories can be calculated and added to yield a total "gross income" requirement for maintaining the standard for each kind of family. With the existing system a whole new list of goods and services must be specified for each separately budgeted family type. Clearly the size of this task has been an obstacle to providing coverage for a wider variety of family types. While the existing program has its own set of equivalence scales that can be used to adjust the four-person spending totals, they have never been widely used or given prominent attention.

ALTHOUGH THE COMMITTEE recommends substantial changes in the way family budgets are conceived, estimated, and presented, the new standards are very much in line with the traditional ones. The levels that have been chosen provide essential continuity with those that have been developed and found useful in the existing program. Consequently, the typical user will not notice any sharp change in the overall appearance of the budgets despite the sharp change in methodology. If the recommendations are accepted the committee believes that the broader coverage of the budgets, both as to family types and areas, will make the budgets useful for a wider range of users and that the proposed new Report on Household Consumption will add an important dimension to our array of social indicators. □

——*FOOTNOTES*——

[1] A large part of the estimates were based on analysis of the 1960–61 Survey of Consumer Expenditures. Given the availability of data from the 1972–73 Consumer Expenditure Survey and the mandate of the Comprehensive Employment and Training Act (CETA) of 1973 that "the Secretary (of Labor) shall develop methods to establish and maintain more comprehensive household and budget data at different levels of living, including a level of adequacy, to reflect the differences of household living costs in regions and localities, both urban and rural," the Bureau of Labor Statistics began to plan for a comprehensive revision of the Family Budget Program.

[2] See Carol Fendler and Mollie Orshansky, "Improving the Poverty Definition" in *Statistical Uses of Administrative Records with Emphasis on Mortality and Disability Research: Selected Papers given at the 1979 Annual Meeting of the American Statistical Association,* Washington, D.C., August 1979. Social Security Administration, Office of Research and Statistics, pp. 161–68.

[3] See Denton Vaughn and S. Lancaster, "Income Levels and Their Impact on Two Subjective Measures of Wellbeing: Some Early Speculation from Work in Progress," *1979 Proceedings of the Section on Survey Research Methods, American Statistical Association,* Forthcoming; and Frank M. Andrews and Stephen B. Withy, *Social Indicators of Wellbeing: Americans' Perceptions to Life Quality* (New York, Plenum Press, 1976.)

Inflation's diffused pattern

Inflation is characterized by a general and widely diffused rise in prices and costs. However, all prices and factors affecting prices do not begin to rise or fall at the same time. In part, this is due to the existence of more or less regular sequences in the movement of different prices. Prices in some markets almost always begin to rise more promptly than in other markets. Similarly, some prices typically begin to fall sooner than others.

Moreover, prices do not all move at the same pace, and in particular, they do not necessarily move at the same pace as wages or costs of production. Prices of some types of assets, such as common stocks or land, rise or fall, while the money price of other assets, such as savings accounts or debt instruments, may not change at all. These differences in price behavior have significant consequences. Real wages—money wages adjusted for price changes—may rise or fall, with vital effects on the wage earner and his family. Profit margins, dependent on the difference between prices and costs, may rise or fall, thereby encouraging or discouraging expansion of production, development of investment plans, or shifts of resources from one activity to another.

——GEOFFREY H. MOORE,
Business Cycles, Inflation, and Forecasting (New York, National Bureau of Economic Research, Inc., 1980), p. 214.

The 1995 labor force: a first look

All three projections—high, middle, and low—indicate that women will account for two-thirds of the growth, most of which will occur in the prime working-age group; the black labor force will grow twice as fast as the white force

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By the mid-1980's, persons in the labor force are projected to exceed those not in the labor force—including babies. This development reflects the changing age composition of the population which, in turn, is caused by the swings in births over the past 50 years. By 1995, this labor force would have a greater proportion of women and minorities; indeed, about two-thirds of the labor force growth would be generated by women, reflecting their continued labor force participation.[1]

The projections discussed in this article are part of a continuing program of economic projections made by the Bureau of Labor Statistics. As part of this program, every 2 years labor force projections are prepared, followed by projections of the economy, of employment by industry, of demand, and ultimately, of occupations by industry.

The Bureau of Labor Statistics developed three labor force growth scenarios: a *high-growth* projection, which assumes rapid growth in the labor force participation of women in the 1980's and the convergence of participation between black men and white men under age 65; a *middle-growth* scenario, with the expansion coming from women; and a *low-growth* path with only moderate increases in the participation of women and with the divergence in male participation between races continuing.[2]

In the intermediate scenario, the labor force is projected to reach 115 million by 1985 and 128 million by 1995. (See table 1.) This represents 1.8 percent growth per year from 1979 to 1985 and 1.0 percent per year from 1985 to 1995. (See table 2.) Under this scenario, labor force rates of women age 20 to 44 are assumed to rise at an increasing rate until 1983. For most age groups of men, participation is projected to decline, although not as fast as it did in the 1970's. Overall participation is assumed to increase more rapidly for whites than for blacks.[3]

In the high-growth scenario, the labor force is projected to grow 2.3 percent per year between 1979 and 1985 and 1.1 percent per year between 1985 and 1995. Under this scenario, about 135 million persons would be in the labor force in 1995. The participation rates for women age 16 to 19 and 45 to 64 are projected to grow at an increasing rate until 1985, before tapering off in the 1990's. The rates for white men age 25 to 39 are assumed to rise, reversing a long-term drop since 1960. By the end of the century, the labor force participation ratio of black men are projected to converge to the ratio of white men. (With the higher rate of black involvement in the Armed Forces and higher rates of institutionalization, the civilian labor force rates for

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some age groups of black men would exceed those of white men.) However, because blacks make up about 12 percent of the labor force, this assumption of the high-growth scenario does not have a significant impact on the level of the overall labor force.

In the low-growth scenario, the labor force is projected to grow 1.1 percent a year from 1979 to 1985 and 0.8 percent from 1985 to 1995. By 1995, the civilian labor force is projected to be only 122 million. The participation rates of women age 20 to 44 are projected to rise over the entire period, but at a decreasing rate. For other age groups of women, participation is assumed to increase at a slower rate than in the middle-growth path, reflecting a longer run experience than that in the 1970's. For men, labor force activity is projected to decrease more rapidly than in the middle-growth scenario, leading to an increased disparity in rates by race.

Women provide most growth

As a base for these projections, we used the population projections prepared by the Bureau of the Census. Under the Series II (middle) projection, the population 16 and older grows steadily through 1995, although the decrease in births (which began around 1960) means slower rates of growth during the remainder of this century.[4] (See table 3.) Because of reduced birth rates during the 1930's and the 1970's and the baby boom of the 1950's, the age composition of the population and, thus, of the labor force will change significantly during the next 15 years.[5]

In the past, much of the increase in the labor force has been generated by the entrance of youth and women. The number of new labor force entrants could drop in the future because there will be fewer youths. This means that the labor force would consist of more experienced workers than now. By 1985, the small number of persons born during the Great Depression will begin to leave the prime working ages. They will be replaced by the more populous baby-boom generation; the growth of the older population will be slowed.

More than two-thirds of the 1980–95 labor force growth would come from women. (These projections do not yield estimates of new entrants and of re-entrants.) Women are expected to compose an additional 4 percent of the labor force in 1995 under each of the three patterns of labor force growth. The increase in the proportion of employed women in the prime working-age group would more than offset the decreasing proportions of younger and older working women. On the other hand, the proportion of men in the labor force is assumed to be slightly less. Under the medium- and low-growth scenarios, the activity rates of men age 25 and over is expected to drop. Under the high-growth path, the rates for men age 40 to 64 are projected to remain constant and the rates for men age 25 to 39 will increase slightly. Rates for men and women under age 25 are moving up, but those for women are increasing faster. In the older age groups, where rates for men and women are dropping, those for men are dropping faster. Hence, women's increasing share of the labor force reflects their own greater activity as well as the decrease in male participation.

Until recently, labor force participation has been dropping for most age groups of black men, while their population has been increasing at a higher rate than that of whites. As the black population continues to grow at a faster rate, the black labor force also can be expected to grow at a faster rate. Thus, under all three projections, the black labor force is growing considerably faster—at about twice the rate of whites. That the relatively rapid growth is related to population growth may be seen by comparing possible participation rates. Under middle and low scenarios, the overall rate is lower for blacks than for whites. Under the high-growth scenario, which assumes convergence of male total participation ratios for blacks and whites, black civilian la-

Table 1. Civilian labor force based on three different growth paths to 1995

Growth path	Actual (in millions)			Projected (in millions)			Annual percent change[1]					Participation rate					
							1965 to 1975	1975 to 1979	1979 to 1985	1985 to 1990	1990 to 1995	Actual			Projected		
	1965	1975	1979	1985	1990	1995						1965	1975	1979	1985	1990	1995
Total:	74.5	92.6	102.9				2.2	2.7				58.9	61.2	63.7			
Middle growth				115.0	122.4	127.5			1.9	1.3	0.8				66.5	67.9	68.6
High growth				118.3	128.1	134.7			2.4	1.6	1.0				68.4	71.1	72.4
Low growth				111.7	117.4	121.7			1.4	1.0	.7				64.6	65.2	65.9
Men:	48.3	55.6	59.5				1.4	1.7				80.7	77.9	77.9			
Middle growth				63.6	65.9	67.6			1.1	.7	.5				77.7	77.2	76.8
High growth				64.8	68.2	70.8			1.4	1.0	.8				79.2	79.9	80.5
Low growth				62.5	63.9	64.9			.8	.4	.3				76.3	74.9	73.7
Women:	26.2	37.0	43.4				3.5	4.1				39.3	46.3	51.0			
Middle growth				51.4	56.5	59.9			2.9	1.9	1.2				56.5	59.6	61.2
High growth				53.4	59.9	63.9			3.5	2.3	1.0				58.7	63.2	65.2
Low growth				49.2	53.5	56.8			2.1	1.7	1.2				54.1	56.4	57.9

[1] Compounded continuously.

Table 2. Annual rate of growth of the civilian labor force by sex, age, and race, 1975–79 and projected to 1995

[In percent]

Age, sex, and race	Actual	Projected								
		Middle growth			High growth			Low growth		
	1975 to 1979	1979 to 1985	1985 to 1990	1990 to 1995	1979 to 1985	1985 to 1990	1990 to 1995	1979 to 1985	1985 to 1990	1990 to 1995
Total, age 16 and over	2.67	1.86	1.25	.83	2.34	1.61	1.01	1.37	.99	.72
Men	1.70	1.11	.70	.52	1.43	1.01	.76	.80	.45	.32
16 to 24	3.15	−1.47	−2.17	−1.16	−1.11	−1.67	−.63	−1.67	−2.26	−1.19
16 to 19	1.39	−2.25	−.79	−.34	−1.76	−.14	.28	−2.41	−.87	−.38
20 to 24	2.72	−.06	−2.94	−1.66	.22	−2.53	−1.21	−.28	−3.04	−1.69
25 to 54	1.83	2.06	1.88	1.10	2.24	2.04	1.23	1.88	1.72	.96
25 to 34	3.32	2.18	.52	−1.59	2.43	.75	−1.40	2.01	.35	−1.74
35 to 44	2.45	3.88	3.18	1.87	4.00	3.28	1.97	3.72	3.03	1.75
45 to 54	−.91	−.41	2.37	4.03	−.28	2.50	4.14	−.63	2.19	3.88
55 and over	−.91	.78	−1.20	−.57	1.69	−.26	.14	−.27	−2.30	−1.48
55 to 64	.56	−.04	−1.43	−.44	.58	−.83	.00	−.99	−2.37	−1.15
65 and over	−6.96	4.47	−.33	−1.04	6.51	1.64	.58	2.98	−2.01	−2.80
Women	4.06	2.85	1.91	1.18	3.52	2.33	1.29	2.13	1.67	1.18
16 to 24	3.30	.49	−.90	−.21	1.02	−.24	−.28	−.04	−1.20	−.46
16 to 19	2.63	−1.16	.08	.30	−.84	.48	.73	−1.55	−.23	.10
20 to 24	3.73	1.48	−1.46	−.52	2.12	−.65	−.88	.85	−1.76	−.81
25 to 54	4.88	4.28	3.24	1.73	5.05	3.56	1.86	3.42	3.04	1.83
25 to 34	7.19	4.98	2.06	−.73	6.03	2.38	−.60	3.82	1.93	−.55
35 to 44	5.78	6.12	4.64	2.69	6.84	5.01	2.85	5.35	4.41	2.84
45 to 54	.72	.52	3.28	4.56	.80	3.59	4.75	.12	2.96	4.31
55 and over	2.05	.45	−.61	.01	.86	−.15	.30	.07	−.85	−.10
55 to 64	1.91	.44	−.98	.11	.83	−.63	.29	.13	−1.26	−.04
65 and over	2.60	.47	.78	−.36	1.02	1.62	.33	−.13	.72	−.30
WHITE										
Total, age 16 and over	2.49	1.71	1.08	.63	2.10	1.37	.76	1.22	.84	.57
Men	1.56	.96	.55	.36	1.20	.77	.52	.68	.32	.19
16 to 24	2.07	−.97	−2.28	−1.25	−.91	−2.14	−1.09	−1.16	−2.34	−1.26
25 to 54	1.68	1.88	1.72	.93	2.04	1.84	1.01	1.75	1.59	.82
55 and over	.39	−.22	−1.32	−.64	.60	−.47	−.01	−1.31	−2.47	−1.60
Women	3.89	2.72	1.74	.96	3.32	2.11	1.04	1.97	1.49	1.02
16 to 24	3.11	.36	−1.07	−.57	.68	−.72	−.78	−.16	−1.38	−.59
25 to 54	4.74	4.19	3.11	1.55	4.92	3.44	1.67	3.29	2.91	1.68
55 and over	1.94	.28	−.88	−.16	.68	−.43	.09	−.08	−1.12	−.29
BLACK AND OTHER										
Total, age 16 and over	3.97	2.97	2.39	2.02	4.01	3.14	2.46	2.42	2.05	1.65
Men	2.95	2.27	1.85	1.58	3.26	2.71	2.32	1.80	1.40	1.20
16 to 24	3.29	−.07	−1.41	−.56	2.33	1.06	1.66	−.32	−1.65	−.76
25 to 54	3.13	3.42	3.08	2.29	3.82	3.45	10.35	2.91	2.62	1.91
55 and over	1.52	.46	−.07	.07	2.11	1.57	1.49	−.18	−.19	−1.02
Women	5.15	3.71	2.92	2.44	4.81	3.56	2.58	3.09	2.70	2.08
16 to 24	4.67	1.35	.13	1.90	3.19	2.37	2.11	.72	−.11	.28
25 to 54	5.11	4.85	3.96	2.73	5.79	4.18	2.84	4.20	3.74	2.63
55 and over	2.94	1.77	1.25	1.18	2.27	1.79	1.62	133	1.03	1.14

NOTE: Compounded continuously.

bor force participation exceeds that of whites by 1995. (This reflects, for black women, an expected continuation of higher participation and, for black men, higher rates of institutionalization and of participation in the Armed Forces.) Under the middle and low scenarios, the racial gap in male participation rates is projected to approximately double from the percentage point difference in 1979.

The above description of population and labor force changes suggests that the discussion of future labor force trends should focus on two periods, 1979 to 1985, and 1985 to 1995. During 1979–85, the teenage and young adult population will decline in absolute numbers and the prime-age population will grow sharply. During 1985–95, the older adult population will grow at a slower rate. Further, during the late 1980's and early 1990's, women of the baby-boom generation will pass their prime childbearing ages.

The changing labor force, 1979–85

A look back to 1975 will help our gaze forward to 1985. In 1975, the total fertility rate was 1.8 children per woman; for 1985, the Census Bureau's Series II population projection is for 2.0 children per woman.[6] Because the total fertility rate adjusts for changing age composition, there would be an increase in births from the levels of the 1970's. This increase in fertility rates, coupled with the increase in the labor force participation of women, means there would be more working mothers.

In 1975, 46 percent of all women were in the labor force. By 1985, this is projected to increase to 56.4 percent under the middle-growth scenario. (See tables 4 and 5.) This dramatic increase reflects both the movement of women of the baby-boom generation into the prime working-age group and the projection of increased activity rates. In 1975, women represented 40 percent of the labor force—by 1985 they would represent about 45 percent. The percents do not vary much across scenarios.

Slow growth for youths. Since the early 1960's, the youth population (age 16 to 24) has been growing at a faster rate than has the older population. However, 20 years have passed since the years of peak births, and the size of this age group has begun to fall. Thus, with the aging of the baby-boom cohort, the numbers of those age 16 to 24 almost certainly will decline so that, despite a projected increase in their labor force participation rates, the level of the youth labor force would fall. (Of course, the drop would not be as sharp as that for the population component.)

The composition of the younger population will also be affected by the difference in fertility between blacks and whites. Although fertility for both groups has been falling, black fertility rates remain higher. As a consequence, the black population is younger (the median age is lower), and the youth population will have a greater proportion of blacks than will the population age 25 and over. At the same time, black youths have lower labor force participation than do their white counterparts, so if other things remained the same, the

Table 3. Civilian noninstitutional population, by age, sex, and race, 1975–79 and projected to 1995

[Numbers in thousands]

Age, sex, and race	Actual population		Projected population			Net change				Annual percent change[1]			
	1975	1979	1985	1990	1995	1975 to 1979	1979 to 1985	1985 to 1990	1990 to 1995	1975 to 1979	1979 to 1985	1985 to 1990	1990 to 1995
Total, 16 and over	151,268	161,532	172,850	180,129	186,034	10,264	11,318	7,279	5,905	1.65	1.14	0.83	0.65
Men	71,403	76,449	81,889	85,285	88,031	5,046	5,440	3,396	2,746	1.72	1.15	.82	.64
16 to 24	16,793	17,669	16,364	14,695	13,983	876	−1,305	−1,669	−712	1.28	−1.27	−2.13	−.99
16 to 19	8,046	8,155	6,920	6,521	6,403	109	−1,235	−399	−118	.34	−2.70	−1.18	−.35
20 to 24	8,747	9,514	9,444	8,174	7,580	767	−70	−1,270	−594	2.21	−.12	−2.85	−1.50
25 to 54	36,617	39,381	44,707	49,224	52,190	2,764	5,326	4,517	2,966	1.84	2.14	1.94	1.18
25 to 34	14,537	16,552	18,988	19,574	18,122	2,015	2,436	586	−1,452	3.30	2.31	.61	−1.53
35 to 44	10,756	11,838	14,947	17,510	19,236	1,082	3,109	2,563	1,726	2.43	3.96	3.22	1.90
45 to 54	11,324	10,991	10,772	12,140	14,832	−333	−219	1,368	2,692	−.74	−.33	2.42	4.09
55 and over	17,994	19,399	20,818	21,366	21,858	1,405	1,419	548	492	1.90	1.18	.52	.46
55 to 64	9,215	9,782	10,217	9,819	9,738	567	435	−398	−81	1.50	.73	−.79	−.82
65 and over	8,779	9,617	10,601	11,547	12,120	838	984	946	573	2.31	1.64	1.72	.97
Women	79,865	85,083	90,961	94,844	98,003	5,218	5,878	3,883	3,159	1.59	1.12	0.84	0.66
16 to 24	17,686	18,397	17,012	15,322	14,560	711	−1,385	−1,690	−762	.99	−1.30	−2.07	−1.02
16 to 19	8,215	8,224	6,981	6,560	6,421	9	−1,243	−421	−139	.03	−2.69	−1.24	−.43
20 to 24	9,471	10,173	10,031	8,762	8,139	702	−142	−1,269	−623	1.80	−.23	−2.67	−1.46
25 to 54	39,326	42,031	47,318	52,022	55,156	2,705	5,287	4,704	3,134	1.68	1.99	1.91	1.18
25 to 34	15,488	17,499	19,906	20,533	19,071	2,011	2,407	627	−1,462	3.14	2.17	.62	−1.47
35 to 44	11,632	12,780	15,938	18,553	20,384	1,148	3,158	2,615	1,831	2.38	3.75	3.06	1.92
45 to 54	12,206	11,752	11,474	12,936	15,701	−454	−278	1,462	2,765	−.94	−.40	2.43	3.95
55 and over	22,853	24,656	26,631	27,500	28,287	1,803	1,975	869	787	1.92	1.29	.64	.71
55 to 64	10,347	10,930	11,293	10,736	10,637	583	363	−557	−99	1.38	.55	−1.01	−.19
65 and over	12,506	13,726	15,338	16,764	17,650	1,220	1,612	1,426	886	2.35	1.87	1.79	1.01
WHITE													
Total, 16 and over	133,501	141,614	150,085	155,029	158,791	8,113	8,471	4,944	3,762	1.49	.97	.65	.48
Men	63,385	67,493	71,632	73,982	75,770	4,108	4,139	2,350	1,788	1.58	1.00	.65	.48
16 to 24	14,526	15,175	13,796	12,154	11,418	649	−1,379	−1,645	−733	1.10	−1.58	−2.50	−1.24
25 to 54	32,569	34,816	39,151	42,788	45,002	2,247	4,335	3,637	2,214	1.68	1.98	1.79	1.01
55 and over	16,291	17,501	18,685	19,040	19,350	1,210	1,184	355	310	1.81	1.10	.38	.32
Women	70,115	74,120	78,453	81,047	83,021	4,005	4,333	2,594	1,974	1.48	.95	.65	.48
16 to 24	15,068	15,522	14,118	12,482	11,724	454	−1,404	−1,636	−758	.74	−1.57	−2.43	−1.25
25 to 54	34,315	36,339	40,457	44,115	46,352	2,024	4,118	3,658	2,237	1.44	1.81	1.75	.99
55 and over	20,733	22,257	23,878	24,450	24,945	1,524	1,621	572	495	1.79	1.18	.47	.40
BLACK AND OTHER													
Total, 16 and over	17,768	19,918	22,765	25,100	27,243	2,150	2,847	2,335	2,143	2.90	2.25	1.97	1.65
Men	8,018	8,955	10,257	11,303	12,261	937	1,302	1,042	958	2.80	2.29	1.96	1.64
16 to 24	2,267	2,493	2,568	2,541	2,565	226	75	−27	24	2.40	.50	−.29	.19
25 to 54	4,048	4,564	5,556	6,436	7,188	516	992	880	752	3.04	3.33	2.98	2.23
55 and over	1,703	1,897	2,133	2,326	2,508	194	236	193	182	2.73	1.97	1.75	1.52
Women	9,750	10,963	12,508	13,797	14,982	1,213	1,545	1,289	1,185	2.97	2.22	1.98	1.66
16 to 24	2,618	2,873	2,894	2,840	2,836	255	21	−54	−4	2.36	.12	−.38	−.03
25 to 54	5,011	5,691	6,861	7,907	8,804	680	1,170	1,046	897	3.23	3.17	2.88	2.17
55 and over	2,120	2,399	2,753	3,050	3,342	279	354	297	292	3.14	2.32	2.07	1.85

[1]Compounded continuously.

Table 4. Civilian labor force participation rate by sex, age, and race, 1975–79 and projected to 1995

[In percent]

Sex, age, and race	Actual		Projected								
			Middle growth			High growth			Low growth		
	1975	1979	1985	1990	1995	1985	1990	1995	1985	1990	1995
Total, age 16 and over	61.2	63.7	66.5	67.9	68.6	68.4	71.1	72.4	64.6	65.2	65.4
Men	79.7	77.9	77.7	77.2	76.8	79.2	79.9	80.5	76.3	74.9	73.7
16 to 24	78.7	77.9	76.9	76.8	76.1	78.7	80.5	82.0	76.1	75.5	74.7
16 to 19	59.2	61.7	63.4	64.7	64.7	65.3	68.8	71.1	62.8	63.8	63.7
20 to 24	84.6	86.6	86.9	86.4	85.7	88.4	89.8	91.2	85.8	84.9	84.1
25 to 54	94.4	94.4	94.0	93.7	93.4	95.0	95.5	95.7	93.0	92.0	91.0
25 to 34	95.3	95.4	94.7	94.3	94.0	96.1	96.7	97.4	93.7	92.5	91.5
35 to 44	95.7	95.8	95.4	95.2	95.1	96.0	96.4	96.7	94.4	93.6	93.0
45 to 54	92.1	91.4	91.0	90.8	90.6	91.7	92.1	92.4	89.8	88.8	87.9
55 and over	49.5	44.2	43.1	39.6	37.6	45.5	43.8	43.1	40.5	35.1	31.8
55 to 64	75.8	73.0	69.7	67.5	66.5	72.4	72.2	72.8	65.8	60.7	57.8
65 and over	21.7	20.0	17.5	15.8	14.3	19.7	19.6	19.2	16.1	13.3	11.0
Women	46.3	51.0	56.5	59.6	61.2	58.7	63.2	65.2	54.1	56.4	57.9
16 to 24	48.3	62.6	69.7	73.9	77.0	71.9	78.9	81.8	67.5	70.5	72.5
16 to 19	49.2	54.5	59.8	63.9	66.3	61.0	66.5	70.5	58.4	61.4	63.1
20 to 24	64.1	69.1	76.5	81.4	85.3	79.5	88.1	90.7	73.8	77.3	79.8
25 to 54	55.0	62.2	71.1	75.9	78.0	74.3	80.5	83.3	67.7	71.5	73.9
25 to 34	54.6	63.8	75.1	80.7	83.7	79.7	86.9	90.8	70.3	75.0	78.5
35 to 44	55.8	63.6	72.9	78.6	81.7	75.9	83.2	87.2	69.8	74.4	77.9
45 to 54	54.0	58.4	61.7	64.3	66.2	62.7	66.4	69.0	60.2	61.8	62.9
55 and over	23.1	23.2	22.1	20.7	20.2	22.6	21.7	21.5	21.6	20.0	19.4
55 to 64	41.0	41.9	41.6	41.7	42.3	42.6	43.4	44.5	40.9	40.3	40.6
65 and over	8.3	8.3	7.7	7.3	6.8	7.9	7.9	7.6	7.4	7.0	6.6
WHITE											
Total, age 16 and over	61.5	64.0	66.8	68.3	68.8	68.4	70.9	7.19	65.0	65.6	65.9
Men	78.7	78.6	78.5	78.1	77.7	79.6	80.1	80.3	77.2	76.0	74.9
16 to 24	74.3	77.2	80.1	81.0	80.9	80.4	81.9	82.5	79.2	79.8	79.7
25 to 54	95.1	95.1	94.6	94.3	93.9	95.5	95.7	79.9	93.8	93.0	74.0
55 and over	49.8	47.1	43.6	40.0	38.1	45.8	43.9	43.1	40.8	35.3	32.1
Women	45.9	50.6	56.2	59.3	60.7	58.2	62.5	64.3	53.8	56.1	57.6
16 to 24	59.0	64.8	72.8	78.0	80.6	74.2	80.9	82.8	70.5	74.4	76.9
25 to 54	56.2	61.6	70.8	75.7	77.8	73.8	80.2	83.0	67.2	71.2	73.6
55 and over	22.8	22.9	21.7	20.3	19.7	22.2	21.2	20.9	21.2	19.6	18.9
BLACK AND OTHER											
Total, age 16 and over	59.3	61.8	64.4	65.8	67.0	68.5	72.5	75.4	62.4	62.7	62.7
Men	71.5	71.9	71.9	71.5	71.3	76.2	79.0	81.7	69.9	68.0	66.6
16 to 24	60.1	62.3	60.2	56.6	54.5	69.4	74.0	79.6	59.3	55.1	52.5
25 to 54	89.0	89.3	89.8	90.2	90.5	91.8	94.0	96.0	87.1	85.6	84.3
55 and over	45.1	43.0	39.3	35.9	33.5	43.4	43.0	42.9	37.8	33.5	30.3
Women	49.2	53.5	58.3	61.1	63.5	62.2	67.1	70.3	56.3	58.3	59.5
16 to 24	46.4	50.8	54.7	56.1	61.8	60.9	69.8	77.6	52.7	53.4	54.2
25 to 54	60.8	66.3	73.1	77.0	79.2	77.1	82.1	84.9	70.4	73.5	75.2
55 and over	26.4	26.2	25.4	24.4	23.6	26.2	25.8	25.5	24.7	23.5	22.7

growth of the youth labor force would be slower. (See table 6.)

The number of black youths should increase slightly while the number of whites should drop. Only black young men had lessening labor force participation during the 1970's. Under the middle-growth projection, this drop is assumed to continue, although at a decreasing rate. The effects of greater labor force participation by black women and a proportionately larger youth population would offset the decline in male participation, and black youths would constitute the same proportion of the labor force in 1985 as at present. Under both the middle- and high-growth projections, the black youth labor force would be half men and half women. In the high-growth scenario, black youths represent an even greater proportion of the labor force in 1985; the more pessimistic low-growth pattern yields a lower proportion.

Prime-age labor force. The prime-age workers (25 to 54 years) would be the fastest growing component of the labor force under each of the growth paths. The following tabulation shows annual growth rates by major age group and race, 1975–79, and projected growth for 1979–85:

	1975–79	*1979–85*
Youth	3.2	−0.6
Prime	3.0	3.0
Older	.2	.7
White	2.6	1.7
Black and other	4.0	3.0

In each scenario, the prime-age labor force of women would grow at a faster rate than that of men. Under the high projection, between 1975 and 1985, the female la-

bor force is projected to grow at twice the male rate and at a pace faster than that experienced in the 1970's. This is due to three factors: the movement of women of the baby-boom generation into this age group, a moderate rise in fertility, and a continued growth in female labor force participation. The high-growth scenario for women in this age group is an attempt to reflect the acceleration in participation that was exhibited in the 1970's.

Under the high-growth scenario, prime-age men (particularly young men), are also expected to experience an increase in participation. Under the high-growth path, prime-age men would represent 78 percent of the total male labor force, a moderate increase from 1979. Under the middle-growth path, such trends would also be evident, although less significantly. For example, by 1985, prime-age male workers would represent only 75 percent of the male labor force. With the more pronounced drop anticipated under the low-growth scenario, the proportion of prime-age men would be less than in 1975, while their female counterparts would be more than 10 percentage points higher than in 1975.

Older workers. Older people (age 55 and over) have the most on-the-job experience, although on average, they have the least formal education. From 1979 to 1985, older workers are expected to participate less intensively in the labor force. These projections do not indicate the extent of part-time labor force activity that this growing segment of the population might elect.

Under the high-growth scenario, men age 55 to 64 are expected to have only a modest decrease in participation. This decrease, coupled with population growth, will result in an increase in their labor force. Under the

Table 5. Civilian labor force by sex, age, and race, 1975–79 and projected to 1995

[Numbers in thousands]

Sex, age, and race	Actual		Projected								
			Middle growth			High growth			Low growth		
	1975	1979	1985	1990	1995	1985	1990	1995	1985	1990	1995
Total, age 16 and over	92,613	102,908	114,985	122,375	127,542	118,252	128,123	134,753	111,706	117,394	121,684
Men	55,615	59,517	63,600	65,880	67,611	64,825	68,174	70,835	62,458	63,888	64,918
16 to 24	12,158	13,769	12,592	11,282	10,641	12,873	11,833	11,463	12,445	11,099	10,450
16 to 19	4,760	5,031	4,387	4,216	4,144	4,521	4,489	4,553	4,344	4,158	4,078
20 to 24	7,398	8,239	8,205	7,066	6,497	8,352	7,344	6,910	8,101	6,941	6,372
25 to 54	34,569	37,180	42,029	46,147	48,758	42,473	46,988	49,950	41,584	45,287	47,507
25 to 34	13,854	15,792	17,976	18,453	17,029	18,239	18,934	17,645	17,796	18,113	16,583
35 to 44	10,288	11,337	14,252	16,672	18,297	14,353	16,873	18,604	14,116	16,393	17,880
45 to 54	10,426	10,051	9,801	11,022	13,432	9,881	11,181	13,701	9,672	10,781	13,044
55 and over	8,888	8,568	8,979	8,451	8,212	9,479	9,353	9,422	8,429	7,502	6,961
55 to 64	6,982	7,140	7,122	6,625	6,479	7,393	7,090	7,092	6,725	5,963	5,626
65 and over	1,906	1,428	1,857	1,826	1,733	2,086	2,263	2,330	1,704	1,539	1,335
Women	36,998	43,391	51,385	56,495	59,931	53,427	59,949	63,918	49,248	53,506	56,766
16 to 24	10,108	11,511	11,854	11,325	11,205	12,235	12,083	11,912	11,477	10,800	10,551
16 to 19	4,039	4,481	4,176	4,194	4,259	4,259	4,363	4,526	4,079	4,031	4,053
20 to 24	6,069	7,029	7,678	7,131	6,946	7,976	7,720	7,386	7,398	6,769	6,498
25 to 54	21,613	26,156	33,650	39,469	43,021	35,163	41,885	45,934	32,020	37,198	40,735
25 to 34	8,456	11,167	14,955	16,568	15,971	15,870	17,853	17,322	13,988	15,396	14,971
35 to 44	6,493	8,130	11,617	14,581	16,651	12,094	15,444	17,781	11,121	13,805	15,887
45 to 54	6,665	6,860	7,078	8,320	10,399	7,199	8,588	10,831	6,911	7,997	9,877
55 and over	5,277	5,724	5,881	5,701	5,705	6,029	5,981	6,072	5,751	5,508	5,480
55 to 64	4,244	4,579	4,703	4,476	4,502	4,812	4,662	4,731	4,615	4,330	4,320
65 and over	1,033	1,145	1,178	1,225	1,203	1,217	1,319	1,341	1,136	1,178	1,160
WHITE											
Total, age 16 and over	82,084	90,602	100,316	105,867	109,292	102,667	109,930	114,208	97,496	101,661	104,604
Men	49,881	53,074	56,228	57,800	58,871	57,014	59,245	60,817	55,287	56,197	56,752
16 to 24	10,795	11,718	11,047	9,843	9,242	11,090	9,953	9,421	10,923	9,699	9,103
25 to 54	30,965	33,105	37,041	40,342	42,256	37,370	40,939	43,051	36,742	39,775	41,447
55 and over	8,121	8,251	8,140	7,615	7,373	8,554	8,353	8,345	7,622	6,723	6,202
Women	32,203	37,528	44,088	48,067	50,421	45,653	50,685	53,391	42,209	45,464	47,852
16 to 24	8,890	10,051	10,271	9,731	9,453	10,472	10,100	9,710	9,952	9,284	9,013
25 to 54	18,595	22,382	28,635	33,379	36,052	29,872	35,391	38,462	27,187	31,389	34,118
55 and over	4,717	5,095	5,182	4,957	4,916	5,309	5,194	5,219	5,070	4,791	4,721
BLACK AND OTHER											
Total, age 16 and over	10,529	12,306	14,669	16,508	18,250	15,585	18,193	20,545	14,210	15,733	17,080
Men	5,734	6,443	7,372	8,080	8,740	7,811	8,929	10,018	7,171	7,691	8,166
16 to 24	1,363	1,552	1,545	1,439	1,399	1,783	1,880	2,042	1,522	1,400	1,347
25 to 54	3,602	4,075	4,988	5,805	6,502	5,103	6,049	9,899	4,842	5,512	6,060
55 and over	768	816	839	836	839	925	1,000	1,077	807	799	759
Women	4,795	5,863	7,297	8,428	9,510	7,774	9,264	10,527	7,039	8,042	8,914
16 to 24	1,216	1,460	1,583	1,594	1,752	1,763	1,983	2,202	1,525	1,516	1,538
25 to 54	3,091	3,774	5,015	6,090	6,969	5,291	6,494	7,472	4,833	5,809	6,617
55 and over	560	629	699	744	789	720	787	853	681	717	759

other two scenarios, their participation is expected to drop more sharply, and the male labor force age 55 to 64 would actually decrease. Participation rates for women in this age group are expected to increase under both the moderate- and high-growth projections. The result would be an older labor force with proportionately more women.

The scenarios in these projections for the age group 65 and over are the same for both sexes. For the high projection, recent legislation forbidding mandatory retirement before age 70 is expected to hold participation constant. Under the moderate-growth scenario, the measured rate of decrease in participation is reduced somewhat, so that labor force activity drops at a slower rate than in the past. Under the low-growth projection, the measured declines in labor force participation are projected to continue.

An experienced labor force, 1985–95

During 1985–95, the baby-boom generation will be in the prime working ages and the relatively small number of persons born in the Great Depression will begin retiring, easing pressures on retirement systems.

To put the 1995 projections in context, it is useful to look back to 1965, a time of the buildup of forces in Vietnam and a period of lower inflation. The fertility rate was 2.9 children per woman, well above the Census Bureau's Series II projection of 2.1 for 1995.[7] In fact, 1965 was the first year in which births were below 4 million—after 11 years of high birth rates. In 1965, 40 percent of all women, 34 percent of all married women, and 23 percent of mothers with children under age 6 were in the labor force. Although comparable projections of the labor force by marital and parental status were not made by the Bureau of Labor Statistics for 1995, more than half of all married women were already in the labor force by 1979, as were 45.2 percent of mothers with preschool children. Both groups (which, of course, overlap) are projected to supply much of the labor force growth in the 1990's.

Youths. In 1965, youths were a relatively small proportion of the labor force, 18 percent. By 1979, this number had climbed to 24.4 percent. The effects of changes in the composition of the labor force may be seen by looking at the median age of the labor force. In 1965, it was 40 years; by 1979, it had dropped 5 years, taking the effects of both greater retirement and the aging of the baby-boom generation into account; by 1995, the median age of the labor force is projected to be 37.5 years.

Based on the Census Bureau's Series II birth rate projection, the youth labor force would continue to decrease from 1985 to 1995, although a larger proportion of teenagers would participate in the labor force. Only under the high-growth pattern would young men age 20 to 24 have a greater participation rate than in 1979. By 1995, the youth labor force would be a smaller proportion of the labor force than in either 1979 or 1985.

Prime-age workers. By 1995, more than 70 percent of the labor force would be in the prime working ages. For the middle- and high-growth scenarios, this is actually a lower proportion than in 1985. The projected growth for prime-age men is about the same under all three scenarios; consequently, even after the growth in female participation is taken into account, the prime-age labor force is still more stable over the scenarios than that of the younger and older age groups. (See table 6.) In the middle- and low-growth projections, it is assumed that the youth and the older labor force grow relatively slower than the prime-age labor force, so these scenarios have a higher proportion of prime-age workers. However, the greatest number of prime-age workers would be attained under the high-growth pattern. Under all projections, the labor force would have more women and more blacks than now: 47 percent of the labor force would be women, and 14 to 15 percent of the labor force would be black. Following are selected annual growth rates (in percent) of all persons in the labor force, by major age group and race, 1965–79, and projected growth to 1995:

	1965–79	*1979–95*
Youth	3.9	−0.9
Prime	2.2	2.3
Older	.4	−.2
White	2.3	1.2
Black and other	2.8	2.5

Older workers. Under all scenarios, workers age 55 and older would continue to be a decreasing proportion of the workforce. The changes for the 25 years from 1970 are most dramatic in the low-growth projection—in 1995, older workers would constitute about two-thirds the proportion of the labor force that they did in 1970. This drop reflects both their expected continued drop in participation and the increase in the numbers of persons in the prime working ages, when participation is highest. The drop in the proportions for the middle- and high-growth paths is less extreme, from 14 percent in 1979 to around 11 percent in 1995.

How the projections were revised

The uncertainty of the projection process is indicated by the changes from the 1978 set.[8] (See table 7.) The difference between the high and low in 1985 and 1990 is about the same as that in the 1978 projections; the current middle projection is midway between the previous middle and high. Each scenario, high, middle, and low was revised upward—the low one the most, to almost

Table 6. Labor force distribution by sex, age, and race, 1975–79 and projected to 1995

[In percent]

Sex, age, and race	Actual		Projected								
			Middle growth			High growth			Low growth		
	1975	1979	1985	1990	1995	1985	1990	1995	1985	1990	1995
Total, age 16 and over	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Men	60.0	57.8	55.3	53.8	53.0	54.8	53.2	52.5	55.9	54.4	53.3
16 to 24	13.1	13.3	10.9	9.2	8.3	10.8	9.2	8.5	11.1	9.4	8.5
16 to 19	5.1	4.8	3.8	3.4	3.2	3.8	3.5	3.3	3.8	3.5	3.3
20 to 24	7.9	8.0	7.1	5.7	5.0	7.0	5.7	5.1	7.2	5.9	5.2
25 to 54	37.3	36.1	36.5	37.7	38.2	35.9	36.6	37.0	37.2	38.5	39.0
25 to 34	14.9	15.3	15.6	15.0	13.3	15.4	14.7	13.0	15.9	15.4	13.6
35 to 44	11.1	11.0	12.3	13.6	14.3	12.1	13.1	13.8	12.6	13.9	14.6
45 to 54	11.2	9.7	8.5	9.0	10.5	8.3	8.7	10.1	8.6	9.1	10.7
55 and over	9.5	8.3	7.8	6.9	6.4	8.0	7.3	6.9	7.5	6.3	5.7
55 to 64	7.5	6.9	6.1	5.4	5.0	6.2	5.5	5.2	6.0	5.0	4.6
65 and over	2.0	1.3	1.6	1.4	1.3	1.7	1.7	1.7	1.5	1.3	1.0
Women	39.9	42.1	44.6	46.1	46.9	45.1	46.7	47.4	44.0	45.5	46.6
16 to 24	10.9	11.1	10.3	9.2	8.7	10.3	9.4	8.8	10.2	9.1	8.6
16 to 19	4.3	4.3	3.6	3.4	3.3	3.6	3.4	3.3	3.6	3.4	3.3
20 to 24	6.5	6.8	6.6	5.8	5.4	6.7	6.0	5.4	6.6	5.7	5.3
25 to 54	23.3	25.4	29.2	32.2	33.7	29.7	32.6	34.0	28.6	31.6	33.4
25 to 34	9.1	10.8	13.0	13.5	12.5	13.4	13.9	12.8	12.5	13.1	12.3
35 to 44	7.0	7.9	10.1	11.9	13.0	10.2	12.0	13.1	9.9	11.7	13.0
45 to 54	7.1	6.6	6.1	6.7	8.1	6.0	6.7	8.0	6.1	6.8	8.1
55 and over	5.6	5.5	5.1	4.6	4.4	5.0	4.6	4.5	5.1	4.6	4.5
55 to 64	4.5	4.4	4.0	3.6	3.5	4.0	3.6	3.5	4.1	3.6	3.5
65 and over	1.1	1.1	1.0	1.0	.9	1.0	1.0	.9	1.0	1.0	.9
WHITE											
Total, age 16 and over	88.6	88.0	87.2	86.5	85.6	86.8	85.8	84.7	87.2	86.5	85.9
Men	53.8	51.5	48.9	47.2	46.1	48.2	46.2	45.1	49.4	47.8	46.6
16 to 24	11.6	11.3	9.6	8.0	7.2	9.3	7.7	6.9	9.7	8.2	7.4
25 to 54	33.4	32.1	32.2	32.9	33.1	31.6	31.9	31.9	32.8	33.8	34.0
55 and over	8.7	8.0	7.0	6.2	5.7	7.2	6.5	6.1	6.8	5.7	5.0
Women	34.7	36.4	38.3	39.2	39.5	38.6	39.5	39.6	37.7	38.7	39.3
16 to 24	9.5	9.7	8.9	7.9	7.4	8.8	7.8	7.2	8.9	7.9	7.4
25 to 54	20.0	21.7	24.9	27.2	28.2	25.2	27.6	28.5	24.3	26.7	28.0
55 and over	5.0	4.9	4.5	4.0	3.8	4.4	4.0	3.8	4.5	4.0	3.8
BLACK AND OTHER											
Total, age 16 and over	11.3	11.9	12.7	13.4	14.3	13.1	14.1	15.2	12.7	13.4	14.0
Men	6.1	6.2	6.4	6.6	6.8	6.6	6.9	7.4	6.4	6.5	6.7
16 to 24	1.4	1.5	1.3	1.1	1.0	1.5	1.4	1.5	1.3	1.1	1.1
25 to 54	3.8	3.9	4.3	4.7	5.0	4.3	4.7	7.3	4.3	4.6	4.9
55 and over	.8	.7	.7	.6	.6	.7	.7	.7	.7	.6	.6
Women	5.1	5.6	6.3	6.8	7.4	6.5	7.2	7.8	6.3	6.8	7.3
16 to 24	1.3	1.4	1.3	1.3	1.3	1.4	1.5	1.6	1.3	1.2	1.2
25 to 54	3.3	3.6	4.3	4.9	5.4	4.4	5.0	5.5	4.3	4.9	5.4
55 and over	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6

the level of the previous middle-growth path. The changes reflect the effects of two additional years of observations, as well as changes in the assumptions made for women age 20 to 44 mentioned earlier. They also reflect the general experience that it is more difficult to project an increasing phenomenon.

In 1990, the projected number of women would be about 2.5 million higher under each scenario, but the proportion of the labor force in each major age group differs among scenarios. Under both the high and middle scenarios, the number of young women in the labor force would be smaller than in the previous projection, reflecting their slower participation growth. For women in the 20 to 44 age group, the 1978 projection included an adjustment to the high-growth scenario to reflect accelerating participation rates; in the current projection, this assumption was formally introduced in both the middle- and high-growth scenarios.

The differences between the two sets of projections are less uniform for men. The number of men in the labor force is essentially unchanged in the high-growth scenario; in the low and middle scenarios the number of men is projected to increase. The Bureau of Labor Statistics typically revised downward the number of men in the labor force with each succeeding labor force projection (while increasing the number of women). These changes reflect the slowing or ending of the decline in male participation rates. For the high-growth scenario, it is assumed that male participation rates will either rise or at least hold constant.

To summarize, for each scenario, the number of women expected to be in the labor force was revised upward by about the same amount. For men, the high-growth projection was approximately the same as the

last projection, the middle-growth path was revised upward slightly, and the low-growth path was revised upward significantly.

Possible consequences

A number of questions could be asked about the possible consequences of the changes in the structure of the population and of the labor force in these projections. Would these changes affect the ability of society to maintain the responsibilities it has assumed, such as social security? Could the changing composition of the labor force make goals such as equal employment opportunity easier or more difficult to accomplish? Is there potential for changes in productivity? Will there be scarcities of certain kinds of workers? How would migration affect the composition of the labor force?

Societal responsibilities. One of the implications of these projections is the change in the "economic dependency ratios" for both the high and middle projections. The economic dependency ratio is defined as all persons not in the labor force (including those under age 16) divided by the total in the labor force.[9] This ratio should drop to below 100 nonworkers per 100 workers. Under the conditions of the middle-growth pattern, the dependency ratio would stabilize after 1990. Under the conditions of the high-growth scenario, (which assumes higher participation), the dependency ratio drops significantly; in fact, it shows no sign of leveling off in this century. Under the conditions of the low-growth projection, the dependency ratio would stabilize above the 100-nonworker-per-100-worker level, but well below historic levels. The following tabulation shows dependency ratios for 1965–79 and projected ratios for the three scenarios, 1985–95:

		Projected		
	Actual	*Middle*	*High*	*Low*
1965	151.8	...	...	...
1970	138.5	...	...	...
1975	125.4	...	...	...
1979	110.1	...	...	...
1985	...	98.8	93.5	104.5
1990	...	95.6	87.0	103.4
1995	...	94.5	84.4	104.1

These favorable ratios are a characteristic of the age of the baby-boom cohort and of the numbers of projected births. A large labor force is combined with low births to give low economic dependency ratios. As the baby-

Table 7. Comparison of the current and previous projections for 1985 and 1990

[Numbers in thousands]

Growth path, sex, and age	1985			1990		
	Previous [1]	Current	Difference [2]	Previous [1]	Current	Difference [2]
MIDDLE						
Total, age 16 and over	112,953	114,985	2,032	119,366	122,375	3,039
Men	63,007	63,600	593	65,115	65,880	765
16 to 24	12,465	12,592	127	11,156	11,282	126
25 to 54	41,824	42,029	205	45,845	46,147	302
55 and over	8,718	8,979	261	8,114	8,451	337
Women	49,946	51,385	1,439	54,251	56,495	2,244
16 to 24	11,934	11,854	-80	11,225	11,325	100
25 to 54	32,432	33,650	1,218	37,713	39,469	1,756
55 and over	5,580	5,881	301	5,313	5,701	388
HIGH						
Total, age 16 and over	117,005	118,252	1,247	125,603	128,123	2,520
Men	65,013	64,825	-188	68,220	68,174	-46
16 to 24	12,882	12,873	-9	11,879	11,833	-46
25 to 54	42,533	42,473	-60	47,056	46,988	-68
55 and over	9,598	9,479	-119	9,285	9,353	68
Women	51,992	53,427	1,435	57,383	59,949	2,566
16 to 24	12,510	12,235	-275	12,054	12,083	29
25 to 54	33,596	35,163	1,567	39,630	41,885	2,256
55 and over	5,886	6,029	143	5,699	5,981	282
LOW						
Total, age 16 and over	108,900	111,706	2,806	113,521	117,394	3,873
Men	61,169	62,458	1,289	62,472	63,888	1,416
16 to 24	12,134	12,445	311	10,744	11,099	355
25 to 54	41,219	41,584	365	44,844	45,287	443
55 and over	7,816	8,429	613	6,884	7,502	618
Women	47,731	49,248	1,517	51,049	53,506	2,457
16 to 24	11,315	11,477	162	10,375	10,800	425
25 to 54	31,220	32,020	800	35,942	37,198	1,256
55 and over	5,196	5,751	555	4,732	5,508	776

[1] The previous projections were published in Paul O. Flaim and Howard N Fullerton, Jr., "Labor force projections to 1990: Three possible paths," *Monthly Labor Review*, pp. 25–35, December 1978.

[2] A minus sign indicates that the current projection is lower than the previous projection.

boom cohort leaves the prime working ages (after 2015), the dependency ratios should rise again, although the higher mortality of older people will prevent it from reaching the levels of the 1960's. Differences in the number of older people are a consequence of past fertility—not improvements in mortality—but if spectacular increases in longevity occur, this could change.[10] Thus, the current difficulties of the social security system are not a result of the current age composition of the population. This favorable age composition effect on social security almost certainly will reverse in the early part of the next century.

Black-white differentials. One dilemma confronting labor force forecasters and policymakers concerned with employment and training programs has been the continued divergence of labor force participation between blacks and whites in the prime-age groups. As recently as the mid-1950's, the rates for men were virtually the same; but since then, the participation rates for black men have dropped more rapidly than those for white men. The high-growth scenario projects a possible return to parity of their labor force rates. The extent to which black rates have to increase is a measure of the problems that have to be confronted. In numbers, about 1.3 million more black men would participate in the high than in the middle-growth path labor force. For women, the picture has been different; in 1979, the rate for prime-age black women was higher than that for their white counterparts (despite higher fertility among black women). Moreover, participation of women in both groups is increasing, although faster for whites.

The differences in female participation reflect the greater family responsibilities of black women—more are single parents than are whites, although the number of such white women is increasing.[11] The higher fertility of black women obviously translates into higher population growth and then into higher labor force growth. Thus, the youth groups of the 1980's and 1990's will have a higher proportion of blacks.

Productivity. One question raised by these projections is the effect of a proportionally greater prime-age labor force on productivity. The proportion of prime-age workers will increase at least by 10 percentage points (with the low-growth projection having the greatest concentration in the prime ages). Analyses have centered on the relative size of the youth labor force (which will diminish) and on the likely impact this would have on productivity gains.[12] The growing proportion of the prime-age labor force should have a favorable impact on productivity because of the greater continuity of participation by women and because of the higher educational attainment of all age, sex, and ethnic components.[13]

In the 1980's and 1990's, employers may have increasing difficulty finding young workers. The decline in the number of youths will be particularly important to the Armed Forces—the largest single employer of youths. Given the decrease in the youth labor force, those who employ unskilled workers may also experience difficulty—depending to some extent on the Nation's immigration policy.

The growth of the prime-age labor force would exceed that of the overall labor force by 20 percent. Because this is the experienced component of the labor force, analysts who look for a shortage of skilled workers must consider likely changes in the composition of the prime-age labor force. More than half (59 percent) of the growth is projected to be generated by women and 22 percent by blacks (black women are in both groups). Skilled and professional workers will have to come from these groups in greater numbers than in the past if there is not to be a shortage.

In the U.S. labor market, there is a tradition of male occupations and of female occupations, and there has been little change in this pattern.[14] The growth in female participation has occurred largely in occupations traditionally held by women. What would happen if demand would no longer grow in those sectors? The argument has been presented that higher participation would be translated into greater continuity of work and, thus, into more capacity to retain skills and professional abilities that diminish if not used. Given that much of the increase in female labor force activity will probably come from mothers, employers may have to review their personnel practices (such as provision of day care) to attract these workers.[15]

By 1995, the youngest of the baby-boom generation will be in their thirties. They may well face competition for career positions which may result in frustration for some and greater productivity for all. The older members of the baby-boom generation will be in the preretirement years and should be at the peak of their productivity.

Immigration. Along with growth in the native adult population and increased labor force activity, immigration represents a possible source of labor force growth. For purposes of this discussion, migration can be divided into two groups, legal or "documented" migration and illegal or "undocumented" migration. The Bureau of the Census projects that "documented" net migration will average 400,000 persons a year, with bulges in a few years such as 1976 and 1980 when large numbers of refugees reached our shores. To estimate the proportion of the labor force growth that net migration represents, we can look at 1979. The labor force participation rate for those age 16 and older was 63.7 percent. If the comparable rate for the migrant population was about the

same, and ignoring the fact that there are proportionately fewer older persons in the migrant population, some 173,000 would have been in the labor force in 1979, or about 7 percent of the actual labor force growth.[16] Documented workers vary from those with high skills (the brain drain) and professional athletes to lower skilled agricultural and service workers.

Undocumented workers also represent a variety of skills, from college graduates to unskilled workers. By their nature, we know little about these people as a group. The discussion that follows is based on a study conducted by Jacob S. Siegel, Jeffrey S. Passel, and J. Gregory Robinson for the Select Commission on Immigration and Refugee Policy.[17] After a review of past estimates, they concluded that there are 3 to 6 million undocumented workers in the United States. It is important not to confuse the *stock* of undocumented workers with the *flow* of documented workers discussed in the preceding paragraph. The only information available about flows of undocumented workers is for Mexicans. There appears to be considerable movement in both directions netting to zero (with large seasonal fluctuation). There is no way of ascertaining what portion of undocumented workers, if any, are currently accounted for in existing labor force data. Therefore, no changes have been made to the projections to account for undocumented workers.

Obviously, these last few paragraphs have raised rather than answered questions about the implications of the changing structure of the labor force. The topics discussed here illustrate some uses for which these projections have been generated; there also are other uses. □

FOOTNOTES

These projections replace those described by Paul O. Flaim and Howard N Fullerton, Jr. in "Labor force projections to 1990: three possible paths," *Monthly Labor Review*, pp. 25–35, December 1978.

[2] These scenarios are prepared by projecting the changes in the ratio of the total labor force to the total population for each of 54 age-sex-race groups; the levels of the anticipated labor force were calculated by applying the projected rates to the Bureau of the Census' population projections. The high and low scenarios do not represent "confidence intervals," but rather different views of the future. A complete methodological statement is in preparation.

[3] The term "blacks" refers to black and other races, which includes Negroes, American Indians, Eskimos, and others. At the time of the 1970 Census of Population, 89 percent of this population group was black.

[4] *Projections of the Population of the United States: 1977 to 2050, Current Population Reports* (Bureau of the Census, Series P-25, No. 704, 1977). For an analysis of recent fertility trends, see Arthur A. Campbell, "Baby Boom to Birth Dearth and Beyond," *Annals*, January 1978, pp. 40–60.

[5] There is no standard definition of the baby-boom period; this article uses the 1950's, as described in Leon F. Bouvier, "America's Baby Boom Generation: The Fateful Bulge," *Population Bulletin*, Vol. 35, No. 1, 1980.

[6] *Projections of the Population* . . . , Table A-5. A moderate increase in fertility is plausable because the Series II population projections are tracking well at this time.

[7] *Projections of the Population* . . . , Table A-5.

[8] Flaim and Fullerton, "Labor force projections. . . . " Projections were not published for 1995.

[9] There is no standard definition of the "economic dependency ratio." See Henry S. Shryock, Jacob S. Siegel, and others, *The Methods and Materials of Demography* (Bureau of the Census, 1973), p. 235.

[10] Jacob S. Siegel, "On the Demography of Aging," *Demography*, forthcoming, and Nathan Keyfitz, *Applied Mathematical Deomography* (New York, John Wiley and Sons, 1977).

[11] Elizabeth Waldman and others, "Working mothers in the 1970's: a look at the statistics," *Monthly Labor Review*, October 1979, pp. 39–49.

[12] George L. Perry, "Potential Output and Productivity," *Brookings Papers on Economic Activity*, 1977; J. R. Norsworthy, M. J. Harper, and K. Kunze, "The Slowdown in Productivity Growth: Analysis of Some Contributing Factors," *Brookings Papers on Economic Activity*, 1979; and the discussion by Martin Neil Baily, Edward F. Denison, and Michael L. Wachter in the same issue.

[13] Edward F. Denison, *Accounting for United States Economic Growth, 1929–1969* (Washington, The Brookings Institution, 1974), and *Accounting for Slower Economic Growth* (Washington, The Brookings Institution, 1979).

[14] Valerie K. Oppenheimer, "Demographic Influence on Female Employment and the Status of Women," in Joan Hamber, ed., *Changing Women in a Changing Society* (Chicago, University of Chicago Press, 1973).

[15] Peter F. Drucker, *Managing in Turbulent Times* (New York, Harper and Row, 1980).

[16] *Projections of the Population.* . . . Table C-1 contains the distribution of the immigrant population.

[17] Jacob S. Siegel, Jeffery S. Passel, and J. Gregory Robinson, "Preliminary Review of Existing Studies of the Number of Illegal Residents in the United States" (Washington, Select Commission on Immigration and Refugee Policy, 1980).

Contracts in six key industries scheduled to expire in 1981

New settlements are expected to cover almost 2.6 million workers in this light bargaining year; unions are still formulating goals, but several have indicated that safety and job security may be among the issues pressed

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Following 2 years of relatively heavy bargaining activity, collective bargaining in 1981 will be light. About 2.6 million workers are covered by major agreements expiring or reopening in 1981, compared with approximately 3.7 million in both 1979 and 1980.[1] Except for the airline industry, which has negotiations scheduled throughout the year, most of the talks will occur before midsummer. Contracts in the railroad and coal industries expire in March; contracts in the maritime industry expire in June; and those in the postal and West Coast longshore industries, in July.

We do not know, of course, what economic conditions will exist at the time of the negotiations. But, as the Nation entered the fourth quarter of 1980, some indicators, such as gross national product, housing starts, and industrial production rebounded after declining in the first half of 1980.[2] The third quarter saw an increase in retail sales and a recovery in durable goods orders. Interest rates, although dropping from recent record levels, have remained high. Employment has remained relatively stable since the first of the year, but the unemployment rate rose to 7.7 percent by midyear (from 6.2 percent in January), and remained at about that rate until it inched down to 7.6 percent in August, and to 7.5 percent in September. Double-digit inflation continued through the first half of 1980. However, in the third quarter, the Consumer Price Index, which had risen at an 18.7-percent annual rate in the first quarter, slowed to a 7.0-percent rate.

The recent high rate of inflation may cause negotiators to focus on cost-of-living adjustment (COLA) clauses as a means of helping workers recoup lost purchasing power.[3] About 42 percent of the workers under major agreements that either expire or are subject to reopening in 1981 have COLA protection. In recent years, there has not been a substantial increase in the prevalence of COLA provisions in major agreements, but there has been a tendency to liberalize existing formulas.[4] Major contracts with COLA clauses have tended to provide for a larger total wage increase, as can be seen from the following tabulation, which shows the average annual wage change (in percent) of the expiring contracts:[5]

	Negotiated change	*Negotiated change plus COLA*
Contracts expiring in 1981 . .	6.9	8.1
With COLA	5.8	8.6
Without COLA	7.7	—

Railroads

Contracts expire on March 31, 1981, for 400,000 employees of the Nation's class 1 railroads (rail carriers with operating revenues of more than $50 million a year). Proposals for changes in the agreements will be exchanged no earlier than January 1. Representatives of 13 railroad unions will conduct coordinated bargaining sessions with the National Railway Labor Conference, the bargaining agent for most of the rail carriers. Three

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organizations represent a majority of the workers—the United Transportation Union; Brotherhood of Maintenance of Way Employes; and the Brotherhood of Railway, Airline and Steamship Clerks, Freight Handlers, Express and Station Employees.[6]

The movement towards coordinated bargaining with common expiration dates began in 1973, when all of the major unions agreed to negotiate as a group with the conference. The parties are limited to negotiating on wages, cost-of-living adjustments, and health and welfare benefits. Issues specific to individual unions are considered in separate negotiations between each union and the conference.

In 1978, for the first time since it was formed in 1963, the conference did not represent all class 1 railroads, as Conrail and several bankrupt railroads bargained on their own.[7] It is possible that one or more of the major rail carriers will not be represented by the conference in 1981.

The last round of rail negotiations began in July 1977 and continued into the summer of 1979. The 39-month agreements, consummated by the various unions, generally provided for straight wage increases of 14 percent over the life of the contract;[8] two cost-of-living adjustments payable under the expired contracts; semiannual cost-of-living reviews, providing up to an 8-percent increase per year; improved vacation, medical, and dental benefits; and some changes in work rules intended to cut labor costs. The parties also agreed to refer the issue of the size of crews to local negotiations.

The 1978 round of bargaining was conducted without a work stoppage. Only one emergency board was established, as specified in the Railway Labor Act, to hear the dispute between the conference and the Train Dispatchers.[9] The board mediated a settlement within the required 30 days, the first such mediated agreement in a national railroad case.

Information on 1981 union demands is not now available. However, negotiations will undoubtedly be influenced by the industry's improved economic performance and the recent deregulation, which has spurred merger proposals and increased competition among the major rail carriers.

Table 1. Calendar of major collective bargaining activity

[Workers in thousands]

Year and month	Principal industry	Contract expirations[1]		Scheduled wage reopenings	
		Number	Workers covered	Number	Workers covered
All years	.....	1,979	9,311	41	137
Total 1981	.....	672	2,504	29	102
January	.....	31	90	2	4
February	.....	33	91	....	....
March	Railroads, mining	86	790	....	....
April	Construction	124	331	4	16
May	Construction	94	307	6	13
June	Construction, maritime	103	301	7	43
July	Retail food stores	35	151	5	13
August	.....	26	75	2	6
September	.....	35	93	....	....
October	Airlines	52	139	1	2
November	.....	19	36	2	5
December	.....	34	100	....	....
Total 1982	.....	562	3,464	12	35
January	Oil refineries	38	88	2	2
February	.....	17	46	....	....
March	Trucking	41	544	2	4
April	Construction, rubber	88	312	2	3
May	Apparel, construction	117	530	2	8
June	Electrical equipment, food and kindred products, and construction	96	449	1	1
July	Electrical equipment	47	166	1	8
August	Food production	35	138	1	2
September	Automotive companies	32	1,023	....	....
October	.....	23	54	....	....
November	.....	18	79	....	....
December	.....	10	35	1	6
Total 1983		408	2,488	....	....
January–June	Construction, lumber, and food production	283	1,123	....	....
July–December	Telephone companies	125	1,365	....	....
1984 or later	.....	9	40	....	....
Year unknown or in negotiation[2]	.....	328	815	....	....

[1] Eleven agreements covering 23,000 workers are excluded because they have no fixed expiration or reopening date.

[2] These include 55 major agreements, covering 178,000 workers, which are due to expire between November 1 and December 31, 1980; and 273 agreements, covering 637,000 workers, which expired prior to November 1, but for which necessary information had not been fully gathered.

NOTE: Only bargaining units in the private nonagricultural economy affecting 1,000 workers or more are considered for this table. Because of rounding, sums of individual items may not equal totals.

Bituminous coal

The contract between the United Mine Workers of America (UMW, Ind.) and the Bituminous Coal Operators Association (BCOA), covering about 125,000 miners, mostly in the Appalachian region, expires March 26. Settlement terms for bituminous coal miners traditionally set the pattern for other agreements covering coal mine construction workers (14,000), western surface miners (12,000), and anthracite coal miners (2,000).

Before the discovery of vast western petroleum and natural gas fields, coal had been the primary energy source in the United States. After a long decline, annual coal production has risen steadily since 1961, spurred in recent years by soaring oil prices and intermittent shortages. However, a rapidly increasing proportion of coal production is coming from new western surface fields where the UMW is weak. During much of the 1970's, the Appalachian deep mines, where the union has its principal strength, have been plagued by overproduction and unemployment.

The 90 year-old UMW has been ridden by internal dissent, financial problems,[10] and competition of other unions for the miners in the prosperous western fields.[11] During the 1980's, however, continued oil price rises are

likely to accelerate the demand for coal, and may help provide jobs for 20,000 UMW members now unemployed.[12]

The expiration of the UMW-BCOA agreement in December 1977 marked the start of a bitter 111-day strike. The first agreement, negotiated by UMW President Arnold Miller, was rejected by the union's bargaining council; a second agreement was rejected by the membership. In an attempt to get the miners back to work, President Jimmy Carter invoked the emergency dispute procedures of the Taft-Hartley Act, explaining that "at least a million more Americans will be unemployed if the walkout continues."[13]

A settlement, reached March 14, 1978, terminated the automatic cost-of-living adjustments but provided for an immediate $1-per-hour pay increase and additional 70-cent increases in 1979 and 1980. The miners also received increased shift differentials, additional vacation time, an improved health benefit program for employees and retirees, and an improved retirement plan. The coal operators were allowed to introduce production incentive plans, if approved by a majority of the union members at individual mines.[14]

Strikes have been a chronic problem in the coal mining industry; the last five rounds of national negotiations have been marked by walkouts. Such strikes can idle workers in other industries, particularly those in railroads and primary metals. Local and regional disputes, usually over noneconomic issues such as safety and mine administration, and often unauthorized by the UMW national leadership, occur more frequently in coal mining than in other industries. However, since the 1978 settlement, the incidence of "wildcat" strikes has declined by 90 percent, even though the BCOA did not secure the right to discipline the leaders of unauthorized strikes; hence, such walkouts may not be a major issue in the 1981 negotiations.

According to UMW sources, major union demands in 1981 include a substantial wage increase, an "uncapped" escalator clause, greater shift differentials and a shorter work week. The union is likely to seek additional safety measures (including full-time safety inspectors and nurses at each mine, and the right to stop work over unsafe conditions), an expedited arbitration procedure similar to that used in the primary metals industry, and placement of arbitrators under contract which would help to avoid delays and fee raising.

UMW President Sam Church has expressed optimism that negotiations will be peacefully concluded. Talks began in mid-September, although serious bargaining is not expected until early next year.

Postal Service

A national agreement covering 570,000 employees of the U.S. Postal Service is up for renewal July 20. Negotiating unions include the American Postal Workers Union, the National Association of Letter Carriers, the Mail Handlers' division of the Laborers' International Union of North America, and the National Rural Letter Carriers Association (Ind.).

Postal unions were primarily lobbying organizations until they gained some bargaining rights in the 1960's, but most economic and job security issues were decided by the Congress. Employee dissatisfaction led to a postal strike in 1970, followed by passage of the Postal Reorganization Act of 1970.[15] The act established the Postal Service as an independent agency, and authorized collective bargaining similar to that in private industry. Unions representing the majority of postal workers set up a coordinated bargaining committee to negotiate with postal officials.

Bargaining experience since 1970 has varied. The 1971 talks lasted 6 months and were marked by acrimony, deadlocks, and factfinding intervention. Negotiations in 1973 went fairly smooth, but the 1975 settlement required mediation, and 1978 negotiations were submitted to arbitration. Negotiations at the national level have been aggravated by intermittent postal budget deficits; declining employment resulting from automation and private competition; the differing impact of inflation and automation on local postal facilities; and varying interpretations of the agreements at the local level.

The initial agreement of the 1978 negotiations was ratified by the National Rural Letter Carriers but rejected by members of the other three unions. Further bargaining was unsuccessful, and an arbitrator decided the terms in dispute, awarding the workers an annual pay increase of $500, a 3-percent increase after 1 year, and $500 after 2 years; an "uncapped" escalator clause; and continuation of the job security clause, introduced in 1971. (The wage terms were similar to those awarded members of the National Rural Letter Carriers.) The arbitrator ruled that regular employees on payroll as of September 1, 1978, were protected from layoff "during their worklife" and that employees hired later would gain the same protection after 6 years of qualifying service.

The postal talks are scheduled to start in early 1981 and are anticipated to be difficult. It has been mentioned that the unions will abandon coalition bargaining, meaning that Postal Service management will have to conduct separate negotiations with each national union. Management, under pressure to cut labor costs, may seek to roll back union gains won in previous rounds, particularly the "uncapped" COLA clause, and the "worklife" protection of employees from layoff. The unions almost certainly will resist such efforts, and additionally, may seek new gains, such as greater safety protection for employees working with automated mail

Table 2. Major contract expiration and wage reopening dates, by industry

[Workers in thousands]

Industry	Total		Year of contract termination [1]										Scheduled wage reopening			
			1981		1982		1983		1984 or later		Unknown or in negotiation [2]		1981		1982	
	Contracts	Workers covered	Contracts	Workers covered	Contracts	Workers covered	Contracts	Workers covered	Contracts	Workers covered	Contracts	Workers covered	Contracts	Workers covered	Contracts	Workers covered
All industries	1,979	9,311	672	2,504	562	3,464	408	2,488	9	40	328	815	29	102	12	35
Manufacturing	941	4,050	271	585	269	2,108	195	974	2	2	204	381	9	21	4	10
Food and kindred products	99	314	38	88	31	164	16	33	...	...	14	28	3	5	...	...
Tobacco manufacturing	8	28	...	...	1	1	7	26	...	...	...	...	...	...	...	...
Textile mill products	17	43	8	14	4	9	3	17	...	...	2	3	1	7	...	...
Apparel and other finished products	55	486	8	26	40	444	...	...	...	...	7	17	...	...	...	...
Lumber and wood products, except furniture	15	66	2	2	2	4	11	59	...	...	...	...	...	...	1	2
Furniture and fixtures	17	28	4	5	8	14	2	3	...	...	3	6	...	...	...	...
Paper and allied products	66	98	27	36	13	13	12	26	...	...	14	23	1	2	...	...
Printing, publishing and allied industries	33	63	18	35	4	11	5	11	...	...	6	6	...	...	...	...
Chemicals and allied products	36	65	17	29	8	13	9	21	...	...	2	2	1	2	...	...
Petroleum refining and related industries	19	37	4	7	15	29	...	...	...	...	...	...	...	...	...	...
Rubber and miscellaneous plastics	15	83	...	...	12	78	2	3	...	...	1	1	...	...	...	...
Leather and leather products	16	38	10	22	2	12	2	3	...	...	2	2	...	...	1	2
Stone, clay, glass and concrete products	36	91	12	22	5	8	12	42	...	...	7	19	...	...	...	...
Primary metals industries	118	476	17	30	12	17	35	330	1	1	53	98	1	1	1	1
Fabricated metal products	59	116	19	51	12	22	5	7	...	...	23	36	...	...	...	...
Machinery, except electrical	93	289	25	40	21	142	18	55	1	1	28	51	...	...	...	...
Electrical machinery equipment and supplies	103	448	22	45	44	264	21	111	...	...	16	29	...	...	1	6
Transportation equipment	107	1,209	32	120	25	833	29	203	...	...	21	53	1	3	...	...
Instruments and related products	16	49	5	9	3	14	4	21	...	...	4	6	...	...	...	...
Miscellaneous manufacturing industries	13	23	3	4	7	15	2	3	...	...	1	1	1	2	...	...
Nonmanufacturing	1,038	5,261	401	1,920	293	1,356	213	1,514	7	38	124	434	20	82	8	24
Mining, crude petroleum and natural gas production	16	217	3	163	1	1	7	23	...	...	5	31	...	...	...	...
Construction	489	1,588	212	648	149	402	108	477	5	13	15	48	11	61	4	13
Transportation, except railroads and trucking	66	287	35	163	7	37	11	40	...	...	13	48	...	...	...	...
Railroads	18	432	18	432	...	...	...	...	...	...	...	...	...	...	...	...
Trucking	20	476	1	2	16	469	2	4	...	...	1	1	...	...	...	...
Communications	42	734	6	17	5	18	27	692	...	...	4	7	...	...	...	...
Utilities, gas and electric	77	224	33	79	24	60	8	32	...	...	12	52	3	9	1	2
Wholesale trade	26	44	5	7	8	12	2	3	...	...	11	22	...	...	...	...
Retail trade, except restaurants	155	678	41	211	48	182	38	194	...	...	28	90	...	...	1	4
Restaurants	25	80	7	22	9	24	4	24	...	...	5	10	2	6	...	...
Finance, insurance and real estate	21	126	10	45	5	40	...	...	...	...	6	41	1	2	...	...
Services, except hotels and health services	45	151	16	46	10	37	2	5	...	...	17	63	...	...	1	1
Hotels	21	126	7	52	5	16	3	18	2	25	4	15	1	1	1	3
Health services	17	97	7	33	6	57	1	1	...	...	3	6	2	4	...	...

[1] Eleven agreements covering 23,000 workers are excluded because they have no fixed expiration or reopening date.

[2] These include 55 major agreements, covering 178,000 workers, which are due to expire between November 1 and December 31, 1980; and 273 agreements, covering 637,000 workers, which expired prior to November 1, but for which necessary information had not been fully gathered.

NOTE: Only bargaining units in the private nonagricultural economy affecting 1,000 workers or more are considered for this table. Because of rounding, sums of individual items may not equal totals.

processing equipment. Although strikes against the Federal Government carry stiff penalties, such action is possible. Delegates to recent Letter Carriers' and Postal Workers' conventions adopted "no contract, no work" mandates, and the Postal Workers' union has a new president, Morris Biller, who, reportedly, is more militant than his predecessor, Emmet Andrews.

West Coast longshoring

On July 1, 1981, the 3-year agreement between the International Longshoremen's and Warehousemen's Union (Ind.) and the Pacific Maritime Association is due to expire. Although the agreement covers only about 11,500 workers, it involves virtually all firms engaged in longshoring operations at West Coast ports. Interruption of such operations can quickly affect shipping, trucking, railroads, and eventually can spread to other industries.

Until the 1950's (except during World War II), West Coast dock negotiations usually were marked by impasses and strikes, and at times by violence.[16] With the advent of the Pacific Maritime Association in 1949, labor-management relations gradually improved. The Mechanization and Modernization Agreement of 1959,

(Text continued on p. 29)

Table 3. Expiration and wage adjustment provisions of selected collective bargaining agreements

[Contracts are listed in order of the Standard Industrial Classification Code]

1972 SIC Code	Industry and employer [1]	Union [2]	Employees covered	Contract term [3]	1981 provisions for automatic cost-of-living review [4]	1981 provisions for deferred wage increases [5]
	Manufacturing					
20	Food and kindred products:					
	Armour and Co. (Interstate) [6]	Food and Commercial Workers	6,000	Sept. 1, 1979 to Aug. 31, 1982	January and July	Sept. 1: 25 cents
	California Processors, Inc.	Teamsters (Ind.)	55,000	July 1, 1979 to July 1, 1982	July	July 1: 5.7 percent
	John Morrell and Co. (Interstate)	Food and Commercial Workers	6,100	Sept. 1, 1979 to Sept. 1, 1982	January and July	Sept. 7: 25 cents
	Kellogg Co. (Interstate)	Grain Millers	5,350	Oct. 10, 1978 to Sept. 26, 1981	April, thereafter quarterly	Apr. 1: 3 percent
	Nabisco, Inc. (Interstate) [6]	Bakery, Confectionery and Tobacco Workers	11,000	Sept. 1, 1979 to Aug. 31, 1981	.....	.....
	Sugar Cos., Negotiating Committee (Hawaii)	Longshoremen and Warehousemen (Ind.)	7,000	Feb. 1, 1980 to Jan. 31, 1982	.....	Feb. 1: 55 - 75 cents
	Swift and Co. (Interstate) [6]	Food and Commercial Workers	5,200	Sept. 1, 1979 to Aug. 31, 1982	January and July	Sept. 1: 25 cents
	Wilson Foods Corp. (Interstate)	Food and Commercial Workers	6,000	Sept. 1, 1979 to Aug. 31, 1982	May and November	Sept. 7: 25 cents
21	Tobacco manufacturers:					
	Phillip Morris, U.S.A. (Richmond, Va.)	Bakery, Confectionery and Tobacco Workers	7,200	Feb. 1, 1980 to Jan. 31, 1983	January thereafter quarterly	Feb. 1: 43 cents
22	Textile mill products:					
	Fieldcrest Mills, Inc. (Virginia and North Carolina)	Clothing and Textile Workers	5,000	Mar. 1, 1978 to Feb. 28, 1981	.....	.....
23	Apparel and other finished products:					
	Cotton Garment Manufacturers (Interstate) [6]	Clothing and Textile Workers	60,000	Sept. 1, 1979 to Aug. 31, 1982	.....	.....
	New York Coat and Suit Assn.; Affiliated Dress Manufacturers, Inc. [6]	Ladies' Garment Workers	47,000	May 1, 1979 to May 31, 1982	January and March	June 1: 7 percent
	United Knitwear Manufacturers League (New York, N.Y.) [6]	Ladies' Garment Workers	10,000	July 16, 1979 to July 31, 1982	.....	June 1: 25 cents
24	Lumber and wood products, except furniture: [6]					
	Western States Wood Products Employers Association (Boise Cascade Corp., Champion International Co., Crown Zellerbach Corp., Georgia-Pacific Corp., International Paper Co., ITT-Rayonier, Inc., Louisiana-Pacific Corp., Publishers Paper Co., Simpson Timber Co., and Weyerhaeuser Co.)	Woodworkers and Carpenters	37,000	June 1, 1980 to May 31, 1983	.....	June 1: 75 cents
26	Paper and allied products:					
	International Paper Co., Southern Kraft Division (Interstate)	Paperworkers and Electrical Workers (IBEW)	8,000	June 1, 1979 to May 31, 1983	.....	June 1: 4 percent to nearest 1/2 cent
30	Rubber and miscellaneous plastic products:					
	B. F. Goodrich Co. (Interstate) [6]	Rubber Workers	9,600	Apr. 20, 1979 to Apr. 19, 1982	January, thereafter quarterly	Apr. 20: 20 cents, plus 15 cents advance COLA
	Firestone Tire and Rubber Co. (Interstate)	Rubber Workers	15,250	Apr. 20, 1979 to Apr. 19, 1982	January, thereafter quarterly	Apr. 20: 20 cents, plus 15 cents advance COLA
	General Motors Corp., Inland Manufacturing Division (Dayton, Ohio)	Rubber Workers	6,900	Sept. 15, 1979 to Sept. 14, 1982	March, thereafter quarterly	Sept. 14: 25 - 36 cents
	Goodyear Tire and Rubber Co. (Interstate)	Rubber Workers	22,300	Apr. 21, 1979 to Apr. 20, 1982	January, thereafter quarterly	Apr. 20: 20 cents, plus 15 cents advance COLA
	Uniroyal, Inc. (Interstate)	Rubber Workers	8,300	June 18, 1979 to Apr. 19, 1982	.....	Apr. 20: 20 cents, plus 15 cents advance COLA
32	Stone, clay and glass products:					
	Anchor Hocking Glass Co. (Interstate) [6]	Glass Bottle Blowers	7,000	Apr. 1, 1980 to Mar. 31, 1983	.....	Apr. 1: 20 - 24 cents
	Brockway Glass Co., Inc. (Interstate)	Glass Bottle Blowers	7,150	Apr. 1, 1980 to Mar. 31, 1983	April	Apr. 1: 55 cents
	Owens-Illinois, Inc. (Interstate)	Glass Bottle Blowers	14,350	Apr. 1, 1980 to Mar. 31, 1983	April	Apr. 1: 55 cents
33	Primary metal industries [6]					
	9 major basic steel companies: Allegheny Ludium Industries, Inc.; Armco Steel Corp.; Bethlehem Steel Corp.; Inland Steel Co.; Jones and Laughlin Steel Corp.; National Steel Corp.; Republic Steel Corp.; United States Steel Corp.; Wheeling-Pittsburgh Steel Co.	Steelworkers	286,000	Apr. 15, 1980 to July 31, 1983	.....	Aug. 1: 20 - 52 cents
	Aluminum Co. of America (Interstate)	Aluminum Workers	9,000	June 1, 1980 to May 31, 1983	.....	June 1: 20 - 46 cents
	Aluminum Co. of America (Interstate)	Steelworkers	9,000	June 1, 1980 to May 31, 1983	January, thereafter quarterly	June 1: 20 - 46 cents
	Kaiser Aluminum and Chemical Corp. (Interstate)	Steelworkers	10,000	June 2, 1980 to May 31, 1983	January, thereafter quarterly	June 1: 20 - 46 cents
	Reynolds Metals Co. (Interstate)	Steelworkers	8,100	June 2, 1980 to May 31, 1983	January, thereafter quarterly	June 1: 20 - 46 cents
34	Fabricated metal products:					
	American Can Co. (Interstate)	Steelworkers	7,000	Nov. 1, 1977 to Feb. 15, 1981	February	.....
	Continental Group, Inc. (Interstate)	Steelworkers	11,000	Nov. 1, 1977 to Feb. 15, 1981	February	.....

Table 3. Continued—Expiration and wage adjustment provisions

[Contracts are listed in order of the Standard Industrial Classification Code]

1972 SIC Code	Industry and employer [1]	Union [2]	Employees covered	Contract term [3]	1980 provisions for automatic cost-of-living review [4]	1980 provisions for deferred wage increases [5]
35	Machinery, except electrical:					
	Caterpillar Tractor Co. (Interstate)	Auto Workers (Ind.)	25,000	Oct. 1, 1979 to Sept. 30, 1982	January, thereafter quarterly	Oct. 5: 27-35 cents
	Cummins Engine Co., Inc. (Columbus, Ind.)	Diesel Workers' Union (Ind.)	6,700	May 1, 1978 to May 3, 1981	March, thereafter quarterly	.....
	Deere and Co. (Illinois and Iowa)	Auto Workers (Ind.)	32,000	Oct. 20, 1979 to Sept. 30, 1982	January, thereafter quarterly	Oct. 5: 3 percent
	International Harvester Co. (Interstate)	Auto Workers (Ind.)	32,100	Oct. 1, 1979 to Sept. 30, 1982	January, thereafter quarterly	Oct. 5: 3 percent
36	Electrical machinery, equipment and supplies:					
	General Electric Co. (Interstate)	Electrical Workers (UE, Ind.)	16,400	July 1, 1979 to June 27, 1982	June and December	June 29: 15 cents hourly; $6 weekly salaried
	General Electric Co. (Interstate)	Electrical Workers (IUE)	70,000	July 1, 1979 to June 27, 1982	June and December	June 29: 15 cents hourly; $6 weekly salaried
	General Motors Corp. (New Jersey, New York, and Ohio)	Electrical Workers (IUE)	23,450	Sept. 18, 1979 to Sept. 14, 1982	January, thereafter quarterly	Sept. 14: 24 cents
	GTE Sylvania, Inc. (Interstate) [6]	Multi AFL-CIO unions and Teamsters (Ind.)	9,000	Oct. 6, 1979 to Oct. 5, 1982	March and September	Sept. 7: 14.5 cents
	Raytheon Co. (Massachusetts)	Electrical Workers (IBEW)	9,000	Sept. 3, 1979 to Aug. 31, 1981	.....	.....
	RCA Corp. (Interstate)	Electrical Workers (IBEW)	13,000	Dec. 1, 1979 to Dec. 1, 1982	June and December	Dec. 7: 15 cents
	Westinghouse Electric Corp. (Interstate) [6]	Electrical Workers (UE, Ind.)	5,500	Sept. 4, 1979 to July 11, 1982	January and July	July 13: 15 cents
	Westinghouse Electric Corp. (Interstate) [6]	Electrical Workers (IUE)	19,000	Sept. 4, 1979 to July 11, 1982	January and July	July 13: 15 cents
	Westinghouse Electric Corp. (Interstate) [6]	Federation of Westinghouse Independent Salaried Unions (Ind.)	12,000	July 16, 1979 to July 26, 1982	January and July	July 13: $6 weekly
	Whirlpool Corp. (Evansville, Ind.) [6]	Electrical Workers (IUE)	5,300	Feb. 17, 1980 to Feb. 17, 1983	January, thereafter quarterly	Feb. 17: 15 cents
371	Transportation equipment—motor vehicle and motor vehicle equipment:					
	Budd Co. (P & M) (Interstate)	Auto Workers (Ind.)	6,150	Feb. 11, 1980 to Mar. 4, 1983	March, thereafter quarterly	Apr. 27: 21-40 cents
	Chrysler Corp. (P & M) (Interstate) [6]	Auto Workers (Ind.)	110,000	Oct. 25, 1979 to Sept. 14, 1982	.....	Jan.: 3 percent
	Dana Corp. (Interstate)	Auto Workers (Ind.)	7,500	Dec. 3, 1979 to Dec. 5, 1982	January, thereafter quarterly	.....
	Ford Motor Co. (Interstate)	Auto Workers (Ind.)	158,000	Oct. 4, 1979 to Sept. 14, 1982	January, thereafter quarterly	Sept. 14: 23-39 cents
	General Motors Corp. (Interstate) [6]	Auto Workers (Ind.)	382,000	Sept. 17, 1979 to Sept. 14, 1982	January, thereafter quarterly	Sept. 14: 25-41 cents
372	Transportation equipment—aircraft:					
	Beech Aircraft Corp. (Kansas and Colorado)	Machinists	6,550	Aug. 7, 1978 to Aug. 2, 1981	February, thereafter quarterly	June 8: 76 cents
	Cessna Aircraft Co. (Wichita, Kans.)	Machinists	6,000	Sept. 18, 1978 to Sept. 27, 1981	January, thereafter quarterly	.....
	Hughes Aircraft Co. (California)	Carpenters	8,000	Dec. 1, 1979 to Dec. 5, 1982	March, thereafter quarterly	Dec. 5: 18-30 cents
	McDonnell-Douglas Corp. (St. Louis, Mo.)	Machinists	9,300	May 8, 1978 to May 10, 1981	February	May 5: 3 percent
	Rockwell International, Rockwell, Aerospace and Electronics Group (California and Oklahoma)	Auto Workers (Ind.)	8,000	June 11, 1978 to June 30, 1981	January and April	.....
	United Aircraft Corp., Pratt Whitney Aircraft Div. (Connecticut)	Machinists	9,700	Nov. 28, 1978 to Nov. 28, 1982	.....	.....
373	Transportation equipment—shipbuilding:					
	Bethlehem Steel Corp., Shipbuilding Dept (Interstate)	Marine and Shipbuilding Workers	5,000	Aug. 14, 1978 to Aug. 13, 1981	February, thereafter quarterly	.....
	General Dynamics Corp., Electric Boat Division (Groton, Mass.) [6]	Metal Trades Council and Teamsters (Ind.)	11,700	July 1, 1979 to June 30, 1982	.....	July 1: 55 cents
	Litton Systems, Inc., Ingalls Shipbuilding Division (Pascagoula, Miss.)	Metal Trades Council and Teamsters (Ind.)	10,900	Jan. 29, 1978 to Feb. 1, 1981	January	.....
374	Transportation equipment—railway cars:					
	Pullman, Inc. Pullman Standard Division (Interstate)	Steelworkers	8,800	Apr. 4, 1978 to Apr. 4, 1981	January	.....
38	Professional scientific and controlling instruments, photographic and optical goods; watches and clocks					
	Honeywell Inc. (Minneapolis and St. Paul, Minn.)	Teamsters (Ind.)	8,000	Feb. 1, 1980 to Jan. 31, 1982	.....	Feb. 1: 11 percent
39	Miscellaneous manufacturing: [6]					
	National Association of Doll Manufacturers, Inc. & Stuffed Toy Manufacturers Association, Inc. (New York, N.Y.)	Novelty and Production Workers	7,500	July 1, 1979 to June 30, 1982	.....	July 1: $12 per week

Table 3. Continued—Expiration and wage adjustment provisions

[Contracts are listed in order of the Standard Industrial Classification Code]

1972 SIC Code	Industry and employer [1]	Union [2]	Employees covered	Contract term [3]	1981 provisions for automatic cost-of-living review [4]	1981 provisions for deferred wage increases [5]
	Nonmanufacturing					
12	Bituminous coal and lignite mining:					
	Association of Bituminous Contractors, Inc.	Mine Workers (Ind.)	14,000	Mar. 26, 1978 to Mar. 27, 1981	.....	.....
	Bituminous Coal Operators Association, National	Mine Workers (Ind.)	160,000	Mar. 26, 1978 to Mar. 27, 1981	.....	.....
40	Railroads: [6]					
	Class I railroads:					
	Operating unions	Locomotive Engineers (Ind.)	25,150	Jan. 1, 1978 to Mar. 31, 1981	January	.....
		Transportation Union	91,500	Jan. 1, 1978 to Mar. 31, 1981	January	.....
	Nonoperating unions:					
	Shop craft	Railway Carmen	44,000	Jan. 1, 1978 to Mar. 31, 1981	January	.....
		Firemen and Oilers	13,800	Jan. 1, 1978 to Mar. 31, 1981	January	.....
	Nonshop craft	Electrical Workers (IBEW)	11,400	Jan. 1, 1978 to Mar. 31, 1981	January	.....
		Machinists	18,000	Jan. 1, 1978 to Mar. 31,1981	January	.....
		Maintenance of Way Employes	37,000	Jan. 1, 1978 to Mar. 31, 1981	January	.....
		Railway Clerks	105,000	Jan. 1, 1978 to Mar. 31, 1981	January	.....
		Railroad Signalmen	8,000	Jan. 1, 1978 to Mar. 31, 1981	January	.....
	Conrail and Amtrak, Maintenance and Equipment employees	Transport Workers	10,000	Jan. 1, 1978 to Mar. 31, 1981	.....	.....
	Conrail, clerks	Railway Clerks	20,000	Jan. 1, 1978 to Mar. 31, 1981	.....	.....
	Conrail, operating employees	Transportation Union	22,250	Jan. 1, 1978 to Mar. 31, 1981	.....	.....
42	Trucking and warehousing:					
	Local Cartage, for Hire, and Private carriers agreement (Chicago, Ill.)	Chicago Truck Drivers (Ind.)	7,700	Apr. 1, 1979 to Mar. 31, 1982	April	Apr. 1: 35 cents
	National Master Freight agreements and supplements: [6]					
	Local Cartage	Teamsters (Ind.)	200,000	Apr. 1, 1979 to Mar. 31, 1982	.....	Apr. 1: 35 cents
	Over-the-road	Teamsters (Ind.)	100,000	Apr. 1, 1979 to Mar. 31, 1982	.....	Apr. 1: 35 cents
	United Parcel Service (Interstate)	Teamsters (Ind.)	73,000	May 1, 1979 to Apr. 30, 1982	May and November	May 1: 35 cents
44	Water transportation:					
	Dry Cargo Cos., Atlantic and Gulf coasts	Masters, Mates, and Pilots	5,000	June 16, 1978 to June 15, 1981	.....	.....
	Dry Cargo Cos., Tankers, Atlantic and Gulf coasts	Maritime Union	15,000	June 16, 1978 to June 16, 1981	.....	.....
	Pacific Maritime Association (Interstate) [6]	Longshoremen and Warehousemen (Ind.)	11,500	July 1, 1978 to July 1, 1981	.....	.....
	Standard Freightship Agreement, Unlicensed personnel (Interstate)	Seafarers	10,750	June 16, 1978 to June 15, 1981	.....	.....
	Standard Tanker Agreement, Unlicensed personnel (Interstate)	Seafarers	10,750	June 16, 1978 to June 15, 1981	.....	.....
45	Airlines: [6]					
	American Airlines, flight attendants	Independent Airline Union	6,200	Sept. 1, 1978 to Aug. 31, 1981	.....	.....
	Eastern Airlines, ground service	Machinists	11,500	Jan. 1, 1979 to Dec. 31, 1981	.....	.....
	Trans World Airlines, Inc., ground service	Machinists	12,000	Nov. 1, 1978 to Oct. 31, 1981	.....	July 1: 5 percent
	United Airlines, Inc., flight attendants	Air Line Pilots	9,100	Apr. 1, 1980 to Mar. 31, 1982	October	Apr. 1: 10 percent
	United Airlines, Inc., ground service	Machinists	18,600	Nov. 1, 1978 to Oct. 31, 1981	.....	.....
	United Airlines, Inc., pilots	Air Line Pilots	5,000	Feb. 1, 1978 to Jan. 31, 1981	.....	.....
48	Communications:					
	General Telephone Co. of California	Electrical Workers (IUE)	20,000	Mar. 5, 1980 to Mar. 4, 1983	.....	Mar. 5: 2.75 percent
	GTE General Telephone Co. of Florida	Electrical Workers (IBEW)	7,700	Aug. 20, 1978 to Aug. 15, 1981	.....	.....
	Western Union Telegraph Co. (Interstate) [6]	Telegraph Workers	8,150	July 28, 1979 to July 27, 1982	.....	July 28: 3.162 percent
49	Electric, gas and sanitary services:					
	Pacific Gas and Electric Co. (Calif.)	Electrical Workers (IBEW)	13,850	Jan. 1, 1980 to Dec. 30, 1982	.....	Jan. 1: 3 percent
53	Retail trade—general merchandise:					
	R. H. Macy and Co., Inc. (New York, N.Y.)	Retail, Wholesale and Department Store	7,000	Feb. 1, 1980 to Jan. 30, 1982	.....	Feb. 1: $15 per week
	Woodward and Lothrop, Inc. (Maryland, D.C., and Virginia)	Food and Commercial Workers	6,000	July 1, 1979 to June 30, 1982	.....	Feb. 1: 8 percent
54	Retail trade—food stores:					
	Chain and independent food stores (Illinois and Indiana) [6]	Food and Commercial Workers	10,000	Aug. 8, 1979 to Sept. 7, 1982	.....	Feb. 1: 20 cents
	Chicago area grocery stores (Chicago, Ill.)	Food and Commercial Workers	7,000	July 1, 1979 to June 26, 1982	.....	June 28: 50 cents
	Denver retail grocers (Colorado)	Food and Commercial Workers	9,300	May 26, 1979 to May 5, 1982	May	May 3: 50 cents
	Food Employers Council, Inc. Retail meat industry and independent retail meat operators (Los Angeles, Calif.)	Food and Commercial Workers	6,000	Nov. 5, 1979 to Nov. 4, 1982	May and November	Nov. 2: 50 cents and $.768 on Sundays
	Food Employers Council, Inc. General Merchandise Agreement (California)	Food and Commercial Workers	60,150	July 31, 1978 to July 25, 1981	.....	.....
	Food Employers Labor Relations Association of Northern California [6]	Food and Commercial Workers	17,000	Mar. 5, 1980 to Mar. 5, 1983	.....	Mar. 5: 59 cents
	Food Industry Agreement (St. Louis, Mo.) [6]	Food and Commercial Workers	8,500	May 6, 1979 to May 7, 1982	November	May 4: 50–70 cents
	Food Market Agreement of Minneapolis (Minnesota) [6]	Food and Commercial Workers	7,200	Mar. 3, 1980 to Feb. 25, 1983	.....	Feb. 25: 11 percent

Table 3. Continued—Expiration, reopening, and wage adjustment provisions

[Contracts are listed in order of the Standard Industrial Classification Code]

1972 SIC Code	Industry and employer [1]	Union [2]	Employees covered	Contract term [3]	1981 provisions for automatic cost-of-living review [4]	1981 provisions for deferred wage increases [5]
54	Retail trade—food stores: (continued)					
	Jewel Cos., Inc., Jewel Food Stores Division (Illinois and Indiana)	United Retail Workers Union (Ind.)	14,000	Sept. 23, 1979 to Sept. 18, 1982	.....	Sept. 20: 70 cents
	Meijer, Inc. (Michigan)	Food and Commercial Workers	8,500	Nov. 5, 1978 to July 11, 1981	.....	Jan. 1: 20 cents
	Pathmark and Shop Rite Supermarkets (New York and New Jersey)	Food and Commercial Workers	10,750	Apr. 10, 1978 to Apr. 5, 1981	January	.....
	Philadelphia Food Stores (Pennsylvania, New Jersey and Delaware)	Food and Commercial Workers	5,000	Mar. 9, 1980 to Mar. 5, 1983	September	Mar. 1: 45 cents
	Stop and Shop Cos., Inc. (New England states)	Food and Commercial Workers	8,000	Feb. 11, 1979 to Feb. 13, 1982	.....	Feb. 8: $20 per week
58	Retail trade—eating and drinking places:					
	Restaurant-Hotel Employers' Council of Southern California	Hotel and Restaurant Employees	10,000	Mar. 16, 1979 to Mar. 15, 1983	.....	Mar. 1: $1–$2.44 per day
59	Retail trade—miscellaneous retail stores:					
	Retail Drug Store Operators (Southern California)	Food and Commercial Workers	8,400	May 8, 1978 to Mar. 1, 1981	.....	.....
63	Insurance carriers:					
	John Hancock Mutual Life Insurance Co. (Interstate)	Insurance Workers	6,000	June 29, 1978 to June 30, 1981	.....	.....
	Prudential Insurance Co. of America (Interstate)	Insurance Workers	16,500	Sept. 29, 1979 to Sept. 23, 1981	.....	.....
65	Finance, insurance, and real estate:					
	Bronx Realty Advisory Board, Inc. (New York, N.Y.)	Service Employees	11,000	Sept. 15, 1979 to Sept. 14, 1982	.....	Sept. 15: $11 per week
	Building Managers Association of Chicago [6]	Service Employees	12,500	Apr. 1, 1980 to Mar. 31, 1982	.....	Mar. 31: 50 cents
	Realty Advisory Board of Labor Relations, Inc., Apartment Buildings (New York, N.Y.)	Service Employees	20,000	Apr. 21, 1979 to Apr. 20, 1982	March	Apr. 21: $15 per week
70	Hotels, rooming houses, camps, and other lodging places:					
	Hotel Association of New York City, Inc. (New York, N.Y.)	New York Hotel Trades Council	25,000	June 1, 1978 to May 31, 1982	.....	.....
	Hotel Association of Washington, D.C.	Hotel and Restaurant Employees	10,000	Sept. 16, 1978 to Sept. 15, 1981	.....	.....
	Hotel Industry (Hawaii)	Hotel and Restaurant Employees	10,000	June 1, 1977 to May 31, 1982	.....	.....
78	Motion pictures:					
	Screen Actors Guild, Commercials Contract (Interstate)	Actors	39,000	Feb. 7, 1979 to Feb. 6, 1982	.....	.....
	Television and Radio Commercial Announcement Agreement (Interstate)	Musicians	5,000	May 1, 1979 to Apr. 30, 1981	.....	.....
80	Medical and other health services:					
	Kaiser Foundation Hospitals, Permanente Medical Group (California)	Service Employees	7,800	Nov. 11, 1979 to Oct. 31, 1981	.....	.....
	Kaiser-Permanente Medical Program of Southern California (Los Angeles and Orange Counties, Calif.) [6]	Service Employees	9,000	Apr. 1, 1980 to Mar. 31, 1982	.....	Apr. 1: 8.5 percent
91	Federal government:					
	U. S. Postal Service national agreement	Postal Workers; Letter Carriers; Rural Letter Carriers'; and Laborers	571,000	July 21, 1978 to July 20, 1981	January and July	.....

[1] Geographical coverage of contracts is interstate unless specified.

[2] Unions are affiliated with AFL–CIO, except where noted as independent (Ind.).

[3] Contract term refers to the date contract is to go into effect, not the date of signing. Where a contract has been amended or modified and the original termination date extended, the effective date of the changes becomes the new effective date of the agreement. For purposes of this listing, the expiration is the formal termination date established by the agreement. In general, it is the earliest date on which termination of the contract could be effective, except for special provisions for termination as in the case of disagreement arising out of wage reopening. Many agreements provide for automatic renewal at the expiration date unless notice of termination is given. The Labor Management Relations Act of 1947 requires that a party to an agreement desiring to terminate or modify it shall serve written notice upon the other party 60 days prior to the expiration date.

[4] Dates shown indicate the month in which adjustment is to be made, not the month of the Consumer Price Index on which adjustment is based.

[5] Hourly rate increase unless otherwise specified.

[6] Contract terms are not on file with the Bureau of Labor Statistics, information is based on newspaper accounts.

which allowed companies to introduce labor-saving technology to the docks in exchange for guarantees of employee income, is considered a major innovation in labor relations. However, the only significant coastwide strike since the 1940's centered on a labor-saving technology—cargo containerization. The walkout began July 1, 1971, and ended February 21, 1972, although it was temporarily halted by a Taft-Hartley injunction and by an agreement to resume work for a limited period. Workers at Eastern and Gulf Coast ports joined in the strike, making it the first nationwide longshore strike in U.S. history.

The terms of the 1978 settlement provided for an 85-cent-per-hour increase in each of the 3 years, greater skill differentials, added holidays, a sixth week of vacation at 25 years of service, and improved medical, life insurance, and retirement benefits. The association agreed to the concept of seniority in the selection of

"steady men" (highly-skilled employees who work almost exclusively for a single employer), as well as a fair distribution of work and training opportunities for such workers. The 1978 agreement included, for the first time, a union security clause, requiring all fully-registered employees to become union members within 30 days.

The Longshoremen's union formulates contract demands at a biennial caucus of representatives from its locals. Major objectives in the 1981 talks have not been announced, but job security is likely to continue as a significant issue for the union.

Maritime industry

In June, 3-year agreements covering 50,000 seamen in dry cargo and tanker operations will expire. The four unions involved are AFL-CIO affiliated—the National Maritime Union, the Seafarer's International Union, the Marine Engineers' Beneficial Association, and the Masters, Mates and Pilots of the International Longshoremen's Association.

The bargaining structure in shipping is relatively complex. Most licensed officers are represented primarily by four nationwide labor organizations that have separate bargaining units on each coast—the Marine Engineers' Beneficial Association; International Organization of Masters, Mates and Pilots; American Radio Association; and Radio Officers' Union. In addition, three small coastal unions also represent licensed officers. On the East and Gulf Coasts, two rival unions—the National Maritime Union and the Atlantic, Gulf, Lakes and Inland Waters District of the Seafarers' International Union—represent deck, engine, and steward department seamen. On the Great Lakes, these two rival unions negotiate for most of the unlicensed seamen. On the West Coast, unlicensed seamen in deck, engine and steward departments are represented by the Pacific District of the Seafarers' International Union.

Several associations negotiate with the unions, depending on geographic area. On the East and Gulf Coasts, two committees conduct negotiations. The Maritime Service Committee bargains for subsidized passenger and dry cargo ship operators, and the Tanker Service Committee bargains for tanker companies. Both committees negotiate with the National Maritime Union and all of the East Coast licensed officers' organizations. Shipping operators who are not eligible for Government subsidies are represented by the American Maritime Association. This association negotiates with the Seafarers' International Union and the unions of licensed officers. The two committees and the association are not empowered to bind its members to the terms of the contract; instead, each operator member concurring in the agreement signs an individual contract with the unions. If a member disagrees with the terms, it negotiates its own pact with the union involved.

On the West Coast, the Pacific Maritime Association, which represents many steamship companies, negotiates with the Seafarers' International Union and the West Coast licensed officers' unions. The tanker companies, which do not belong to the association, bargain separately with the West Coast unions. In addition, several large companies, such as Exxon Corp. and Mobil Oil, conduct separate negotiations with independent labor associations.

Despite heavy subsidies enjoyed by some U.S. companies engaged in foreign trade, the U.S. merchant marine has suffered a marked decline since World War II and presently accounts for only a small percentage of the vessels engaged in U.S. foreign trade. Employment in the industry has suffered from competition from foreign vessels, alternative modes of transportation, automation, and containerization of cargo. Efforts to revitalize the industry, particularly a dwindling fleet, are being made under the Omnibus Maritime Bill, which would set a goal for the 1980's of transporting 50 percent of this country's exports and imports in U.S. ships. The bill is now pending in the Congress.

Unions have not yet announced 1981 demands. Important items of discussion are likely to be wages, improved vacation and health and medical benefits, and retiree protection against inflation.

Airlines

Contracts held by unions representing employees of trunk line carriers will be up for renewal throughout 1981.[17] The large number of contracts reflects the collective bargaining structure in the industry. Like the railroads, the airlines' collective bargaining relations are governed by the Railway Labor Act. Unlike the railroads, each carrier generally bargains separately with each craft. Most airline workers are organized on a craft basis, with each craft represented in a separate bargaining unit and, frequently, by a different union.

Of the various crafts or classes, only the mechanics, pilots, and flight attendants will be heavily involved in 1981 negotiations. The Air Line Pilots Association will bargain throughout the year for 21,000 pilots at Braniff, Continental, Delta, Eastern, Trans World, United, and Western. The Allied Pilots Associations's (Ind.) contract at American, covering 3,300 pilots, expires November 1.

Contrary to other airline unions, the International Association of Machinists and Aerospace Workers (Machinists), which bargains for most of the industry's unionized ground service employees, has a common contract expiration date with several of the larger carriers. Contracts covering approximately 52,000 mechanics and related employees represented by the Machinists will terminate at Braniff, Northwest, Trans World, and

United on November 1, and at Eastern on December 31.[18] The only other mechanic unit bargaining in 1981 is at Western, where the International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America (Teamsters, Ind.) will negotiate for 1,800 mechanics, whose contract expires January 1.

Unlike the pilots and mechanics, the flight attendants are represented by various labor organizations. Northwest's contract covering 2,200 members of the Teamsters union terminates on January 1. The Independent Union of Flight Attendants' contract for 5,200 employees at Pan American comes up for renewal on May 1. The 5,600-member International Federation of Flight Attendants' contract at Trans World terminates on August 1, and the Association of Flight Attendants, an affiliate of the Air Line Pilots Association, will renegotiate for 2,000 employees at Braniff in January.

Unlike the last major round of negotiations, bargaining in 1981 will take place in a more uncertain economic environment, as the industry is experiencing the competitive effects of deregulation and sagging profits, and layoffs as a result of mergers and a sluggish economy. The unions' bargaining goals are still being formulated, but it is likely that the mechanics units will concentrate on job protection, wage issues, and improvements in pension benefits and cost-of-living adjustments. Notwithstanding potential money demands, the crew size issue should be a major one for the pilots, with the impending introduction of the new B–757 and B–767 aircraft. If history repeats itself, flight attendant groups will probably propose numerous changes involving all major contract provisions. □

—FOOTNOTES—

[1] Major agreements are those that cover 1,000 workers or more. The Postal Service is not included in the 2.6 million workers covered by major expiring contracts.

[2] The economy entered a recession in January 1980; some economists have argued that this downturn ended in July or August.

[3] For more detailed information about escalators offsetting inflation, see Victor Sheifer, "Cost-of-living adjustment: keeping up with inflation?" *Monthly Labor Review,* June 1979, pp. 14–17.

[4] For an analysis of how 1979 contracts compared with prior contracts see Edward J. Wasilewski, "Inflation again outpaces wage and package gains in 1979," *Current Wage Developments,* July 1980, pp. 41–60.

[5] Data are through October 1980. Thus, additional COLA amounts may be added until the contracts expire in 1981.

[6] The 10 other unions participating in the negotiations are the American Train Dispatchers Association; Brotherhood of Locomotive Engineers (Ind.); International Association of Machinists and Aerospace Workers; Railroad Yardmasters of America; Sheet Metal Workers International Association; Brotherhood of Railroad Signalmen; International Brotherhood of Firemen and Oilers; International Brotherhood of Electrical Workers; Brotherhood of Railway Carmen of the United States and Canada; and International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers. This increase in unions represented at the bargaining table reflects the dissolution of the Railway Employees' Department, which bargained for four of six shop craft unions in the 1978 negotiations.

[7] Amtrak, a class 1 carrier, has never been represented by the conference in negotiations.

[8] See *The New York Times,* July 15, 1978, p. 1.

[9] Collective bargaining in the railroad industry is governed by the Railway Labor Act which provides an elaborate set of dispute settlement procedures. The party wishing to reopen the contract must give the other party 30 days' notice of such intent, within which time negotiations must begin. If an agreement is not reached, either or both parties may request the assistance of the National Mediation Board, the agency that administers the act; or the board itself may proffer its services. If mediation fails to bring about a settlement, the board proffers arbitration. If arbitration is rejected, the board terminates its services, and a 30-day status quo period begins. If the dispute remains unresolved and is of a sufficient magnitude, the President may create an ad hoc emergency board to investigate and make a report within 30 days. During this period and for 30 days thereafter, strikes and changes in employee working conditions are prohibited.

[10] In 1972, Arnold Miller defeated W. A. "Tony" Boyle for president of the UMW. Miller was unable to control pro-Boyle and other factions, dropped many reforms, and alienated many of his supporters. In ill health, he stepped down in 1979 and was succeeded by then union vice president Sam Church. The union's financial problems are discussed briefly in Mary A. Andrews, "Mine Workers' new president wins dues increase, right to name VP," *Monthly Labor Review,* March 1980, pp. 48–50.

[11] The International Union of Operating Engineers and the International Brotherhood of Electrical Workers, both AFL–CIO affiliates, have actively organized western miners. The Progressive Mine Workers and the Southern Labor Union, independents, have membership in the Midwest and South. A minority of coal miners work in unorganized mines.

[12] See Harold Wool, "Coal industry resurgence attracts a variety of new workers," *Monthly Labor Review,* forthcoming.

[13] See "Developments in Industrial Relations," *Monthly Labor Review,* April 1978, pp. 55–56.

[14] See "Developments in Industrial Relations," *Monthly Labor Review,* May 1978, pp. 69–70.

[15] At its peak, the strike disrupted the processing and delivery of mail in 15 States and numerous cities. Federal troops were called in to maintain service in some areas. Since 1970, work stoppages have been minor. See Stephen C. Shannon, "Work stoppage in Government: the postal strike of 1970," *Monthly Labor Review,* July 1978, pp. 14–22.

[16] Pacific Coast dockworkers still observe "Bloody Thursday" as a holiday to commemorate July 5, 1934, when two strikers were killed and many were injured by police. At the time, the workers were represented by the International Longshoremen's Association.

[17] Trunk line air carriers include American Airlines, Braniff International, Continental Airlines, Delta Air Lines, Eastern Air Lines, Northwest Airlines, Pan American World Airways, Trans World Airlines, United Air Lines, and Western Airlines.

[18] Besides the mechanics, the Machinists bargains for stock and stores and flight kitchen employees at Eastern and Northwest; stock and stores, flight kitchen employees, and guards at Trans World; and communications, fleet service, stock and stores, flight kitchen employees, and dispatchers at United.

International comparisons of productivity and labor costs

As in the United States, manufacturing productivity growth slowed after 1973 and unit labor costs accelerated in most major industrial countries; aggregate hours rose only in the U.S.

ARTHUR NEEF AND PATRICIA CAPDEVIELLE

In the United States, the average annual rate of growth of manufacturing productivity after 1973 (1.4 percent) was less than half that from 1960 to 1973 (3.1 percent). Manufacturing productivity growth also slowed in the 10 other industrial countries studied, but the magnitude of the slowdown varied—from more than 85 percent in the United Kingdom to only about 15 percent in France and Belgium and less than 5 percent in Germany.

This article describes developments in manufacturing productivity (output per hour), hourly compensation, and unit labor costs from 1973 to 1979 for the United States, Canada, Japan, France, Germany, Italy, the United Kingdom, and four smaller European countries —Belgium, Denmark, the Netherlands, and Sweden.[1,2]

In all 11 countries, the average rate of growth of manufacturing output decelerated after 1973. In the European countries and Japan, the output slowdown was greater than that of manufacturing productivity, reflecting declines in labor input. From 1973 to 1979, overall, aggregate hours of manufacturing employees rose only in the United States, and manufacturing employment increased only in the United States, Canada, and Italy.

Manufacturing unit labor costs in the United States accelerated four-fold from less than 2 percent per year during 1960–73 to about 8 percent per year from 1973 to 1979, because of significantly larger annual gains in hourly compensation in conjunction with the productivity slowdown. For like reasons, 7 of the 10 foreign countries also experienced sharply higher rates of increase in unit labor costs after 1973. The exceptions were: Germany, where annual gains in both productivity and hourly compensation were similar in the two periods, and Japan and the Netherlands, where average annual increases in hourly compensation were smaller in 1973–79 than in the pre-1974 period. Measured in U.S. dollars, however, even these three countries had significantly higher average annual increases in unit labor costs during 1973–79.

Although the productivity measure relates output to the hours of persons employed in manufacturing, it does not measure the specific contributions of labor as a single factor of production. Rather, it reflects the joint effects of many influences, including new technology,

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capital investment, the level of output, capacity utilization, energy use, and managerial skills, as well as skills and efforts of the work force.

Productivity and output slow

From 1973 to 1979, manufacturing productivity, as measured by output per hour, increased at annual rates of 1.4 percent in the United States, .5 percent in the United Kingdom, 2 to 2.5 percent in Canada and Sweden, 4 to 6 percent in the other European countries, and 7 percent in Japan. In contrast, the average annual rates of growth of manufacturing productivity from 1960 to 1973 were about 3 percent in the United States, 4 to 4.5 percent in the United Kingdom and Canada, 5.5 to 7.5 percent in the continental European countries, and more than 10 percent in Japan. (See table 1.)

In the United States, 1973 was the year of a business cycle peak, and in the other countries economic activity peaked in that year or the first half of 1974. The recession which followed in 1974–75 was on average the steepest economic decline in the last 30 years and, for most countries, the productivity trend during the recession and recovery was markedly weaker than in previous periods.

The slowdown in productivity, as measured by the difference in growth rates between the two periods, was greatest in Sweden (minus nearly 4.5 percentage points), followed by Italy, Japan, and the United Kingdom (minus 3.5 points). However, in proportion to the average rate prior to 1974, the slowdown was by far the greatest in the United Kingdom, where the productivity growth rate for 1973–79 was less than 15 percent of the 1960–73 average rate, followed by Sweden, the United States, Canada, and Italy—about 35 to 50 percent of the 1960–73 average rate. According to either measure, the productivity slowdown was modest in France and Belgium, and growth in the two periods was almost unchanged in Germany.

During the 1974–75 recession, output per hour declined or rose significantly less than the average trend in most countries. Only in Germany and Denmark were the average productivity gains over the 2 years close to their long-term rates. After large advances during the post-recession recovery, annual productivity increases have generally been below average 1960–73 rates. The major exception was Italy, which achieved a productivity gain of 9.5 percent in 1979.

Manufacturing output dropped sharply in most countries during the recession. The largest declines occurred in the United States, Italy, and the United Kingdom, and the smallest in France. Output posted a strong recovery in 1976 in most countries, but subsequent growth has been sluggish—particularly in most of the European countries. From 1973 to 1979 overall, manufacturing output declined slightly in the United Kingdom and remained virtually unchanged in Sweden. Output increased at annual rates of around 1 to 3 percent in the other European countries, the United States, and Canada, while it increased more than 5 percent per year in Japan.

Employment and hours decline

In 6 of the 8 European countries, the 1973–79 productivity gains largely reflected significant decreases in

Table 1. Annual percent change[1] in manufacturing productivity and output, 11 countries, 1960–79

Year	United States	Canada	Japan	France	Germany	Italy	United Kingdom	Belgium	Denmark[2]	Netherlands	Sweden	Eight European countries	Ten foreign countries
	Output per hour												
1960–79	2.6	3.8	9.2	5.5	5.4	6.1	2.9	6.7	6.1	6.7	5.3	5.2	6.0
1960–73	3.1	4.6	10.3	5.8	5.5	7.2	4.0	7.0	7.0	7.4	6.7	5.8	6.5
1973–79	1.4	2.2	6.9	4.8	5.3	3.7	.5	6.0	4.4	5.3	2.4	4.0	4.8
1973–74	−5.0	1.6	4.1	3.4	6.0	5.3	−.3	5.5	3.3	8.3	3.4	3.9	4.0
1974–75	5.1	−2.6	4.0	3.1	4.8	−4.2	−2.2	5.7	7.8	−1.7	−1.3	1.5	2.0
1975–76	4.4	4.9	9.4	8.2	6.3	8.6	3.1	9.3	7.5	12.7	.7	6.7	7.3
1976–77	3.0	5.1	8.8	4.5	5.6	1.1	−.4	5.6	2.1	4.1	−2.0	2.8	4.7
1977–78	0.4	3.1	6.8	4.9	3.6	3.1	1.2	5.4	4.4	5.1	6.0	3.5	4.6
1978–79	0.8	1.2	8.1	4.7	5.2	9.3	1.7	4.6	1.2	4.1	8.2	5.3	6.0
	Output												
1960–79	3.8	5.1	10.4	5.4	4.2	5.8	1.8	5.0	4.8	4.6	3.8	4.3	5.7
1960–73	4.7	6.4	12.8	6.7	5.2	7.0	3.0	6.7	6.1	6.0	5.5	5.5	7.0
1973–79	2.0	2.2	5.3	2.6	1.9	3.2	−.7	1.4	2.0	1.6	.3	1.8	2.9
1973–74	−6.7	3.8	−.4	3.2	0.3	6.7	−1.2	4.3	1.9	4.4	4.7	1.9	1.4
1974–75	−5.1	−6.3	−3.8	−2.1	−5.2	−9.5	−7.0	−6.4	−5.6	−6.7	−2.3	−5.2	−4.9
1975–76	9.5	5.5	13.3	7.0	7.2	12.6	2.1	7.5	8.7	8.0	−1.2	6.8	8.6
1976–77	7.3	1.4	9.0	3.1	3.1	2.1	1.8	−0.2	1.3	.9	−6.2	2.2	4.2
1977–78	4.8	5.7	6.3	2.3	1.7	1.8	.4	1.2	2.7	1.8	.4	1.7	3.3
1978–79	3.1	3.8	8.4	2.2	5.0	7.0	.1	2.4	3.4	1.8	6.6	3.8	5.2

[1] Average annual compound rate of change.

[2] Excluding manufacturing handicrafts.

labor input—the aggregate hours of manufacturing employees. Declines in hours accounted for 90 percent of the productivity rise in Sweden, for 60 to 75 percent in Belgium, Netherlands, and Germany, and for 40 to 50 percent in Denmark and France. In Italy, however, falling hours accounted for less than 15 percent of the productivity increase. The small British productivity gain *reflected* an overall decline in hours somewhat greater than the decrease in output. In Japan, declines in labor input accounted for 20 percent of the gain in productivity. In contrast, aggregate hours rose in the United States.

Productivity gains during 1960–73 were not as dependent on falling hours. Hours declined overall in most of the European countries, but accounted for no more than one-fourth of any country's productivity rise.

From 1973 to 1979, aggregate hours of manufacturing employees declined 3 to 4 percent per year in Germany, Belgium, and the Netherlands; 1 to 2 percent in France, Denmark, Sweden, the United Kingdom, and Japan; and .5 percent in Italy. Hours were unchanged in Canada and increased about .5 percent per year in the United States. In the latter three countries, manufacturing employment increased over the 6-year period. Total hours remained unchanged in Canada and fell in Italy because of reductions in average hours. In most other countries, the decreases in aggregate hours were attributable mostly to declines in employment, with the largest employment losses occurring in Belgium, the Netherlands, Denmark, and Germany. However, average hours also fell significantly in France, Germany, Belgium, the Netherlands, and Sweden, in part because the standard workweek was shortened or annual vacations increased. (See table 2.)

During the 1974–75 recession, total hours declined as much as 15 percent—the largest decreases occurring in the United States, Japan, Germany, Belgium, and Denmark. In the United States and Denmark, employment losses accounted for most of the decline, while in Japan and several European countries, short-time work programs were used more extensively to adjust total hours. Total hours regained 1973 levels in 1978 in the United States and in 1979 in Canada. In Japan and most European countries, employment and hours continued to

Table 2. Annual percent change[1] in manufacturing employment and hours, 11 countries, 1960–79

Year	United States	Canada	Japan	France	Germany	Italy	United Kingdom	Belgium	Denmark[2]	Netherlands	Sweden	Eight European countries	Ten foreign countries
	Aggregate hours												
1960–79	1.2	1.2	1.1	–.1	–1.2	–.3	–1.0	–1.6	–1.3	–2.0	–1.5	–.9	–.3
1960–73	1.6	1.7	2.3	.9	–.3	–.2	–1.0	–.3	–.8	–1.3	–1.1	–.3	.5
1973–79	.6	.0	–1.5	–2.1	–3.2	–.5	–1.2	–4.4	–2.3	–3.5	–2.1	–2.1	–1.8
1973–74	–1.9	2.1	–4.3	–.3	–5.4	1.4	–.9	–1.1	–1.4	–3.6	1.3	–1.9	–2.5
1974–75	–9.7	–3.9	–7.6	–5.0	–9.6	–5.5	–4.8	–11.4	–12.5	–5.1	–1.0	–6.6	–6.8
1975–76	4.9	.6	3.6	–1.1	0.8	3.8	–1.0	–1.7	1.1	–4.2	–1.8	.1	1.1
1976–77	4.2	–3.5	.1	–1.3	–2.4	1.0	2.1	–5.5	–.8	–3.0	–4.3	–.7	–.5
1977–78	4.4	2.5	–.5	–2.4	–1.8	–1.3	–.8	–4.0	–1.6	–3.1	–5.3	–1.8	–1.2
1978–79	2.2	2.6	.2	–2.4	–.2	–2.2	–1.6	–2.2	2.2	–2.2	–1.5	–1.5	–.8
	Employment												
1960–79	1.2	1.5	1.9	.6	–.2	1.2	–.6	–.5	–.1	–.7	–.2	.0	.5
1960–73	1.4	1.9	3.3	1.4	.6	1.6	–.5	.8	.8	.1	.1	.6	1.3
1973–79	.8	.6	–1.1	–1.1	–2.1	.3	–.7	–3.3	–2.0	–2.5	–.7	–1.2	–1.1
1973–74	–0.4	2.0	.2	1.3	–2.7	2.5	1.9	1.1	–3.3	–.4	2.3	.3	.4
1974–75	–8.6	–2.5	–5.1	–2.7	–6.7	–.4	–3.8	–6.1	–9.5	–3.3	.7	–3.9	–4.2
1975–76	3.7	.1	.4	–1.0	–2.4	.2	–1.3	–4.1	.6	–3.9	–.4	–1.4	–.9
1976–77	3.6	–2.2	–.2	–.4	–.8	.1	1.2	–3.9	.1	–2.7	–3.4	–.4	–.4
1977–78	4.2	2.5	–1.1	–1.8	–.4	–1.0	–.6	–4.1	–.5	–2.8	–3.0	–1.1	–1.0
1978–79	2.7	3.9	–.8	–2.0	.4	.5	–1.4	–2.2	1.0	–1.6	–.4	–.7	–.5
	Average hours												
1960–79	.1	–.3	–.8	–.6	–1.0	–1.5	–.5	–1.1	–1.2	–1.3	–1.3	–.9	–.8
1960–73	.2	–.1	–1.0	–.5	–.9	–1.8	–.5	–1.1	–1.6	–1.3	–1.3	–.9	–.8
1973–79	–.2	–.6	–.3	–1.0	–1.1	–.8	–.5	–1.1	–.3	–1.1	–1.4	–.9	–.7
1973–74	–1.5	.1	–4.5	–1.5	–2.8	–1.1	–2.8	–2.1	2.0	–3.2	–1.0	–2.2	–2.8
1974–75	–1.2	–1.4	–2.6	–2.3	–3.1	–5.1	–1.1	–5.7	–3.2	–1.8	–1.7	–2.8	–2.7
1975–76	1.2	.5	3.2	–.1	3.3	3.5	.3	2.5	.4	–.3	–1.4	1.5	2.0
1976–77	.6	–1.3	.3	–.9	–1.6	.9	1.0	–1.7	–.9	–.3	–.9	–.3	–.1
1977–78	.2	.0	.6	–.7	–1.4	–.2	–.2	.2	–1.2	–.3	–2.4	–.7	–.3
1978–79	–.4	–1.2	1.1	–.4	–.6	–2.6	–.2	.1	1.2	–.6	–1.1	–.8	–.2

[1] Average annual compound rate of change.

[2] Excluding manufacturing handicrafts.

fall, as manufacturing employment was rationalized and working hours shortened. In most European countries, this process had begun before the recession, but the rate of decline was more rapid after 1973.

Hourly compensation gains

From 1973 to 1979, hourly compensation in manufacturing increased at annual rates of 9 to 11 percent in the United States, Germany, and the Netherlands; around 13 percent in Canada, Japan, Belgium, and Denmark; 15 percent in France and Sweden; 19 percent in the United Kingdom; and 21 percent in Italy. For the United States and Canada, these increases were about double the average compensation gains made in 1960–73; in the United Kingdom, more than double; and in France, Italy, and Sweden, they were approximately 50 percent higher. On the other hand, in Belgium and Denmark, 1973–79 annual rates of growth were not much higher than those for the previous period; and in Japan, Germany, and the Netherlands, they were about the same or lower. (See table 3.)

Hourly compensation increases peaked at around 30 percent in Japan, Italy, and the United Kingdom and at about 20 percent in France and the four smaller European countries in 1974 or 1975. U.S. annual compensation gains peaked at 12 percent in 1975, and in Canada and Germany, the high was 15 percent in 1974. By 1978 or 1979, compensation increases had moderated considerably in most of the countries. It was greatest in Japan where increases for 1978 and 1979 were only about 6 percent, one-fifth of the 1974 increase. Compensation gains also slowed significantly in Belgium, Germany, the Netherlands, Sweden, and the United Kingdom. (In the United Kingdom, however, the smallest annual increase occurred in 1977, and by 1979 the rate of growth was up again to 17 percent.) By comparison, hourly compensation increases diminished much less in Canada, France, Italy, and especially in the United States, and were higher in 1979 than 1978.

Unit labor costs accelerate

National currency basis. From 1973 to 1979, unit labor costs increased at average annual rates of about 8 percent in the United States, 7 percent in Belgium, 9 to 12 percent in Canada, France, Denmark, and Sweden, and 17 to 19 percent in Italy and the United Kingdom, but

Table 3. Annual percent change[1] in hourly compensation and unit labor costs in manufacturing, 11 countries, 1960–79

Year	United States	Canada	Japan	France	Germany	Italy	United Kingdom	Belgium	Denmark[2]	Netherlands	Sweden	Eight European countries	Ten foreign countries
	Hourly compensation												
1960–79	6.3	8.1	14.4	11.7	10.1	16.0	11.8	11.7	12.2	12.6	11.8	11.6	11.6
1960–73	5.0	6.2	15.1	9.8	10.2	13.6	8.6	10.9	11.5	13.1	10.4	10.4	10.6
1973–79	9.4	12.4	12.8	15.8	10.0	21.2	19.2	13.5	13.5	11.5	15.0	14.1	13.7
1973–74	10.4	15.1	31.4	20.2	15.3	24.6	23.4	22.1	20.4	19.2	16.6	18.1	21.2
1974–75	12.0	14.8	17.1	19.7	12.7	28.9	31.8	20.9	18.9	14.4	21.2	18.8	18.3
1975–76	8.3	14.3	7.2	14.5	7.3	19.8	17.2	12.0	11.4	12.4	19.9	12.8	11.3
1976–77	8.4	12.8	10.2	13.9	9.8	18.8	11.2	11.1	10.2	8.6	12.2	11.6	11.2
1977–78	8.1	7.5	6.3	12.9	8.4	14.6	15.5	7.1	10.3	7.7	12.5	11.3	9.8
1978–79	9.1	9.9	6.3	13.9	6.5	21.2	16.9	8.7	10.5	7.0	7.9	12.3	10.7
	Unit labor costs												
1960–79	3.7	4.1	4.7	5.9	4.4	9.3	8.7	4.8	5.7	5.5	6.1	6.0	5.3
1960–73	1.8	1.5	4.4	3.8	4.4	5.9	4.4	3.7	4.3	5.3	3.4	4.3	3.8
1973–79	7.9	10.0	5.5	10.5	4.5	16.9	18.6	7.1	8.8	5.8	12.2	9.8	8.5
1973–74	16.1	13.3	26.2	16.2	8.7	18.4	23.7	15.8	16.5	10.0	12.8	13.7	16.6
1974–75	6.6	17.8	12.5	16.1	7.5	34.6	34.8	14.4	10.3	16.4	22.9	17.1	15.9
1975–76	3.8	9.0	−2.0	5.8	.9	10.4	13.6	2.4	3.6	−.3	19.1	5.7	3.7
1976–77	5.3	7.3	1.3	9.0	4.0	17.5	11.6	5.2	7.9	4.3	14.5	8.5	6.2
1977–78	7.7	4.3	−.5	7.6	4.6	11.2	14.2	1.6	5.7	2.5	6.1	7.5	5.0
1978–79	8.2	8.6	−1.7	8.8	1.2	10.9	14.9	3.8	9.3	2.8	−.3	6.6	4.4
	Unit labor costs in U.S. dollars												
1960–79	3.7	3.1	7.5	6.7	9.0	7.6	7.1	7.7	7.2	9.0	7.2	8.0	7.3
1960–73	1.8	1.3	6.7	4.6	8.1	6.5	3.3	5.8	5.4	7.8	4.8	6.4	5.8
1973–79	7.9	7.1	9.4	11.3	11.1	10.1	15.7	12.2	11.3	11.7	12.5	11.6	10.6
1973–74	16.1	15.8	17.3	7.3	11.5	5.9	18.1	15.5	15.4	13.9	10.8	11.1	12.8
1974–75	6.6	13.3	10.6	30.3	13.1	34.2	28.0	21.3	17.0	23.8	31.5	20.7	17.8
1975–76	3.8	12.5	−1.9	−5.1	−1.6	−13.3	−7.7	−2.6	−1.7	−4.8	13.3	−3.5	−2.7
1976–77	5.3	−.4	12.1	5.9	12.8	10.5	7.9	13.3	8.6	12.3	11.6	10.8	10.2
1977–78	7.7	−2.8	27.9	17.5	21.1	15.6	25.5	15.8	15.2	16.4	5.0	19.0	20.0
1978–79	8.2	5.7	−6.1	15.1	10.8	13.3	27.2	11.3	14.4	10.7	5.1	13.2	7.2

[1] Average annual compound rate of change.

[2] Excluding manufacturing handicrafts.

only 4.5 percent in Germany and 5.5 percent in Japan and the Netherlands. These growth rates were 2 to 7 times higher than the average rates of increase from 1960 to 1973, except in Germany, Japan, and the Netherlands. (See table 3.)

For the United Kingdom and Italy, the higher rates of increase in unit labor costs after 1973 mostly reflected larger hourly compensation gains. This accounted for 70 to 75 percent of the change in their unit labor cost growth rates, and the productivity slowdown for only 25 to 30 percent. Also, for the United States, Canada, France, and Belgium larger gains in hourly compensation rather than the magnitude of the productivity slowdown accounted for most of the larger increases in unit labor costs. However, for Denmark and Sweden the slowdown in productivity contributed a greater proportion—50 to 60 percent.

In Germany, unit labor costs in manufacturing increased at practically the same rate both before and after 1973 because output per hour and hourly compensation both increased in line during the two periods. In the Netherlands, unit labor costs rose at nearly identical rates in the two periods because hourly compensation and productivity slowed at a like rate. In Japan, moderation in compensation gains offset most productivity slowdown.

The magnitude of the difference in the average annual rate of growth of unit labor costs in each country is

Table 4. Indexes of manufacturing output per hour, hourly compensation, unit labor costs, and related data, 1970–79

[1967=100]

Year	United States	Canada	Japan	France	Germany	Italy	United Kingdom	Belgium	Denmark [1]	Netherlands	Sweden	Eight European countries	Ten foreign countries
	Output per hour												
1970	105.0	114.7	146.6	121.2	116.1	121.7	110.1	129.5	129.3	134.0	123.5	120.2	125.7
1971	110.5	122.9	152.9	127.6	121.3	125.2	113.9	136.7	138.7	143.0	130.3	126.2	131.7
1972	115.7	128.3	168.0	135.1	128.7	135.3	121.9	152.2	150.7	154.4	138.7	135.0	141.7
1973	118.9	135.0	187.3	142.5	136.4	151.7	128.9	167.8	159.8	170.2	148.9	143.7	152.7
1974	113.0	137.2	195.0	147.3	144.7	159.7	128.6	176.9	165.1	184.3	153.9	149.3	158.7
1975	118.8	133.7	202.9	151.9	151.6	152.9	125.7	186.9	178.0	181.1	151.9	151.5	162.0
1976	124.0	140.2	221.9	164.3	161.3	166.0	129.6	204.4	191.4	204.2	152.9	161.7	173.9
1977	127.7	147.3	241.5	171.7	170.2	167.8	129.1	215.9	195.4	212.5	149.9	166.3	182.1
1978	128.2	151.9	258.0	180.2	176.3	173.0	130.7	227.6	204.0	223.4	158.9	172.2	190.4
1979	129.2	153.7	279.0	188.7	185.5	189.1	132.9	238.1	206.3	232.5	172.0	181.3	201.9
	Output												
1970	102.6	112.6	153.0	123.7	131.6	125.6	111.7	131.3	127.7	129.1	121.1	126.1	131.3
1971	104.0	119.2	159.4	131.5	133.4	126.0	110.4	136.3	132.2	134.3	123.2	129.0	135.2
1972	113.7	127.7	174.0	139.8	137.1	131.1	113.1	147.1	142.5	138.1	125.5	134.0	142.5
1973	123.2	140.2	200.3	149.4	145.5	145.3	123.5	161.2	148.2	147.2	134.0	143.7	156.1
1974	114.9	145.5	199.6	154.2	145.9	155.0	122.0	168.1	151.0	153.6	140.4	146.5	158.2
1975	109.1	136.2	191.9	151.0	138.3	140.3	113.5	157.4	142.5	143.3	137.1	138.9	150.5
1976	119.5	143.7	217.4	161.5	148.2	158.0	115.9	169.2	154.9	154.8	135.5	148.3	163.5
1977	128.2	145.7	236.9	166.5	152.8	161.4	117.9	168.8	156.9	156.2	127.1	151.6	170.2
1978	134.5	154.0	252.0	170.4	155.3	164.3	118.4	170.9	161.0	159.1	127.6	154.1	175.9
1979	138.6	159.9	273.1	174.1	163.1	175.7	118.5	175.0	166.6	161.9	136.1	159.9	185.1
	Aggregate hours												
1970	97.7	98.2	104.4	102.0	113.4	103.3	101.5	101.4	98.8	96.4	98.1	104.9	104.5
1971	94.1	97.0	104.3	103.0	109.9	100.7	97.0	99.7	95.3	93.9	94.6	102.2	102.6
1972	98.3	99.6	103.6	103.5	106.5	96.9	92.8	96.7	94.6	89.5	90.4	99.3	100.6
1973	103.6	103.8	106.9	104.9	106.7	95.8	95.8	96.1	92.7	86.5	90.0	100.0	102.2
1974	101.7	106.0	102.3	104.6	100.9	97.1	94.9	95.0	91.5	83.3	91.2	98.1	99.7
1975	91.8	101.9	94.6	99.4	91.2	91.8	90.3	84.2	80.1	79.1	90.3	91.7	92.9
1976	96.4	102.5	98.0	98.3	91.9	95.2	89.4	82.8	80.9	75.8	88.6	91.7	94.0
1977	100.4	98.9	98.1	97.0	89.7	96.2	91.3	78.2	80.3	73.5	84.8	91.1	93.5
1978	104.9	101.4	97.7	94.6	88.1	95.0	90.6	75.1	79.0	71.2	80.3	89.5	92.4
1979	107.3	104.1	97.9	92.3	87.9	92.9	89.2	73.5	80.7	69.6	79.1	88.2	91.7
	Hourly compensation												
1970	122.3	124.0	164.0	131.6	133.5	145.7	132.3	131.2	145.0	146.2	130.3	136.2	139.8
1971	129.9	133.5	189.4	147.1	150.9	168.1	151.1	150.2	157.2	167.1	146.4	154.4	158.3
1972	136.6	143.8	218.6	164.0	168.6	192.7	169.8	174.6	176.1	191.5	167.4	173.9	178.4
1973	146.5	158.0	269.2	188.0	191.5	243.9	188.3	202.4	203.4	228.4	183.1	199.0	206.7
1974	161.7	181.9	353.8	226.0	220.8	303.9	232.4	247.1	244.9	272.2	213.5	235.1	250.5
1975	181.1	208.8	414.1	270.4	248.8	391.7	306.4	298.8	291.2	311.3	258.9	279.3	296.4
1976	196.1	238.6	444.0	309.6	266.9	469.2	359.0	334.7	324.5	349.8	310.3	315.2	329.9
1977	212.7	269.1	489.4	352.6	293.2	557.6	399.3	371.9	357.5	379.8	348.3	351.7	366.9
1978	229.9	289.3	520.3	398.1	317.7	639.0	461.3	398.4	394.3	409.1	391.8	391.3	403.0
1979	250.8	317.9	553.2	453.5	338.4	774.8	539.3	432.9	435.8	437.8	422.9	439.3	446.0

shown in the following tabulation, with the relative acceleration measured according to both proportion of the pre-1974 growth rate and percentage-point difference:

	Ratio: 1973–79 to 1960–73	*Percentage-point difference*
Canada	6.7	8.5
United States	4.4	6.1
United Kingdom	4.2	14.2
Sweden	3.6	8.8
Italy	2.9	11.0
France	2.8	6.7
Denmark	2.0	4.5
Belgium	1.9	3.4
Japan	1.3	1.1
Netherlands	1.1	.4
Germany	1.0	.1

The acceleration in the average rate of growth of unit labor costs was greatest in the United Kingdom and Italy, when measured in terms of percentage points. However, in proportion to the average rate before 1974, the increase was most rapid in Canada. The countries with little acceleration were the same—Germany, the Netherlands, and Japan—according to both methods of measurement.

During the 1974–75 recession, unit labor cost increases peaked at annual rates of nearly 9 percent in Germany, 15 to 18 percent in the United States, Canada, France, Belgium, Denmark, and the Netherlands, about 25 percent in Japan and Sweden, and 35 percent in Italy and the United Kingdom. With the post-recession recovery and moderation in hourly compensation gains in 1976 and 1977, manufacturing unit labor costs either declined or the increases diminished significantly. In 1979, costs fell or rose only about 1 percent in Japan, Germany, and Sweden; but in all of the other countries except Belgium and the Netherlands, they were still rising or had accelerated to much higher rates —more than 8 percent—than in the pre-1974 period.

In terms of U.S. dollars. When measured in U.S. currency, with relative changes in foreign exchange rates taken into account, unit labor costs increased at annual rates of about 9.5 percent in Japan, 10 to 13 percent in the continental European countries, and 16 percent in the United Kingdom from 1973 to 1979, compared with 8 percent in the United States and 7 percent in Canada. (See table 3.)

Table 4. Continued—Indexes of manufacturing output per hour, hourly compensation, unit labor costs, and related data, 1970–79

[1967=100]

Year	United States	Canada	Japan	France	Germany	Italy	United Kingdom	Belgium	Denmark [1]	Netherlands	Sweden	Eight European countries	Ten foreign countries
	Value of foreign currency relative to the U.S. dollar												
1970	100.0	103.4	101.1	89.0	109.3	99.5	87.1	100.1	93.1	99.6	99.5	100.3	100.6
1971	100.0	106.8	104.2	89.3	114.7	100.9	88.9	102.4	94.3	103.2	101.1	103.4	103.7
1972	100.0	108.9	119.5	97.5	125.0	106.9	90.9	112.9	100.4	112.2	108.5	111.5	113.0
1973	100.0	107.9	133.7	110.9	150.5	107.3	89.1	128.0	115.9	129.6	118.6	126.8	127.3
1974	100.0	110.3	124.2	102.4	154.4	95.9	85.1	127.8	114.8	134.3	116.5	123.8	123.2
1975	100.0	106.1	122.1	114.9	162.4	95.7	80.0	135.4	121.7	142.8	124.6	127.6	125.2
1976	100.0	109.4	122.2	103.0	158.4	75.2	65.6	128.8	115.5	136.3	118.5	116.5	117.5
1977	100.0	101.5	135.2	100.1	171.7	70.7	63.4	138.7	116.3	146.8	115.5	119.0	121.8
1978	100.0	94.6	173.8	109.3	198.8	73.5	69.7	158.1	126.7	166.7	114.3	131.8	139.2
1979	100.0	92.1	166.0	115.7	217.5	75.1	77.2	169.4	132.7	179.6	120.4	139.9	142.9
	Unit labor costs in national currency												
1970	116.5	108.1	111.9	108.6	115.0	119.8	120.3	101.4	112.2	109.1	105.5	113.3	111.3
1971	117.6	108.6	123.9	115.2	124.4	134.3	132.7	109.8	113.3	116.9	112.4	122.4	120.2
1972	118.1	112.1	130.1	121.4	130.9	142.4	139.3	114.7	116.8	124.1	120.6	128.8	125.9
1973	123.2	117.0	143.7	132.0	140.4	160.8	146.1	120.7	127.3	134.2	123.0	138.5	135.3
1974	143.1	132.5	181.4	153.4	152.6	190.4	180.8	139.7	148.4	147.7	138.7	157.5	157.8
1975	152.4	156.2	204.1	178.0	164.1	256.2	243.8	159.8	163.6	171.9	170.4	184.4	183.0
1976	158.2	170.2	200.1	188.4	165.5	282.7	277.0	163.7	169.5	171.3	203.0	194.9	189.7
1977	166.6	182.7	202.7	205.3	172.2	332.3	309.2	172.2	182.9	178.7	232.4	211.4	201.5
1978	179.4	190.5	201.7	220.9	180.2	369.5	353.0	175.1	193.3	183.1	246.6	227.2	211.7
1979	194.1	206.9	198.3	240.4	182.4	409.7	405.7	181.8	211.2	188.3	245.9	242.3	220.9
	Unit labor costs in U.S. dollars												
1970	116.5	111.7	113.1	96.7	125.7	119.2	104.8	101.4	104.4	108.7	105.0	113.6	111.9
1971	117.6	116.1	129.1	102.9	142.7	135.6	117.9	112.4	106.8	120.6	113.6	126.5	124.6
1972	118.1	122.1	155.5	118.4	163.7	152.2	126.7	129.4	117.3	139.2	130.9	143.6	142.2
1973	123.2	126.2	192.1	146.4	211.3	172.5	130.2	154.4	147.6	174.0	145.8	175.6	172.3
1974	143.1	146.2	225.4	157.0	235.6	182.6	153.8	178.5	170.3	198.3	161.5	195.1	194.4
1975	152.4	165.6	249.2	204.6	266.4	245.1	196.9	216.4	199.2	245.4	212.4	235.3	229.1
1976	158.2	186.2	244.5	194.1	262.2	212.5	181.8	210.9	195.8	233.6	240.6	227.1	222.8
1977	166.6	185.5	274.1	205.5	295.8	234.9	196.2	238.9	212.7	262.4	268.5	251.6	245.5
1978	179.4	180.3	350.5	241.5	358.3	271.7	246.2	276.7	245.0	305.3	281.8	299.5	294.7
1979	194.1	190.6	329.1	278.0	396.8	307.8	313.1	308.0	280.3	338.1	296.0	339.0	315.8

[1] Excluding manufacturing handicrafts.

The overall effects of the exchange rate movements during this period were to offset Italy's annual rate of growth of unit labor costs in national currency by nearly 6 percentage points, those in Canada and the United Kingdom by nearly 3 points. On the other hand, changes in the value of their currencies added 5 to 7 percentage points to the annual growth of unit labor costs for Germany, Belgium, and the Netherlands, about 4 points for Japan, 2.5 for Denmark, and less than 1 for France and Sweden.

Exchange rate movements were irregular during the 1973–79 period, with one or more large increases or declines in the currencies of each country. (See table 4.) The more significant movements were the depreciations of the British and Italian currencies versus the dollar in 1976 (down 19 and 21 percent, respectively) and the 1978 appreciations of the currencies of Japan (up 29 percent), Germany (16 percent), Belgium (14 percent), and the Netherlands (14 percent). Even France and Sweden, which had little overall exchange rate shifts, experienced significant currency value changes in specific years. □

FOOTNOTES

[1] Percent changes in productivity, labor costs, and other related measures for selected periods and each year from 1973 are shown in tables 1 to 3. Annual indexes for 1970 to 1979 are shown in table 4; those from 1950 are available upon request. Data sources are summarized in the appendix.

[2] See Keith Daly and Arthur Neef, "Productivity and unit labor costs in 11 industrial countries, 1977," *Monthly Labor Review*, November 1978, pp. 11–17; and "International Comparisons of Manufacturing Productivity and Labor Costs: 1978," Summary 80–1, February 1980.

APPENDIX: Data Sources

Output per hour, hourly compensation, and unit labor costs are compiled from basic series on manufacturing output, employment, average hours, and compensation. The latter three relate to all employed including self-employed persons in the United States and Canada and all employees in the other countries. Hours refer to hours paid in the United States, hours worked in the other countries.

In general, the measures relate to total manufacturing. However, manufacturing handicrafts are excluded from all basic series for Denmark (see below) and from the employment and hours measures for Germany. Handicraft workers in Germany account for nearly 17 percent of manufacturing employment, but preliminary BLS calculations indicate that their inclusion would have little effect on the average trend over time.

The output measures are gross product originating in manufacturing in constant prices from the national accounts of each country—except those for Japan for 1950 to 1970 and the Netherlands for 1969 to 1979, which are indexes of industrial production. (For Canada and the United Kingdom, the index of industrial production is identical to the national accounts measure of manufacturing output at constant prices.) The production index for Japan excludes about 6 percent of manufacturing value added; national accounts real output measures are not yet available for years before 1970. For the Netherlands, a production index is used in order to eliminate gas extraction from the manufacturing sector; the national accounts output data for recent years include gas extraction in manufacturing, which would distort the Dutch productivity series.

The compensation measures are also from national accounts—except those for Belgium and for France for 1967 to 1979, which are BLS estimates. Compensation is defined as all payments made by employers directly to their employees, before deductions of any kind, plus employer contributions to legally required insurance programs and contractual and private welfare plans for the benefit of employees. Labor costs include, in addition to compensation, employer expenditures for recruitment and training; the cost of cafeterias, medical facilities, and various other plant facilities and services; and taxes (other than social security taxes, which are part of compensation) that are levied on payrolls or employment rolls. Annual data are not available for total labor costs. Labor costs, as used in this article, approximate more closely the concept of compensation. However, compensation has been adjusted to include all significant changes in taxes that are regarded as labor costs, and the omitted items represent no more than 4 percent of total labor costs in any country. Self-employed workers are included in the U.S. and Canadian figures by assuming that their hourly compensation is equal to the average for wage and salary employees.

The employment data are official estimates published with the national accounts or other comprehensive employment series; average hours are either from official

Appendix table 1. Comparative rates of change in output, output per hour, and unit labor costs, 1970–1978

Period	Output		Output per hour		Unit labor costs	
	National accounts	Production index	National accounts	Production index	National accounts	Production index
1970–78[1]	6.4	3.8	7.3	4.6	7.6	10.4
1973–78[1]	4.7	1.0	6.6	2.9	7.0	10.9
1970–71	4.2	2.7	4.3	2.8	10.7	12.3
1971–72	9.1	7.4	9.9	8.1	5.1	6.7
1972–73	15.1	15.9	11.5	12.2	10.4	9.7
1973–74	–.4	–3.9	4.1	.4	26.2	30.9
1974–75	–3.8	–11.0	4.0	–3.8	12.5	21.6
1975–76	13.3	11.2	9.4	7.4	–2.0	–.1
1976–77	9.0	4.0	8.8	3.9	1.3	6.1
1977–78	6.3	6.3	6.8	6.8	–.5	–.5

[1] Average annual compound rate of change.

aggregate hours series or BLS estimates of hours worked. For Belgium, France, and the Netherlands, the hours worked estimates may not reflect all random hours changes, such as time lost because of industrial disputes.

For all countries, preliminary estimates for recent years are generally based on current indicators of manufacturing output, employment and hours, and hourly compensation until national accounts and other statistics used for the long-term measures become available. Furthermore, national accounts statistics for the most current years are subject to revision as more information is received.

To compute the series for 8 European countries and 10 foreign countries, the data have been combined by aggregating the output, compensation, and hours figures for each year, adjusting where necessary for compatibility of coverage and concept. The average exchange rates for 1974–79 are used to aggregate the output and compensation data. The use of average 1974–79 exchange rates, however, does not imply that these rates reflect the comparative real value of currencies for manufacturing output. Also, the use of exchange rates for a different time period would have little effect on the combined indexes.

United States. The U.S. data in this article do not reflect a benchmark revision being made in the national income and product accounts incorporating the 1972 economic census and other new information. The current schedule calls for completion of the benchmark revision by this winter. All series will be revised back to at least 1967.

Japan. In this article, new national accounts constant price measures of gross product originating in manufacturing are introduced for Japan for the period 1970 to 1978. Previously, the index of industrial production was used as the manufacturing output measure for those years. For the years before 1970, the industrial production index will continue to be used until constant price measures of gross product originating become available.

The national accounts measure of gross product originating in manufacturing shows a much smaller decline in output during the 1974–75 recession and larger gains in most other years than does the production index. Appendix table 1 shows comparative rates of change in output, output per hour, and unit labor costs based on the two output series. Gross product originating in constant prices provides a measure of changes in value added—or gross output minus inputs of materials, fuels, and purchased services—while the index of industrial production for Japan measures base year value added extrapolated using quantity indicators of gross output only. According to the Japanese Economic Planning Agency, which produces the national accounts, their measure better reflects the structural changes which have occurred in Japanese manfacturing since the 1973 oil shock.

Denmark. Manufacturing establishments classified as handicrafts are not covered by the series for Denmark because relevant data by industrial sector are not available. The output and compensation figures used to construct the Danish productivity and labor cost measures are from the Danish national accounts, while the employment and hours figures are from an establishment survey. The Danish national accounts are currently undergoing a major revision, including the classification of handicrafts by industrial sector and the development of consistent data on employment. However, revised data are now available only for the period 1966–73. These figures indicate a significantly slower rate of productivity growth and, consequently, a larger increase in unit labor costs for that period. The following are average annual rates of change for 1966–73 based on the revised data, with the presently used data in parentheses: Output per hour, 6.9 percent (8.4); hourly compensation, 13.3 percent (12.3); and unit labor costs, 6.0 percent (3.6). BLS does not know how much of the change is the result of including handicrafts, because the revisions also include a new system of industrial classification, new statistical data, and revised methods of calculation.

Labor requirements decline for public housing construction

Onsite and offsite spending in 1979 created about 28,200 jobs for each $1 billion, including about 11,700 in other industries; turnkey projects, born during the 1960's, have accelerated declines in onsite employee-hour requirements

ROBERT J. PRIER

Each $1 billion of expenditure for public housing construction during 1979 generated an estimated equivalent of 16,500 full-time jobs in the construction industry, 13,800 onsite and 2,700 offsite, according to a Bureau of Labor Statistics survey.[1] The Bureau also estimates that for each $1 billion spent during 1979 about 11,700 jobs were generated in other industries: 6,000 in manufacturing; 4,400 in trade, transportation, and services; and 1,300 in mining and other industries. For each $1,000 (constant 1960) spent during 1979, 23 worker hours were generated in other industries: 12 in manufacturing; 8 in trade, services, and transportation; and 3 in mining and other industries.

Data from the survey, which covered public housing projects completed in 1975, indicate that labor requirements for public housing construction have decreased.[2] The number of employee hours generated in the construction industry for each 1,000 constant dollars of contract cost fell from 128.3 in 1960, to 99.4 in 1968, to 76.5 in 1975. For onsite work (activity performed at the construction site) the respective figures for the 3 years were 113.7, 87.6, and 62.7. (See table 1.)

The average annual rate of decline in onsite employee-hour requirements has accelerated in recent years largely because of a shift in the types of projects. In constant dollars, the number of onsite employee hours per $1,000 decreased at an average rate of 3.9 percent per year during 1960–75. The rate was 3.2 percent per year during 1960–68, but advanced to 4.7 percent during 1968–75. This trend reflects the inclusion of turnkey projects in the 1975 survey and the increasing use of prefabricated components, more efficient building methods, and more productive onsite workers.

The current survey represents the first time that turnkey projects have been included in the sampling universe. These projects, built and completed by private contractors, and then turned over to local housing authorities, are an important component of public housing construction in the United States today. Because turnkey projects were not started until the late 1960's, and were not a factor in public housing construction until the 1970's, the 1960 and 1968 surveys dealt with conventional projects only; that is, projects built under the direct supervision of local housing authorities. To present data representative of all public housing, both conventional and turnkey projects will be included in future surveys of public housing construction. It is estimated that turnkey projects currently account for two-thirds of public housing construction. This proportion will probably not change significantly in the near future.

Onsite labor requirements

For both turnkey and conventional public housing projects surveyed in 1975, 62.7 employee hours were generated at the construction site for each 1,000 constant dollars of expenditure. Onsite employment requirements declined at an average rate of 4.7 percent a year during 1968–75, a significant portion of which can

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be attributed to the presence of turnkey projects.

By project type. Turnkey projects require substantially fewer employee hours than do conventional ones, 27.4 employee hours per $1,000 of contract cost, while conventional projects required 41.1. For both types of projects completed in 1975, 33.2 employee hours were generated at the construction site for each $1,000 of construction expenditure. (See table 2.)

For conventional projects only, the rate of decline in onsite employee-hour requirements was considerably lower than that for all public housing construction. Between 1968 and 1975, the number of employee hours required by each $1,000 of cost declined from 87.6 to 77.6, an average annual rate of 1.7 percent. Because only a few turnkey projects were completed in 1968 (and were not included in the survey), a comparable figure for them is not available. However, when conventional projects completed in 1968 are compared with both kinds of projects for 1975, the average annual rate of decline for onsite employee hours was 4.7 percent.

By region. Public housing construction in the South required more labor than any other region. Construction wage rates generally are lower in the South where there is more unskilled labor, facilitating substitution of labor for capital. The North Central States had the lowest employee-hour requirements, 26.8, followed closely by the Northeast and Western regions.

Increases in costs of materials, equipment, and labor caused the average cost per square foot of public housing construction to rise from $15.22 in 1968, to $25.21 in 1975, representing an average increase of 7.5 percent a year. During the same period, the average cost per building unit rose from $12,300 to $21,700.

Projects in the Northeast region were the most expensive in 1975; the cost per square foot was $30.35, or 20 percent higher than the national average. The North Central and Western regions ranked second and third, respectively. Costs in the South were considerably lower partly because of lower wage rates and more unskilled labor. Costs per square foot were:

	All regions	*Northeast*	*North Central*	*South*	*West*
All projects	$25.21	$30.35	$29.95	$20.98	$27.27
Conventional . . .	24.39	34.13	28.92	20.33	26.42
Turnkey	25.86	28.62	30.70	21.65	27.75

During 1968–75, the average size of dwelling units rose from 811 to 859 square feet. (The figure for 1960 was 992.) Despite the increase, employee-hour requirements per dwelling unit have decreased from 983 hours in 1968 to 720 in 1975. (See table 3.)

By occupation. Onsite labor requirements by type of occupation, although not collected for the current survey, show gradual shifts over long periods. Based on data from previous surveys of public housing construction, in 1960 more than 61 percent of the onsite labor force consisted of skilled tradesworkers, and in 1968, about 64 percent. Carpenters accounted for the largest single share of employment in 1960 and 1968, with 19 and 20 percent, respectively; followed by plumbers at 8 and 9 percent; bricklayers at 8 percent for both years; electricians at 4 and 6 percent; and painters at 4 and 5 percent. Semiskilled and unskilled workers such as laborers, helpers, and tenders comprised between 30 and 31 percent of the onsite public housing construction work force in both studies. The remainder of onsite employees were in nonconstruction jobs such as supervisory, clerical, and custodial.

Table 1. Employee hours per $1,000 of construction cost for public housing construction, and projections for 1979, and rates of change, selected years

Year	Dollars	Total construction	Onsite	Offsite
1960	Current	128.3	113.7	14.6
1968	Current	90.3	79.6	10.7
	1960	99.4	87.6	11.8
1975	Current	40.5	33.2	7.3
	1960	76.5	62.7	13.8
1979[1]	Current	21.6	17.7	3.9
	1960	63.0	51.6	11.4
Average annual rates of change				
1960–75		−3.4	−3.9	−0.4
1960–68		−3.1	−3.2	−2.6
1960–75		−3.7	−4.7	+1.0

[1] Estimated, adjusted for productivity change of −4.7 percent a year.

Contractors and subcontractors

In 1975, 37.6 percent of employee hours in public housing construction were supplied by general or prime contractors. The remainder was from subcontractors. General and prime contractors performed a larger share of work in the South and West, but subcontractors performed more work on projects in the Northeast and North Central regions. (See table 4.)

Of the structural types of buildings included in the 1975 public housing construction survey (high-rises, walk-ups, and townhouses and rowhouses), high-rise buildings of four or more stories required fewest employee hours. High-rise buildings generally require a larger percentage of materials and more intensive use of construction equipment. Also, high-rise construction is well-suited to take advantage of laborsaving prefabrication techniques.

Offsite labor requirements

In 1975, 18 percent of employee hours generated in the construction industry, by each $1,000 of expenditure for public housing construction, was worked away from

the construction site. This includes employment such as in contractors' offices and warehouses.[3]

Onsite employment requirements have decreased at an average rate of 4.7 percent a year during 1968–75, while offsite employment has increased at 1.0 percent. This is partly because of the complexity and differing design standards of the various projects, resulting in an increase in support employment. Further, there is need for more clerical jobs because of increased record-keeping, reporting, inventory, payrolls, and other requirements.

The greater use of preassembled components in areas such as kitchens, bathrooms, and closets also increases the amount of offsite labor and decreases that of onsite. This work is not affected by inclement weather, and individual mass-production techniques can be utilized in building the components, a major benefit. This trend is likely to continue as more laborsaving techniques are sought and as attempts are made to counterbalance the seasonal nature of the industry.

Some employment is generated indirectly from public housing construction. The production of needed materials and supplies creates jobs throughout the economy. Although materials data were not collected for this survey, extrapolation of trends from previous surveys were used to have developed data for 1975 and 1979. By applying material consumption data to a series of input-output matrixes, the Bureau has developed estimates for the indirect employment effects of public housing construction for each 1,000 current dollars of expenditure.[4]

Industry	Current dollars				1960 dollars			
	1960	1968	1975	1979	1960	1968	1975	1979
Total	109	66	34	23	109	73	63	67
Manufacturing	62	42	21	12	62	46	40	36
Trade, transportation, and services	29	16	8	8	29	18	15	22
Mining and miscellaneous	18	8	4	3	18	9	8	8

Distribution of costs

For projects completed in 1975, estimated expenditures for construction materials accounted for about 49 percent of contract costs.[5] Onsite labor accounted for nearly one-third of total costs. Equipment, overhead, and profit accounted for the remainder.[6]

The rising costs of construction materials and equipment during the 1970's are reflected in changing percent distributions of costs during the three survey years. General contractors do not have detailed cost information from their subcontractors, resulting in estimates only for 1975:

Type of cost	1960	1968	1975
Onsite wages	35.5	32.4	32.7
Materials	45.0	41.9	48.7
Equipment	2.5	1.5	4.4
Overhead and profit	17.0	24.2	14.2

Table 2. Onsite employee-hour requirements per $1,000 of contract cost for public housing construction, 1975

Characteristic	United States	Northeast	North Central	South	West
All projects	33.22	27.80	26.85	40.97	27.97
Conventional	41.11	32.29	31.43	50.51	31.44
Turnkey	27.35	25.33	23.74	31.58	26.13
Size of structure					
1 Story	35.55	21.43	26.15	41.01	31.85
2 Story	38.03	22.37	20.79	48.35	25.11
3 Story	19.56	...	17.55	...	27.92
4 and over	30.45	30.48	29.46	32.19	27.51
Type of building					
Walk-up	33.54	22.37	21.40	41.88	30.79
Townhouse/rowhouse	41.24	21.43	25.69	50.35	14.91
Hi-rise	30.45	30.48	29.46	32.19	27.51
Construction characteristics:					
Structural frame					
Steel	37.23	26.06	54.54	43.14	26.81
Concrete	29.43	30.06	26.94	31.75	28.66
Masonry	27.30	28.99	24.62	28.99	30.30
Wood	36.88	23.45	24.72	44.70	27.83
Exterior wall					
Masonry	33.21	30.76	25.31	40.64	29.61
Wood	39.27	24.78	...	50.25	14.91
Stucco	23.64	19.38	35.29	...	...
Concrete	...	...	...	...	...
Curtain wall	20.87	...	27.12	18.31	...
Other	33.89	21.43	54.54	40.01	...
Interior wall					
Drywall	33.04	27.80	27.83	39.70	27.97
Plaster	35.84	...	22.59	68.88	...
Floor base					
Concrete	33.98	28.49	26.84	42.12	25.96
Wood/plywood	25.04	21.43	26.91	18.71	37.48
Floor covering					
Vinyl/vinyl asbestos	35.22	27.60	28.82	42.20	32.67
Linoleum	12.53	...	12.53	...	...
Carpet	29.04	28.43	26.26	35.35	23.88
Ceiling					
Acoustical tile	32.57	29.33	23.88	46.74	16.57
Drywall	33.32	23.04	26.51	40.04	29.07
Plaster	40.32	...	...	42.95	22.31
Concrete	31.16	31.61	29.30	...	33.92
Other	28.40	...	28.40	...	...
Roof base					
Concrete	30.74	30.48	29.37	34.06	28.12
Wood/plywood	36.21	22.08	24.72	43.34	27.83
Other	12.53	...	12.53	...	...
Other characteristics:					
Basement					
Partial or full basement	32.02	32.10	25.71	42.57	29.32
No basement	33.56	23.71	27.19	40.82	27.84
Air conditioning					
Central	27.78	...	24.66	37.58	18.91
None	33.96	27.80	27.48	41.31	31.96
Type of heat					
Forced air	35.69	21.43	22.01	41.67	26.36
Hot water	27.16	27.10	28.58	18.31	...
Electric radiant	38.16	30.78	27.40	52.03	36.93
Other	26.33	27.05	...	24.63	30.30
Type of fuel					
Electricity	34.84	30.78	27.59	39.36	33.92
Gas	33.43	23.30	26.60	42.11	26.36
Oil	27.40	27.40	...	...	...
Coal	...	...	...	...	...
Elevators					
Yes	29.52	30.48	26.93	32.32	28.12
No	37.76	22.08	26.53	45.48	27.83

Table 3. Onsite hour requirements for public housing construction, by selected characteristics and region, 1960, 1968, and 1975

	Characteristic		
	Per $1,000 of contract cost	Per 1,000 square feet	Per dwelling unit
United States			
1960	113.7	1,214	1,205
1968	79.6	1,212	983
1975	33.2	838	720
Northeast			
1960	95.9	1,046	1,073
1968	66.7	1,107	920
1975	27.8	844	676
North Central			
1960	106.0	1,299	1,205
1968	86.3	1,452	1,036
1975	26.8	804	601
South			
1960	142.1	1,331	1,336
1968	90.5	1,216	1,033
1975	41.0	859	813
West			
1960	98.4	1,270	1,176
1968	62.8	949	741
1975	28.0	763	647

During 1968–75, the percentage of costs required by onsite wages and salaries remained about the same, but material and equipment expenditures increased. Labor's share of costs has decreased since 1960, indicating that productivity and technology changes have kept pace with wage increases during the survey period.

The dramatic decrease in overhead and profit during the period reflects, in part, that 1975 was a recession year for the industry. In the recession of 1974–75, contractors may have bid on less profitable jobs, or may have been willing to accept lower profits to stay in business and to keep core employees on payroll.

However, because the 1975 data are estimated by surveyed general contractors (actual costs can only be obtained directly from subcontractors), a definitive explanation of these changes cannot be made with the available data. □

Table 4. Percent distribution of employee-hour requirements for public housing construction, by type of operation and region, 1975

Type of operation	United States	Northeast	North Central	South	West
Total	100.0	100.0	100.0	100.0	100.0
General and prime contractors	37.6	27.9	34.1	42.4	40.3
Electrical	8.0	9.8	9.9	6.7	7.2
Plumbing	7.9	7.4	9.6	7.4	7.5
Carpentry (including kitchen cabinets)	6.9	6.4	3.8	8.6	4.4
Masonry	6.0	8.9	5.1	5.2	5.4
Wallboard	5.8	6.5	6.7	5.1	7.4
Gradings, footings, excavation, and foundation	4.8	6.3	3.6	5.0	3.2
Concrete and stucco work	4.6	10.5	2.7	3.1	4.6
Heating, ventilating, and air-conditioning (except electric heat)	3.9	2.5	4.7	3.6	7.5
Painting and wall papering	3.7	3.8	3.3	4.0	2.8
Plastering and lathing	1.2	0.1	4.2	0.7	0.2
Linoleum, vinyl tile, vinyl-asbestos tile, carpeting	1.0	1.0	0.6	1.2	0.9
Ceramic tile	0.9	0.5	0.4	1.3	0.2
Elevators	0.9	1.4	1.7	0.4	0.6
Structural steel erection	0.8	1.1	2.3	0.2	0.1
Landscaping	0.8	0.6	0.4	0.7	3.0
Roofing, gutter work, siding	0.7	0.8	0.6	0.7	0.9
Insulation	0.5	0.1	0.3	0.8	0.6
Other	3.8	4.5	6.0	2.8	3.3

NOTE: Items may not add to totals due to rounding.

FOOTNOTES

[1] The 1979 employment estimates for public housing construction were developed from previous survey data adjusted for price and productivity changes. The deflator used to adjust for price changes is the Bureau of the Census single-family price index, excluding value of lot. The index, on a 1972 base, equaled 131.6 in 1975, and 203.3 in 1979.

The estimate used to adjust the survey data for productivity change is the inverse of the change in onsite employee hours per $1,000 after adjustments for price variations, between 1968 and 1975. The average annual rate of change was 4.7 percent.

Estimates of the number of full-time jobs generated in the construction industry per billion dollars of expenditures were derived using 1,800 employee hours per year-long job for onsite construction, and 2,000 employee hours per offsite construction job.

Because of part-time workers and the seasonal nature of the construction industry, more workers would actually be employed than indicated by the full-time job estimates.

[2] This survey is one of a series of studies of construction labor requirements prepared by the Bureau of Labor Statistics. The data from this series are used to estimate the impact of Federal funding upon employment in the construction industry. The data may also be used to make budgetary decisions, aid in developing countercyclical employment and expenditure policies, assess training needs, anticipate occupational shortages and bottlenecks in skilled trades, and provide indicators of productivity change in construction.

The 1975 survey is the third public housing construction survey. See Labor and Material Requirements for Public Housing Construction (Bulletin 1402, Bureau of Labor Statistics, May 1964); Labor and Material Requirements for Public Housing Construction, 1968 (Bulletin 1821, Bureau of Labor Statistics, 1974); Joseph T. Finn, "Labor requirements for public housing," *Monthly Labor Review,* April 1972, pp. 40–42. It is one of a group of abbreviated studies which exclude detailed information on material usage and onsite occupational requirements. The 1975 public housing construction survey is the fourth abbreviated study of construction labor requirements. See John G. Olsen, "Decline noted in hours required to erect Federal office buildings," *Monthly Labor Review,* October 1976, pp. 18–22; Barbara J. Bingham, "U.S. civil works construction shows decrease in required labor," *Monthly Labor Review,* October 1978, pp. 24–29; Barbara J. Bingham, "Labor requirements for college housing construction," *Monthly Labor Review,* May 1979, pp. 28–34. In other BLS construction labor requirements studies, material and equipment expenditure data are used to develop indirect employment estimates for the industries which mine, manufacture, and transport the construction materials required. The abbreviated studies are designed to allow more frequent measurement of the labor requirements of different types of construction, as well as to reduce survey costs. Detailed data on materials, equipment, and occupational distribution will be included in the next survey of public housing construction. For reference, summaries of cost components and occupational requirements from the previous surveys are included in this article.

The information in this article is based on a probability sample of 67 public housing projects completed in 1975. Of these, 35 were turnkey projects and 32 were conventional. The sample frame was stratified two ways. The primary division was by the four broad regions of the Bureau of the Census. Within regions, projects were directly grouped by development type (conventional or turnkey), as well as implicity by size of contract. The measure of size used was the estimated development cost (ETDC) provided by the Department of Housing and Urban Development, (HUD). The number of units in

the universe was 296. Based on estimates of standard errors computed on previous construction survey results, a Neyman allocation was used to determine the number of projects in each region. Within regions, the square roots of the ETDC's were used to determine the number of projects for each development type. Within the eight strata thus obtained, projects were ordered by magnitude of ETDC, and the sample was drawn using probability proportionate to size. A sample of 65 projects was being selected plus a 10 percent oversample for non-response.

A case study of several rehabilitation and leased projects was included in the survey. Data on the leased projects, however, were insufficient for publication. Data for the rehabilitated projects are being reviewed for possible future publication. The sample projects were randomly selected from a universe of 296 projects supplied by area offices of HUD. The projects are grouped by geographic region, and data are presented on a regional as well as national basis. The four geographic regions are: Northeast—Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont; North Central—Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; South—Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia; and West—Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

Although the national and regional data provided by the survey are believed to be accurate, the detailed data would have a wider margin of sampling error and may be subject to other limitations. Except for nonresponding sample units and estimated data, there are no known sources of nonsampling error. Sampling variances are being prepared by the Bureau.

[3] Employee-hour and employee-year estimates for offsite construction were derived from the ratio of "nonconstruction" workers to total workers among general building contractors and special trade contractors (Standard Industrial Classifications 15 and 17) as shown in *Employment and Earnings, United States,* 1909–78 (BLS Bulletin 1312–11). The data were adjusted to remove the portion of clerical and administrative hours already included in onsite hours.

[4] Estimates for 1975 and 1979 were based upon data from the 1968 survey which included detailed data on equipment and material usage.

[5] Cost distribution for 1975 is based on conventional and turnkey projects; 1960 and 1968 figures are based on conventional projects only. The costs for 1975 are estimates made by the general contractors, and should not be construed as representing actual costs as collected in complete labor and material requirements surveys. Actual construction cost components can only be obtained from subcontractors.

[6] "Overhead" includes salaries for offsite workers, supplemental benefits, insurance, construction financing charges, and other miscellaneous expenses.

Caution: sociocentrics at work

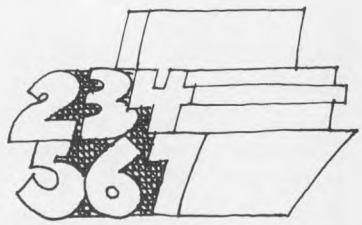
Though the conformist and entrepreneurial value systems have long characterized the American work force, particularly at the managerial levels, recent years have witnessed rejection of the materialism and commercialism of these value systems. Concern with the quality of life and disdain for traditional status symbols characterize the values of many newcomers to the work force. They tend toward strong affiliation needs—getting along with others seems to be more important than getting ahead in the organization. They wish to be respected by those whom they respect. Though their informality and sometimes unkempt appearance may be disconcerting to traditional managers, they are capable of productive effort under appropriate supervision and provided they are not involved with what they see as harmful products such as napalm, bombs, or pesticides. Being a manager of their own jobs is an appealing concept to sociocentrics, particularly when they can relate to supervision on a first-name basis and are free to experience solidarity with other members of the work force.

An existential personality type is also encountered with increasing frequency in work forces. He or she tends to ignore protocol, shun status symbols, and resent bureaucratic constraints and the use of authority. This person can accept people whose values differ from his or her own as long as they don't try to impose those values. This person is a goal-oriented individual whose behavior seems to say, "OK, I understand the job to be done; now leave me alone and let me do it my way." Being his or her own manager is the only acceptable condition of employment, and if deprived of this opportunity, the person is likely to leave the organization or to become preoccupied with personal goals on company time.

In summary, "every employee a manager" is a universally applicable concept, but one that depends on appropriate job conditions for its fullest implementation. Every person has the potential for managing some jobs, but not all jobs. However, every person has the potential for managing certain components of any job or combinations of several jobs. The realization of this potential depends on matching the person's talents and aspirations with the appropriate job, particularly if the employee has an influential role in the matching process. The "job" in this case refers not only to the work itself, but also to style of supervision, procedural constraints, peer relationships, and other climate factors in the workplace.

—M. SCOTT MYERS
Managing With Unions
(Reading, Mass., Addison-Wesley Publishing Co., 1978), pp. 37–38.

The Anatomy of Price Change



Inflation slows in third quarter, although food prices soar

CRAIG HOWELL, WILLIAM THOMAS, AND EDDIE LAMB

The pace of inflation slowed to a single-digit rate from June to September, primarily because of a sharp drop in mortgage interest costs. The Consumer Price Index for All Urban Consumers (CPI-U) rose at a seasonally adjusted annual rate of 7.0 percent during the third quarter, the slowest rate since the final quarter of 1977. The CPI had risen at an 11.6-percent rate in the second quarter of 1980 and at an 18.1-percent rate during the opening months of the year. The mortgage interest cost index, which had advanced at an annual rate of more than 50 percent during each of the three preceding quarters, decreased at a rate of 30.3 percent. (See table 1.)

Excluding mortgage interest costs, however, the rate of inflation at the retail level accelerated from 7.5 percent in the second quarter to more than 12 percent in the third. The third quarter rate was still somewhat slower than the first quarter rate of nearly 15 percent. Most of the acceleration in the third quarter was caused by sharply higher food prices. When both food and mortgage interest costs are excluded, the CPI moved up at an annual rate of 9.7 percent, slightly more than in the previous quarter (9.0 percent), as retail prices for most other major categories of consumer spending rose more than they did from March to June. However, the rate of increase in energy prices—which had slowed dramatically from a 64.8-percent rate in the first quarter to an 8.1-percent rate in the second—slowed again to a rate of about 3 percent.

At the primary market level, the Producer Price Index (PPI) for Finished Goods advanced at a seasonally adjusted annual rate of 13.0 percent, far faster than the 6.0-percent rate of increase registered in the previous quarter but considerably less than the 19.3-percent rate recorded in the first 3 months of the year. Food prices climbed even more sharply than in the CPIfollowing declines during the first half of 1980. Price increases also accelerated, although more moderately, for consumer goods other than food and energy. In contrast, energy prices dropped somewhat from June to September, after rising at a rate of 17 percent in the second quarter and at a rate in excess of 100 percent in the first. Prices for intermediate materials rose much more than in the preceding 3 months, and crude material prices soared after falling during the first half of the year.

Food and related products

The CPI for food advanced at an 18.9-percent annual rate from June to September, after rising more moderately in both preceding quarters. At the primary market level, the PPI for finished consumer foods surged at a 36.9-percent rate, after falling during the first half of the year. (See table 2.) Much of the increase in food prices during the third quarter reflected the effects of unusually hot summer weather. A severe drought hampered production and affected marketing at the farm level, particularly for grains, hay, oilseeds, livestock, and live poultry. Consequently, the PPI for crude foodstuffs advanced steeply in July and August, before stabilizing in September. Retail food prices were also influenced by earlier increases for energy and for other distribution costs. The index for food away from home rose at an 8.2-percent rate, about the same as in the second quarter.

Retail and processor prices for meats and poultry soared from June to September, buoyed by skyrocketing prices for hogs, cattle, and live poultry. The CPI for pork rose at a 75.0-percent annual rate, reflecting increased prices for hogs. Hog marketings declined in the third quarter, a result of fewer pigs born in the early months of 1980. In addition, intense heat limited weight gains and caused some delay in marketings. There were also fears that the future hog supplies would be reduced by a decline in fertility rates caused by the heat. Processed poultry prices increased at an annual rate of 82.7 percent in the CPI. Live poultry prices soared because of higher feed costs and sharply curtailed marketings after the intense heat killed millions of chickens.

Retail prices for beef and veal rose at a 22.4-percent annual rate, partly in response to good demand as a result of higher prices for its competitors, pork and poultry. At the farm level, cattle prices increased sharply, reflecting smaller offerings of grain-fed cattle. Cattle farmers continued to rebuild herds after periods of heavy slaughter. Meanwhile, marketings of grass-fed

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cattle increased in the summer when pastures dried up and cattle were taken to market earlier than usual.

At the farm level, grain prices climbed at an unusually steep rate after declining substantially in the first half of the year. Prices for most grains were higher as reduced harvests were anticipated as a result of the drought. Good export demand also contributed to the price strength of grains. Many farmers deliberately held back grain marketings in hopes of more favorable prices later. Prices soared for corn, oats, and barley; wheat prices also moved up, but not as rapidly as other grains. There was a record harvest of winter wheat, which was not affected by the drought; spring wheat was adversely affected, but it normally accounts for less than 25 percent of total domestic wheat production.

Prices for oilseeds and hay also advanced from June to September. Soybean prices skyrocketed as adverse weather reduced prospects for the domestic crop; expectations of smaller crops in South America also helped to drive soybean prices higher. Prices for manufactured feeds rose in response to increased costs for ingredients, particularly grains and oilseeds.

Prices for cereal and bakery products rose, largely because of higher costs of grains and energy. Fats and oils were higher, a result of higher costs for ingredients. Prices for soybean oil, a key ingredient in many canned foods, rose sharply because of increased costs for soybeans and rising energy costs associated with the crushing process.

Prices for fresh fruits and vegetables moved up sharply in both retail and farm markets. Among fresh vegetables, the largest increases occurred for both white and sweet potatoes because of reduced acreage and the effects of hot, dry weather. The rapid price increases for fresh fruits followed moderate increases earlier in the year. Citrus fruits accounted for most of the surge.

Prices for sugar and sweets moved up at both the retail and processor levels, reflecting earlier cost increases for raw sugar, fructose, and energy. Raw sugar rose sharply in August, as crop disease and adverse weather in many growing areas reduced production throughout the world. Prices were higher for packaged cane sugar, beet sugar, and corn syrup. On the other hand, prices for chocolate products declined in response to falling prices of cocoa beans, a result of excellent supplies.

Roasted coffee prices fell for the third consecutive quarter at both the retail and processor levels, reflecting lower prices for green coffee. Green coffee prices dropped as a result of unseasonably mild weather in Brazil, the world's leading producer, which often experiences damaging frost conditions during the third quarter. Downward pressure was also exerted by a continuing decline in coffee consumption in the United States. Tea prices moved up because of drought conditions in some producing countries.

Table 1. Changes in selected components of the Consumer and the Producer Price Indexes, 1979–80

Index	Compound annual rate, seasonally adjusted except as noted, for 3 months ended—				
	1979		1980		
	Sept.	Dec.	Mar.	June	Sept.
Consumer Price Index for All Urban Consumers (CPI-U)[1]					
All items	13.8	13.7	18.1	11.6	7.0
Food and beverages	6.5	11.9	4.3	5.8	18.3
Housing	15.9	17.4	19.5	20.6	.3
Apparel and upkeep	7.7	5.1	15.3	.5	9.6
Transportation	20.6	14.3	35.2	2.5	10.4
Medical care	10.7	12.0	15.9	7.3	9.2
Entertainment	7.7	5.3	15.0	8.4	10.8
Other goods and services	12.2	5.1	10.6	8.9	12.5
Food	6.5	12.1	3.8	5.6	18.9
Commodities less food	16.4	12.7	22.1	4.7	10.6
Services	14.3	15.8	20.9	21.6	−.6
Energy	49.9	19.2	64.8	8.1	2.9
All items less energy	10.6	13.5	12.9	12.3	7.8
All items less food and energy	10.9	13.9	15.7	13.5	5.1
Mortgage interest costs	29.0	52.8	53.8	55.0	−30.3
All items less mortgage interest costs	12.3	11.8	14.8	7.5	12.1
All items less mortgage interest costs and foods	13.2	11.5	17.1	9.0	9.7
Producer Price Index (PPI) by stage of processing[1]					
Finished goods	16.1	13.3	19.3	6.0	13.0
Finished energy goods	106.2	45.7	109.4	17.0	−3.4
Consumer foods	15.3	8.6	−1.2	−7.8	36.9
Finished goods less food	16.4	15.0	26.5	10.3	6.7
Finished goods less food and energy	7.6	11.0	16.1	9.0	8.8
Finished consumer goods less food	23.4	17.9	34.8	10.1	5.6
Finished consumer goods less food and energy	9.1	11.5	18.1	7.7	8.8
Capital equipment	5.9	10.0	13.4	10.9	8.8
Intermediate materials, supplies, and components	19.7	16.0	22.8	4.8	9.9
Intermediate energy goods	71.1	37.1	62.0	6.5	15.6
Intermediate foods and feeds	24.8	1.2	−1.5	13.7	70.4
Intermediate materials less foods and feeds	19.4	17.0	24.0	4.4	7.2
Intermediate materials less food and energy	13.4	13.9	18.3	4.1	6.0
Crude materials for further processing	20.0	14.9	−1.1	−7.5	67.7
Crude energy materials[2]	50.7	32.5	30.8	20.3	22.9
Crude foodstuffs and feedstuffs	16.4	5.7	−16.7	−10.5	96.4
Crude nonfood materials	25.1	27.8	21.9	−3.9	39.1
Crude nonfood materials less energy	−7.1	20.1	7.4	−38.0	78.9

[1] See "Definitions" and "Notes" preceding tables 22–30 Current Labor Statistics in this *Review*.

[2] Not seasonally adjusted.

NOTE: Monthly data for Producer Price Indexes have been revised through May 1980 to reflect the availability of late reports and corrections by respondents. For this reason, some of the figures shown above and elsewhere in this report differ from those previously published.

Services, excluding energy

Prices of consumer services other than energy declined at an annual rate of 1.8 percent in the third quarter, in contrast to increases at rates of 21.0 and 20.0 percent in the first and second quarters of 1980. (See table 3.) The sharp decline in contracted mortgage interest costs (a component of the household services index) was primarily responsible for the downturn. Charges for transportation, medical care, and entertainment services continued to move up.

Table 2. Changes in retail and producer prices for consumer foods, 1979–80

Commodity	Index	Relative importance December 1979	Compound annual rate, seasonally adjusted except as noted, for 3 months ended—				
			1979		1980		
			Sept.	Dec.	Mar.	June	Sept.
Consumer foods[1]	CPI	100.0	6.5	12.1	3.8	5.6	18.9
	PPI	100.0	15.3	8.6	−1.2	−7.8	36.9
Beef and veal[2]	CPI	10.3	−17.7	13.2	10.9	−7.6	22.4
	PPI	14.6	32.0	7.9	−4.3	−22.9	44.8
Pork	CPI	4.7	−23.5	14.8	−12.4	−23.3	75.0
	PPI	6.7	1.4	4.4	−21.1	−35.7	203.2
Poultry	CPI	2.2	−21.6	27.5	−3.9	−15.2	82.7
	PPI	3.3	−5.0	100.6	−49.0	−25.5	295.9
Cereal and bakery products	CPI	8.6	15.1	11.1	12.6	12.8	7.4
	PPI	12.7	22.8	3.3	16.8	10.1	5.5
Dairy products	CPI	9.3	12.2	7.4	8.4	14.5	6.5
	PPI	15.1	15.2	−.2	9.1	18.2	2.8
Fresh fruits and vegetables	CPI	5.0	31.8	−.2	−28.2	38.1	76.2
	PPI	3.8	−7.3	15.0	−21.2	34.5	118.3
Processed fruits and vegetables	CPI	4.6	10.1	−1.7	9.0	11.7	8.7
	PPI	6.7	5.1	−8.6	7.5	7.5	6.6
Eggs	CPI	1.3	−35.7	12.8	−21.8	22.7	14.3
	PPI	2.1	−38.8	−10.3	−.5	−18.6	49.0
Sugar and sweets[3]	CPI	2.4	6.8	3.7	47.2	41.6	24.3
	PPI	4.2	12.1	35.6	61.2	128.5	22.2
Coffee, roasted	CPI	1.0	126.2	14.6	−2.8	−4.7	−5.7
	PPI	4.4	96.9	21.0	−17.8	−7.1	−16.1
Fats and oil products[4]	CPI	2.0	9.0	4.2	13.2	−1.5	5.6
	PPI	1.9	14.3	9.8	1.0	−7.6	11.3

[1] Includes items not listed. The CPI includes prices of food away from home, which account for about 31 percent of the food index. The PPI for finished consumer foods does not reflect restaurant prices.

[2] Not seasonally adjusted in the CPI.
[3] "Sugar and confectionery" in the PPI. Not seasonally adjusted in the PPI.
[4] "Vegetable oil end products" in the PPI.

The index for household services other than rent and energy decreased at a 13.2-percent rate, after rising at rates of 29.2 percent in the second quarter and 29.9 percent in the first. This reversal was caused by a steep drop (a 30.3-percent rate) in mortgage interest financing costs, as a 37.7-percent rate of decline in mortgage interest rates was only partially offset by a 14.9-percent rate of increase in house prices.[1] The index for property insurance rose at an 8.2-percent rate, a slower pace than that registered in either of the two preceding quarters. The index for property taxes rose at a 7.7-percent rate, following a second-quarter decline, and a first-quarter advance at a 4.8-percent rate. Price increases for the home maintenance and repairs index were the smallest since the third quarter of 1977. This index advanced at a 6.1-percent rate in the third quarter of 1980, after advancing at a rate of 6.7 percent in the second quarter, and 20.0 percent in the first. The housekeeping services index rose at a rate of 6.4 percent after rising at a rate of nearly 9 percent in both the first and second quarters.

The index for transportation services moved up at a rate of 13.3 percent, a somewhat slower rate than in either of the two previous quarters. The slowdown was due to a 12.6-percent rate of decrease in automobile finance charges, which had climbed at a 46.0-percent rate during the first half of 1980. On the other hand, charges for public transportation rose much faster (at a

Table 3. Changes in consumer services less energy prices, 1979–80

Item	Relative importance December 1979	Compound annual rate, seasonally adjusted except as noted, for 3 months ended—				
		1979		1980		
		Sept.	Dec.	Mar.	June	Sept.
Services less energy	100.0	14.2	17.1	21.0	20.0	−1.8
Rent, residential[1]	14.0	10.2	9.0	8.3	10.0	8.6
Household, less rent and energy	48.7	17.5	25.5	29.9	29.2	−13.2
Home financing, taxes, and insurance	23.1	25.3	38.1	43.9	44.5	−23.4
Mortgage interest rates	....	12.2	24.2	42.8	39.2	−37.7
Home maintenance and repairs	7.4	9.7	11.8	20.0	6.7	6.1
Housekeeping services[1]	5.4	9.0	7.6	8.8	8.6	6.4
Transportation services	15.1	12.7	12.7	16.3	18.5	13.3
Auto maintenance and repairs	3.9	9.6	9.5	11.0	11.9	10.6
Other private transportation services	8.3	10.5	6.2	18.7	21.3	2.4
Public transportation[1]	2.8	25.2	39.5	17.3	18.6	56.7
Medical care services[1]	10.7	11.2	12.6	16.9	6.4	9.3
Entertainment services[1]	4.1	5.0	1.9	12.9	9.2	9.7
Personal care services[1]	2.4	9.0	7.2	11.3	7.4	6.5
Apparel services[1]	1.8	11.0	12.7	18.3	14.3	6.5
Personal and educational services	3.2	17.7	5.2	9.8	7.9	26.9

[1] Not seasonally adjusted.

56.7-percent rate) than earlier in the year, reflecting large increases in fares for airlines, intracity mass transit, intercity buses, and taxis.

Charges for medical care services were up at a 9.3-percent rate, more than in the second quarter, but substantially less than in the first. The professional services category (physicians' and dental services) rose at a rate of 9.0 percent, the slowest quarterly advance over the past 12 months. However, the hospital services index climbed at an 18.5-percent rate, far more than in the previous 3 months.

Among other services, the CPI for apparel services increased at a 6.5-percent rate, the smallest increase since the third quarter of 1976. This moderation reflected a slowdown in charges for laundry and drycleaning services. The pronounced third-quarter acceleration in the index for personal and educational services was primarily due to increases in college tuition. These charges, which generally increase once a year, were 10.2 percent higher in September 1980 than they were a year earlier.

Energy

Prices for most energy goods and services continued a moderating trend which had begun in the second quarter. Consumer prices for energy items moved up at a rate of 2.9 percent, while producer prices for finished energy goods declined at a 3.4-percent rate. (See table 4.) In contrast, retail energy prices had climbed 47.2 percent between March 1979 and March 1980. The improved energy price situation reflected a large surplus of crude petroleum on world markets. Consumption of oil by the industrialized nations declined because of a general drop in business activity, as well as reductions in consumer demand induced by the earlier sharp price hikes.

One major reason for the surplus was that Saudi Arabia decided to continue exporting greater-than-normal amounts of crude oil. This decision made it more difficult for other Organization of Petroleum Exporting Countries (OPEC) members to raise prices on their own. As a result, there were no major price increases by OPEC between July and September. However, prices continued to vary widely among OPEC members, even after the latest meeting of OPEC oil ministers in September.[2]

The reduced demand for petroleum products in this country was reflected in the unusually low rate of refinery capacity utilization (about 74 percent in the third quarter, compared with about 90 percent at the same time in 1978). At the same time, primary stocks of both crude and refined petroleum were substantially above seasonal norms.

As a consequence of sluggish demand, retail gasoline prices moved down for the second consecutive quarter, and prices received by refiners turned down after decelerating substantially in the previous quarter. Prices for

Table 4. Changes in retail and producer prices for energy-related items, 1979–80

Item	Index	Relative importance December 1979	Compound annual rate, seasonally adjusted except as noted, for 3 months ended—				
			1979		1980		
			Sept.	Dec.	Mar.	June	Sept.
Finished items							
Energy items, (gas, electricity, fuel oil, coal, gasoline, motor oil)	CPI	100.0	49.9	19.2	64.8	8.1	2.9
Finished energy goods	PPI	100.0	106.2	45.7	109.4	17.0	−3.4
Gasoline, motor oil, coolants, etc.	CPI	55.3	62.2	28.3	105.2	−5.7	−5.4
Gasoline [1]	CPI	54.5	63.1	29.1	105.7	−6.2	−5.3
	PPI	64.1	89.4	58.7	138.1	14.0	−8.2
Household fuels [2]	CPI	44.7	31.7	7.0	31.5	28.9	10.1
Fuel oil [1,2]	CPI	10.3	99.7	22.2	68.4	3.7	1.5
	PPI	24.0	141.5	22.0	78.1	18.0	2.8
Gas (piped) [2]	CPI	13.4	22.5	20.4	14.3	29.3	15.6
Electricity	CPI	19.5	9.7	2.3	20.3	39.4	8.1
Intermediate materials							
Intermediate energy goods	PPI	100.0	71.1	37.1	62.0	6.5	15.6
Diesel fuel [1]	PPI	10.3	157.0	26.1	88.2	10.1	7.9
Commerical jet fuel [1,2]	PPI	8.4	157.5	60.6	98.6	24.2	13.2
Residual fuel [1]	PPI	14.6	111.2	23.2	75.0	−41.0	68.3
Liquefied petroleum gas [2]	PPI	7.1	204.4	95.7	63.2	9.4	−9.4
Electric power [3]	PPI	35.7	14.8	24.7	19.8	16.0	22.6
Crude materials							
Crude energy materials [2]	PPI	100.0	50.7	32.5	30.8	20.3	22.9
Natural gas [1,2]	PPI	43.9	45.5	27.4	25.9	25.6	36.5
Crude petroleum [2]	PPI	38.1	96.7	54.8	52.1	21.6	16.9
Coal	PPI	17.8	2.1	6.8	7.3	−2.7	6.3

[1] Prices for these items are lagged 1 month in the PPI.
[2] Not seasonally adjusted.
[3] Includes commercial and industrial power, but not residential.

home heating oil edged upward at both the consumer and the producer level. Within the PPI for intermediate energy goods, price increases continued to slow for diesel fuel and jet fuel.

Prices for commercial and industrial electric power advanced more sharply than during the first 6 months of the year. One of the principal reasons for this acceleration was the heavy demand associated with increased use of air conditioning units in much of the country during the unusually hot summer. However, residential electricity rates did not rise nearly as rapidly as in the previous quarter. Similarly, consumer prices for piped gas increased less than in the prior 3-month period.

The PPI for crude energy materials advanced at a 22.9-percent annual rate, slightly more than in the previous quarter, but not as fast as the 37.1-percent rise in the 12 months ended in March. Prices of natural gas at the wellhead increased at a 36.5-percent annual rate, following three quarters of advances at annual rates of about 25 percent. This acceleration reflected the expanded output of new gas fields which are not under price controls, as well as higher prices for gas imported from Canada. The index for crude petroleum (which only includes domestic production) moved up somewhat less than in the previous quarter, as higher prices for upper and lower tier crude oil were partly offset by small declines in prices of uncontrolled oil in weak markets.

Finished goods, excluding food and energy

Consumer goods. In the CPI, prices for commodities except food and energy moved up at a seasonally adjusted annual rate of 12 percent, following advances at rates of 9.7 and 7.3 percent in the first and second quarters. (See table 5.) Price increases also accelerated somewhat at the producer level, as the PPI for consumer goods other than foods and energy rose at an 8.8-percent rate, after increasing at a 7.7-percent rate in the previous 3 months, and climbing at an 18.1-percent rate in the first quarter.

Domestic passenger car manufacturers raised their

Table 5. Changes in retail and producer prices for consumer goods other than foods and energy, 1979–80

Commodity	Index	Relative importance December 1979	Compound annual rate, seasonally adjusted except as noted, for 3 months ended—				
			1979		1980		
			Sept.	Dec.	Mar.	June	Sept.
Commodities less food and energy [1]	CPI	100.0	8.3	10.4	9.7	7.3	12.9
	PPI	100.0	9.1	11.5	18.1	7.7	8.8
Apparel, excluding footwear [2]	CPI	10.9	7.3	3.0	16.3	−2.4	10.2
	PPI	13.8	4.8	2.5	13.1	9.4	7.9
Footwear	CPI	1.9	7.7	9.2	7.4	3.5	9.2
	PPI	3.0	12.1	4.3	3.7	0	7.6
Textile housefurnishings [2]	CPI	1.5	.5	7.8	18.3	7.3	9.9
	PPI	2.1	8.7	8.1	5.6	5.9	30.1
Soap and detergent [2, 3]	CPI	.9	9.7	11.8	21.2	4.9	15.8
	PPI	1.7	22.4	8.4	16.3	−1.1	20.2
Cleansing and toilet tissue, paper towels and napkins [2, 3, 4]	CPI	.7	−1.0	14.9	11.8	19.0	14.3
	PPI	2.7	21.7	8.6	31.1	12.4	15.3
Tires [5]	CPI	1.3	7.8	18.3	16.9	10.8	11.5
	PPI	1.9	24.6	17.3	21.8	8.9	−.3
Furniture [2]	CPI	3.5	4.4	9.3	17.0	6.0	7.0
	PPI	4.3	8.0	11.7	10.5	6.0	10.3
Appliances, including radio and TV [3]	CPI	4.4	1.8	3.9	3.8	4.1	5.2
	PPI	6.3	2.5	5.0	7.6	10.0	−2.3
New cars	CPI	9.6	7.1	0	12.3	10.5	15.3
	PPI	15.4	1.8	7.5	9.0	10.9	−.2
Sporting goods and equipment [3]	CPI	1.8	7.5	3.3	19.1	4.9	8.7
	PPI	1.3	19.7	4.5	14.9	11.2	21.1
Tobacco products [2, 3]	CPI	3.1	10.0	2.5	13.8	10.5	2.2
	PPI	3.9	14.7	8.7	20.3	13.8	4.1
Gold jewelry [3, 6]	CPI	1.2	16.4	28.6	60.7	10.8	13.6
	PPI	2.9	62.2	147.8	146.1	13.6	42.1
Home purchase [3, 7]	CPI	30.1	17.1	18.8	7.0	14.9	14.9
Used cars [7]	CPI	7.5	−4.9	10.5	−2.5	−16.8	40.1

[1] Commodities less food and energy account for 34.5 percent of the CPI-U and 51.7 percent of the PPI for finished consumer goods.
[2] Not seasonally adjusted in the PPI.
[3] Not seasonally adjusted in the CPI.
[4] "Sanitary papers and health products" in the PPI.
[5] "Tires and tubes" in the PPI.
[6] "Jewelry and luggage" in the CPI.
[7] Not included in the PPI.

prices at the beginning of the quarter to pass through earlier increases in the costs of metals and other inputs. Prices of imported cars also continued to rise as a result of generally good demand and changes in foreign exchange rates. Used car prices increased at a rate of about 40 percent from June to September, reversing a declining trend that was dominant for much of the first half of the year.

In the PPI, substantial advances for passenger cars in July and August were balanced by a steep drop in September. The September decrease reflected "liquidation allowances" granted by domestic producers to their dealers for each 1980 car left on their lots when 1981 cars first went on sale.[3] If this had not occurred, producer prices for passenger cars would have risen at a rate of 19.6 percent in the third quarter, and the PPI for consumer goods other than foods and energy would have advanced at an 11.8-percent rate. The new car CPI rose at a rate of 15.3 percent from June to September.

Home purchase prices rose at an annual rate of 14.9 percent in the third quarter, the same as in the previous 3 months. This index has risen at a double-digit rate in every calendar quarter but two since the end of 1977, partly reflecting intensive demand for homes as a hedge against inflation. Shifts in demographic factors have also served to bolster demand for homes.

Jewelry prices resumed their strong upward climb during the third quarter, after slowing abruptly in the spring. This reacceleration reflected an upturn in gold and silver prices, which had soared early in the year and then had fallen sharply as part of a widespread commodity price decline.

Capital equipment. The Producer Price Index for capital equipment moved up at an 8.8-percent annual rate from June to September on a seasonally adjusted basis, less than in any calendar quarter over the past year. However, the slowdown was due to the introduction of liquidation allowances for cars and trucks into the September index. Without this factor, the capital equipment index would have advanced at a rate of 13.2 percent, more than in the second quarter and about as fast as in the first 3 months of the year.

Motor truck prices climbed rapidly in both July and August; price increases were concentrated in the heavier trucks, which continued to sell well in spite of the general economic sluggishness. Demand for light trucks and vans remained weak, in part because relatively poor gas mileage for many domestic models discouraged prospective buyers. The actual third quarter rate of increase in truck prices was 10.9 percent; but if it were not for the liquidation allowances incorporated into the September index, truck prices would have jumped at a rate of 28.5 percent.

Among other kinds of capital equipment, price increases accelerated for railroad equipment, fixed-wing utility aircraft, and transformers and power regulators. On the other hand, prices rose less than in the second quarter for machine tools, mining machinery, and oilfield machinery. For the second consecutive quarter, prices for both office machinery and commercial furniture moved up at a rate of less than 5 percent.

Intermediate goods, excluding foods and energy

The PPI for intermediate materials less foods and energy moved up at a 6.0-percent seasonally adjusted annual rate in the third quarter, slightly more than in the second quarter, but substantially less than in any calendar quarter during the 2 years prior to that. However, if the impact of volatile price fluctuations in precious metals (particularly for silver) were removed, the rate of increase for this index would have been slightly less than in the second quarter. This continued moderate trend reflected weak industrial demand.

The nondurable manufacturing materials index slowed considerably, rising at a 4.5-percent annual rate following much more rapid advances in each calendar quarter since late 1978. The slump in business activity, combined with stabilized prices for crude petroleum on world markets, led to lower prices for organic industrial chemicals and plastic resins and materials. Similarly, prices for synthetic rubber were virtually unchanged as low production levels of motor vehicles reduced demand for tires. Paperboard prices turned down in response to the reduced output of paperboard boxes, and the rate of increase slowed markedly for paper and woodpulp.

On the other hand, leather prices turned upward substantially after declining during the first half of the year, reflecting a similar pattern in cattle hide prices. The index for inedible fats and oils also turned upward sharply, as a result of the reduced weight of slaughtered livestock. The inorganic chemicals index rose rapidly for the third consecutive quarter, largely because of sharply higher prices for caustic soda. Production of caustic soda was reduced as a result of a cutback in output of its coproduct, chlorine; this occurred because of weak demand for plastics, which often contain chlorine compounds. Among textile materials, prices for synthetic fibers advanced at a double-digit rate for the third consecutive quarter, as producers reduced output to match a decline in demand. Gray fabric prices turned up sharply after moving down from March to June; the third-quarter increases were attributed to higher costs for cotton and synthetics.

The index for durable manufacturing materials rose at a 3.8-percent annual rate, reversing the decline of the previous quarter. Much of this upturn was caused by nonferrous metals; prices for silver, copper, lead, and tin rebounded after falling from March to June, and

gold prices climbed more than in the second quarter. A strike by copper workers in this country caused a reduction in supplies, and heavy purchases by the Soviet Union raised lead prices. Prices for jewelers' materials continued to rise rapidly, reflecting the upsurge in prices for gold and silver. In contrast, the finished steel mill products index declined at a 9.2-percent annual rate as steel firms introduced discounts in July for steel sheets, strips, and bars in reaction to poor demand for these items, which are used in making automobiles and appliances. Overall domestic shipments of finished steel products were about one-third less during the summer than they were a year before. Weak demand also resulted in a drop in hardwood lumber prices for the third consecutive quarter.

The construction materials index moved up at a 5.7-percent annual rate, somewhat more than in the previous quarter, but less than in any calendar quarter during the preceding 3 years. As a result of the sharp decline in mortgage interest rates between April and July, the rate of new private residential construction began to recover in June after a steep drop that had begun in late 1979. However, interest rates turned upward in late summer, curtailing the availability of mortgage credit and driving many potential homebuyers out of the market. Closely mirroring the fluctuations in the level of housing sales, softwood lumber and plywood prices advanced early in the quarter, but turned downward in September. Millwork prices rose steadily following a second quarter decline, reflecting higher labor costs. Prices for most other construction materials exhibited weakness, reflecting the earlier sharp drop in housing starts and the easing of cost pressures on energy-intensive materials. The indexes for gypsum products and refractories registered declines, and prices rose considerably less than in the first half for concrete products, plumbing fixtures, and fabricated structural metal products.

Among other intermediate goods, the index for electronic components continued upward, rising at a 13.5-percent annual rate. About one-third of this increase was caused by higher prices for capacitors, a consequence of higher costs of the metal tantalum. Prices also rose substantially for motor vehicle parts, nonfarm tractor parts, and machine tool parts. In contrast, wooden pallet prices continued to decline, reflecting a low volume of manufacturing shipments.

Crude nonfood materials, excluding energy

The index for crude nonfood materials less energy moved up sharply at a 78.9-percent annual rate, following a decrease at a rate of 38.0 percent in the second quarter. The dramatic upturn was broad-based, as prices for scrap metals, raw cotton, hides and skins, and natural rubber all climbed rapidly after falling earlier in the year.

Iron and steel scrap prices, which had declined at a rate of 46.8 percent during the first half of the year, soared in the third quarter. Strong export demand and tight supplies, a result of abnormally low prices which forced some dealers out of the market, were the major factors in this abrupt price resurgence. Increased demand from secondary smelters and higher prices for primary copper lifted prices for copper base scrap, which had declined in both previous quarters. Improved demand from Japan raised prices for aluminum base scrap, following a severe slump in the second quarter.

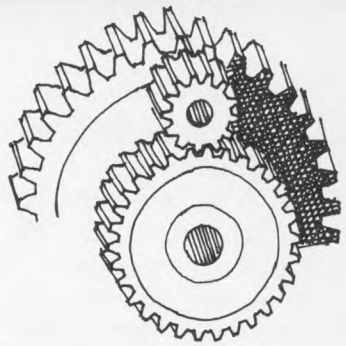
After falling in the previous quarter, prices of raw cotton climbed rapidly, as hot, dry weather led to expectations of a much smaller domestic cotton crop than in most recent years. The U.S. Department of Agriculture estimated that the 1980 cotton crop would be 20 percent smaller than last season. Export demand for cotton also improved. Hides and skins prices climbed at a rate of almost 80 percent, in contrast to a 58.5-percent rate of decrease during the first half; heavier demand from the Far East and from domestic tanners, combined with poor supplies, pushed prices higher. Crude natural rubber prices advanced following a second-quarter drop because of the impact of the border disputes between Thailand and Cambodia. Much of the natural rubber imported into this country normally comes from Thailand. On the other hand, wastepaper prices fell for the second consecutive quarter because of continued poor demand from domestic paperboard mills and the building materials industry. □

FOOTNOTES

[1] Mortgage interest rates in the CPI are represented by conventional, FHA, and VA rates. Although FHA and VA ceiling rates were raised from 11.5 to 12 percent late in the third quarter, conventional rates declined sharply in all 3 months. Conventional rates are represented in the CPI by actual mortgage loan transactions and not by current commitment rates.

[2] As a result of the September 1980 OPEC conference, Saudi Arabia lifted its basic price from $28 per barrel to $30 for the fourth quarter; this was still the lowest official contract price within OPEC. The highest officially allowed price within OPEC remained at $37 per barrel. The war between Iraq and Iran, which broke out in September, did not have any significant impact on crude oil prices in the third quarter.

[3] This marked the first time that the Bureau of Labor Statistics succeeded in reflecting these annual liquidation allowances in the PPI, as part of a stepped-up commitment to obtain realistic transaction prices whenever possible. The CPI has, in effect, always reflected the impact of such discounts each September.



Productivity Reports

Sixth consecutive productivity drop recorded during the second quarter

LAWRENCE J. FULCO

Exceptionally large declines in output and proportionately smaller decreases in hours during the second quarter of 1980 were reflected in falling productivity in all sectors of the economy for which the Bureau of Labor Statistics prepares quarterly productivity measures. Productivity in the private business sector declined 2.7 percent—the sixth consecutive quarterly drop in output per hour of all persons.

This is the second longest period of continuously falling productivity for the sector. By the second quarter of 1980, productivity had decreased about 2.5 percent cumulatively over six quarters. A steeper and longer decline, lasting seven quarters, occurred during the 1973–74 downturn. As of the third quarter of 1974, private business productivity had fallen 4.3 percent, also after six quarterly drops.

Output declined at a 12.0-percent annual rate in second quarter 1980, the first such drop in the private business sector in a year. However, it was the largest quarterly decrease in three decades.

In the nonfarm business sector, productivity fell at a 3.7-percent annual rate. This decline was larger than the drop in the private business sector, owing to productivity gains in the farm sector during the second quarter.

Nonfinancial corporations marked six quarters of continuously falling productivity with a 1.9-percent drop in the second quarter. These corporations, which account for about two-thirds of private business hours, also showed a 0.1-percent decline in the first quarter.

Output per hour declined 4.7 percent among manufacturing industries, but the drop in nondurables was much greater than that in durables. This was the third consecutive quarter of productivity decrease in manufacturing.

Chart 1 traces the growth of productivity, hourly compensation, and unit labor costs in major sectors of the economy since 1967. The following tabulation shows the second-quarter annualized rates of change in productivity, output, and hours paid for by major sector; more complete information may be found in tables 31–34 of the Current Labor Statistics section of this issue:

Sector	*Productivity*	*Output*	*Hours*
Private business	−2.7	−12.0	−9.6
Nonfarm business	−3.7	−12.3	−8.9
Nonfinancial corporations	−1.9	−11.5	−9.8
Manufacturing	−4.7	−21.8	−18.0
Durable	−3.2	−25.5	−23.0
Nondurable	−7.5	−16.4	−9.6

Compensation, labor costs, and profits

Hourly compensation in the private business sector grew faster in the second quarter than at any time since the third quarter of 1974. The 12.0-percent annual rate of increase in compensation payments, combined with the decline in productivity, resulted in a 15.1-percent rise in unit labor costs (compensation per unit of output). These costs grew faster in the second quarter of 1980 than at any other time since the third quarter of 1974.

In the nonfarm business sector, hourly compensation rose at a 10.8-percent annual rate in the second quarter, contributing to a 15.0-percent increase in unit labor costs.

Hourly compensation in nonfinancial corporations grew at an annual rate of 11.1 percent in the second quarter, and unit labor costs rose 13.2 percent. Unit profits in the nonfinancial sector declined 34.7 percent (annualized) in the second quarter—the sixth in a series of quarterly decreases which have cumulatively reduced unit profits by about 22 percent.

Among manufacturing industries, hourly compensation gains were somewhat larger in durables. However, unit labor costs grew faster among nondurable goods producers, partly reflecting the steeper decline in their productivity.

Although hourly compensation increased rapidly in the second quarter, the faster rise of the Consumer Price Index for All Urban Consumers (CPI-U) caused a reduction in real compensation in the private business and nonfarm business sectors. The 13.7-percent annualized advance in the CPI-U is the third highest quarterly price increase in the series.[1] When compensation payments were adjusted for changes in the CPI-U, real hourly compensation in the private business sector declined

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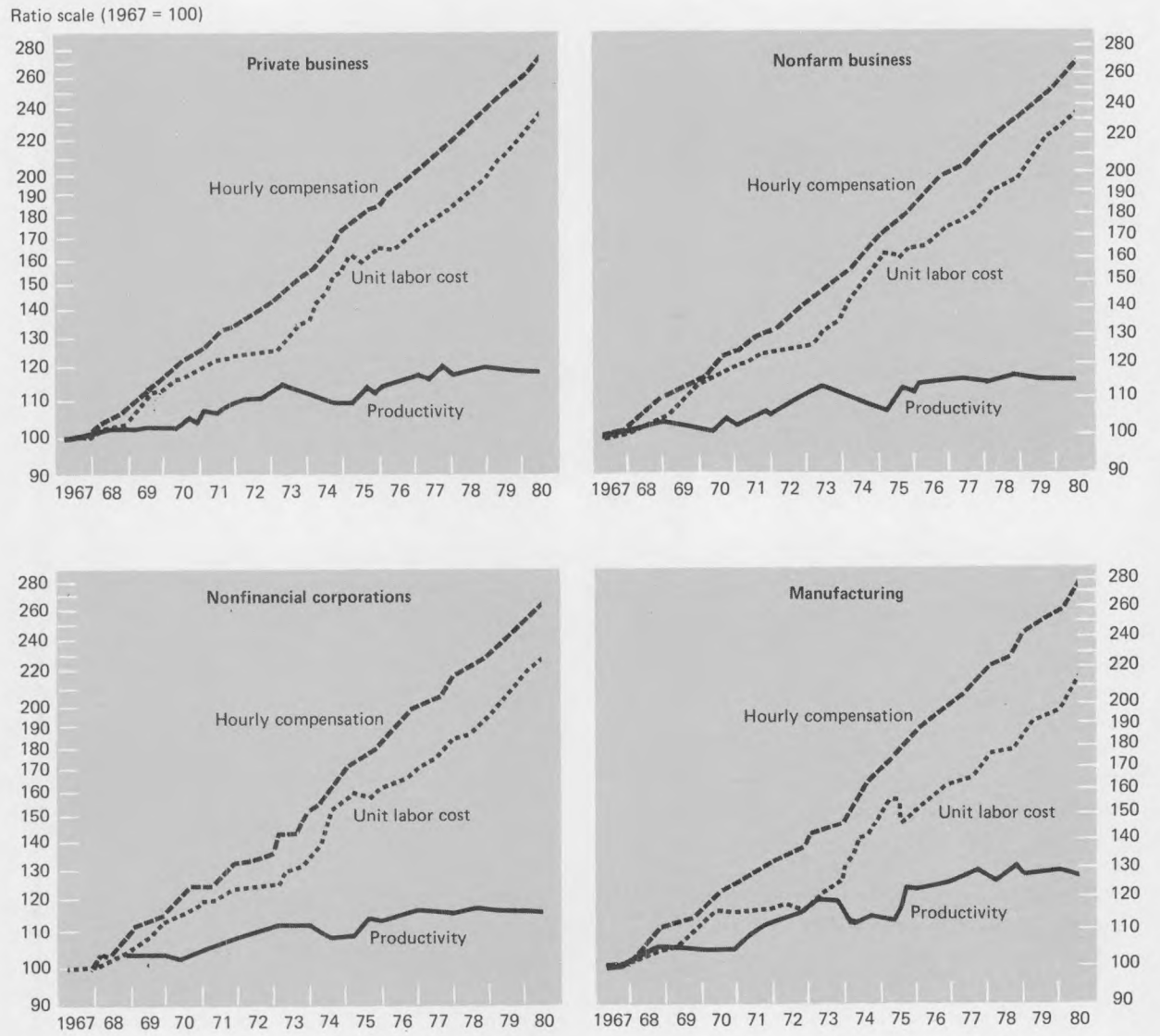
Chart 1. Changes in productivity and related measures in four major sectors of the economy, 1967-80



at a 1.5-percent annual rate during the second quarter.

Real hourly compensation has not risen in the private business sector since the first quarter of 1978. After more than two years of decline, the measure has fallen to its third-quarter 1975 level. Chart 2 shows that while hourly compensation has increased rather smoothly since 1967, trends in real compensation tend to reflect variations in the rate of growth of the CPI-U.

Employment and hours

Employment in the private business sector fell 5.5 percent in the second quarter—down 1.1 million jobs to 79.5 million—ending a pattern of growth which had been unbroken since mid-1975. This was the only quarterly employment decline since 1975. Average weekly hours dropped from 37.0 in the first quarter to 36.6 in the second, the greatest quarterly reduction since 1957. Nonfarm business employment declined 5.2 percent.

Employment in manufacturing, 20.7 million in the second quarter, was down 13.2 percent from the previous period. Average weekly hours in the sector declined 5.6 percent to 39.6. Employment fell at an annual rate of 17.6 percent in durables and 5.9 percent in nondurables.

Chart 2. Changes in hourly compensation and real hourly compensation in the private business sector, and changes in the Consumer Price Index, 1967-80

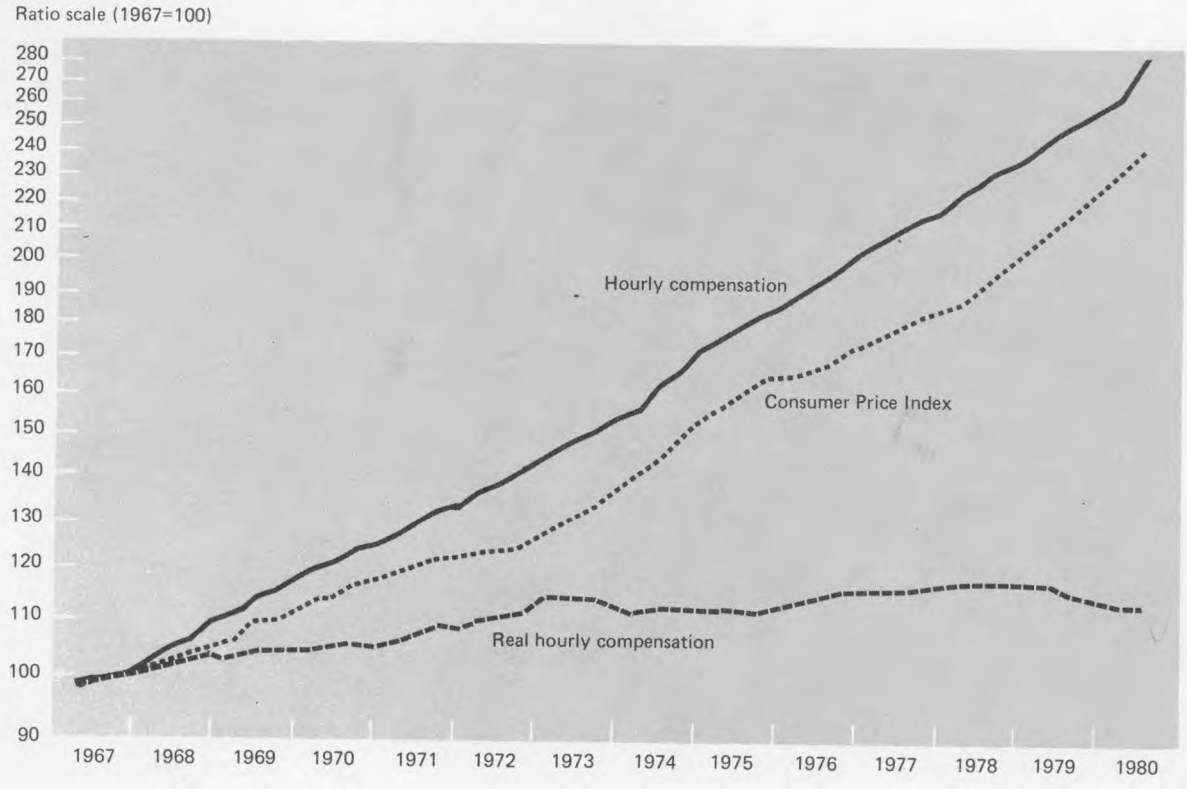


Table 1. Trends in hours in the private business sector, second quarter 1980

Worker category	Percent change in hours	Category share of hours	Contribution to trend
Total private business	−9.53	1.00	−9.53
Manufacturing	−17.31	0.283	−4.89
Durable	−21.89	0.174	−3.81
Nondurable	−9.54	0.109	−1.04
Transportation, communication, and public utilities	5.18	0.069	−0.36
Transportation	−9.82	0.040	−0.39
Communications	−1.57	0.018	−0.03
Public utilities	6.10	0.011	0.07
Finance, insurance, and real estate	2.76	0.061	0.17
Services	0.73	0.123	0.09
Mining	0.29	0.015	0.00
Construction	−11.51	0.057	−0.65
Wholesale trade	−4.21	0.069	0.29
Retail trade	−5.97	0.155	−0.93
Farm employees	−30.55	0.015	−0.45
Farm unpaid family workers	−45.09	0.004	−0.19
Farm proprietors	−15.27	0.024	−0.37
Nonfarm proprietors	−14.53	0.099	−1.44
Nonfarm unpaid family workers	26.94	0.005	0.13
Government enterprises	−3.50	0.021	−0.07
Sum of interaction terms[1]	.....	.....	−0.34

[1] A measure of how much of the overall trend results from the joint effect of the individual worker category movements.

Hours reductions in the private business sector were recorded for the great majority of worker categories included in the totals. Table 1 shows the distribution of changes in second-quarter hours, and the relative importance of the individual categories. The steepest drop in hours occurred among farm unpaid family workers, but because such workers account for only about 0.4 percent of all hours, the impact was quite small.

Manufacturing, on the other hand, represents about 28.3 percent of total hours, and its 17.31-percent decline in hours over the quarter accounted for 4.89 percentage points of the overall 9.53-percent decrease for private business. Other important components of the reduction were changes in hours among nonfarm proprietors, and employees in retail trade, construction, and on farms. □

FOOTNOTE

[1] During the first quarter of 1951, prices rose at a 17.2-percent annual rate (seasonally adjusted), and a 16.9-percent advance occurred in first quarter 1980.

Family Budgets

Autumn 1979 retired couple budget dominated by rise in transportation

Reflecting large increases in transportation, the three hypothetical budgets for an urban retired couple in autumn 1979 totaled $6,023 at the lower level, $8,562 at the intermediate level, and $12,669 at the higher level. (See table 1.) From autumn 1978 to autumn 1979, tintermediate, 9.1 percent, and the higher, 9.3 percent. (See table 2.)

Total consumption costs rose by the same amount as the total budget: 9.2, 9.1, and 9.3 percent, respectively, for the lower, intermediate, and higher budgets. The largest increase was in transportation, which increased approximately 17 percent for the lower and intermediate budgets, and 18 percent for the higher budget. Transportation in the higher budget contains a larger proportion of automobile owners, and therefore, was affected most by increases in private transportation costs.

Large increases in fuels and utilities had the greatest impact on housing costs in the lower budget, because those items constitute a larger budget share of housing at that level. Homeowner costs are based on the assumption that retired couples own their homes and have no mortgage and interest payments. Shelter costs are based on rented and owned dwellings.

The budgets represent the costs that were specified in the mid-1960's to portray three relative levels of living. They are designed for a precisely defined retired couple —a husband age 65 or over, and his wife. The couple is assumed to be self-supporting, residing in an urban area, in good health, and able to care for themselves. The budget levels provide different qualities and quantities of goods and services. The lower budget was not designed as a subsistence or poverty level, but simply as a level somewhat lower than the intermediate budget. Beginning with the autumn 1973 updating of the budgets, the total budget is defined as the sum of "total family consumption" and "other items." Income taxes are not included. The autumn 1979 cost estimates for medical care contain a preliminary estimate for "out-of-pocket" costs for Medicare.

Table 1. Summary of annual budgets for a retired urban couple, at 3 levels of living, autumn 1979

Component	Lower budget	Intermediate budget	Higher budget
Total budget	$6,023	$8,562	$12,669
Total family consumption	5,763	8,047	11,719
Food	1,882	2,507	3,149
Housing	1,996	2,862	4,481
Transportation	420	820	1,528
Clothing	225	378	581
Personal care	169	247	362
Medical care	837	842	848
Other family consumption	234	390	770
Other items	259	515	950

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 2. Percentage changes in budgets for a retired urban couple, at 3 levels of living, autumn 1978 to autumn 1979

Component	Lower budget	Intermediate budget	Higher budget
Total budget	9.2	9.1	9.3
Total family consumption	9.2	9.1	9.3
Food	9.1	9.0	9.2
Housing	9.0	8.4	8.3
Transportation	16.7	17.0	17.6
Clothing	2.3	2.4	2.3
Personal care	8.3	7.9	8.1
Medical care	9.4	9.5	9.6
Other family consumption	6.4	6.6	6.6
Other items	9.3	9.1	8.6

The budget costs are updated annually and reflect autumn price levels. Users should note that the procedures used in updating the budgets in 1979 differ from those used in 1978. Because of the revision of the Consumer Price Index program in January 1978, individual area price indexes from autumn 1978 to autumn 1979 were available for only 25 of the 44 family budget areas. The urban U.S. average includes estimates for those areas, however, using price data for the appropriate region and population size classes that are available from the CPI. Nonmetropolitan areas have always been shown as a separate class, and their costs have been similarly updated. (See table 3.)

Complete data for 24 metropolitan areas; four nonmetropolitan areas; Anchorage, Alaska; total metropolitan average; and the U.S. urban average can be obtained from the Bureau of Labor Statistics or any of its regional offices.

Table 3. Indexes of comparative costs based on an intermediate budget for a retired couple,[1] autumn 1979

[U.S. urban average cost = 100]

Area	Total budget[2]	Family consumption										
		Total consumption	Food		Housing			Transportation[6]	Clothing	Personal care	Medical care	Other family consumption[7]
			Total	Food at home	Total[3]	Renter costs[4]	Homeowner costs[5]					
Urban United States	100	100	100	100	100	100	100	100	100	100	100	100
Metropolitan areas[8]	103	103	101	101	107	107	106	101	102	98	101	107
Nonmetropolitan areas[9]	90	90	96	97	80	78	83	97	94	108	98	78
Northeast:												
Boston, Mass.	118	118	107	108	142	130	173	102	112	91	97	117
Buffalo, N.Y.	108	108	104	105	112	104	119	119	123	90	94	104
New York-Northeastern N.J.	115	115	111	109	138	122	167	71	93	102	100	111
Philadelphia, Pa.-N.J.	104	104	112	109	107	103	115	87	73	85	99	109
Pittsburgh, Pa.	102	102	105	105	99	90	102	111	98	90	98	104
Nonmetropolitan areas[9]	100	100	103	104	100	102	121	108	102	104	98	77
North Central:												
Chicago, Ill.-Northwestern Ind.	99	99	101	102	97	106	87	92	97	90	101	113
Cincinnati, Ohio-Ky.-Ind.	98	98	102	103	91	82	92	102	116	85	100	107
Cleveland, Ohio	104	104	100	99	106	106	108	108	107	119	96	113
Detroit, Mich.	102	102	98	99	103	107	103	108	99	96	100	108
Kansas City, Mo.-Kans.	98	98	97	97	90	81	86	110	108	113	103	108
Milwaukee, Wis.	103	103	97	96	106	106	108	110	117	99	99	108
Minneapolis-St. Paul, Minn.	102	102	101	101	102	112	93	107	104	102	95	115
St. Louis, Mo.-Ill.	100	100	105	106	94	83	87	114	98	85	97	105
Nonmetropolitan areas[9]	92	92	96	98	84	88	89	94	107	115	97	79
South:												
Atlanta, Ga.	92	92	97	95	78	76	59	106	108	96	99	106
Baltimore, Md.	99	99	96	95	98	102	77	108	97	97	99	103
Dallas, Tex.	95	95	93	91	89	96	78	110	92	99	103	102
Houston, Tex.	98	98	98	95	92	82	88	105	104	104	107	98
Washington, D.C.-Md.-Va.	108	108	103	104	113	114	109	111	94	119	105	116
Nonmetropolitan areas[9]	86	86	94	95	73	61	71	95	80	102	99	77
West:												
Denver, Colo.	99	99	97	97	93	84	80	111	130	91	98	104
Los Angeles-Long Beach, Calif.	99	99	97	95	92	124	64	120	94	94	109	98
San Diego, Calif.	97	97	95	91	92	114	74	112	96	93	107	103
San Francisco-Oakland, Calif.	105	105	101	102	101	128	72	124	106	119	109	105
Seattle-Everett, Wash.	109	109	100	99	117	138	103	113	111	112	103	112
Honolulu, Hawaii	116	116	130	132	110	150	77	124	102	110	102	117
Nonmetropolitan areas[9]	93	93	96	97	84	98	80	96	111	116	100	80
Anchorage, Alaska	136	136	127	128	152	194	141	127	129	180	123	94

[1] The family consists of a retired husband and wife, age 65 years or over.

[2] Total budget costs do not include personal income taxes.

[3] Housing includes shelter, housefurnishings, and household operations. The higher budget also includes an allowance for lodging away from home city.

[4] Renter costs include average contract rent plus the cost of required amounts of heating, fuel, gas, electricity, water, specified equipment, and insurance on household contents.

[5] Homeowner costs include property taxes, insurance on house and contents, water, refuse disposal, heating fuel, gas, electricity, specified equipment, and home repair and maintenance.

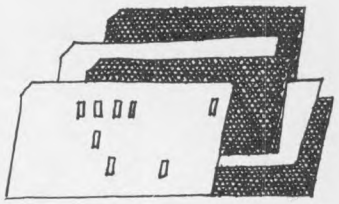
[6] The average costs of automobile owners and nonowners in the lower budget were weighted by the following proportions of families: Boston, Chicago, New York, and Philadelphia, 100 percent for nonowners of automobiles; all other metropolitan areas, 45 percent for owners, 55 percent for nonowners; nonmetropolitan areas, 55 percent for owners, 45 percent for nonowners. The intermediate budget proportions are: New York, 25 percent for owners, 75 percent for nonowners; Boston, Chicago, Philadelphia, 40 percent for owners, 60 percent for nonowners; all other metropolitan areas, 60 percent for owners, 40 percent for nonowners; nonmetropolitan areas, 68 percent for owners, 32 percent for nonowners. The higher budget proportions are: Boston, Chicago, New York, and Philadelphia, 75 percent for owners, 25 percent for nonowners; all other areas, 100 percent for owners.

[7] Includes average costs for reading, recreation, tobacco products, alcoholic beverages, and miscellaneous expenditures.

[8] As defined in 1960–61. For a detailed description of current and previous geographical boundaries, see the 1967 edition of *Standard Metropolitan Statistical Areas*, prepared by the Office of Management and Budget.

[9] Places with population of 2,500 to 50,000. Data for some places previously shown are no longer available.

Research Summaries



Women's use of time converging with men's

FRANK P. STAFFORD

Does the work history of a married woman primarily reflect her own voluntary choices between market work and other time uses, or is her work history largely the consequence of culturally prescribed differences in the household division of labor reinforced by low wages and tax considerations?

The probability of married women working has increased, but official statistics may be overstating the extent they work, particularly in terms of hours per week. This can be seen in table 1, where time diary estimates indicate a 22.7-percent decline between 1965 and 1975 in market hours of married women who worked at least 10 hours per week. The drop in hours per working married woman is sufficient to offset the increased participation rates so that, overall, married women have *decreased* their hours of employment by an estimated 2.2 percent. If work provides on-the-job training, one would still expect the earnings of married men and women to converge in the future because married men have decreased their hours of employment at a faster rate than married women, by 10.8 percent between 1965 and 1975. This includes declines associated with falling participation rates, as well as falling hours per week of those working.[1]

Unmarried women increased their labor market hours via an increased labor force participation rate and a modest increase in hours. Coupled with the growth in the number of unmarried women (partly the consequence of increased divorce rates), this means that, overall, women's hours of market work continue to approach those of men.

Research has shown that some women are more likely to stay in the labor market and others to remain at home.[2] Even when preschool children are in the household, married women, particularly those with a college education, are likely to work a good deal of the time. This does not appear to threaten the quality of child care or child-related housework: college-educated, working mothers tend to have fewer children and to meet their responsibilities by reducing their sleep and passive leisure, such as TV viewing. Working women can expect some help with child care and housework from their husbands, though the time involved is small relative to their own time. Full sharing of these responsibilities is rare.

Not only has market participation of men and women tended toward equality, but their leisure lifestyles and other nonmarket activities have also become more equal, as can be seen in table 2. Working women have decreased their time to housework, while working men have increased their housework time slightly. Among

Table 1. Estimates of weekly hours at work by sex and marital status, 1965–76

Sex and marital status	Time diary estimates for those working[1]					
	Normal work			Travel to work		
	1965	1975	Percent change	1965	1975	Percent change
Married men	44.7	41.3	−7.6	5.0	4.5	−10.0
Unmarried men	46.0	35.2	−23.5	3.9	4.4	+12.8
All men	44.9	39.9	−11.1	4.8	4.2	−12.5
Married women	34.3	26.5	−22.7	3.2	2.3	−28.1
Unmarried women	34.9	35.6	+2.0	3.6	3.7	+2.8
All women	34.6	30.8	−11.0	3.4	2.9	−14.7
	Current Population Survey estimates					
	Hours worked last week			Participation rates		
	1965	1975	Percent change	1965	1976	Percent change
Married men[2]	[3]44.2	[3]42.9	−2.9	[3]95.5	[4]92.2	−3.5
Married women[2]	[3]34.5	[3]34.0	−1.4	[3]38.7	[4]49.0	26.6
Men, 20 to 64 years	43.9	42.6	−3.0	[3]94.6	[5]92.2	−2.5
Women, 20 to 64 years	35.7	35.0	−2.0	[3]51.7	58.5	13.2

[1] From the national time-use surveys conducted by the Survey Research Center of the University of Michigan. Hours of normal work were defined to include regular work for pay outside the home or brought home, overtime, waiting, or interruption during worktime (for example, machine breakdown), and coffee breaks. Data are weighted using day of the week as a stratification variable, and are available only for those reporting at least 10 hours per week in the labor market.

[2] Married, spouse present.

[3] November.

[4] May.

[5] April.

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Table 2. Time use of men and women by minutes per day at work and at home, 1965 and 1975[1]

Sex and marital status	Labor market time[2]								Work at home								Total work time	
	Total[3]		Main job		Second job		Travel to work		Housework		Household repairs, upkeep, gardening		Child care		Shopping, financial			
	1965	1975	1965	1975	1965	1975	1965	1975	1965	1975	1965	1975	1965	1975	1965	1975	1965	1975
Average	409	367	350	316	7	3	37	33	76	64	8	13	19	19	47	40	559	503
Married men	451	428	383	365	9	7	43	40	23	25	13	18	17	15	44	37	548	523
Unmarried men	454	353	394	309	8	2	33	34	37	38	2	10	5	5	36	29	534	435
Married women	337	276	294	242	2	0	28	21	181	143	4	10	29	31	51	55	602	515
Unmarried women	350	353	300	305	5	0	31	32	121	89	2	7	19	27	56	41	548	517

Sex and marital status	Personal care		Education		Organizations		Social events		Active leisure		Passive leisure				Total nonwork time		Sample size[4]	
											TV viewing		Other activities					
	1965	1975	1965	1975	1965	1975	1965	1975	1965	1975	1965	1975	1965	1975	1965	1975	1965	1975
Average	647	662	11	20	16	15	39	34	24	34	84	117	60	55	881	937	864	557
Married men	639	642	10	18	16	15	35	29	26	31	103	132	62	51	891	918	448	248
Unmarried men	636	667	20	34	15	12	76	48	27	59	73	118	57	66	904	1,004	73	86
Married women	652	685	4	7	9	16	30	35	23	24	59	105	62	53	839	925	190	119
Unmarried women	671	684	17	20	23	10	46	36	16	24	66	94	54	55	893	923	152	104

[1] From the national time-use surveys conducted by the Survey Research Center of the University of Michigan.
[2] Labor market participation was defined by 10 or more hours of work per week.
[3] Including time at lunch.
[4] Subgroup sample sizes may not add to totals due to missing data.

working adults, total market and nonmarket work of married women and men has become quite similar. In contrast, during 1965, the total worktime of married women who were employed was substantially greater than that of married men (602 minutes per day compared to 548). Total leisure time of married women has increased and they have begun to approach married men in time spent TV viewing (105 minutes per day compared to 132).

From these data and other labor market studies, it can be concluded that women's and men's time uses are converging. Though the market worktime estimates for women are lower than the official statistics, the latter have understated the decline in men's work hours, and time-use data for 1965–75 indicate a larger decline in men's hours of market work than recorded in the Current Population Survey. Employment figures for highly educated women with preschool children suggest that there is now a greater awareness of the "full shadow value" of worktime early in the life cycle. The full shadow value includes the current wage, and the discounted value of on-the-job training acquired through labor force participation. As a result, the sacrifice of sleep and TV viewing to pursue both child care and labor market goals may be worth it, even though it implies short-run stress.

Response to preschool children

The pattern of high levels of labor market activity by college-educated women with preschool children is not observed historically. Based on analysis of 1960 census data, Arleen Liebowitz concluded that market time is usually greater the higher the level of a woman's schooling, except when preschool children are present, and then hours of highly educated and less educated women are similar.[3] Our results imply a change during the last 10 to 15 years in the market response to preschool children by college-educated women relative to other women; namely, despite a high level of per child care time, market hours are now reduced less per child by college-educated women than by high-school educated women. Our research also indicated that the amount of help by the husband, in either the form of child care or housework, is still minor.[4]

In our social security system, married women who work receive as an incremental benefit only the benefits which exceed what they could claim as a dependent. Because a woman usually earns less than her husband, the marginal discounted benefit gain from labor market activity is very small, relative to the present value of tax contributions.[5] Under the Federal income tax system, married women who work are taxed at the marginal rate applicable to the husband's earnings. In Sweden, by comparison, married individuals are taxed under the same schedule as single persons. The zero marginal tax rate on the first labor market earnings creates a larger substitution effect toward market work, while the progressive tax structure, by lowering the husband's after-tax earnings, results in a smaller income effect toward the wife's leisure.

In Sweden, many working women hold part-time jobs, perhaps because tax progression sets in rapidly there, and the after-tax payoff to longer hours declines. These tax effects toward a shorter workweek need not greatly depress part-time wages. An increased supply of part-time workers may keep wage rates high, and sup-

ply would then create its own demand.[6] If there are enough part-time job seekers, the full price of their services to firms, which includes the wage and search costs, will be partially decreased via reduced search costs. Firms will then have the incentive to restructure their work schedules to make better use of these workers, and as a result the market equilibrium wage-hours will be less hours dependent.[7]

While the current U.S. income tax policy can be argued as "unfair" to families who derive a large share of their economic well-being through market activity, a Swedish-style tax law can be regarded, by comparison, as "unfair" to the division of labor households.[8] Therefore, as a conceptual matter, the unfairness of the current policy could be remedied by taxing imputed income on nonmarket activity, rather than adopting a Swedish-style tax law. As a practical matter, taxing imputed income would be difficult due to valuation and because it is difficult to demand cash from a household activity which generates in-kind flows, if total family market income is low. As a possible solution, lowering taxes on market income is an easier way to achieve equity, but certainly this would provide redistributive gains to multiple-earner families and would further increase their number. On "fairness" grounds, the case for the Swedish-style system is stronger if the tax law is more progressive, and progressive taxes can be viewed as a policy which adversely affects multiple-earner families. Also, the political popularity of ceilings on the rate of taxation of labor market income is partly the *consequence* of the growth of multiple-earner families. □

FOOTNOTES

[1] One caveat is that the 1975–76 study coincides with a recession. It could be that some of the 1965–75/76 changes in table 1 reflect business cycle effects. Suppose the difference between actual hours at work and contracted hours at work is greater during recessions, but that respondents tend to report normal or contractual hours when hours are measured by direct questioning, rather than time diaries.

[2] James Heckman and Robert Willis, "A Beta Logistic Model for the Analysis of Sequential Labor Force Participation by Married Women," *Journal of Political Economy,* February 1977, pp. 27–58, and C. R. Hill and Frank P. Stafford, "Lifetime Fertility, Child Care, and Labor Supply," mimeo, September 1979.

[3] Arleen Liebowitz, "Education and Home Production," *American Economic Review,* May 1974, pp. 243–50.

[4] C. Russell Hill and Frank P. Stafford, "Parental Care of Children: Time Diary Estimates of Quantity Predictability and Variety," *Journal of Human Resources,* spring 1980, pp. 219–39.

[5] Nancy M. Gordon, "Institutional Responses: The Social Security System," and "Institutional Responses: The Federal Income Tax System," in Ralph E. Smith, ed., *The Subtle Revolution: Women Who Work* (Washington, D.C., The Urban Institute, 1979), pp. 223–55.

[6] Proposed by my colleague, Paul Courant.

[7] See Harvey Rosen, "Taxes in a Labor Supply Model with Joint Wage-Hours Determination," *Econometrica,* May 1976, pp. 485–507, for a discussion of the market equilibrium wage-hours locus.

[8] By Swedish style, I mean the adoption of individual earner status for married individuals, but not necessarily the adoption of the extent of progressivity. In Sweden, the 82-percent marginal tax rate is reached at an annual income level equivalent to about $20,000. By division of labor, I mean specialization by one spouse to market activity and specialization by the other spouse to nonmarket activity.

Occupational earnings in electric and gas utilities

Average straight-time hourly earnings in privately operated electric and gas utility systems ranged from $10.81 for watch engineers to $5.02 for janitors, according to a February 1978 survey conducted by the Bureau of Labor Statistics. This represents a 45 to 55 percent increase in earnings since a similar survey in November 1972. The increase compares with a 47-percent rise in average hourly earnings of all workers in the private nonfarm sector, as measured by the Bureau's hourly earnings index.

Fifty-six physical (plant) worker occupations, virtually all staffed by men, were studied in 1978. The most populous job class, journeyman line workers, averaged $8.58 per hour. Twenty-four office clerical classifications, predominantly held by women, and 19 professional and technical categories studied had average hourly earnings ranging from $10.96 for class A systems analysts, working independently or under general supervision, to $3.93 for messengers. Class B accounting clerks, numerically the largest white-collar job class, averaged $5.08 per hour.

Of the nearly 500,000 nonsupervisory workers covered by the survey, the Great Lakes and Middle Atlantic regions accounted for about 20 percent each; the Southwest, 14 percent; the Southeast, 13 percent; and the remaining regions, 10 percent or fewer. All utility systems included in the study had 100 workers or more. Of the survey's nonsupervisory workers, more than nine-tenths were in utility systems that employed at least 500 workers.

Average hourly earnings were generally highest in the Pacific States and lowest in the Southwest region. For the physical and professional/technical groups, pay levels in the highest-paying region exceeded those for the lowest paying region by about 25 percent; for office clerical workers, the corresponding pay spread was approximately 33 percent. Differences in pay levels among regions were usually greater for lower paid occupations than for relatively higher paid jobs—a trend common to BLS wage surveys.

Employees were paid mainly on a time-rated basis, typically incorporating ranges of rates for specified occupations. Almost four-fifths of the physical workers, and more than one-third of the office clerical workers, were employed by utility systems with labor-management agreements (union contracts). The major union for

both groups was the International Brotherhood of Electrical Workers (AFL-CIO).

Paid holidays and vacations were provided to nearly all employees, along with eligibility for cost-sharing health, medical, and retirement plans. An employer frequently provided 9 to 12 paid holidays per year. Vacations with pay ranged from 2 to 5 weeks annually, depending on length of service.

A comprehensive report, *Industry Wage Survey: Electric and Gas Utilities, February 1978,* (BLS Bulletin 2040), is available from the Bureau or any of its regional offices. □

Wages and tips in hotels and motels

Tips contributed substantially to the earnings of employees in a number of hotel and motel occupations, particularly of those paid comparatively low wages, such as customer lodging attendants, and waiters and waitresses, according to a May 1978 Bureau of Labor Statistics survey of 24 areas.[1] Table waiters and waitresses employed in full-course restaurants, for example, typically received lower wages than their assistants. However, their total hourly earnings were considerably higher when tips are included. (See table 1.)

Tipped occupations. Tips constituted a significantly high proportion of total hourly earnings for waiters and waitresses, customer lodging attendants, and bartenders who directly serve the public, than for employees with little or no direct contact with customers, such as service bartenders, and waiters' and waitresses' assistants. In 4 of the 5 categories of waiters and waitresses having personal contact with customers, tips accounted for at least 50 percent of the workers' total earnings in a majority of the 23 areas for which comparisons could be made.

In contrast, tips for service bartenders, and waiters' and waitresses' assistants in full-course restaurants where tips are often shared, usually averaged less than 25 percent of total hourly earnings. Customer lodging attendants received between 40 and 60 percent of their earnings from tips in 16 of the 23 areas compared.

Among occupations where tips are important wages for both public and service bartenders averaged at least $3 an hour in most areas; for customer lodging attendants, and waiters' and waitresses' assistants, between $1.75 and $3; and for waiters and waitresses, less than $2 an hour. The Fair Labor Standards Act permits tips up to 50 percent of the minimum wage and the reasonable cost of board and lodging to be credited against the Federal minimum wage.[2]

Table 1. Average hourly earnings and employer-paid wages for workers in selected occupations in hotels and motels, 24 areas, May 1978

Region and metropolitan area	Waiters and waitresses, full-course restaurants		Waiters' and waitresses' assistants, full-course restaurants	
	Earnings [1]	Wages [2]	Earnings [1]	Wages [2]
Northeast				
Boston	$5.12	$1.72	$3.69	$2.87
Buffalo	4.48	1.84	3.14	2.04
New York	4.59	2.14	3.47	2.67
Philadelphia	4.44	1.61	2.91	2.23
Pittsburgh	3.06	1.56	2.83	2.28
South				
Atlanta	4.60	1.52	2.79	2.69
Dallas-Fort Worth	3.27	1.44	2.68	2.67
Houston	4.96	1.43	2.81	2.66
Memphis	3.80	1.53	2.87	2.71
Miami	4.12	1.62	3.16	2.09
New Orleans	4.41	1.54	2.74	2.22
Washington	5.15	1.82	3.39	2.96
North Central				
Chicago	2.89	1.91	2.53	2.32
Cincinnati	3.28	1.49	2.75	2.24
Cleveland	3.46	1.45	2.86	2.52
Detroit	3.89	2.47	2.97	2.83
Kansas City	5.33	1.81	3.31	2.61
Minneapolis-St. Paul	3.85	2.08	3.08	3.01
St. Louis	4.72	1.54	2.91	1.97
West				
Denver-Boulder	4.75	1.54	3.24	2.53
Las Vegas	([3])	3.27	([3])	3.52
Los Angeles-Long Beach	5.49	2.50	3.12	2.52
Portland	5.43	2.68	3.18	2.64
San Francisco-Oakland	8.23	3.15	5.74	3.16

[1] Refers to employer-paid wages plus estimated average hourly customer tips.
[2] Refers to employer-paid straight-time wages, excluding premium pay for overtime and for work on weekends, holidays, and late shifts; also excluded are tips and the value of free rooms, meals, and uniforms, and nonproduction payments, such as Christmas and yearend bonuses.
[3] Information on tips was not available.

Nontipped occupations. For nontipped occupations, stationary engineers were among the highest paid, ranging hourly from $9.66 in Las Vegas to $4.67 in Miami. General maintenance mechanics and second cooks averaged between $4 and $6 an hour in most of the 24 areas.

In May 1978, occupational pay levels for nonoffice, nonsupervisory workers in the hotel and motel industry were usually highest in Las Vegas, followed closely by New York and San Francicso. Lowest averages among the occupational categories generally were found in Buffalo, Miami, and St. Louis.

Most hotels and motels provided paid holidays, typically 6 to 8 days annually, and paid vacations after specified periods of service. Life, hospitalization, surgical, and basic medical insurance were available to at least 70 percent of workers in most of the 24 areas. Retirement pension plans (other than Federal social security) applied to at least half of the workers in 14 areas.

A comprehensive report, *Industry Wage Survey: Hotels and Motels, May 1978,* BLS Bulletin 2055 is for

sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. □

FOOTNOTES

[1] The survey covered commercial establishments, known to the public as hotels, motel-hotels, motels, and tourist courts, which primarily provide lodging or lodging and meals, for the general public. It covered establishments that operate at least nine months a year, and employ at least 20 workers. In May 1978, the 1,850 surveyed establishments employed about 188,200 nonoffice, nonsupervisory workers. Information on "wages" relates to employer-paid straight-time wages, excluding premium pay for overtime and for work on weekends, holidays, and late shifts. Also excluded are tips, and the value of free rooms, meals, and uniforms, and nonproduction payments such as Christmas and yearend bonuses. "Earnings," on the other hand, refer to employer-paid wages plus estimates of customer tips.

[2] At the time of this study, the applicable minimum wage was $2.65 per hour. The current minimum wage is $3.10 per hour.

Building wage gains accelerate in 1978–79

Following 2 years of smaller increases, hourly wage rates of union building trades members in large cities rose by an average of 6.9 percent between July 3, 1978 and July 2, 1979. These findings are based on the Bureau of Labor Statistics annual studies of cities with populations of 100,000 or more.[1] The increase raised the Bureau's index of union building trades wage rates to 239.9 (1967 = 100). Average annual wage increases for union building trades fluctuated widely during the 1970's, which witnessed a period of wage and price controls early in the decade, as well as varying levels of both union and nonunion construction activity. (See table 1.)

Among the 25 journeyman trades studied, machinists reported the largest average increase, 11.5 percent, and elevator constructors, the smallest, 4.8 percent. Carpenters, the largest occupational group, averaged a 6.8-percent rise, while the rate for building laborers, the predominant job among the nine helper and laborer classifications measured, advanced 7.3 percent.

Table 1. Hourly wage rate increases for union building trades by year, 1969–79

[In percent]

Year	All building trades	Journeyman trades	Helpers and laborers
July to July:			
1969–70	11.6	11.4	12.5
1970–71	11.8	11.6	12.7
1971–72	6.4	6.6	5.4
1972–73	5.0	4.8	5.7
1973–74	7.8	7.6	9.1
1974–75	8.6	8.7	8.0
1975–76	6.5	6.5	6.6
1976–77	5.9	5.8	6.4
1977–78	5.7	5.7	5.8
1978–79	6.9	6.9	6.9

The highest regional increases during the 1978–79 period were reported in the Mountain States, 7.9 percent, and the Great Lakes, 7.8 percent. The latter region had the largest number of union building trades members. Outside of the Pacific States, 7.3 percent, increases in the remaining six regions were in the 6.0 to 6.2 percent range.

On July 2, 1979, hourly wage rates for all journeyman trades averaged $11.81, and for helpers and laborers, $9.15. The middle half of the wage rate array, excluding the upper and lower fourths, ranged from $10.99 to $12.68 per hour for journeymen, and from $8.52 to $10.11 per hour for helpers and laborers.

Regionally, average wage rates for journeymen were highest in the Pacific States, $12.73, and lowest in the Southeast, $10.20. Averages for helpers and laborers were also lowest in the Southeast, $6.89, and were highest in the Great Lakes States, $9.94.

Although less important than location, city population size also seemed to be related to average wage rates.[2] Journeymen in cities of at least 1 million inhabitants, for example, averaged 3 percent more per hour, or $12.28, than the $11.97 average of their counterparts in cities of 500,000 to 1 million; 6 percent more than the $11.62 average in cities of 250,000 to 500,000; and 8 percent more than the $11.36 average in cities of 100,000 to 250,000. There was, however, considerable variation among cities and individual trades in the same region and size group.

Employee benefits raised the journeymen's average to $14.59 and that of helpers and laborers to $11.26.[3] The proportion of employer contributions for these selected benefits to the basic wage-plus-benefit package has increased steadily during the 1970's, from about 10 percent in 1969 to nearly 20 percent in 1979.

On request, the Bureau or any of its regional offices will provide listings of union wage rates and employer payments for selected benefit funds, for each of the 66 cities studied, and for the Nation as a whole. A bulletin providing national, regional, and city averages, and wage trend data for each year since 1907 is in preparation. □

FOOTNOTES

[1] The survey was designed to reflect union wage rates in the 153 cities having 100,000 inhabitants or more, according to the 1970 Census of Population. Data were obtained from local union officials in 66 sample cities, by mail questionnaire, telephone, or personal interview by BLS field representatives.

Union wage rates are the basic (minimum) wage rates (excluding holiday, vacation, or other benefit payments made or regularly credited to the employee) agreed upon through collective bargaining between employers and unions. Averages do not include rates for apprentices or premium rates for overtime, or for work on weekends, holidays, or late shifts. Thus, they do not represent total hourly earnings of organized building trades workers.

[2] For a detailed discussion of the relative importance of city size and location in determining union building trade wage rates, see

Mark Sieling, "Union wage rates in building trades," *Monthly Labor Review,* July 1976.

[3] Data were collected on employer contributions to insurance (life, hospitalization, medical, surgical, and other similar types of health and welfare programs); pension funds; vacation payments; supplemental unemployment insurance; savings funds; and paid holidays, as provided for in labor-management contracts. In actual practice some employer payments are calculated on the bases of a negotiated rate, total hours worked, or gross payroll. Some contracts also provide for additional payments to other funds as for education and promotion; information on payments to these funds was not included in the survey averages.

Wage structure in steel mills narrows during 70's

The occupational pay structure in basic steel mills narrowed substantially during the 1970's, according to Bureau of Labor Statistics wage surveys, primarily because of uniform cents per hour wage increases for steelworkers, mostly those covered by labor-management contracts and paid under a common job evaluation system.

Between the last survey in February 1978, and May 1980, when the new master agreement became effective,[1] basic hourly wage rates for union workers rose 25 to 30 percent, depending on job class. The 27-month increase under both the old and new contracts included general wage advances of 55 cents per hour and cost-of-living adjustments totaling $1.47 per hour. Table 1 illustrates the narrowing such increases have had on the basic wage scales for selected occupations during the past 8 years. Scales for tandem-mill rollers, for example, were 44 percent above those of laborers in May 1980, compared with 80 percent in the September 1972 survey.

Table 1. Basic hourly wage scales and pay relatives for workers in selected occupations in steel mills with common job evaluation and pay systems[1]

Occupation	Typical job class	Basic wage scales[2]			Pay relatives[3]		
		Sept. 1972	Feb. 1978	May 1980	Sept. 1972	Feb. 1978	May 1980
Laborers	1	$3.520	$6.705	$8.725	100	100	100
Chargers (bar mills)	6	3.896	7.149	9.233	111	107	106
Locomotive engineers	11	4.366	7.704	9.868	124	115	113
Millwrights	16	4.836	8.259	10.503	137	123	120
First helpers (open hearth)	27	5.870	9.480	11.900	167	141	136
Tandem-mill rollers	32	6.340	10.035	12.535	180	154	144

[1] Includes establishments under common job evaluation and pay system, that is, with the same minimum hourly rates ($6.705 an hour) and the same increment (11.1 cents) between job classes.
[2] Includes cost-of-living adjustments.
[3] Basic wage scales of laborers = 100.

Narrower earnings also exist among individual workers in the industry, even though most are under incentive pay plans. The dispersion of earnings that commonly results from such plans was dampened substantially in recent years because most wage advances were not incorporated into the rates used for incentive calculations. For example, the incentive calculation rates for a job-class 9 locomotive craneman were nearly three-fourths of the basic hourly rate in 1972, compared to one-half in 1980. The overall industry compression can be measured by the relative index of wage dispersion, which declined from 24 in 1972 to 18 in 1978, one of the lowest figures for manufacturing industries studied by the Bureau.[2]

The primary reason for the concentration of earnings is the degree of uniformity built into the nationwide job evaluation system, applying to a large majority of the workers.[3] Slightly more than two-thirds of production workers were employed in establishments using a common job evaluation system, which has the same minimum rate and increment between job classes or labor grades. Under this system, all occupational classifications are assigned point values on the basis of factors such as experience, skill, responsibility, effort, and working conditions. These point values in turn, are related to one of the 34 established job classes.

At the least nine-tenths of production workers were in mills that provided various types of health and insurance benefits, pension plans, supplemental unemployment benefits, 11 paid holidays, regular paid vacations (up to 5 weeks after 25 years), and extended benefits every 5 years, that can bring total vacation pay to 14 weeks for "senior" personnel.

Slightly over one-fourth of the work force was employed on second shifts, and just over one-fifth, on third shifts. Pay differential for such shifts are 30 cents for evening and 45 cents for nightwork.

A summary of these findings was issued earlier and copies are available upon request from the Bureau of Labor Statistics or any of its regional offices. A comprehensive bulletin, *Industry Wage Survey: Basic Iron and Steel, 1978–79,* BLS Bulletin 2064, is also available. □

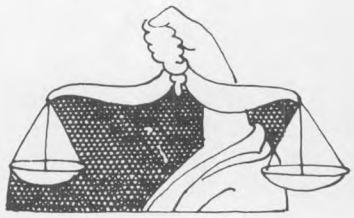
FOOTNOTES

[1] See May 1980 *Monthly Labor Review* for summary of provisions in the new basic steel agreements.

[2] The dispersion index is computed by dividing the difference between the first and third quartiles in the earnings array by the median.

[3] See "Incentive pay patterns in the steel industry," *Monthly Labor Review,* August 1974, pp. 75–77.

Significant Decisions In Labor Cases



Supreme Court opens new term

On the opening day of its 1980–81 term, the Supreme Court agreed to review a lower court decision upholding the government standard limiting worker exposure to cotton dust.[1] Challenged by the textile industry as unreasonable and too costly, the Occupational Safety and Health Administration standard was ruled valid by the District of Columbia Circuit Court of Appeals, which found it technologically and economically feasible. The court reasoned that the cost of implementing an OSHA standard is feasible as long as the industry is not confronted with massive economic dislocation. This conflicts with interpretations of the Fifth, Sixth, and Seventh Circuits that some cost/benefit approach must be used to justify standards.[2]

The cotton dust case presents the first opportunity for the High Court to clarify the constraints on OSHA's regulatory authority[3] since striking down the agency's attempt to reduce worker exposure to benzene last term.[4] In the benzene case, the Court made clear that all OSHA standards must be "reasonably necessary" to remedy a "significant risk" to workers' health or safety. In ruling that the benzene standard failed to meet this criterion, the Court's split opinion revealed that "substantial proof" is required to identify a "significant risk" and suggested that the economic relationship between costs and benefits also should play some role in determining when a standard is reasonably necessary. Thus, a decision on the cotton dust standard should help clarify OSHA's burden of proof in setting workplace health and safety regulations and should settle other questions concerning the agency's options for implementing standards.

On opening day, the Court also agreed to decide whether a worker's right to file suit under the Fair Labor Standards Act remains intact following contractual grievance proceedings on the same claim.[5] In 1974, the Court ruled that initial resort to contractual grievance procedures to settle a workplace discrimination claim does not forfeit a worker's right to seek redress of the same claim under Title VII of the 1964 Civil Rights Act.[6]

"Significant Decisions in Labor Cases" is written by Gregory J. Mounts of the *Monthly Labor Review* staff.

In other opening-day action, the High Court summarily dismissed the appeals of lower court rulings that approved the voluntary use of racial quotas by a public employer and that upheld the constitutionality of a Federal requirement that State unemployment compensation laws cover all employees of State and local governments. The Court refused to review 72 other labor and labor-related cases on appeal from various lower courts. Unless four of the nine justices vote to review a case, review is denied, leaving the lower court ruling in effect.[7]

Quota questions

A public employer's use of voluntary racial quotas in hiring and promotion to remedy the effects of specifically identified discrimination was approved by the California Supreme Court in *Sacramento County Civil Service Commission.*[8] The California court pointed to portions of the Supreme Court's *Bakke* and *Weber* decisions[9] in reasoning that the temporary quotas, adopted after administrative proceedings had identified the effects of the county's discriminatory employment practices, do not violate Title VII of the 1964 Civil Rights Act or the equal protection guarantees of either State or Federal Constitutions. The California decision occurred before the Supreme Court ruled last term that Congress could remedy prior discrimination by imposing racial and ethnic quotas in allocating Federal money.[10] By dismissing the appeal of the California ruling, the Court permitted what amounts to an extension of the remedial authority used by Congress in *Fullilove* to public employers in California.

The constitutionality of preference schemes might be further clarified by another case from California the High Court has already agreed to review.[11] The California Department of Corrections adopted an affirmative action program that called for goals in the employment of women and minorities. The corrections department contended that such a program was necessary to ease tensions between employees and inmates. But white employees alleged that the department actually reserved job slots for women and minorities and that prior discrimination had not been established, violating the criteria for voluntary affirmative action programs established by the Supreme Court. The California Supreme Court refused to review a ruling by the California Court of Appeals that the corrections department's plan fell

within the boundaries set by the High Court's *Bakke* decision.

A Supreme Court Ruling in the California case could answer questions about what evidence of prior discrimination is necessary to sanction a voluntary affirmative action program, whether the safe and efficient operation of correctional facilities justifies certain percentages of women and minorities in the work force, and if such employment goals are permissible what reference group should be used to establish the target proportions.

The Court could soon act on appeals in two other cases that would also clarify the authority of public employers to utilize minority preference schemes. Both the Sixth Circuit and the Washington Supreme Court have approved the use of racial preference schemes by municipal employers which had first identified the effects of prior discrimination.[12]

States' rights, union duties

The Federal Unemployment Tax Act sets *voluntary* conditions for the application of State unemployment compensation laws. However, for private employers to obtain Federal tax credits in proportion to their payment to the State compensation program, the State law *must* conform to Federal requirements. One such requirement since 1976 extended coverage to all State and local government employees. Refusing to comply, New Hampshire challenged the consitutionality of the requirement, claiming that it involved the same impairment of State sovereignty disallowed by the Supreme Court in *National League of Cities.*[13] The First Circuit ruled that the voluntary nature of the Federal requirement for unemployment compensation coverage bore no similarity to the mandatory minimum wage issue raised in *National League of Cities* and therefore it did not violate the Constitution.[14] The Supreme Court dismissed New Hampshire's appeal of the First Circuit's ruling and denied review to an appeal of a similar decision by the District of Columbia appeals court in a case brought by the County of Los Angeles.[15]

The Supreme Court also refused to review a January 1980 ruling by the Eighth Circuit that a union breached its duty of fair representation when it processed the grievances of unsuccessful job bidders and failed to represent the less senior workers actually promoted.[16] The employer had promoted the less senior workers under contract language that permitted "skill and ability" to outweigh seniority in such decisions. After arbitration, the promotions were awarded to the more senior workers, and the union refused to process the grievances of those demoted. The appeals court ruled that, even though the union's policy of processing grievances on the basis of seniority was conducted in good faith, it illegally discriminated against employees promoted on the basis of merit. The court reasoned that such a practice may significantly alter the negotiated contract by challenging only those promotion decisions that are based on merit. The decision limits union discretion in using classifications such as seniority to select which grievances to process. □

——— *FOOTNOTES* ———

[1] *American Textile Manufacturers Institute, Inc. v. Marshall,* 48 U.S.L.W. 2311 (D.C. Cir., Oct. 24, 1979), review granted 49 U.S.L.W. 3208 (U.S., Oct. 7, 1980).

[2] *American Iron and Steel Institute v. OSHA,* 581 F.2d 493 (5th Cir., 1978); *RMI Co. v. Sec. of Labor,* 594 F.2d 566 (6th Cir., 1979); and *Turner Co. v. Sec. of Labor,* 561 F.2d 82 (7th Cir., 1977).

[3] The Court had agreed last term to rule on an industry challenge to OSHA's coke oven emissions standard, *American Iron and Steel Institute v. OSHA,* 577 F.2d 825 (3d Cir., 1978), review granted, 48 U.S.L.W. 3855 (U.S., July 2, 1980), but on Sept. 16, 1980 the industry withdrew its appeal of the Third Circuit's ruling upholding the regulation (49 U.S.L.W. 3145). Industry spokespersons cited the fact that substantial compliance had been achieved with the emission standard during the years of litigation and that the Court's 1980 ruling on OSHA's benzene standard (see footnote 4) achieved their goal of a more balanced regulatory environment.

[4] *Industrial Union Dept., AFL–CIO v. American Petroleum Institute,* 48 U.S.L.W. 5022 (U.S., July 2, 1980), see *Monthly Labor Review,* September 1980, pp. 53–54.

[5] *Barrentine v. Arkansas-Best Freight System, Inc.* 615 F.2d 1194 (8th Cir., Feb. 20, 1980), review granted 49 U.S.L.W. 3209 (U.S., Oct. 7, 1980).

[6] *Alexander v. Gardner-Denver Co.* 415 U.S. 36 (1974), see *Monthly Labor Review,* March 1975, pp. 46–48, and Apr. 1975, pp. 69–70.

[7] Denial of review does not technically affirm lower court holdings because the Supreme Court is free to alter them by ruling in other cases raising the same issues.

[8] *District Atty. Sacramento County v. Sacramento County Civil Serv. Comm.,* 48 U.S.L.W. 2538 (Cal. Sup. Ct., Jan. 25, 1980), cert. dismissed, 49 U.S.L.W. 3213 (U.S., Oct. 7, 1980).

[9] *Regents of the University of California v. Bakke,* 438 U.S. 265 (1978); see *Monthly Labor Review,* July 1978, p. 46; *and Steelworkers v. Weber,* 443 U.S. 193 (1979), see *Monthly Labor Review,* August 1979, pp. 56–57.

[10] *Fullilove v. Klutznick,* 48 U.S.L.W. 4979 (U.S., July 2, 1980), see *Monthly Labor Review,* Sept. 1980, pp. 54–56.

[11] *Minnick v. California Department of Corrections,* 48 U.S.L.W. 2128 (Cal. Ct. App., 1979), review granted, 48 U.S.L.W. 3855 (U.S., July 2, 1980).

[12] *Detroit Police Officers' Assoc. v. Young,* 608 F.2d 671 (6th Cir., 1979); and *Maehren v. City of Seattle,* 20 FEP 854 (Wash. Sup. Ct., 1979).

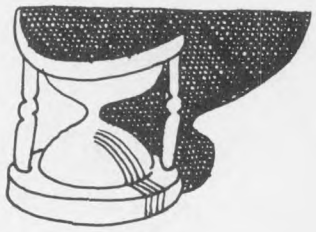
[13] *National League of Cities v. Usery,* 426 U.S. 833 (1976).

[14] *State of New Hampshire, Dept. of Employment Security v. Marshall,* 616 F.2d 240 (1st Cir., Feb. 20, 1980), appeal dismissed 49 U.S.L.W. 3214 (U.S., Oct. 7, 1980).

[15] *Los Angeles County v. Marshall* (D.C. Cir., Mar. 19, 1980), review denied, 49 U.S.L.W. 3240 (U.S., Oct. 7, 1980).

[16] *Steelworkers, Local 13889 v. Smith,* 48 U.S.L.W. 2505 (8th Cir., 1980), review denied, 49 U.S.L.W. 3230 (U.S., Oct. 7, 1980).

Major Agreements Expiring Next Month



This list of collective bargaining agreements expiring in January is based on contracts on file in the Bureau's Office of Wages and Industrial Relations. The list includes agreements covering 1,000 workers or more.

Employer and location	Industry	Union[1]	Number of workers
Aldens, Inc. (Chicago, Ill.)	Retail trade	Teamsters (Ind.)	1,900
American Home Foods, Inc., Chef Boy-ar-dee Division (Milton, Pa.)	Food products	Food and Commercial Workers	1,300
American National Insurance Co. (Galveston, Tex.)	Insurance	Insurance Workers	3,850
Bryant Packing Co. (West Point, Mass.)	Food products	Food and Commercial Workers	1,200
Building Trades Employers Association Cement League and Building Contractors Association (New York, N.Y.)	Construction	Plasterers and Cement Masons	1,600
Corning Glass Works (Corning, N.Y.)	Stone, clay, and glass products	Flint Glass Workers	4,000
Del Monte Corp., Midwest Division (Illinois)	Food products	Retail, Wholesale and Department Store	1,450
Dow Jones and Co., Inc. (Interstate)	Printing and publishing	Independent Association of Publishers Employees, Inc. (Ind.)	1,100
Honeywell, Inc. (Minneapolis and St. Paul, Minn.)	Instruments	Teamsters (Ind.)	8,000
Kroger Co., Houston Division (Texas)	Retail trade	Food and Commercial Workers	2,400
Movers Association of Greater Chicago, Individual Employer (Illinois)	Trucking	Teamsters (Ind.)	1,000
Philadelphia Food Store Employer Labor Council (Pennsylvania)	Retail trade	Food and Commercial Workers	6,500
Shell Oil Co., Shell Chemical Co. (Houston, Tex.)	Petroleum	Oil, Chemical and Atomic Workers	2,250
Supermarkets, 6 companies (Georgia and Tennessee)[2]	Retail trade	Food and Commercial Workers	1,600
	Government activity	Employee organization[1]	
Michigan: Detroit Public Schools Custodial-Maintenance-Transportation Employees	Education	American Federation of State, County and Municipal Employees	2,400

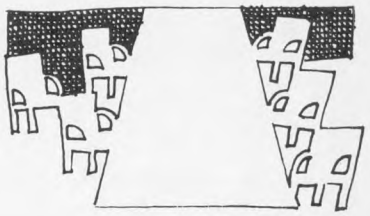
[1] Affiliated with AFL–CIO except where noted as independent (Ind.).

[2] Industry area (group of companies signing same contract).

Erratum

In George Iden's August 1980 article, "The labor force experience of black youth: a review," a typographical error resulted in the omission of a minus sign from two of the coefficients in the first column of table 3, page 13.

Developments in Industrial Relations



Stevens, Clothing Workers sign first agreement

J. P. Stevens & Co. and the Amalgamated Clothing and Textile Workers signed their first collective bargaining agreement, thereby easing one of the longest and most bitter confrontations in the history of labor-management relations in the United States. The agreement covers only 3,500 workers at 10 plants, but Stevens agreed to accept similar terms at any of its other plants that the union is able to organize within 18 months. However, during this period, the union agreed to give up its court-granted right to use company facilities for organizing purposes. J. P. Stevens, the second largest textile company in the industry, has a total of 70 plants and 44,000 workers.

AFL–CIO President Lane Kirkland called the victory "a tremendous forward step for the textile and apparel workers of the South." Clothing and Textile Workers' President Murray H. Finley, referring to the company claims that the union made the most significant concessions to attain the settlement, said his union "looks forward to more [such] victories by Stevens."

Whitney Stevens, chairman and chief executive officer of the company, said the settlement means that the union will no longer single out J. P. Stevens as its primary target. He claimed that the agreement would not spur unionization because, "people in the South basically don't care for unions," and acknowledged that the company plans to continue to resist organizing efforts in its nonunion plants.

Seven of the 10 plants involved in the settlement are located in Roanoke Rapids, N.C., and employ 3,000 of the covered workers. In 1974, the National Labor Relations Board had certified the results of a representation election the union had won earlier that year at the seven plants. Subsequent years did not produce a settlement, only union charges that Stevens had engaged in unfair labor practices, including refusal to bargain—charges that were ruled valid by the board and the courts. The union only recently gained representation rights at the other three plants through board elections or orders. These plants are in Allendale, S.C., High Point, N.C., and Boylston, Ala.

The 30-month contract for the Roanoke Rapids workers provided for an 8.5-percent pay increase effective immediately and 10.0 percent retroactive to July 1979. These increases matched those that the company gave workers in all other plants, but had withheld from the Roanoke Rapids workers "as a contract bargaining measure," according to company officials. The union said the 1980 increase brought the average straight-time pay rate at the 10 plants to more than $5 an hour. The contracts are subject to reopening during their term on wages and benefits.

All of the contracts provided for the following terms considered favorable to the union: checkoff of union dues from payroll; various changes in health and safety practices; binding arbitration of disputes that arise between contract settlements; "regulation" of work loads; a seniority system to govern layoffs and promotions; and company assurances that it would not retaliate against employees who engage in union activities.

Provisions viewed as favorable to Stevens called for an end to the union's designation of Stevens as its primary organizing target; termination of the consumer boycott against Stevens products that the union had initiated in 1976; and an 18-month suspension of the union's campaign to pressure and embarrass directors of other companies serving on Stevens' board of directors and Stevens' officers serving on other boards. Reportedly, the settlement was hastened by the union's plan to attempt to gain two seats on the board of Metropolitan Life Insurance Co., Stevens' major lender. This led Metropolitan to express concern to Stevens over the adverse publicity and the estimated $7 million cost associated with a contested election.

Boeing and Machinists reach accord

The first settlement in the round of bargaining in the aerospace industry occurred when the Boeing Co. and the Machinists union agreed to a 3-year contract for 50,000 employees in Seattle, Wash., Wichita, Kans., Portland, Oreg., and other locations.

The union valued the wage and benefit package at $3.85 an hour, or a 39-percent increase over the term, in-

"Developments in Industrial Relations" is prepared by George Ruben and other members of the staff of the Division of Trends in Employee Compensation, Bureau of Labor Statistics, and is largely based on information from secondary sources.

cluding wage escalator adjustments based on an estimated 10-percent annual rise in the Consumer Price Index.

Wages will increase by 7 percent immediately, and 3-percent increases are scheduled on the first and second anniversaries. In addition, workers in the top 11 pay grades received an "inequity adjustment" of 1 to 35 cents an hour. The wage escalator clause was not changed; it provides 1-cent-an-hour quarterly adjustments for each 0.3-point movement in the Consumer Price Index for Urban Wage Earners and Clerical Workers (1967=100).

Pensions for future retirees were increased to $16 a month for each year of credited service after December 31, 1980, and the existing $14 rate will now apply to all past years. Under the prior contract, the rate was $12 for each year of service through January 1978 and $14 for each year thereafter.

Retirees' pensions also were increased by $1 a month for each year of service or 1 percent of their total monthly entitlement, whichever is more. Employees are now permitted to retire at unreduced benefit rates at age 60, instead of age 62, and benefits for early retirement (at age 58) will be computed at 94 percent of the normal rate, instead of the previous 86 percent.

Health and welfare improvements included the establishment of an alcoholic rehabilitation program and a hearing aid plan, extension of the dental plan to provide orthodontic coverage for dependents under age 19, and an increase in the amount payable for major medical expenses.

Later, the Machinists union settled with Lockheed Corp. on similar terms for 31,000 workers in Burbank and Sunnyvale, Calif., and Marietta, Ga. Also, the United Auto Workers negotiated a similar contract with McDonnell Douglas Corp. for 15,000 workers in Long Beach, Calif., Tulsa, Okla., and Melbourne, Ark.

Meanwhile, the Machinists and Auto Workers unions, which coordinate their bargaining efforts in the aerospace and other industries, began merger talks that could result in the Nation's largest union, with more than 2.3 million members. The two unions have been suffering declines in membership because of economic conditions and are in the midst of efforts to cut operating costs.

American Motors, Auto Workers settle

Continuing the practice of recent years, American Motors Corp. and the United Auto Workers negotiated a 3-year contract that provided for some cost concessions from the pattern the union negotiated with General Motors Corp. and Ford Motor Co. in 1979. (See *Monthly Labor Review,* November 1979 pp. 58–59, for the GM and Ford terms and *Monthly Labor Review,* March 1980, p. 56, for the terms at Chrysler Corp., which also deviated from GM and Ford.) Following the lead of Chrysler Corp., American Motors agreed to nominate an official of the union to its board of directors, pending approval from the Federal Government. However, the company reportedly is concerned that having a union representative on its board might violate the rule that a board member's responsibility is to represent the interests of stockholders.

Raymond Majerus, the union's secretary-treasurer and director if its American Motors department, said that pension improvements will lag the GM pattern during the first two contract years, but in the final year will attain parity with the GM contract. (The GM, Ford, and Chrysler agreements expire in September 1982 and the American Motors agreement expire a year later.)

According to Majerus, 14 cents of the 24 cents cost-of-living allowance at American Motors was diverted to help the company meet the cost of benefits improvements. (GM withheld 14 cents by reducing each of the quarterly cost-of-living increases by 1 or 2 cents an hour.) American Motors and the union also agreed to revise the escalator formula to 1 cent for each 0.26 point movement in the consumer price index. This formula is effective beginning with the quarterly adjustment in June 1983 and is retroactive to December 1981. (At GM, the formula is to be effective with the quarterly adjustment in December 1981.) "Set" wage increases at American Motors were the same as those at GM—3 percent at the beginning of each contract year and an additional 24-cent increase in the first year.

The final concession at American Motors was in the number of paid personal holidays, which was raised to a total of 23, from 15, to be taken during three calendar years. (At GM, the total was raised from 15 to 26.)

The American Motors accord was preceded by a 2-day strike by the 8,800 hourly employees the United Auto Workers union represents in Kenosha and Milwaukee, Wisc.

Clothing workers accept short-term contract

In a departure from their practice in recent years, the Amalgamated Clothing and Textile Workers and the Clothing Manufacturers of America negotiated a contract that extends for only 18 months. The previous 40-month contract expired on September 30, the day of the new settlement. The parties agreed that the depressed state of the men's and boys' tailored clothing industry and concern over the rate of inflation were the major factors in the shorter duration. The 18-month term was a compromise between the union's demand for either a 1-year contract or a 3-year agreement with an uncapped cost-of-living clause, and management's proposal for a 3-year contract with a capped escalator.

The accord, which covered 80,000 workers, provided for wage increases of 30 cents an hour on October 1, 1980, and 20 cents on March 1 and October 1 of 1981. Also, on October 1, 1981, employees may receive an escalator increase—not to exceed 10 cents—calculated at 6 cents for each percentage point rise in the Consumer Price Index above 9.1 percent for the year ending June 1981. The previous contract provided for increases of $1.10 an hour over the 40 months and also resulted in a 10-cent escalator increase in 1979.

There were numerous changes in insurance coverage. Employer financing of health and welfare and pension benefits remained at 15 percent of payroll, but .4 of a percentage point more of the money will be allocated for pensions.

There was no immediate change in the vacation schedules—all employees with at least 1 year of service receive 3 weeks of paid vacation each year. However, the parties agreed that the contract to be negotiated in 1982 will give 20-year employees 4 weeks of annual vacation.

Federal white-collar workers get pay increase

The 1.4 million white-collar employees covered by the General Schedule pay system received a 9.1-percent salary increase in October, after earlier indications that the increase would be smaller. (About 25,000 employees in the two lowest pay grades received 10.1- or 10.4-percent increases.) In January, President Jimmy Carter had projected a 6.2-percent increase; this was changed to 7.8 percent in July. The President said the figure was increased to 9.1 percent because "Federal employees face the same kinds of problems with inflation as other citizens and should not have to bear an unfair burden."

The President's pay agent—the Director of the Office of Personnel Management, the Director of the Office of Management and Budget, and the Secretary of Labor—announced that an increase ranging from 10.12 percent for employees in the lowest pay grade to 20.91 for those in grade 15 would be required to attain comparability with equivalent occupations in the private economy. The average increase would have been 13.46 percent. However, the President used his authority under the Federal Pay Comparability Act of 1970 to propose the 9.1-percent increase, which matched the March 1979 to March 1980 rise in private sector salaries covered in the Bureau of Labor Statistics' annual survey of professional, administrative, technical, and clerical pay. Either the House of Representatives or the Senate could have rejected the proposal and the President would have then been obligated to implement an increase in accord with the comparability principle—presumably, the increase recommended by his pay agent—but the Congress did not act.

Some employees in the upper length-of-service pay steps of grade 15 either did not receive the increase or received only part of it because, by law, they cannot exceed the $50,112.50-a-year salary of presidential appointees at the lowest level of the Executive Schedule. This also precluded any increase for employees in GS grades 16, 17, and 18, and for those in the Senior Executive Service, established under the Civil Service Reform Act of 1978.

Under the Executive Salary Cost-of-Living Adjustment Act of 1975, members of the Congress, Executive Schedule personnel, and Federal judges would have automatically received the 9.1-percent increase—which would have resulted in a matching increase for the government employees at the $50,112.50 limit. However, the Congress had voted earlier to forgo this year's increase.

The 9.1-percent increase also applied to members of the Foreign Service and members of the medical and dental staffs of the Veterans' Administration under existing laws linking their salary levels to those of General Schedule employees. A similar linkage usually applies to the 2 million members of the Armed Forces, but the Congress legislated a more costly compensation package intended to make military service more attractive. The package, effective in October, included an 11.7-percent pay increase; a $20,000-ceiling on re-enlistment bonuses (formerly $15,000); a 15-percent increase in sea pay and a 25-percent increase in flight pay; increases in subsistence and housing allowances; increased travel expenses; and increased living expenses in high-cost areas and for temporary assignments.

Pay for the Government's 465,000 blue-collar workers is adjusted annually at various times throughout the year, based on comparisons with prevailing local pay rates for the same occupation in the private economy. However, special legislation and a presidential order limited the blue-collar employees increases to 7 percent during the fiscal year that ended September 30, 1980. A similar 9.1-percent limit applies during the current fiscal year.

Postal Workers' president loses re-election bid

Morris Biller won a 2-year term as president of the Postal Workers, defeating incumbent president Emmet Andrews and two other officers of the union in a mail referendum. Biller, who was head of the union's local in New York City, received 45,049 votes and Andrews, 26,025. William Burrus of Cleveland, running on the Biller slate, was elected executive vice president. Secretary-treasurer Chester W. Parrish retained his post in the voting, which involved 93 positions in the union.

Andrews became president of the union in 1977 after the death of Francis S. Filbey, and was elected to his first full term in 1978.

Steelworkers' local retracts offer of pay reduction

Local 2869 of the Steelworkers retracted its offer to accept a $1-an-hour reduction in future cost-of-living increases from Kaiser Steel Corp., leading to renewed speculation about the future of the company's mill in Fontana, Calif., which lost $39 million in 1979. Earlier, the company had announced plans to keep the mill open, calling the local's move to aid the company an important factor in the decision. Kaiser officials attributed the withdrawal of the offer to the international leaders of the Steelworkers.

The decision was an "effort to avoid any future conflict in regard to the alleged legalities in the matter of this local union's recent vote . . . and to maintain the union's integrity," according to the union. The concession would have been accomplished by withholding the first 10 cents of each of the next 10 quarterly cost-of-living adjustments.

Kaiser officials attributed the mill's difficulties to competition from Japanese steelmakers, to operating problems, and to the depressed state of the steel market. They welcomed the union's pledge to "seek out, discuss and implement all feasible ways to . . . make Kaiser Steel Corp. more competitive." In recent months, Kaiser has laid off 2,000 of its 6,000 hourly workers and cut production to 2.8 million tons a year, from 3.5 million tons.

California wine workers end strike

A threat to the 1980 vintage in the California wine industry ended when members of the Winery, Distillery and Allied Workers Union approved a 3-year contract with the Winery Employers Association and ended their first strike in 35 years. The walkout was first limited to two of the largest wineries but then spread to all 23 wineries. The employers said they continued production during the stoppage by using supervisory employees.

The settlement came only about a week before the peak of the grape picking and crushing period. It provided for yearly wage increases of 13, 8, and 7 percent, bringing average pay to about $11 an hour, from about $8.39. (This includes an estimated 18 cents increase under the escalator clause, which was continued.)

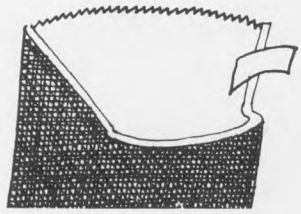
The wineries are located in the Napa and Central valleys of California and produce 80 percent of the State's wine. The State, in turn, accounts for 80 percent of the Nation's wine.

Industry withdraws coke emission exposure suit

The long legal fight over the Occupational Safety and Health Administration's limits on worker exposure to coke oven emissions ended when the steel industry withdrew the appeal it had filed with the Supreme Court. Sheldon Wesson, speaking for the American Iron and Steel Institute, said the case had become almost moot because companies have already instituted most of the protective measures called for by the standard during the series of appeals that followed OSHA's announcement of the standard in 1977. According to OSHA, the standard is needed to reduce an excessive rate of cancer for 21,000 coke oven workers. The industry had contended that the standard could not be met in many instances.

In another occupational safety and health case, General Motors Corp. announced that it will undertake a year-long study to determine why employees and retirees from its Flint (Mich.) trim plant suffer a high rate of lung cancer. The company said it decided on the study after the Sloan Kettering Cancer Center confirmed earlier findings of the United Auto Workers that the rate of lung cancer deaths for the employees and retirees exceeded the national average.

Earlier, General Motors had announced that it was underwriting the largest industrial health screening in history, aimed at finding the causes of rectal and colon cancer in men and women who build scale models of cars from wood, clay, and other materials. (See *Monthly Labor Review,* April 1980, p. 63.) □



Book Reviews

Labor relations: room for research

The Labor Relations Process. By William H. Holley, Jr. and Kenneth M. Jennings. Hinsdale, Ill., The Dryden Press, A division of Holt, Rinehart and Winston, 1980. 656 pp. $19.95.

This volume, by William H. Holley, Jr. and Kenneth M. Jennings, is designed as a text for college courses in industrial relations. The authors state that the book combines "theoretical and practical insights" into the labor relations process; that it was "written with both the beginning student and the professional scholar" in mind; that each of its sections "has been subjected to critical academic and practitioner review"; and that the extensive references at the end of each chapter are intended "as useful stimuli and starting points for continuing research on the subject."

Somehow the performance is not quite up to the promise. It may be that the authors had too many objectives in view, and that their large accumulation of information, which is impressive, could not be sufficiently digested and fitted into the framework of their analysis. The analytical framework itself is unexceptionable. It is based on the first chapter of John Dunlop's *Industrial Relations Systems* (1958), in which the essence of the industrial relations process is found in the establishment and administration of work rules relating to pay, benefits, and other conditions of employment. These rules are shaped under various conditions and constraints by the "actors" in the system—workers and their formal or informal organizations; managers and their organizations; and the representatives of appropriate government administrative or rule-making agencies.

The present book is divided into four parts. The initial chapter of part 1 consists largely of an adaptation of the Dunlop model of the industrial relations process, but with scant attention to the constraints imposed upon the actors in the system by conditions in the relevant product and labor markets. There is also a discussion of why workers join unions. In between consideration of "alienation" *(Marx)* and "job scarcity" *(Perlman)* as possible reasons for union membership is the statement—perhaps undergraduates need to be told this—that "Some research has shown that employees might join unions if they (a) are dissatisfied with physical characteristics of the workplace, low wages, or lack of benefits and (b) believe that a union will help them achieve the job-related conditions important to them."

The remainder of part 1 (chapters 2–5) deals with the development of the labor movement in the United States; major legal decisions and legislative enactments affecting labor relations; how unions are organized (largely restricted to the certification procedures of the National Labor Relations Board, with some attention to employer antiunion tactics); and to the structure of the trade union movement, including a brief discussion of union membership.

There are quite a few points relating to these chapters that cannot be raised in a brief review, however, one broad question suggests itself, but not with respect to this book alone. It is this: why should not more research attention be devoted to employer associations with bargaining functions and indeed to the policies, procedures, and tactics of major employers who bargain independently? So far as I know, the most recent full-scale study of employer bargaining associations was published almost 60 years ago (Clarence E. Bonnett, *Employers' Associations in the United States,* 1922). Bonnett at that time pointed to the lack of information on the bargaining and related activities of employer organizations. The trade union movement might well complain of the disproportionate attention given to its side of the bargaining relationship.

Part 2 (chapters 6–9) is concerned with the negotiation of collective bargaining agreements; methods of

Books reviewed in this issue

Robert U. Ayres, *Uncertain Futures: Challenges for Decision-Makers.* Reviewed by Klaus Weiermair.
William H. Holley, Jr. and Kenneth M. Jennings, *The Labor Relations Process.* Reviewed by H. M. Douty.
Helen J. McLane, *Selecting, Developing, and Retaining Women Executives: A Corporate Strategy for the Eighties.* Reviewed by Diane N. Westcott.
Marjorie Hansen Shaevitz and Morton H. Shaevitz, *Making It Together as a Two-Career Couple.* Reviewed by George R. Pospolita.

resolving impasses, including mediation, interest arbitration, and work stoppages; and with contract administration, with emphasis upon grievance procedures and the development of grievance arbitration. This is followed in part 3 (chapters 10–13) by a discussion of major issues that tend to arise in the collective bargaining process, including managerial prerogatives, union security, employee discipline, job security, and worker compensation.

These chapters are uneven, the strongest being those dealing essentially with a single subject (for example, grievance arbitration, employee discipline). A general weakness is the absence at many points of much in the way of analysis, coupled with a tendency to throw all kinds of odds and ends of information into the narrative. This is shown, perhaps to an exaggerated extent, in the chapter on economic issues. For example, industry wage differentials sometimes enter into collective bargaining, but the discussion in chapter 13 throws no light on the matter. The section on job evaluation as it relates to collective bargaining is confusing. There is no coherent analysis of the factors that influence decisions on general wage changes. With respect to cost-of-living escalator clauses, it is stated in the same paragraph that the most common formula for adjustment "is cents per hour for each point increase in the CPI" and also that the "most common arrangement is to have wages adjusted for each 0.3-percent change in the CPI." Neither of these statements is correct.

Part 4 (chapters 14–17) covers a variety of situations that are designated as emerging labor relations processes. One chapter deals with State and local government, with special emphasis upon collective bargaining at educational institutions; another with the development of collective bargaining in the Federal sector. This is followed by a brief account of industrial relations systems in other parts of the world, with some consideration of problems of transnational collective bargaining with multinational corporations. The final chapter considers collective bargaining in professional sports (baseball in some detail); health care (particularly for nurses); and agriculture. At the end of the volume, summaries of a number of cases dealing with various aspects of the industrial relations process decided by the National Labor Relations Board and private arbitrators, with the decisions not indicated, are set forth for class discussion.

Clearly this volume contains a great deal of information. It cannot be used uncritically as a text. Its usefulness will depend heavily upon the extent to which the instructor brings skill and knowledge to bear upon its subject matter.

—H. M. DOUTY
Washington, D.C.

Opening the managerial ranks to women

Selecting, Developing, and Retaining Women Executives: A Corporate Strategy for the Eighties. By Helen J. McLane. New York, Litton Educational Publishing, Inc., 1980. 248 pp., bibliography. $14.95, Van Nostrand Reinhold Co., New York.

The labor force participation of women has grown substantially over the last decade and, today, more than half of all women are working or looking for work. Currently, women make up 42 percent of the labor force and, not surprisingly, most are crowded into a narrow range of lower paying, less desirable occupations. More than half of all women are engaged in either clerical or service work. Even when women have professional careers, they are often slotted into nonsupervisory and technical roles, rather than managerial positions which lead to the apex of the corporate pyramid. Yet, the aspirations of women to be managers and leaders is rising. Past practices have allowed few women in management, but present laws and government policies, most notably, affirmative action and equal opportunity, are requiring that changes be made in the hiring and advancement of women.

The introduction of women into mid- and upper-level managerial ranks is by no means a simple task. There are psychological and sociological barriers confronting women which make this endeavor difficult. In this book, Helen J. McLane focuses on management's task of successfully integrating women into the corporate hierarchy.

Probably the biggest mistake made in selecting a woman for a key managerial position is the failure to consider whether her personal characteristics are appropriate to the organization. In other words, the interviewer must determine if the potential woman executive is qualified not only in terms of her education and experience but that her personality, attitude, and life style do not conflict with the company's projected self-image. This evaluation is not something that occurs exclusively when considering a woman candidate; however, in their eagerness to hire women, many companies tend to overlook the need to match personalities.

It is not surprising to learn that the attitude of the woman executive's male peers often creates the biggest barrier and source of discouragement for women moving into the managerial ranks. The author points out a number of steps an organization can take to help assure the successful integration of a woman into management. First, the job should be a substantive position and not a post created for her. Second, the organization should judge her performance by clearly defined and readily measurable standards, the same standards by which others are judged. Last, the company should commit itself to providing the support that a woman will need if

she is to succeed. The message is clear; little overall progress will be made in advancing women without consistent and committed leadership from top management. Developing a climate for change of policies and practices in order to accept women as managers usually means revising some organizational procedures and many attitudes and relationships. And while the company must avoid being overprotective of women, female managers must be allowed to take risks and they must be allowed the opportunity to fail.

What do managerial and professional women want? McLane states it succinctly when she notes that women "basically want the same things as men: responsibility, challenge, opportunity for advancement, and appropriate compensation." Women want to be treated as individuals and not as stereotypical women. They seek evaluation on merit, not on sex.

In summation, the book offers advice on every matter concerning the recruitment, selection, hiring, development, positioning, and retention of women executives. In fact, its major inadequacy is in effectively separating one chapter from the next. The book would have benefited from an overall tightening of its content and a reduction in the use of personal interest stories which, after a while, tend to belabor the point rather than enhance it. The only other area for concern, in an otherwise fine presentation of management's goals, was the careless inclusion of a statement in which she reports that "three-fourths of all woman workers remain in five female occupations: secretary-stenographer, household worker, bookkeeper, elementary teacher, and waitress." While women are indeed concentrated in these occupations, they account for only 20 percent of the jobs held by women. In fact, an additional 20 percent of all women are engaged in managerial and professional occupations, but as McLane so aptly points out, they are concentrated in the technical-professional path that is likely to go to the lower middle-management level of the organization and not the more general managerial path leading all the way to top management.

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Will there be enough?

Uncertain Futures: Challenges for Decision-Makers. By Robert U. Ayres. New York, John Wiley & Sons, 1979. 429 pp. $16.95.

Built on Robert U. Ayres previous publications on interrelationships between resources and environment and on alternatives to the combustion engine, this book attempts to present a more global picture of national and international future resources and their economic, technological, and political implications. The author's objective is to provide the reader with a balanced assessment of likely futures in terms of both technological feasibility and social likelihood. The book does not place much accent on technical questions related to specific types and models of long-term forecasting, nor on detailed underlying theories of long-term technological and economic development. Rather, the author attempts to link qualitative and quantitative reasoning, different strands of thought, alpha and omega (conservative and revolutionary) methods, along with social and technological emphasis to yield a comprehensive overall picture of possible futures, mainly those pertaining to the United States.

After a brief, cursory, (and perhaps coarse) introductory chapter, which deals with issues of forecasting methodology written for the novice in this field, the author discusses various measures of man and projection, future natural resources, ecological development, and comparative advantage.

The central idea of unraveling our possible future via various measures of man is an innovative approach. Given the expertise required in a number of disciplines, it is understandable that some areas of the book are better documented and presented than others. This becomes evident in the chapters on measures of man which discuss competing social values, demographic and international developments, which, apart from a few references to prior work in sociology and political science, employ a fair amount of stereotypes and mere classifications of social and personal value systems and ideologies, as opposed to more thorough discussions of factors facilitating, limiting, or constraining future economic and technological developments.

The depth of the discussion and documentation of supporting evidence change considerably in the chapters which deal with microeconomic forecasts in key sectors, the general environment of technological change, diffusion of technological change, and the future resource environment.

The first of these chapters provides an overview of likely patterns of future consumption in food, energy, materials, and services based both on conventional extrapolations and, more importantly, on likely technological and developmental changes underlying these growth processes. The provision of international comparative data throughout offers a good contextual frame against which to analyze and compare U.S. consumption patterns.

The chapters on technology are helpful in showing both the underlying rationale and dynamics of technological change, and the nature of substitution processes for a number of materials and technologies.

In the chapter on the future resource environment, the author discusses factors which may or may not limit

future growth in terms of physical resources, including an account of the interrelationships between energy consumption and climate.

The last chapter illustrates the consequences of nuclear proliferation, another energy crisis, or a dramatic worsening of world food supplies.

This book will prove to be an indispensable and thought-provoking source to those readers who are more interested in the illustration of possible future environments than in who is right or wrong about the future.

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Making the marriage work too

Making It Together as a Two-Career Couple. By Marjorie Hansen Shaevitz and Morton H. Shaevitz. Boston, Mass., Houghton Mifflin Co., 1980. 282 pp. $8.95.

As social and economic changes swept across the United States in the 1960's and 1970's, Americans found themselves altering their institutions and their lives in an effort to keep up with, if not always ahead of, the effects of their shifting personal and financial fortunes. Certainly, the American family, as an institution, has not remained invulnerable to change, and one of the largest changes overtaking it has been the emergence of women from the home and into the workplace. According to the Bureau of Labor Statistics, by 1979 there were 18.7 million married-couple families with two wage earners or more; this book was written with those families in mind.

The authors, Marjorie Hansen Shaevitz and Morton H. Shaevitz, are codirectors of the Institute for Family and Work Relationships in La Jolla, Calif., and have been working with two-career couples for the last 8 years. They contend that until recently, couples who have faced career changes, reassignments, income disruption, and other facts of modern worklife, received little or no support from a community that was still primarily one wage-earner oriented. To help such couples, the authors offer advice on how to cope with the problems that can arise from a two-career relationship as well as how to deal with the minor day-to-day struggles of home maintenance in a busy household.

Half the book is devoted to advice about practical matters such as: choosing proper child care; finances; personal health care; and parental responsibilities as they relate to a working couple. A sample of subchapter headings finds information about Managing Your Time, Child Care Outside Your Home, and Costs in Earning Second Income. Unfortunately, most of the financial advice does not bear directly on the finances of two-career couples and has already been given in other popularly available "money books."

The second half of the book deals with serious career issues. The authors are firm believers in shared career decisionmaking and the sections dealing with work as it affects the two-career couple are realistic and fair. Lists of job-rating factors with instructions on how to weigh various items such as geographical area, personal goals, and economic costs are included to help readers in their decisionmaking. Even more helpful are the case histories of couples dealing with their own work-related dilemmas. Couples who have been counseled by the authors relate their two-career problems and solutions in their own words, which helps readers, who may themselves be facing the prospect of saying "No" to a transfer or some other stressful job-related situation, realize that they are not alone.

The authors emphasize that this book is for working couples, not about them. And although it may not suit every couple's needs, it does give the working couple a handy reference guide for almost every question larger than "Who takes out the garbage?"

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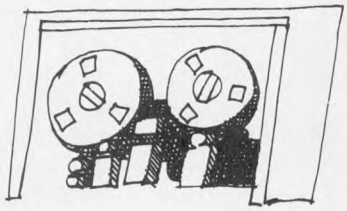
Current Labor Statistics



NOTES ON CURRENT LABOR STATISTICS

This section of the *Review* presents the principal statistical series collected and calculated by the Bureau of Labor Statistics. A brief introduction to each group of tables provides definitions, notes on the data, sources, and other material usually found in footnotes.

Readers who need additional information are invited to consult the BLS regional offices listed on the inside front cover of this issue of the *Review*. Some general notes applicable to several series are given below.

Seasonal adjustment. Certain monthly and quarterly data are adjusted to eliminate the effect of such factors as climatic conditions, industry production schedules, opening and closing of schools, holiday buying periods, and vacation practices, which might otherwise mask short-term movements of the statistical series. Tables containing these data are identified as "seasonally adjusted." Seasonal effects are estimated on the basis of past experience. When new seasonal factors are computed each year, revisions may affect seasonally adjusted data for several preceding years. For a technical discussion of the method used to make seasonal adjustments, see *X-11 Variant of the Census Method II Seasonal Adjustment Program*, Technical Paper No. 15 (Bureau of the Census, 1967).

Seasonally adjusted labor force data in tables 2–7 were last revised in the February 1980 issue of the *Review* to reflect the preceding year's experience. Beginning in January 1980, the BLS introduced two major modifications in the seasonal adjustment methodology for labor force data. First, the data are being seasonally adjusted with a new procedure called X-11/ARIMA, which was developed at Statistics Canada as an extension of the standard X-11 method. A detailed description of the procedure appears in *The X-11 ARIMA Seasonal Adjustment Method* by Estela Bee Dagum (Statistics Canada Catalogue No. 12-564E, September 1979). The second change is that seasonal factors are now being calculated for use during the first 6 months of the year, rather than for the entire year, and then are calculated at mid-year for the July-December period. Revisions of historical data continue to be made only at the end of each calendar year.

Annual revision of the seasonally adjusted payroll data in tables 11, 13, 16, and 18 begins with the August 1980 issue using the X-11 ARIMA seasonal adjustment methodology. New seasonal factors for productivity data in tables 33 and 34 are usually introduced in the September issue. Seasonally adjusted indexes and percent changes from month to month and from quarter to quarter are published for numerous Consumer and Producer Price Index series. However, seasonally adjusted indexes are not published for the U.S. average All Items CPI. Only seasonally adjusted percent changes are available for this series.

Adjustments for price changes. Some data are adjusted to eliminate the effect of changes in price. These adjustments are made by dividing current dollar values by the Consumer Price Index or the appropriate component of the index, then multiplying by 100. For example, given a current hourly wage rate of $3 and a current price index number of 150, where 1967 = 100, the hourly rate expressed in 1967 dollars is $2 ($3/150 × 100 = $2). The resulting values are described as "real," "constant," or "1967" dollars.

Availability of information. Data that supplement the tables in this section are published by the Bureau of Labor Statistics in a variety of sources. Press releases provide the latest statistical information published by the Bureau; the major recurring releases are published according to the schedule given below. The *Handbook of Labor Statistics 1978*, Bulletin 2000, provides more detailed data and greater historical coverage for most of the statistical series presented in the *Monthly Labor Review*. More information from the household and establishment surveys is provided in *Employment and Earnings*, a monthly publication of the Bureau, and in two comprehensive data books issued annually—*Employment and Earnings, United States* and *Employment and Earnings, States and Areas*. More detailed information on wages and other aspects of collective bargaining appears in the monthly periodical, *Current Wage Developments*. More detailed price information is published each month in the periodicals, the *CPI Detailed Report* and *Producer Prices and Price Indexes*.

Symbols

p = preliminary. To improve the timeliness of some series, preliminary figures are issued based on representative but incomplete returns.
r = revised. Generally this revision reflects the availability of later data but may also reflect other adjustments.
n.e.c. = not elsewhere classified.

Schedule of release dates for major BLS statistical series

Title and frequency (monthly except where indicated)	Release date	Period covered	Release date	Period covered	MLR table number
Employment situation	December 5	November	January 9	December	1–11
Producer Price Index	December 5	November	January 9	December	26–30
Consumer Price Index	December 23	November	January 23	December	22–25
Real earnings	December 23	November	January 23	December	14–20
Work stoppages	December 30	November	January 29	December	37
Labor turnover in manufacturing	December 31	November	January 30	December	12–13
Major collective bargaining settlements (quarterly)	...	...	January 26	1980	35–36

EMPLOYMENT DATA FROM THE HOUSEHOLD SURVEY

EMPLOYMENT DATA in this section are obtained from the Current Population Survey, a program of personal interviews conducted monthly by the Bureau of the Census for the Bureau of Labor Statistics. The sample consists of about 65,000 households beginning in January 1980, selected to represent the U.S. population 16 years of age and older. Households are interviewed on a rotating basis, so that three-fourths of the sample is the same for any 2 consecutive months.

Definitions

Employed persons are (1) those who worked for pay any time during the week which includes the 12th day of the month or who worked unpaid for 15 hours or more in a family-operated enterprise and (2) those who were temporarily absent from their regular jobs because of illness, vacation, industrial dispute, or similar reasons. A person working at more than one job is counted only in the job at which he or she worked the greatest number of hours.

Unemployed persons are those who did not work during the survey week, but were available for work except for temporary illness and had looked for jobs within the preceding 4 weeks. Persons who did not look for work because they were on layoff or waiting to start new jobs within the next 30 days are also counted among the unemployed. The **unemployment rate** represents the number unemployed as a percent of the civilian labor force.

The **civilian labor force** consists of all employed or unemployed persons in the civilian noninstitutional population; the **total labor force** includes military personnel. Persons **not in the labor force** are those not classified as employed or unemployed; this group includes persons retired, those engaged in their own housework, those not working while attending school, those unable to work because of longterm illness, those discouraged from seeking work because of personal or job market factors, and those who are voluntarily idle. The **noninstitutional population** comprises all persons 16 years of age and older who are not inmates of penal or mental institutions, sanitariums, or homes for the aged, infirm, or needy.

Full-time workers are those employed at least 35 hours a week; **part-time workers** are those who work fewer hours. Workers on part-time schedules for economic reasons (such as slack work, terminating or starting a job during the week, material shortages, or inability to find full-time work) are among those counted as being on full-time status, under the assumption that they would be working full time if conditions permitted. The survey classifies unemployed persons in full-time or part-time status by their reported preferences for full-time or part-time work.

Notes on the data

From time to time, and especially after a decennial census, adjustments are made in the Current Population Survey figures to correct for estimating errors during the preceding years. These adjustments affect the comparability of historical data presented in table 1. A description of these adjustments and their effect on the various data series appear in the Explanatory Notes of *Employment and Earnings.*

Data in tables 2–7 are seasonally adjusted, based on the seasonal experience through December 1979.

1. Employment status of the noninstitutional population, 16 years and over, selected years, 1950–79

[Numbers in thousands]

Year	Total noninstitutional population	Total labor force		Civilian labor force						Not in labor force
		Number	Percent of population	Total	Employed			Unemployed		
					Total	Agriculture	Nonagricultural industries	Number	Percent of labor force	
1950	106,645	63,858	59.9	62,208	58,918	7,160	51,758	3,288	5.3	42,787
1955	112,732	68,072	60.4	65,023	62,170	6,450	55,722	2,852	4.4	44,660
1960	119,759	72,142	60.2	69,628	65,778	5,458	60,318	3,852	5.5	47,617
1964	127,224	75,830	59.6	73,091	69,305	4,523	64,782	3,786	5.2	51,394
1965	129,236	77,178	59.7	74,455	71,088	4,361	66,726	3,366	4.5	52,058
1966	131,180	78,893	60.1	75,770	72,895	3,979	68,915	2,875	3.8	52,288
1967	133,319	80,793	60.6	77,347	74,372	3,844	70,527	2,975	3.8	52,527
1968	135,562	82,272	60.7	78,737	75,920	3,817	72,103	2,817	3.6	53,291
1969	137,841	84,240	61.1	80,734	77,902	3,606	74,296	2,832	3.5	53,602
1970	140,182	85,903	61.3	82,715	78,627	3,462	75,165	4,088	4.9	54,280
1971	142,596	86,929	61.0	84,113	79,120	3,387	75,732	4,993	5.9	55,666
1972	145,775	88,991	61.0	86,542	81,702	3,472	78,230	4,840	5.6	56,785
1973	148,263	91,040	61.4	88,714	84,409	3,452	80,957	4,304	4.9	57,222
1974	150,827	93,240	61.8	91,011	83,935	3,492	82,443	5,076	5.6	57,587
1975	153,449	94,793	61.8	92,613	84,783	3,380	81,403	7,830	8.5	58,655
1976	156,048	96,917	62.1	94,773	87,485	3,297	84,188	7,288	7.7	59,130
1977	158,559	99,534	62.8	97,401	90,546	3,244	87,302	6,855	7.0	59,025
1978	161,058	102,537	63.7	100,420	94,373	3,342	91,031	6,047	6.0	58,521
1979	163,620	104,996	64.2	102,908	96,945	3,297	93,648	5,963	5.8	58,623

2. Employment status by sex, age, and race, seasonally adjusted

[Numbers in thousands]

Employment status	Annual average		1979			1980									
	1978	1979	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
TOTAL															
Total noninstitutional population[1]	161,058	163,620	164,468	164,682	164,898	165,101	165,298	165,506	165,693	165,886	166,105	166,391	166,578	166,789	167,005
Total labor force	102,537	104,996	105,688	105,744	106,088	106,310	106,346	106,184	106,511	107,230	106,634	107,302	107,139	107,155	107,301
Civilian noninstitutional population[1]	158,941	161,532	162,375	162,589	162,809	163,020	163,211	163,416	163,601	163,799	164,013	164,293	164,464	164,667	164,884
Civilian labor force	100,420	102,908	103,595	103,652	103,999	104,229	104,260	104,094	104,419	105,142	104,542	105,203	105,025	105,034	105,180
Employed	94,373	96,945	97,474	97,608	97,912	97,804	97,953	97,656	97,154	96,988	96,537	96,996	97,006	97,207	97,176
Agriculture	3,342	3,297	3,294	3,385	3,359	3,270	3,326	3,358	3,242	3,379	3,191	3,257	3,180	3,442	3,324
Nonagricultural industries	91,031	93,648	94,180	94,223	94,553	94,534	94,626	94,298	93,912	93,609	93,346	93,739	93,826	93,765	93,851
Unemployed	6,047	5,963	6,121	6,044	6,087	6,425	6,307	6,438	7,265	8,154	8,006	8,207	8,019	7,827	8,005
Unemployment rate	6.0	5.8	5.9	5.8	5.9	6.2	6.0	6.2	7.0	7.8	7.7	7.8	7.6	7.5	7.6
Not in labor force	58,521	58,623	58,780	58,937	58,810	58,791	58,951	59,322	59,182	58,657	59,471	59,091	59,439	59,633	59,704
Men, 20 years and over															
Civilian noninstitutional population[1]	67,006	68,293	68,697	68,804	68,940	69,047	69,140	69,238	69,329	69,428	69,532	69,664	69,756	69,864	69,987
Civilian labor force	53,464	54,486	54,760	54,709	54,781	54,855	55,038	54,996	55,114	55,467	55,220	55,398	55,474	55,547	55,504
Employed	51,212	52,264	52,443	52,374	52,478	52,279	52,531	52,300	51,868	51,796	51,510	51,668	51,792	51,803	51,963
Agriculture	2,361	2,350	2,371	2,438	2,427	2,387	2,435	2,394	2,320	2,384	2,270	2,292	2,286	2,398	2,355
Nonagricultural industries	48,852	49,913	50,072	49,936	50,051	49,892	50,096	49,906	49,548	49,412	49,240	49,376	49,506	49,405	49,607
Unemployed	2,252	2,223	2,317	2,335	2,303	2,577	2,507	2,696	3,246	3,671	3,710	3,730	3,682	3,744	3,541
Unemployment rate	4.2	4.1	4.2	4.3	4.2	4.7	4.6	4.9	5.9	6.6	6.7	6.7	6.6	6.7	6.4
Not in labor force	13,541	13,807	13,937	14,095	14,159	14,192	14,102	14,242	14,215	13,961	14,312	14,266	14,282	14,317	14,483
Women, 20 years and over															
Civilian noninstitutional population[1]	75,489	76,860	77,308	77,426	77,542	77,656	77,766	77,876	77,981	78,090	78,211	78,360	78,473	78,598	78,723
Civilian labor force	37,416	38,910	39,362	39,445	39,659	39,878	39,857	39,751	40,137	40,246	40,125	40,471	40,589	40,297	40,486
Employed	35,180	36,698	37,112	37,248	37,402	37,574	37,604	37,496	37,602	37,576	37,530	37,769	37,961	37,824	37,716
Agriculture	586	591	572	612	582	540	567	582	552	616	541	565	548	607	572
Nonagricultural industries	34,593	36,107	36,540	36,636	36,820	37,034	37,037	36,914	37,051	36,960	36,989	37,204	37,413	37,216	37,144
Unemployed	2,236	2,213	2,250	2,197	2,257	2,304	2,254	2,255	2,534	2,670	2,596	2,702	2,628	2,473	2,771
Unemployment rate	6.0	5.7	5.7	5.6	5.7	5.8	5.7	5.7	6.3	6.6	6.5	6.7	6.5	6.1	6.8
Not in labor force	38,073	37,949	37,946	37,981	37,883	37,778	37,909	38,125	37,844	37,844	38,086	37,889	37,884	38,301	38,237
Both sexes, 16 - 19 years															
Civilian noninstitutional population[1]	16,447	16,379	16,370	16,360	16,326	16,317	16,305	16,302	16,291	16,281	16,271	16,268	16,235	16,205	16,174
Civilian labor force	9,540	9,512	9,473	9,498	9,559	9,497	9,365	9,346	9,168	9,429	9,197	9,334	8,962	9,190	9,191
Employed	7,981	7,984	7,919	7,986	8,032	7,952	7,818	7,859	7,683	7,616	7,497	7,560	7,253	7,580	7,498
Agriculture	395	356	351	335	350	344	325	381	370	379	380	401	346	437	398
Nonagricultural industries	7,586	7,628	7,568	7,651	7,682	7,608	7,493	7,478	7,313	7,237	7,117	7,159	6,907	7,143	7,100
Unemployed	1,559	1,528	1,554	1,512	1,527	1,545	1,547	1,487	1,485	1,813	1,700	1,774	1,709	1,610	1,693
Unemployment rate	16.3	16.1	16.4	15.9	16.0	16.3	16.5	15.9	16.2	19.2	18.5	19.0	19.1	17.5	18.4
Not in labor force	6,907	6,867	6,897	6,862	6,767	6,820	6,940	6,956	7,123	6,852	7,074	6,934	7,273	7,015	6,983
White															
Civilian noninstitutional population[1]	139,580	141,614	142,296	142,461	142,645	142,806	142,951	143,115	143,254	143,403	143,565	143,770	143,900	144,051	144,211
Civilian labor force	88,456	90,602	91,147	91,242	91,579	91,852	91,977	91,821	92,083	92,535	92,096	92,456	92,294	92,337	92,550
Employed	83,836	86,025	86,454	86,571	86,894	86,895	87,081	86,822	86,385	86,148	85,792	86,063	85,981	86,315	86,391
Unemployed	4,620	4,577	4,693	4,671	4,685	4,957	4,896	4,999	5,698	6,386	6,303	6,392	6,313	6,021	6,159
Unemployment rate	5.2	5.1	5.1	5.1	5.1	5.4	5.3	5.4	6.2	6.9	6.8	6.9	6.8	6.5	6.7
Not in labor force	51,124	51,011	51,149	51,219	51,066	50,954	50,975	51,294	51,171	50,868	51,469	51,314	51,606	51,714	51,661
Black and other															
Civilian noninstitutional population[1]	19,361	19,918	20,079	20,128	20,163	20,214	20,261	20,301	20,346	20,395	20,448	20,523	20,564	20,617	20,673
Civilian labor force	11,964	12,306	12,512	12,391	12,432	12,453	12,362	12,266	12,319	12,559	12,446	12,739	12,650	12,680	12,737
Employed	10,537	10,920	11,076	11,044	11,024	10,979	10,937	10,823	10,771	10,813	10,751	10,932	10,930	10,882	10,911
Unemployed	1,427	1,386	1,436	1,347	1,408	1,474	1,424	1,443	1,549	1,746	1,695	1,807	1,719	1,798	1,826
Unemployment rate	11.9	11.3	11.5	10.9	11.3	11.8	11.5	11.8	12.6	13.9	13.6	14.2	13.6	14.2	14.3
Not in labor force	7,397	7,612	7,567	7,737	7,731	7,761	7,899	8,035	8,027	7,836	8,002	7,784	7,914	7,937	7,936

[1]As in table 1, population figures are not seasonally adjusted.

NOTE: The monthly data in this table have been revised to reflect seasonal experience through 1979.

3. Selected employment indicators, seasonally adjusted

[In thousands]

Selected categories	Annual average		1979			1980									
	1978	1979	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
CHARACTERISTIC															
Total employed, 16 years and over	94,373	96,945	97,474	97,608	97,912	97,804	97,953	97,656	97,154	96,988	96,537	96,996	97,006	97,207	97,176
Men	55,491	56,499	56,629	56,580	56,734	56,486	56,732	56,601	55,998	55,823	55,457	55,629	55,551	55,738	55,885
Women	38,882	40,446	40,845	41,028	41,178	41,318	41,221	41,051	41,156	41,165	41,079	41,367	41,455	41,469	41,291
Married men, spouse present	38,688	39,090	39,124	38,845	38,924	38,749	38,955	38,745	38,342	38,147	38,193	37,999	37,910	37,969	38,139
Married women, spouse present	21,881	22,724	22,919	22,940	23,027	23,111	23,178	23,202	23,080	23,155	23,144	23,097	23,162	23,017	22,953
OCCUPATION															
White-collar workers	47,205	49,342	49,738	49,912	49,911	50,313	50,448	50,302	50,405	50,606	50,861	51,114	51,413	51,149	51,084
Professional and technical	14,245	15,050	15,057	15,131	15,272	15,337	15,444	15,397	15,542	15,551	15,712	15,741	15,761	15,501	15,796
Managers and administrators, except farm	10,105	10,516	10,639	10,617	10,535	10,608	10,971	10,755	10,745	10,882	10,911	11,046	11,153	11,018	10,958
Salesworkers	5,951	6,163	6,261	6,362	6,346	6,452	6,185	6,113	5,988	6,022	5,981	6,128	6,124	6,347	6,317
Clerical workers	16,904	17,613	17,781	17,802	17,758	17,915	17,848	18,037	18,129	18,152	18,256	18,199	18,375	18,284	18,013
Blue-collar workers	31,531	32,066	32,205	32,110	32,302	31,882	31,754	31,670	31,127	30,681	30,243	30,149	29,983	30,444	30,621
Craft and kindred workers	12,386	12,880	13,001	12,925	13,041	12,814	12,728	12,767	12,773	12,523	12,301	12,382	12,233	12,546	12,545
Operatives, except transport	10,875	10,909	10,967	10,963	11,042	10,678	10,661	10,579	10,408	10,336	10,131	10,134	10,066	10,196	10,244
Transport equipment operatives	3,541	3,612	3,593	3,628	3,635	3,616	3,571	3,558	3,483	3,421	3,395	3,335	3,474	3,434	3,457
Nonfarm laborers	4,729	4,665	4,644	4,594	4,584	4,774	4,795	4,767	4,463	4,402	4,416	4,299	4,209	4,268	4,376
Service workers	12,839	12,834	12,937	12,899	12,970	12,979	13,080	12,981	13,034	13,932	12,930	13,045	12,917	12,917	12,863
Farmworkers	2,798	2,703	2,695	2,718	2,694	2,660	2,764	2,733	2,658	2,745	2,606	2,689	2,601	2,779	2,735
MAJOR INDUSTRY AND CLASS OF WORKER															
Agriculture:															
Wage and salary workers	1,419	1,413	1,381	1,475	1,451	1,428	1,417	1,449	1,370	1,405	1,365	1,352	1,263	1,418	1,344
Self-employed workers	1,607	1,580	1,602	1,622	1,596	1,554	1,648	1,600	1,591	1,662	1,590	1,631	1,648	1,706	1,643
Unpaid family workers	316	304	313	310	310	293	283	300	281	289	269	292	273	315	338
Nonagricultural industries:															
Wage and salary workers	84,253	86,540	86,982	87,020	87,384	87,578	87,419	87,221	86,741	86,631	86,257	86,407	86,508	86,331	86,507
Government	15,289	15,369	15,423	15,358	15,397	15,414	15,540	15,622	15,668	15,799	15,891	15,760	15,495	15,538	15,565
Private industries	68,966	71,171	71,559	71,662	71,987	72,163	71,879	71,599	71,072	70,832	70,365	70,647	71,014	70,793	70,942
Private households	1,363	1,240	1,261	1,211	1,228	1,132	1,178	1,115	1,123	1,206	1,219	1,245	1,209	1,113	1,146
Other industries	67,603	69,931	70,298	70,451	70,759	71,031	70,702	70,484	69,949	69,625	69,147	69,402	69,805	69,679	69,796
Self-employed workers	6,305	6,652	6,812	6,781	6,737	6,752	6,899	6,825	6,813	6,648	6,666	6,765	6,879	7,014	7,051
Unpaid family workers	472	455	430	417	409	379	397	376	363	411	445	441	399	423	420
PERSONS AT WORK [1]															
Nonagricultural industries	85,693	88,133	88,638	88,617	89,180	89,454	88,985	88,585	87,660	87,680	87,910	87,454	88,270	88,243	88,466
Full-time schedules	70,543	72,647	73,204	72,997	73,137	73,223	73,110	72,749	71,807	71,224	71,206	70,649	71,478	71,969	72,142
Part time for economic reasons	3,216	3,281	3,315	3,392	3,519	3,513	3,406	3,418	3,816	4,349	3,999	4,113	4,148	4,204	4,261
Usually work full time	1,249	1,325	1,354	1,413	1,491	1,549	1,380	1,463	1,709	2,064	1,781	1,847	1,692	1,695	1,667
Usually work part time	1,967	1,956	1,961	1,979	2,028	1,964	2,026	1,955	2,107	2,285	2,217	2,266	2,456	2,509	2,593
Part time for noneconomic reasons	11,934	12,205	12,119	12,228	12,524	12,718	12,469	12,418	12,037	12,106	12,706	12,692	12,644	12,069	12,064

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial disputes.

NOTE: The monthly data in this table have been revised to reflect seasonal experience through 1979.

4. Selected unemployment indicators, seasonally adjusted

[Unemployment rates]

Selected categories	Annual average		1979			1980									
	1978	1979	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
CHARACTERISTIC															
Total, 16 years and over	6.0	5.8	5.9	5.8	5.9	6.2	6.0	6.2	7.0	7.8	7.7	7.8	7.6	7.5	7.6
Men, 20 years and over	4.2	4.1	4.2	4.3	4.2	4.7	4.6	4.9	5.9	6.6	6.7	6.7	6.6	6.7	6.4
Women, 20 years and over	6.0	5.7	5.7	5.6	5.7	5.8	5.7	5.7	6.3	6.6	6.5	6.7	6.5	6.1	6.8
Both sexes, 16 – 19 years	16.3	16.1	16.4	15.9	16.0	16.3	16.5	15.9	16.2	19.2	18.5	19.0	19.1	17.5	18.4
White, total	5.2	5.1	5.1	5.1	5.1	5.4	5.3	5.4	6.2	6.9	6.8	6.9	6.8	6.5	6.7
Men, 20 years and over	3.7	3.6	3.7	3.7	3.7	4.1	4.0	4.4	5.3	5.9	6.0	6.0	5.9	5.9	5.7
Women, 20 years and over	5.2	5.0	5.0	4.9	5.0	5.1	5.2	4.9	5.5	5.8	5.8	5.9	5.8	5.5	5.9
Both sexes, 16 – 19 years	13.9	13.9	14.1	13.9	13.9	14.0	13.8	13.8	14.6	17.4	16.4	16.7	17.0	14.8	15.9
Black and other, total	11.9	11.3	11.5	10.9	11.3	11.8	11.5	11.8	12.6	13.9	13.6	14.2	13.6	14.2	14.3
Men, 20 years and over	8.6	8.4	8.6	8.4	8.6	9.6	9.2	9.3	10.9	12.0	12.6	12.7	12.7	13.5	12.1
Women, 20 years and over	10.6	10.1	10.2	9.5	10.0	10.0	9.0	10.5	11.4	11.9	10.9	11.5	10.6	10.4	12.6
Both sexes, 16 – 19 years	36.3	33.5	35.1	32.8	34.3	34.6	37.9	33.0	29.8	35.2	34.4	36.6	37.4	38.2	37.8
Married men, spouse present	2.8	2.7	2.9	2.9	2.8	3.4	3.1	3.4	4.1	4.7	4.9	5.1	4.9	4.8	4.6
Married women, spouse present	5.5	5.1	5.2	4.8	5.0	5.2	5.4	5.3	5.7	6.3	6.1	6.2	6.1	5.6	6.1
Women who head families	8.5	8.3	8.4	8.4	8.4	9.2	8.5	8.7	9.3	8.3	8.4	8.9	8.9	8.5	10.4
Full-time workers	5.5	5.3	5.4	5.4	5.4	5.7	5.6	5.8	6.6	7.5	7.4	7.6	7.4	7.3	7.3
Part-time workers	9.0	8.7	8.9	8.3	8.5	8.7	8.9	8.3	8.9	9.3	8.8	8.7	8.6	8.6	9.4
Unemployed 15 weeks and over	1.4	1.2	1.2	1.1	1.2	1.3	1.2	1.3	1.6	1.6	1.7	1.8	2.1	2.2	2.2
Labor force time lost[1]	6.5	6.3	6.4	6.4	6.4	6.7	6.6	6.8	7.5	8.8	8.3	8.5	8.3	8.2	8.4
OCCUPATION															
White-collar workers	3.5	3.3	3.4	3.2	3.3	3.4	3.4	3.3	3.7	3.9	3.7	3.7	3.7	3.7	4.0
Professional and technical	2.6	2.4	2.7	2.4	2.3	2.2	2.3	2.3	2.4	2.7	2.6	2.4	2.3	2.4	2.7
Managers and administrators, except farm	2.1	2.1	2.2	1.9	2.0	1.9	2.2	2.4	2.6	2.7	2.4	2.5	2.4	2.4	2.6
Salesworkers	4.1	3.9	3.8	3.7	3.8	4.4	4.5	4.0	4.7	4.5	4.4	4.2	4.1	4.2	4.6
Clerical workers	4.9	4.6	4.7	4.4	4.6	4.8	4.7	4.5	5.1	5.4	5.3	5.4	5.4	5.4	5.6
Blue-collar workers	6.9	6.9	7.2	7.5	7.2	8.0	7.7	8.0	9.7	11.3	11.5	11.5	11.4	10.9	10.8
Craft and kindred workers	4.6	4.5	4.6	4.9	4.4	4.9	4.8	5.4	6.7	8.1	8.0	7.4	8.1	7.7	7.0
Operatives, except transport	8.1	8.4	9.1	9.0	9.0	9.9	9.2	9.3	11.6	14.0	13.8	14.6	13.6	13.0	13.2
Transport equipment operatives	5.2	5.4	5.6	5.2	5.0	6.9	6.7	6.6	8.9	9.0	10.5	10.5	10.0	10.6	10.5
Nonfarm laborers	10.7	10.8	10.7	12.2	12.2	12.3	12.0	13.0	14.1	15.4	16.2	16.1	16.5	15.1	15.3
Service workers	7.4	7.1	6.8	6.6	6.6	6.9	6.9	7.1	8.0	8.5	8.1	8.4	8.6	8.1	8.3
Farmworkers	3.8	3.8	4.3	4.5	4.3	4.4	3.9	4.0	5.0	4.8	4.2	4.8	5.6	4.3	4.5
INDUSTRY															
Nonagricultural private wage and salary workers[2]	5.9	5.7	5.9	5.8	5.8	6.2	6.0	6.2	7.1	8.2	8.3	8.2	8.0	7.8	7.9
Construction	10.6	10.2	9.9	10.2	10.3	10.8	10.5	13.0	15.1	17.5	16.5	16.1	18.3	16.5	14.3
Manufacturing	5.5	5.5	6.0	5.9	5.9	6.7	6.4	6.5	7.9	9.9	9.9	10.3	9.3	9.1	9.3
Durable goods	4.9	5.0	5.5	5.6	5.5	6.7	6.3	6.4	8.3	10.5	11.2	11.2	10.2	10.1	9.4
Nondurable goods	6.3	6.4	6.8	6.3	6.4	6.8	6.7	6.7	7.4	8.8	8.0	8.8	7.9	7.7	9.2
Transportation and public utilities	3.7	3.7	3.8	4.2	4.1	4.4	4.4	3.8	4.6	5.1	5.2	5.8	5.7	5.4	5.3
Wholesale and retail trade	6.9	6.5	6.4	6.5	6.4	6.6	6.4	6.3	7.0	7.6	8.0	7.5	7.6	7.6	7.7
Finance and service industries	5.1	4.9	4.9	4.6	4.7	4.6	4.6	4.9	5.1	5.7	5.7	5.7	5.6	5.3	5.7
Government workers	3.9	3.7	4.0	3.6	3.6	3.8	4.0	4.2	4.4	4.2	3.5	4.1	4.0	4.1	4.6
Agricultural wage and salary workers	8.8	9.1	9.9	10.1	9.4	10.3	9.2	10.2	11.9	11.7	9.7	10.8	13.8	10.9	11.8

[1] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

[2] Includes mining, not shown separately.

NOTE: The monthly data in this table have been revised to reflect seasonal experience through 1979.

5. Unemployment rates, by sex and age, seasonally adjusted

Sex and age	Annual average		1979			1980									
	1978	1979	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Total, 16 years and over	6.0	5.8	5.9	5.8	5.9	6.2	6.0	6.2	7.0	7.8	7.7	7.8	7.6	7.5	7.6
16 to 19 years	16.3	16.1	16.4	15.9	16.0	16.3	16.5	15.9	16.2	19.2	18.5	19.0	19.1	17.5	18.4
16 to 17 years	19.3	18.1	18.4	17.3	18.0	19.0	18.7	17.4	18.7	21.7	19.8	20.9	22.8	19.9	20.8
18 to 19 years	14.2	14.6	15.0	14.7	14.5	14.0	15.1	14.7	14.4	17.7	18.0	17.7	16.6	15.8	16.8
20 to 24 years	9.5	9.0	9.6	8.8	9.8	10.1	9.5	9.7	11.4	12.7	12.4	12.3	11.9	11.9	12.5
25 years and over	4.0	3.9	4.0	4.0	3.8	4.2	4.1	4.4	5.0	5.5	5.5	5.7	5.5	5.4	5.4
25 to 54 years	4.2	4.1	4.2	4.3	4.1	4.4	4.5	4.7	5.4	5.9	6.0	6.1	5.9	6.0	5.9
55 years and over	3.2	3.0	3.0	2.7	2.7	3.5	2.8	2.8	3.4	3.6	3.4	3.5	3.6	3.4	3.3
Men, 16 years and over	5.2	5.1	5.2	5.2	5.2	5.7	5.5	5.7	6.7	7.7	7.8	7.8	7.7	7.7	7.5
16 to 19 years	15.7	15.8	15.7	15.8	15.6	16.2	15.6	14.8	16.1	19.7	19.5	19.7	20.2	18.6	20.0
16 to 17 years	19.2	17.9	17.1	17.8	17.9	19.0	18.0	15.9	18.3	22.0	21.8	20.8	24.6	21.3	22.0
18 to 19 years	13.2	14.2	14.4	14.0	13.6	13.9	14.1	14.0	14.2	17.9	19.3	18.7	17.0	16.6	18.4
20 to 24 years	9.1	8.6	9.5	8.4	9.4	10.4	9.9	10.4	12.3	13.7	13.8	13.4	13.9	13.5	14.1
25 years and over	3.3	3.3	3.4	3.5	3.2	3.7	3.6	3.9	4.7	5.3	5.5	5.6	5.4	5.6	5.0
25 to 54 years	3.4	3.4	3.5	3.8	3.4	3.8	3.8	4.2	5.0	5.7	5.8	6.1	5.7	6.2	5.5
55 years and over	3.1	2.9	2.8	2.6	2.6	3.5	2.6	2.7	3.4	3.5	3.8	3.9	4.0	3.5	3.2
Women, 16 years and over	7.2	6.8	6.9	6.6	6.8	6.8	6.8	6.8	7.3	7.8	7.5	7.8	7.6	7.1	7.8
16 to 19 years	17.0	16.4	17.2	16.1	16.4	16.3	17.6	17.3	16.3	18.7	17.3	18.2	17.8	16.3	16.6
16 to 17 years	19.5	18.3	19.8	16.7	18.0	19.1	19.5	19.2	19.1	21.4	17.6	20.9	20.7	18.3	19.4
18 to 19 years	15.3	15.0	15.6	15.5	15.5	14.2	16.2	15.6	14.6	17.5	16.6	16.6	16.1	15.0	15.1
20 to 24 years	10.1	9.6	9.7	9.3	10.2	9.8	9.1	9.0	10.2	11.6	10.8	11.1	9.7	10.1	10.6
25 years and over	5.1	4.8	4.9	4.7	4.7	4.9	4.9	5.0	5.5	5.7	5.6	5.7	5.7	5.3	6.0
25 to 54 years	5.4	5.2	5.2	5.0	5.1	5.2	5.4	5.5	6.0	6.1	6.1	6.2	6.2	5.8	6.5
55 years and over	3.3	3.2	3.4	2.9	2.9	3.4	3.0	2.9	3.4	3.6	2.8	3.0	3.0	3.2	3.3

6. Unemployed persons, by reason for unemployment, seasonally adjusted

[Numbers in thousands]

Reason for unemployment	1979			1980									
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
NUMBER OF UNEMPLOYED													
Lost last job	2,731	2,729	2,728	2,988	2,907	3,047	3,611	4,301	4,625	4,558	4,360	4,473	4,237
On layoff	929	987	944	1,019	1,031	1,129	1,424	1,944	2,117	1,975	1,692	1,809	1,727
Other job losers	1,802	1,742	1,784	1,969	1,876	1,918	2,188	2,357	2,508	2,583	2,668	2,664	2,510
Left last job	835	845	800	779	813	788	926	992	898	857	897	842	865
Reentered labor force	1,762	1,698	1,771	1,797	1,784	1,803	1,967	2,015	1,822	1,868	1,895	1,817	2,045
Seeking first job	804	736	858	811	827	805	743	884	863	930	867	858	886
PERCENT DISTRIBUTION													
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	44.5	45.4	44.3	46.9	45.9	47.3	49.8	52.5	56.3	55.5	54.4	56.0	52.7
On layoff	15.2	16.4	15.3	16.0	16.3	17.5	19.6	23.7	25.8	24.0	21.1	22.6	21.5
Other job losers	29.4	29.0	29.0	30.9	29.6	29.8	30.2	28.8	30.6	31.5	33.3	33.3	31.2
Job leavers	13.6	14.1	13.0	12.2	12.8	12.2	12.8	12.1	10.9	10.4	11.2	10.5	10.8
Reentrants	28.7	28.3	28.8	28.2	28.2	28.0	27.1	24.6	22.2	22.7	23.6	22.7	25.5
New entrants	13.1	12.3	13.9	12.7	13.1	12.5	10.3	10.8	10.5	11.3	10.8	10.7	11.0
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE													
Job losers	2.6	2.6	2.6	2.9	2.8	2.9	3.5	4.1	4.4	4.3	4.2	4.3	4.0
Job leavers	.8	.8	.8	.7	.8	.8	.9	.9	.9	.8	.9	.8	.8
Reentrants	1.7	1.6	1.7	1.7	1.7	1.7	1.9	1.9	1.7	1.8	1.8	1.7	1.9
New entrants	.8	.7	.8	.8	.8	.8	.7	.8	.8	.9	.8	.8	.8

7. Duration of unemployment, seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		1979			1980									
	1978	1979	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Less than 5 weeks	2,793	2,869	2,955	2,919	2,916	3,184	2,995	2,995	3,309	3,872	3,333	3,363	3,268	2,957	3,182
5 to 14 weeks	1,875	1,892	1,963	1,869	1,966	1,907	2,081	2,169	2,391	2,697	2,922	2,700	2,490	2,613	2,498
15 weeks and over	1,379	1,202	1,195	1,191	1,230	1,334	1,286	1,363	1,629	1,722	1,766	1,915	2,184	2,326	2,318
15 to 26 weeks	746	684	678	660	711	795	790	776	953	1,014	1,027	1,057	1,259	1,397	1,264
27 weeks and over	633	518	517	531	519	539	496	587	676	709	739	858	925	930	1,053
Average (mean) duration, in weeks	11.9	10.8	10.5	10.6	10.5	10.5	10.7	11.0	11.3	10.5	11.7	11.6	12.6	13.1	13.3

NOTE: The monthly data in these tables have been revised to reflect seasonal experience through 1979.

EMPLOYMENT, HOURS, AND EARNINGS DATA FROM ESTABLISHMENT SURVEYS

EMPLOYMENT, HOURS, AND EARNINGS DATA in this section are compiled from payroll records reported monthly on a voluntary basis to the Bureau of Labor Statistics and its cooperating State agencies by 166,000 establishments representing all industries except agriculture. In most industries, the sampling probabilities are based on the size of the establishment; most large establishments are therefore in the sample. (An establishment is not necessarily a firm; it may be a branch plant, for example, or warehouse.) Self-employed persons and others not on a regular civilian payroll are outside the scope of the survey because they are excluded from establishment records. This largely accounts for the difference in employment figures between the household and establishment surveys.

LABOR TURNOVER DATA in this section are compiled from personnel records reported monthly on a voluntary basis to the Bureau of Labor Statistics and its cooperating State agencies. A sample of 40,000 establishments represents all industries in the manufacturing and mining sectors of the economy.

Definitions

Employed persons are all persons who received pay (including holiday and sick pay) for any part of the payroll period including the 12th of the month. Persons holding more than one job (about 5 percent of all persons in the labor force) are counted in each establishment which reports them.

Production workers in manufacturing include blue-collar worker supervisors and all nonsupervisory workers closely associated with production operations. Those workers mentioned in tables 14–20 include production workers in manufacturing and mining; construction workers in construction; and nonsupervisory workers in transportation and public utilities, in wholesale and retail trade, in finance, insurance, and real estate, and in services industries. These groups account for about four-fifths of the total employment on private nonagricultural payrolls.

Earnings are the payments production or nonsupervisory workers receive during the survey period, including premium pay for overtime or late-shift work but excluding irregular bonuses and other special payments. **Real earnings** are earnings adjusted to eliminate the effects of price change. The **Hourly Earnings Index** is calculated from average hourly earnings data adjusted to exclude the effects of two types of changes that are unrelated to underlying wage-rate developments: fluctuations in overtime premiums in manufacturing (the only sector for which overtime data are available) and the effects of changes and seasonal factors in the proportion of workers in high-wage and low-wage industries. **Spendable earnings** are earnings from which estimated social security and Federal income taxes have been deducted. The Bureau of Labor Statistics computes spendable earnings from gross weekly earnings for only two illustrative cases: (1) a worker with no dependents and (2) a married worker with three dependents.

Hours represent the average weekly hours of production or nonsupervisory workers for which pay was received and are different from standard or scheduled hours. **Overtime hours** represent the portion of gross average weekly hours which were in excess of regular hours and for which overtime premiums were paid.

Labor turnover is the movement of all wage and salary workers from one employment status to another. **Accession rates** indicate the average number of persons added to a payroll in a given period per 100 employees; **separation rates** indicate the average number dropped from a payroll per 100 employees. Although month-to-month changes in employment can be calculated from the labor turnover data, the results are not comparable with employment data from the employment and payroll survey. The labor turnover survey measures changes during the calendar month while the employment and payroll survey measures changes from midmonth to midmonth.

Notes on the data

Establishment data collected by the Bureau of Labor Statistics are periodically adjusted to comprehensive counts of employment (called "benchmarks"). The latest complete adjustment was made with the release of June 1980 data, published in the August 1980 issue of the *Review.* Consequently, data published in the *Review* prior to that issue are not necessarily comparable to current data. Complete comparable historical unadjusted and seasonally adjusted data are published in a Supplement to Employment and Earnings (unadjusted data from April 1977 through March 1980 and seasonally adjusted data from January 1974 through March 1980) and in *Employment and Earnings, United States, 1909–78,* BLS Bulletin 1312–11 (for prior periods).

Data on recalls were shown for the first time in tables 12 and 13 in the January 1978 issue of the *Review.* For a detailed discussion of the recalls series, along with historical data, see "New Series on Recalls from the Labor Turnover Survey," *Employment and Earnings,* December 1977, pp. 10–19.

A comprehensive discussion of the differences between household and establishment data on employment appears in Gloria P. Green, "Comparing employment estimates from household and payroll surveys," *Monthly Labor Review,* December 1969, pp. 9–20. See also *BLS Handbook of Methods for Surveys and Studies,* Bulletin 1910 (Bureau of Labor Statistics, 1976).

The formulas used to construct the spendable average weekly earnings series reflect the latest provisions of the Federal income tax and social security tax laws. For the spendable average weekly earnings formulas for the years 1978–80, see *Employment and Earnings,* March 1980, pp. 10–11. Real earnings data are adjusted using the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

8. Employment by industry, 1950–79

[Nonagricultural payroll data, in thousands]

Year	Total	Mining	Construction	Manufacturing	Transportation and public utilities	Wholesale and retail trade	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services	Government		
											Total	Federal	State and local
1950	45,197	901	2,364	15,241	4,034	9,386	2,635	6,751	1,888	5,357	6,026	1,928	4,098
1951	47,819	929	2,637	16,393	4,226	9,742	2,727	7,015	1,956	5,547	6,389	2,302	4,087
1952	48,793	898	2,668	16,632	4,248	10,004	2,812	7,192	2,035	5,699	6,609	2,420	4,188
1953	50,202	866	2,659	17,549	4,290	10,247	2,854	7,393	2,111	5,835	6,645	2,305	4,340
1954	48,990	791	2,646	16,314	4,084	10,235	2,867	7,368	2,200	5,969	6,751	2,188	4,563
1955	50,641	792	2,839	16,882	4,141	10,535	2,926	7,610	2,298	6,240	6,914	2,187	4,727
1956	52,369	822	3,039	17,243	4,244	10,858	3,018	7,840	2,389	6,497	7,278	2,209	5,069
1957	52,853	828	2,962	17,174	4,241	10,886	3,028	7,858	2,438	6,708	7,616	2,217	5,399
1958	51,324	751	2,817	15,945	3,976	10,750	2,980	7,770	2,481	6,765	7,839	2,191	5,648
1959[1]	53,268	732	3,004	16,675	4,011	11,127	3,082	8,045	2,549	7,087	8,083	2,233	5,850
1960	54,189	712	2,926	16,796	4,004	11,391	3,143	8,248	2,629	7,378	8,353	2,270	6,083
1961	53,999	672	2,859	16,326	3,903	11,337	3,133	8,204	2,688	7,620	8,594	2,279	6,315
1962	55,549	650	2,948	16,853	3,906	11,566	3,198	8,368	2,754	7,982	8,890	2,340	6,550
1963	56,653	635	3,010	16,995	3,903	11,778	3,248	8,530	2,830	8,277	9,225	2,358	6,868
1964	58,283	634	3,097	17,274	3,951	12,160	3,337	8,823	2,911	8,660	9,596	2,348	7,248
1965	60,765	632	3,232	18,062	4,036	12,716	3,466	9,250	2,977	9,036	10,074	2,378	7,696
1966	63,901	627	3,317	19,214	4,158	13,245	3,597	9,648	3,058	9,498	10,784	2,564	8,220
1967	65,803	613	3,248	19,447	4,268	13,606	3,689	9,917	3,185	10,045	11,391	2,719	8,672
1968	67,897	606	3,350	19,781	4,318	14,099	3,779	10,320	3,337	10,567	11,839	2,737	9,102
1969	70,384	619	3,575	20,167	4,442	14,705	3,907	10,798	3,512	11,169	12,195	2,758	9,437
1970	70,880	623	3,588	19,367	4,515	15,040	3,993	11,047	3,645	11,548	12,554	2,731	9,823
1971	71,214	609	3,704	18,623	4,476	15,352	4,001	11,351	3,772	11,797	12,881	2,696	10,185
1972	73,675	628	3,889	19,151	4,541	15,949	4,113	11,836	3,908	12,276	13,334	2,684	10,649
1973	76,790	642	4,097	20,154	4,656	16,607	4,277	12,329	4,046	12,857	13,732	2,663	11,068
1974	78,265	697	4,020	20,077	4,725	16,987	4,433	12,554	4,148	13,441	14,170	2,724	11,446
1975	76,945	752	3,525	18,323	4,542	17,060	4,415	12,645	4,165	13,892	14,686	2,748	11,937
1976	79,382	779	3,576	18,997	4,582	17,755	4,546	13,209	4,271	14,551	14,871	2,733	12,138
1977	82,471	813	3,851	19,682	4,713	18,516	4,708	13,808	4,467	15,303	15,127	2,727	12,399
1978	86,697	851	4,229	20,505	4,923	19,542	4,969	14,573	4,724	16,252	15,672	2,753	12,919
1979	89,886	960	4,483	21,062	5,141	20,269	5,204	15,066	4,974	17,078	15,920	2,773	13,147

[1]Data include Alaska and Hawaii beginning in 1959.

9. Employment by State

[Nonagricultural payroll data, in thousands]

State	Sept. 1979	Aug. 1980	Sept. 1980	State	Sept. 1979	Aug. 1980	Sept. 1980
Alabama	1,370.8	1,331.9	1,335.2	Montana	296.6	286.3	287.6
Alaska	177.9	184.6	...	Nebraska	635.7	623.8	629.1
Arizona	973.9	958.9	982.1	Nevada	394.3	402.8	407.9
Arkansas	763.8	745.3	760.7	New Hampshire	385.6	388.8	386.7
California	9,750.9	9,684.8	9,760.3	New Jersey	3,050.6	3,077.1	3,046.7
Colorado	1,234.5	1,252.1	1,255.4	New Mexico	469.7	475.3	476.5
Connecticut	1,412.6	1,386.5	1,403.4	New York	7,201.7	7,197.4	7,154.3
Delaware	259.0	256.1	257.0	North Carolina	2,406.9	2,385.9	2,427.1
District of Columbia	630.8	631.8	618.4	North Dakota	249.4	248.1	249.1
Florida	3,366.0	3,471.3	3,519.7	Ohio	4,543.6	4,360.5	4,417.8
Georgia	2,125.8	2,127.4	2,141.0	Oklahoma	1,108.1	1,134.7	1,141.8
Hawaii	395.3	413.6	396.1	Oregon	1,073.0	1,022.1	1,035.0
Idaho	344.2	327.7	...	Pennsylvania	4,855.9	4,729.2	4,715.7
Illinois	4,886.5	4,842.8	4,788.4	Rhode Island	406.9	391.9	394.9
Indiana	2,283.8	2,199.2	2,226.6	South Carolina	1,187.1	1,174.3	1,183.5
Iowa	1,144.1	1,074.2	1,107.3	South Dakota	243.7	240.1	238.4
Kansas	956.5	933.3	949.5	Tennessee	1,810.5	1,749.5	1,766.9
Kentucky	1,258.1	1,187.5	1,204.5	Texas	5,675.0	5,791.0	5,845.3
Louisiana	1,502.5	1,542.8	1,556.1	Utah	558.6	560.5	567.6
Maine	425.4	427.5	422.4	Vermont	201.1	198.3	201.8
Maryland	1,628.5	1,622.3	1,614.5	Virginia	2,120.2	2,124.1	2,135.9
Massachusetts	2,609.5	2,687.8	2,676.9	Washington	1,609.8	1,608.0	1,621.9
Michigan	3,618.0	3,378.9	3,453.4	West Virginia	660.2	625.4	630.1
Minnesota	1,803.0	1,786.6	1,790.9	Wisconsin	2,007.3	1,987.0	2,000.1
Mississippi	845.9	811.1	824.3	Wyoming	212.4	224.2	225.0
Missouri	2,028.9	1,966.9	1,984.0				
				Virgin Islands	35.2	36.5	35.4

10. Employment by industry division and major manufacturing group

[Nonagricultural payroll data, in thousands]

Industry division and group	Annual average		1979			1980									
	1978	1979	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. p	Oct. p
TOTAL	86,697	89,886	91,062	91,288	91,394	89,630	89,781	90,316	90,761	90,849	91,049	89,820	90,072	90,718	91,242
MINING	851	960	984	986	985	982	987	996	1,006	1,024	1,049	1,030	1,029	1,034	1,037
CONSTRUCTION	4,229	4,483	4,792	4,698	4,536	4,194	4,109	4,150	4,311	4,471	4,611	4,633	4,712	4,683	4,694
MANUFACTURING	20,505	21,062	21,193	21,055	20,987	20,777	20,730	20,793	20,533	20,250	20,201	19,754	20,044	20,279	20,283
Production workers	14,734	15,085	15,170	15,034	14,964	14,738	14,678	14,727	14,466	14,172	14,093	13,657	13,947	14,199	14,209
Durable goods	12,274	12,772	12,824	12,744	12,733	12,600	12,599	12,647	12,414	12,150	12,065	11,774	11,827	12,037	12,095
Production workers	8,805	9,120	9,131	9,054	9,040	8,885	8,869	8,909	8,672	8,409	8,307	8,025	8,075	8,297	8,355
Lumber and wood products	754.7	766.1	780.0	757.2	737.4	717.4	718.9	716.9	678.4	654.8	668.0	666.8	683.0	689.0	690.5
Furniture and fixtures	494.1	499.3	502.5	503.1	501.8	498.0	494.6	494.1	488.7	469.1	460.8	438.1	454.6	466.6	468.8
Stone, clay, and glass products	698.2	709.7	718.6	710.3	697.4	678.2	674.7	679.0	675.5	668.1	666.2	656.0	663.2	668.1	669.0
Primary metal industries	1,214.9	1,250.2	1,231.4	1,222.6	1,209.9	1,207.2	1,205.1	1,203.7	1,193.8	1,149.8	1,112.9	1,055.5	1,059.6	1,079.5	1,084.2
Fabricated metal products	1,672.6	1,723.7	1,733.8	1,733.3	1,725.2	1,696.8	1,699.4	1,703.8	1,671.4	1,619.8	1,598.6	1,538.4	1,567.6	1,593.6	1,605.1
Machinery, except electrical	2,325.5	2,481.6	2,465.1	2,458.7	2,471.6	2,538.5	2,536.5	2,539.9	2,523.5	2,509.3	2,486.1	2,440.2	2,417.8	2,448.5	2,458.7
Electric and electronic equipment	2,006.1	2,124.3	2,162.0	2,164.0	2,171.9	2,162.9	2,157.7	2,167.7	2,156.2	2,120.2	2,102.2	2,066.5	2,080.7	2,105.6	2,117.6
Transportation equipment	2,002.8	2,082.8	2,076.5	2,044.2	2,079.3	1,975.8	1,983.1	2,005.6	1,891.1	1,835.1	1,847.0	1,810.2	1,785.4	1,869.4	1,879.3
Instruments and related products	653.1	688.9	694.6	694.9	698.8	697.7	700.5	703.6	702.2	699.4	702.9	698.3	697.8	695.0	697.5
Miscellaneous manufacturing	451.5	445.6	459.7	455.5	439.4	427.7	428.8	432.9	433.0	424.6	420.1	404.0	417.6	421.3	423.8
Nondurable goods	8,231	8,290	8,369	8,311	8,254	8,177	8,131	8,146	8,119	8,100	8,136	7,980	8,217	8,242	8,188
Production workers	5,929	5,965	6,039	5,980	5,924	5,853	5,809	5,818	5,794	5,763	5,786	5,632	5,872	5,902	5,854
Food and kindred products	1,724.1	1,728.1	1,781.8	1,736.3	1,706.2	1,659.9	1,644.1	1,641.1	1,626.2	1,638.5	1,676.8	1,709.5	1,795.3	1,791.2	1,729.5
Tobacco manufactures	70.6	69.9	77.4	68.6	70.8	69.1	67.1	64.4	62.9	62.7	64.6	63.9	71.3	75.3	76.8
Textile mill products	899.1	888.5	886.1	890.4	889.7	884.0	884.6	886.9	882.1	870.6	853.2	820.6	854.1	854.1	857.7
Apparel and other textile products	1,332.3	1,312.5	1,317.3	1,305.8	1,287.1	1,282.0	1,305.8	1,318.4	1,304.2	1,299.0	1,310.5	1,236.9	1,299.9	1,310.6	1,304.6
Paper and allied products	698.7	706.7	709.3	707.8	705.9	703.5	701.9	701.8	698.8	692.4	695.0	682.3	688.7	688.7	686.6
Printing and publishing	1,192.0	1,239.5	1,251.4	1,262.0	1,268.5	1,266.3	1,270.4	1,272.1	1,270.4	1,267.8	1,271.3	1,264.5	1,264.3	1,267.6	1,270.8
Chemicals and allied products	1,095.5	1,110.7	1,113.7	1,113.9	1,114.2	1,113.1	1,112.1	1,118.1	1,120.6	1,119.5	1,122.2	1,112.0	1,108.4	1,106.5	1,107.8
Petroleum and coal products	207.7	210.0	213.5	212.6	210.6	208.6	155.9	153.1	173.6	203.4	209.1	212.0	212.4	211.0	213.2
Rubber and miscellaneous plastics products	754.5	775.6	770.8	765.9	755.6	750.3	746.3	746.5	737.2	702.4	688.5	659.3	680.4	695.0	699.5
Leather and leather products	256.8	248.0	247.9	247.6	245.2	240.3	242.6	243.4	243.3	243.2	244.7	218.9	242.6	242.1	241.3
TRANSPORTATION AND PUBLIC UTILITIES	4,923	5,141	5,233	5,243	5,240	5,136	5,130	5,143	5,147	5,167	5,185	5,145	5,144	5,168	5,167
WHOLESALE AND RETAIL TRADE	19,542	20,269	20,474	20,756	21,114	20,325	20,155	20,226	20,373	20,497	20,562	20,506	20,579	20,687	20,706
WHOLESALE TRADE	4,969	5,204	5,266	5,282	5,264	5,241	5,250	5,269	5,265	5,263	5,287	5,278	5,284	5,290	5,321
RETAIL TRADE	14,573	15,066	15,208	15,474	15,850	15,084	14,905	14,957	15,108	15,234	15,275	15,228	15,295	15,397	15,385
FINANCE, INSURANCE, AND REAL ESTATE	4,724	4,974	5,025	5,039	5,047	5,052	5,061	5,085	5,104	5,137	5,201	5,229	5,232	5,188	5,190
SERVICES	16,252	17,078	17,297	17,284	17,271	17,135	17,317	17,478	17,636	17,747	17,846	17,973	17,966	17,905	17,944
GOVERNMENT	15,672	15,920	16,064	16,227	16,214	16,029	16,292	16,445	16,651	16,556	16,394	15,550	15,366	15,774	16,221
Federal	2,753	2,773	2,756	2,760	2,770	2,763	2,803	2,869	3,103	2,963	2,995	2,949	2,862	2,754	2,740
State and local	12,919	13,147	13,308	13,467	13,444	13,266	13,489	13,576	13,548	13,593	13,399	12,601	12,504	13,020	13,481

11. Employment by industry division and major manufacturing group, seasonally adjusted

[Nonagricultural payroll data, in thousands]

Industry division and group	1979			1980									
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. [p]	Oct. [p]
TOTAL	90,441	90,552	90,678	91,031	91,186	91,144	90,951	90,468	90,047	89,867	90,142	90,365	90,622
MINING	982	985	992	999	1,007	1,009	1,012	1,023	1,029	1,013	1,013	1,027	1,035
CONSTRUCTION	4,529	4,553	4,615	4,745	4,659	4,529	4,467	4,436	4,379	4,322	4,359	4,397	4,437
MANUFACTURING	21,043	20,966	20,983	20,971	20,957	20,938	20,642	20,286	20,014	19,828	19,940	20,046	20,139
Production workers	15,025	14,948	14,956	14,911	14,871	14,850	14,550	14,186	13,931	13,759	13,872	13,978	14,070
Durable goods	12,764	12,693	12,706	12,681	12,715	12,707	12,442	12,140	11,947	11,819	11,860	11,955	12,038
Production workers	9,069	9,001	9,009	8,953	8,967	8,961	8,686	8,386	8,205	8,084	8,123	8,218	8,300
Lumber and wood products	768	757	746	743	745	737	689	654	648	650	662	674	680
Furniture and fixtures	498	498	497	497	495	494	491	472	461	449	456	464	465
Stone, clay, and glass products	709	704	704	705	705	700	680	663	647	641	648	656	660
Primary metal industries	1,236	1,230	1,219	1,215	1,214	1,209	1,193	1,144	1,096	1,049	1,059	1,072	1,087
Fabricated metal products	1,723	1,722	1,718	1,707	1,711	1,711	1,678	1,620	1,584	1,551	1,569	1,586	1,596
Machinery, except electrical	2,478	2,460	2,459	2,532	2,529	2,530	2,518	2,517	2,476	2,448	2,437	2,451	2,471
Electric and electronic equipment	2,149	2,150	2,163	2,169	2,168	2,176	2,167	2,127	2,094	2,079	2,083	2,093	2,105
Transportation equipment	2,063	2,033	2,057	1,970	2,006	2,006	1,885	1,819	1,831	1,839	1,840	1,854	1,866
Instruments and related products	696	695	698	699	702	705	703	700	696	698	697	696	699
Miscellaneous manufacturing	444	444	445	444	440	439	438	424	414	415	409	409	409
Nondurable goods	8,279	8,273	8,277	8,290	8,242	8,231	8,200	8,146	8,067	8,009	8,080	8,091	8,101
Production workers	5,956	5,947	5,947	5,958	5,904	5,889	5,864	5,800	5,726	5,675	5,749	5,760	5,770
Food and kindred products	1,723	1,725	1,724	1,716	1,713	1,704	1,690	1,691	1,677	1,683	1,690	1,672	1,673
Tobacco manufactures	70	64	66	67	68	68	69	70	71	69	67	68	70
Textile mill products	885	887	889	888	888	888	884	869	843	833	851	851	857
Apparel and other textile products	1,302	1,294	1,296	1,305	1,313	1,316	1,302	1,291	1,287	1,276	1,296	1,300	1,289
Paper and allied products	709	708	708	710	709	708	702	692	685	680	682	686	686
Printing and publishing	1,251	1,259	1,261	1,269	1,273	1,274	1,272	1,268	1,269	1,266	1,266	1,269	1,271
Chemicals and allied products	1,114	1,116	1,118	1,121	1,121	1,123	1,123	1,120	1,112	1,103	1,100	1,104	1,108
Petroleum and coal products	212	212	213	214	161	157	175	203	205	207	208	208	212
Rubber and miscellaneous plastics products	766	762	756	755	751	749	740	703	681	663	680	692	695
Leather and leather products	247	246	246	245	245	244	243	239	237	229	240	241	240
TRANSPORTATION AND PUBLIC UTILITIES	5,203	5,216	5,212	5,202	5,198	5,202	5,178	5,167	5,134	5,114	5,129	5,122	5,136
WHOLESALE AND RETAIL TRADE	20,414	20,479	20,448	20,529	20,637	20,610	20,531	20,487	20,459	20,506	20,589	20,615	20,639
WHOLESALE TRADE	5,246	5,269	5,251	5,278	5,302	5,301	5,286	5,268	5,245	5,247	5,263	5,279	5,300
RETAIL TRADE	15,168	15,210	15,197	15,251	15,335	15,309	15,245	15,219	15,214	15,259	15,326	15,336	15,339
FINANCE, INSURANCE, AND REAL ESTATE	5,033	5,049	5,064	5,091	5,101	5,115	5,119	5,137	5,150	5,167	5,180	5,188	5,200
SERVICES	17,264	17,308	17,362	17,462	17,540	17,580	17,618	17,659	17,652	17,760	17,788	17,851	17,908
GOVERNMENT	15,973	15,996	16,002	16,032	16,087	16,161	16,384	16,273	16,230	16,157	16,144	16,119	16,128
Federal	2,769	2,773	2,773	2,791	2,826	2,886	3,115	2,960	2,951	2,893	2,828	2,765	2,754
State and local	13,204	13,223	13,229	13,241	13,261	13,275	13,269	13,313	13,279	13,264	13,316	13,354	13,374

12. Labor turnover rates in manufacturing, 1977 to date

[Per 100 employees]

Year	Annual average	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Total accessions												
1977	4.0	3.7	3.7	4.0	3.8	4.6	4.9	4.3	5.3	4.6	3.9	3.1	2.4
1978	4.1	3.8	3.2	3.8	4.0	4.7	4.9	4.4	5.4	4.9	4.3	3.3	2.4
1979	4.0	4.0	3.4	3.8	3.9	4.7	4.8	4.3	5.0	4.5	4.1	3.0	2.2
1980	...	3.8	3.3	3.5	3.1	3.4	3.9	3.8	4.5	P4.3	...	...	...
	New hires												
1977	2.8	2.2	2.1	2.6	2.7	3.5	3.7	3.0	4.0	3.5	3.0	2.2	1.6
1978	3.1	2.5	2.2	2.7	2.9	3.6	3.9	3.3	4.2	3.9	3.5	2.6	1.7
1979	2.9	2.8	2.5	2.8	2.9	3.6	3.8	3.1	3.7	3.4	3.1	2.2	1.5
1980	...	2.4	2.2	2.3	2.1	2.1	2.4	2.1	2.5	P2.5	...	...	...
	Recalls												
1977	.9	1.2	1.3	1.1	.9	.8	.8	.9	1.0	.8	.6	.6	.6
1978	.7	1.0	.7	.8	.8	.8	.7	.8	.9	.7	.6	.5	.5
1979	.7	.9	.7	.7	.7	.8	.7	.9	.9	.8	.7	.5	.5
1980	...	1.1	.9	.9	.8	1.0	1.2	1.4	1.7	P1.4	...	...	...
	Total separations												
1977	3.8	3.9	3.4	3.4	3.4	3.5	3.5	4.3	5.1	4.9	3.8	3.4	3.4
1978	3.9	3.6	3.1	3.5	3.6	3.7	3.8	4.1	5.3	4.9	4.1	3.5	3.4
1979	4.0	3.8	3.2	3.6	3.7	3.8	3.9	4.3	5.7	4.7	4.2	3.8	3.5
1980	...	4.1	3.5	3.7	4.7	4.8	4.4	4.2	4.8	P4.1	...	...	...
	Quits												
1977	1.8	1.4	1.3	1.6	1.7	1.9	1.9	1.9	3.1	2.8	1.9	1.5	1.2
1978	2.1	1.5	1.4	1.8	2.0	2.1	2.2	2.1	3.5	3.1	2.3	1.7	1.3
1979	2.0	1.8	1.6	1.9	2.0	2.1	2.1	2.0	3.3	2.7	2.1	1.6	1.1
1980	...	1.6	1.5	1.6	1.5	1.5	1.4	1.4	2.2	P1.9	...	...	...
	Layoffs												
1977	1.1	1.7	1.4	1.0	.9	.8	.8	1.5	1.0	1.1	1.1	1.1	1.5
1978	.9	1.2	.9	.9	.8	.7	.7	1.1	.8	.8	.9	1.0	1.4
1979	1.1	1.1	.8	.8	.9	.7	.9	1.4	1.3	1.1	1.2	1.5	1.7
1980	...	1.6	1.2	1.3	2.3	2.5	2.2	2.0	1.7	P1.4	...	...	...

13. Labor turnover rates in manufacturing, by major industry group

[Per 100 employees]

Major industry group	Accession rates									Separation rates								
	Total			New hires			Recalls			Total			Quits			Layoffs		
	Sept. 1979	Aug. 1980	Sept. 1980 P	Sept. 1979	Aug. 1980	Sept. 1980 P	Sept. 1979	Aug. 1980	Sept. 1980 P	Sept. 1979	Aug. 1980	Sept. 1980 P	Sept. 1979	Aug. 1980	Sept. 1980 P	Sept. 1979	Aug. 1980	Sept. 1980 P
MANUFACTURING	4.5	4.5	4.3	3.4	2.5	2.5	0.8	1.7	1.4	4.7	4.8	4.1	2.7	2.2	1.9	1.1	1.7	1.4
Seasonally adjusted	3.9	3.6	3.8	2.8	1.9	2.0	...	...	...	3.9	3.9	3.5	1.9	1.3	1.3	1.2	1.9	1.5
Durable goods	4.0	4.0	4.0	3.0	1.9	2.1	.7	1.7	1.5	4.1	4.5	3.6	2.2	1.7	1.5	.9	1.9	1.3
Lumber and wood products	5.7	6.9	5.3	4.9	4.3	3.5	.6	2.4	1.6	6.4	6.2	5.9	4.5	3.2	2.8	.7	1.8	2.1
Furniture and fixtures	5.8	5.0	5.7	5.2	3.3	3.9	.4	1.5	1.6	5.3	5.4	4.3	3.6	2.9	2.5	.6	1.5	.8
Stone, clay, and glass products	3.8	4.5	3.7	3.1	2.3	2.1	.5	1.8	1.4	4.6	5.0	3.9	2.6	2.0	1.6	.9	2.0	1.5
Primary metal industries	2.3	4.3	4.4	1.5	.8	1.0	.6	3.2	3.0	3.9	4.6	3.7	1.4	.9	.7	1.6	2.7	2.2
Fabricated metal products	4.6	4.7	5.0	3.6	2.2	2.4	.8	2.2	2.2	4.6	4.7	3.7	2.5	2.0	1.5	1.1	1.9	1.4
Machinery, except electrical	3.1	2.6	2.9	2.5	1.5	1.7	.3	.9	.9	3.0	3.5	3.0	1.7	1.4	1.1	.5	1.4	1.0
Electric and electronic equipment	3.8	3.2	3.3	2.9	1.5	1.9	.4	1.1	.8	3.7	3.7	3.1	2.2	1.7	1.4	.5	1.1	.8
Transportation equipment	4.4	4.5	...	2.3	1.4	...	1.7	2.5	...	4.0	5.9	...	1.4	1.1	...	1.8	3.9	...
Instruments and related products	3.0	2.6	2.9	2.5	1.7	2.3	.2	.6	.4	3.4	3.2	3.2	2.4	1.9	2.0	.3	.6	.6
Miscellaneous manufacturing	6.9	5.3	6.2	6.0	3.7	4.3	.7	1.3	1.7	6.7	5.7	5.2	4.0	3.2	2.8	1.1	1.4	1.3
Nondurable goods	5.2	5.3	4.6	4.0	3.4	3.2	.9	1.6	1.3	5.6	5.2	4.9	3.4	2.9	2.5	1.3	1.4	1.6
Food and kindred products	8.1	8.9	7.1	6.1	6.0	4.7	1.8	2.6	2.2	9.1	7.1	8.2	5.2	4.1	3.7	2.7	2.0	3.5
Tobacco manufacturers	5.8	10.3	...	2.4	4.1	...	2.4	5.6	...	3.6	3.5	...	1.6	1.2	...	1.1	1.4	...
Textile mill products	4.9	3.9	3.8	4.0	2.8	2.7	.5	.9	.9	5.2	4.8	3.9	3.5	2.8	2.3	.6	1.0	.7
Apparel and other products	6.2	6.7	6.0	4.4	3.9	3.9	1.5	2.4	1.9	6.2	6.8	5.9	4.0	3.8	3.2	1.4	2.0	1.8
Paper and allied products	2.8	2.9	2.8	2.4	1.7	1.8	.3	1.0	.8	3.6	3.9	3.4	2.0	1.8	1.4	.7	1.2	1.2
Printing and publishing	4.1	3.3	3.5	3.7	2.7	2.9	.4	.5	.5	3.9	4.2	3.5	2.8	2.8	2.2	.5	.8	.7
Chemicals and allied products	1.7	1.6	1.8	1.4	1.0	1.2	.2	.4	.5	2.2	2.6	2.1	1.2	1.4	1.0	.4	.6	.6
Petroleum and coal products	3.5	2.1	2.0	3.3	1.7	1.6	.1	.3	.3	2.6	3.1	2.2	1.4	1.3	.9	.5	1.1	.7
Rubber and miscellaneous plastics products	5.3	5.8	5.2	4.3	3.0	3.1	.6	2.5	1.8	6.1	5.5	4.5	3.6	2.6	2.2	1.3	1.7	1.4
Leather and leather products	7.3	8.5	6.5	5.6	5.2	4.9	1.2	3.0	1.2	8.7	7.5	7.1	5.3	4.5	4.1	2.2	1.9	1.9

14. Hours and earnings, by industry division, 1949–79

[Gross averages, production or nonsupervisory workers on nonagricultural payrolls]

Year	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
	Total private			Mining			Construction			Manufacturing		
1949	$50.24	39.4	$1.275	$62.33	36.3	$1.717	$67.56	37.7	$1.792	$53.88	39.1	$1.378
1950	53.13	39.8	1.335	67.16	37.9	1.772	69.68	37.4	1.863	58.32	40.5	1.440
1951	57.86	39.9	1.45	74.11	38.4	1.93	76.96	38.1	2.02	63.34	40.6	1.56
1952	60.65	39.9	1.52	77.59	38.6	2.01	82.86	38.9	2.13	66.75	40.7	1.64
1953	63.76	39.6	1.61	83.03	38.8	2.14	86.41	37.9	2.28	70.47	40.5	1.74
1954	64.52	39.1	1.65	82.60	38.6	2.14	88.91	37.2	2.39	70.49	39.6	1.78
1955	67.72	39.6	1.71	89.54	40.7	2.20	90.90	37.1	2.45	75.30	40.7	1.85
1956	70.74	39.3	1.80	95.06	40.8	2.33	96.38	37.5	2.57	78.78	40.4	1.95
1957	73.33	38.8	1.89	98.25	40.1	2.45	100.27	37.0	2.71	81.19	39.8	2.04
1958	75.08	38.5	1.95	96.08	38.9	2.47	103.78	36.8	2.82	82.32	39.2	2.10
1959[1]	78.78	39.0	2.02	103.68	40.5	2.56	108.41	37.0	2.93	88.26	40.3	2.19
1960	80.67	38.6	2.09	105.04	40.4	2.60	112.67	36.7	3.07	89.72	39.7	2.26
1961	82.60	38.6	2.14	106.92	40.5	2.64	118.08	36.9	3.20	92.34	39.8	2.32
1962	85.91	38.7	2.22	110.70	41.0	2.70	122.47	37.0	3.31	96.56	40.4	2.39
1963	88.46	38.8	2.28	114.40	41.6	2.75	127.19	37.3	3.41	99.23	40.5	2.45
1964	91.33	38.7	2.36	117.74	41.9	2.81	132.06	37.2	3.55	102.97	40.7	2.53
1965	95.45	38.8	2.46	123.52	42.3	2.92	138.38	37.4	3.70	107.53	41.2	2.61
1966	98.82	38.6	2.56	130.24	42.7	3.05	146.26	37.6	3.89	112.19	41.4	2.71
1967	101.84	38.0	2.68	135.89	42.6	3.19	154.95	37.7	4.11	114.49	40.6	2.82
1968	107.73	37.8	2.85	142.71	42.6	3.35	164.49	37.3	4.41	122.51	40.7	3.01
1969	114.61	37.7	3.04	154.80	43.0	3.60	181.54	37.9	4.79	129.51	40.6	3.19
1970	119.83	37.1	3.23	164.40	42.7	3.85	195.45	37.3	5.24	133.33	39.8	3.35
1971	127.31	36.9	3.45	172.14	42.4	4.06	211.67	37.2	5.69	142.44	39.9	3.57
1972	136.90	37.0	3.70	189.14	42.6	4.44	221.19	36.5	6.06	154.71	40.5	3.82
1973	145.39	36.9	3.94	201.40	42.4	4.75	235.89	36.8	6.41	166.46	40.7	4.09
1974	154.76	36.5	4.24	219.14	41.9	5.23	249.25	36.6	6.81	176.80	40.0	4.42
1975	163.53	36.1	4.53	249.31	41.9	5.95	266.08	36.4	7.31	190.79	39.5	4.83
1976	175.45	36.1	4.86	273.90	42.4	6.46	283.73	36.8	7.71	209.32	40.1	5.22
1977	189.00	36.0	5.25	301.20	43.4	6.94	295.65	36.5	8.10	228.90	40.3	5.68
1978	203.70	35.8	5.69	332.88	43.4	7.67	318.69	36.8	8.66	249.27	40.4	6.17
1979	219.30	35.6	6.16	365.50	43.0	8.50	342.99	37.0	9.27	268.94	40.2	6.69
	Transportation and public utilities			Wholesale and retail trade			Finance, insurance, and real estate			Services		
1949	.....	.....	.....	$42.93	40.5	$1.060	$47.63	37.8	$1.260	.....	.....	.....
1950	.....	.....	.....	44.55	40.5	1.100	50.52	37.7	1.340	.....	.....	.....
1951	.....	.....	.....	47.79	40.5	1.18	54.67	37.7	1.45	.....	.....	.....
1952	.....	.....	.....	49.20	40.0	1.23	57.08	37.8	1.51	.....	.....	.....
1953	.....	.....	.....	51.35	39.5	1.30	59.57	37.7	1.58	.....	.....	.....
1954	.....	.....	.....	53.33	39.5	1.35	62.04	37.6	1.65	.....	.....	.....
1955	.....	.....	.....	55.16	39.4	1.40	63.92	37.6	1.70	.....	.....	.....
1956	.....	.....	.....	57.48	39.1	1.47	65.68	36.9	1.78	.....	.....	.....
1957	.....	.....	.....	59.60	38.7	1.54	67.53	36.7	1.84	.....	.....	.....
1958	.....	.....	.....	61.76	38.6	1.60	70.12	37.1	1.89	.....	.....	.....
1959[1]	.....	.....	.....	64.41	38.8	1.66	72.74	37.3	1.95	.....	.....	.....
1960	.....	.....	.....	66.01	38.6	1.71	75.14	37.2	2.02	.....	.....	.....
1961	.....	.....	.....	67.41	38.3	1.76	77.12	36.9	2.09	.....	.....	.....
1962	.....	.....	.....	69.91	38.2	1.83	80.94	37.3	2.17	.....	.....	.....
1963	.....	.....	.....	72.01	38.1	1.89	84.38	37.5	2.25	.....	.....	.....
1964	$118.78	41.1	$2.89	74.66	37.9	1.97	85.79	37.3	2.30	$70.03	36.1	$1.94
1965	125.14	41.3	3.03	76.91	37.7	2.04	88.91	37.2	2.39	73.60	35.9	2.05
1966	128.13	41.2	3.11	79.39	37.1	2.14	92.13	37.3	2.47	77.04	35.5	2.17
1967	130.82	40.5	3.23	82.35	36.6	2.25	95.72	37.1	2.58	80.38	35.1	2.29
1968	138.85	40.6	3.42	87.00	36.1	2.41	101.75	37.0	2.75	83.97	34.7	2.42
1969	147.74	40.7	3.63	91.39	35.7	2.56	108.70	37.1	2.93	90.57	34.7	2.61
1970	155.93	40.5	3.85	96.02	35.3	2.72	112.67	36.7	3.07	96.66	34.4	2.81
1971	168.82	40.1	4.21	101.09	35.1	2.88	117.85	36.6	3.22	103.06	33.9	3.04
1972	187.86	40.4	4.65	106.45	34.9	3.05	122.98	36.6	3.36	110.85	33.9	3.27
1973	203.31	40.5	5.02	111.76	34.6	3.23	129.20	36.6	3.53	117.29	33.8	3.47
1974	217.48	40.2	5.41	119.02	34.2	3.48	137.61	36.5	3.77	126.00	33.6	3.75
1975	233.44	39.7	5.88	126.45	33.9	3.73	148.19	36.5	4.06	134.67	33.5	4.02
1976	256.71	39.8	6.45	133.79	33.7	3.97	155.43	36.4	4.27	143.52	33.3	4.31
1977	278.90	39.9	6.99	142.52	33.3	4.28	165.26	36.4	4.54	153.45	33.0	4.65
1978	302.80	40.0	7.57	153.64	32.9	4.67	178.00	36.4	4.89	163.67	32.8	4.99
1979	325.98	39.9	8.17	164.96	32.6	5.06	190.77	36.2	5.27	175.27	32.7	5.36

[1] Data include Alaska and Hawaii beginning in 1959.

15. Weekly hours, by industry division and major manufacturing group

[Gross averages, production or nonsupervisory workers on private nonagricultural payrolls]

Industry division and group	Annual average		1979			1980									
	1978	1979	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. [p]	Oct. [p]
TOTAL PRIVATE	35.8	35.6	35.7	35.6	35.9	35.1	35.1	35.2	35.0	35.0	35.3	35.3	35.5	35.3	35.2
MINING	43.4	43.0	43.7	43.6	43.9	43.4	43.2	43.4	42.8	42.7	43.2	41.9	43.1	43.5	43.6
CONSTRUCTION	36.8	37.0	37.7	36.6	37.2	35.3	35.7	36.2	36.7	36.9	37.9	37.7	37.3	38.0	37.8
MANUFACTURING	40.4	40.2	40.2	40.3	40.9	39.8	39.8	39.8	39.4	39.3	39.4	38.8	39.3	39.8	39.7
Overtime hours	3.6	3.3	3.4	3.4	3.4	3.0	2.9	3.0	2.7	2.5	2.5	2.4	2.7	2.9	2.9
Durable goods	41.1	40.8	40.8	40.8	41.6	40.3	40.3	40.3	39.9	39.7	39.8	39.1	39.7	40.2	40.2
Overtime hours	3.8	3.5	3.5	3.4	3.5	3.1	3.0	3.1	2.7	2.5	2.4	2.3	2.6	2.9	2.9
Lumber and wood products	39.8	39.4	39.8	38.8	39.2	38.1	38.5	38.3	37.1	37.6	38.4	38.2	39.2	39.4	39.1
Furniture and fixtures	39.3	38.7	39.3	39.3	39.9	38.4	38.4	38.5	37.9	37.3	37.3	36.2	37.6	38.4	38.5
Stone, clay, and glass products	41.6	41.5	41.7	41.7	41.8	40.1	40.1	40.7	40.4	40.6	41.0	40.3	40.7	41.2	41.3
Primary metal industries	41.8	41.4	40.9	40.7	40.9	40.7	40.7	40.7	40.6	39.3	39.1	38.6	39.0	39.9	40.2
Fabricated metal products	41.0	40.7	40.9	41.0	41.9	40.6	40.4	40.6	40.2	39.9	40.1	39.2	40.0	40.4	40.4
Machinery except electrical	42.1	41.8	41.5	41.8	42.7	41.5	41.5	41.5	41.1	40.8	40.8	40.0	40.4	41.1	40.8
Electric and electronic equipment	40.3	40.3	40.3	40.8	41.3	40.2	40.2	40.0	39.6	39.3	39.4	38.5	39.2	39.7	39.7
Transportation equipment	42.2	41.1	41.3	40.8	42.7	40.0	40.4	40.4	39.8	39.9	39.9	39.5	40.0	40.5	41.1
Instruments and related products	40.9	40.8	40.8	41.4	41.7	41.0	40.8	40.6	40.4	40.3	40.5	39.6	39.9	40.1	39.9
Miscellaneous manufacturing	38.8	38.8	39.1	39.4	39.5	38.8	38.6	38.8	38.4	38.2	38.3	37.8	38.5	39.0	38.8
Nondurable goods	39.4	39.3	39.4	39.6	39.9	39.0	38.9	38.9	38.7	38.7	38.8	38.5	38.9	39.1	39.0
Overtime hours	3.2	3.1	3.2	3.3	3.2	2.9	2.8	2.9	2.7	2.5	2.5	2.6	2.9	3.0	2.9
Food and kindred products	39.7	39.9	40.0	40.2	40.4	39.5	39.1	39.0	38.9	39.7	39.6	39.9	40.3	40.3	39.8
Tobacco manufactures	38.1	38.0	38.9	38.8	39.4	37.3	36.9	37.7	38.2	38.7	38.3	36.5	36.8	37.7	39.0
Textile mill products	40.4	40.4	40.8	41.3	41.5	40.9	40.8	40.9	39.9	39.8	39.6	38.5	39.2	39.7	39.6
Apparel and other textile products	35.6	35.3	35.5	35.6	35.9	35.2	35.4	35.4	35.3	35.3	35.6	35.3	35.4	35.2	35.4
Paper and allied products	42.9	42.6	42.7	42.9	43.5	42.7	42.4	42.4	42.2	41.6	41.7	41.4	41.8	42.4	42.3
Printing and publishing	37.6	37.5	37.5	37.9	38.1	37.2	37.0	37.2	36.8	36.9	36.7	36.8	37.2	37.3	37.1
Chemicals and allied products	41.9	41.9	41.7	42.2	42.2	41.7	41.6	41.7	41.6	41.3	41.2	40.7	40.9	41.3	41.4
Petroleum and coal products	43.6	43.8	44.1	44.8	43.5	36.2	39.7	39.4	41.1	42.3	42.3	42.7	42.2	43.2	43.1
Rubber and miscellaneous plastics products	40.9	40.5	40.5	40.3	40.7	40.3	39.9	40.0	39.7	39.0	39.3	38.6	40.0	40.4	40.7
Leather and leather products	37.1	36.5	36.5	36.8	37.3	36.7	36.8	36.4	36.7	37.0	37.4	36.4	36.6	36.4	36.2
TRANSPORTATION AND PUBLIC UTILITIES	40.0	39.9	40.0	40.2	40.0	39.5	39.4	39.5	39.5	39.3	39.6	39.9	39.7	39.6	39.5
WHOLESALE AND RETAIL TRADE	32.9	32.6	32.4	32.4	32.9	31.9	31.9	32.0	31.8	31.9	32.3	32.5	32.7	32.1	31.9
WHOLESALE TRADE	38.8	38.8	38.9	38.9	39.1	38.5	38.4	38.4	38.4	38.5	38.2	38.2	38.4	38.4	38.4
RETAIL TRADE	31.0	30.6	30.4	30.4	31.0	29.8	29.8	29.9	29.7	29.9	30.4	30.7	30.9	30.1	29.9
FINANCE, INSURANCE, AND REAL ESTATE	36.4	36.2	36.2	36.3	36.4	36.2	36.3	36.3	36.2	36.1	36.4	36.2	36.3	36.1	36.0
SERVICES	32.8	32.7	32.6	32.6	32.8	32.5	32.5	32.5	32.4	32.3	32.8	33.1	33.1	32.6	32.5

16. Weekly hours, by industry division and major manufacturing group, seasonally adjusted

[Gross averages, production or nonsupervisory workers on private nonagricultural payrolls]

Industry division and group	1979			1980									
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. [P]	Oct. [P]
TOTAL PRIVATE	35.6	35.6	35.7	35.6	35.5	35.4	35.3	35.1	35.0	34.9	35.1	35.2	35.1
MINING	43.7	43.6	43.9	43.4	43.2	43.4	42.8	42.7	43.2	41.9	43.1	43.5	43.6
CONSTRUCTION	36.8	37.0	37.2	37.3	37.1	36.6	36.7	36.8	37.1	36.8	36.5	37.5	36.9
MANUFACTURING	40.1	40.1	40.2	40.3	40.1	39.8	39.8	39.3	39.1	39.0	39.4	39.5	39.6
Overtime hours	3.2	3.3	3.2	3.2	3.0	3.1	3.0	2.6	2.4	2.5	2.7	2.7	2.8
Durable goods	40.7	40.6	40.7	40.8	40.6	40.3	40.3	39.7	39.5	39.4	39.9	40.0	40.1
Overtime hours	3.3	3.3	3.2	3.3	3.1	3.2	3.0	2.5	2.4	2.4	2.6	2.7	2.8
Lumber and wood products	39.2	38.9	39.0	39.4	39.1	38.7	37.3	37.5	37.6	38.1	38.9	38.9	38.6
Furniture and fixtures	38.8	38.9	38.9	39.2	39.0	38.5	38.5	37.6	37.0	36.6	37.4	38.1	38.0
Stone, clay, and glass products	41.3	41.4	41.5	41.4	41.2	40.9	40.6	40.3	40.4	40.2	40.3	41.0	40.9
Primary metal industries	41.1	40.8	40.7	40.8	40.8	40.7	40.6	39.2	38.8	38.6	39.2	39.7	40.4
Fabricated metal products	40.8	40.7	40.9	40.9	40.8	40.7	40.8	39.9	39.7	39.6	40.1	40.3	40.3
Machinery, except electrical	41.5	41.5	41.5	41.6	41.5	41.3	41.5	41.0	40.7	40.6	40.8	41.0	40.8
Electric and electronic equipment	40.3	40.4	40.5	40.5	40.3	40.0	39.9	39.5	39.2	39.0	39.4	39.5	39.7
Transportation equipment	41.0	40.5	40.9	40.9	40.8	40.4	40.5	39.7	39.5	39.6	40.9	40.4	40.8
Instruments and related products	40.7	41.0	41.0	41.4	40.9	40.4	40.7	40.3	40.4	40.1	40.1	40.1	39.8
Miscellaneous manufacturing	38.9	38.9	39.0	39.2	39.1	38.6	38.5	38.3	38.2	38.3	38.6	38.8	38.6
Nondurable goods	39.3	39.4	39.4	39.5	39.4	39.0	39.1	38.9	38.6	38.5	38.7	38.8	38.9
Overtime hours	3.1	3.2	3.1	3.1	2.9	3.0	3.0	2.6	2.5	2.6	2.8	2.7	2.8
Food and kindred products	39.9	39.9	39.9	39.8	39.7	39.3	39.6	39.9	39.6	39.7	39.8	39.7	39.7
Tobacco manufactures	38.3	37.8	38.5	38.5	37.9	37.7	38.2	38.2	37.3	38.5	37.3	37.0	38.4
Textile mill products	40.8	41.0	41.0	41.5	41.1	40.8	40.3	39.7	39.1	38.8	39.2	39.6	39.6
Apparel and other textile products	35.4	35.3	35.6	36.0	35.9	35.3	35.8	35.3	35.2	35.1	35.1	35.1	35.3
Paper and allied products	42.6	42.7	42.8	43.0	42.9	42.6	42.5	41.7	41.4	41.4	41.8	42.2	42.3
Printing and publishing	37.4	37.5	37.4	37.8	37.4	37.2	37.2	37.1	36.8	36.9	37.1	36.9	37.0
Chemicals and allied products	41.7	42.0	41.8	42.0	41.9	41.8	41.5	41.3	41.1	40.8	41.0	41.3	41.4
Petroleum and coal products	43.5	44.4	43.4	36.9	40.7	39.7	41.1	42.5	42.3	42.2	42.2	42.5	42.5
Rubber and miscellaneous plastics products	40.2	40.0	40.0	40.7	40.0	39.9	40.1	39.3	39.2	39.0	40.2	40.2	40.4
Leather and leather products	36.5	36.6	37.0	37.2	37.2	36.9	37.3	36.7	36.7	36.1	36.5	36.4	36.2
TRANSPORTATION AND PUBLIC UTILITIES	40.0	40.2	40.0	39.5	39.4	39.5	39.5	39.3	39.6	39.9	39.7	39.6	39.5
WHOLESALE AND RETAIL TRADE	32.6	32.6	32.6	32.6	32.4	32.3	32.0	32.1	31.9	31.8	32.0	32.1	32.0
WHOLESALE TRADE	38.8	38.9	38.9	38.9	38.8	38.5	38.5	38.6	38.0	38.0	38.2	38.4	38.2
RETAIL TRADE	30.6	30.6	30.6	30.6	30.4	30.3	30.0	30.1	30.0	29.8	30.1	30.1	30.1
FINANCE, INSURANCE, AND REAL ESTATE	36.2	36.3	36.4	36.2	36.3	36.3	36.2	36.1	36.4	36.2	36.3	36.1	36.0
SERVICES	32.6	32.7	32.8	32.7	32.7	32.7	32.6	32.5	32.6	32.6	32.6	32.6	32.5

17. Hourly earnings, by industry division and major manufacturing group

[Gross averages, production or nonsupervisory workers on private nonagricultural payrolls]

Industry division and group	Annual average		1979			1980									
	1978	1979	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. P	Oct. P
TOTAL PRIVATE	$5.69	$6.16	$6.31	$6.34	$6.38	$6.42	$6.46	$6.51	$6.53	$6.57	$6.61	$6.64	$6.68	$6.79	$6.84
MINING	7.67	8.50	8.59	8.73	8.75	8.88	8.90	8.95	9.10	9.08	9.16	9.08	9.18	9.28	9.42
CONSTRUCTION	8.66	9.27	9.50	9.52	9.58	9.49	9.61	9.68	9.69	9.77	9.81	9.91	10.05	10.18	10.22
MANUFACTURING	6.17	6.69	6.82	6.87	6.97	6.96	7.00	7.06	7.09	7.13	7.20	7.29	7.30	7.42	7.48
Durable goods	6.58	7.13	7.25	7.29	7.42	7.39	7.46	7.54	7.56	7.60	7.69	7.77	7.78	7.93	8.01
Lumber and wood products	5.60	6.08	6.23	6.22	6.24	6.21	6.33	6.35	6.28	6.40	6.56	6.72	6.76	6.80	6.76
Furniture and fixtures	4.68	5.06	5.19	5.21	5.26	5.27	5.32	5.37	5.39	5.42	5.49	5.52	5.54	5.57	5.59
Stone, clay, and glass products	6.33	6.85	7.01	7.08	7.11	7.06	7.14	7.27	7.34	7.45	7.53	7.60	7.64	7.68	7.74
Primary metal industries	8.20	8.97	9.11	9.26	9.28	9.30	9.44	9.45	9.53	9.61	9.65	9.82	9.84	9.95	9.99
Fabricated metal products	6.35	6.84	6.98	7.01	7.14	7.09	7.14	7.24	7.27	7.32	7.42	7.42	7.48	7.60	7.64
Machinery, except electrical	6.78	7.32	7.44	7.50	7.63	7.66	7.69	7.76	7.81	7.91	7.97	8.05	8.07	8.27	8.36
Electric and electronic equipment	5.82	6.32	6.49	6.52	6.64	6.67	6.71	6.78	6.79	6.78	6.87	6.96	7.02	7.15	7.20
Transportation equipment	7.91	8.54	8.70	8.72	8.93	8.81	8.86	9.04	9.04	9.06	9.24	9.34	9.35	9.59	9.79
Instruments and related products	5.71	6.17	6.32	6.39	6.50	6.57	6.59	6.63	6.63	6.72	6.80	6.86	6.86	6.90	6.93
Miscellaneous manufacturing	4.69	5.03	5.10	5.13	5.20	5.28	5.30	5.34	5.37	5.40	5.42	5.46	5.46	5.51	5.52
Nondurable goods	5.53	6.00	6.14	6.21	6.26	6.28	6.27	6.30	6.36	6.42	6.48	6.60	6.62	6.68	6.71
Food and kindred products	5.80	6.27	6.35	6.50	6.55	6.61	6.64	6.68	6.75	6.82	6.84	6.89	6.90	6.93	6.95
Tobacco manufactures	6.13	6.65	6.33	6.97	6.98	7.08	7.36	7.57	7.79	7.64	7.97	8.06	7.74	7.44	7.44
Textile mill products	4.30	4.66	4.83	4.86	4.87	4.90	4.90	4.92	4.91	4.90	4.93	5.06	5.19	5.23	5.26
Apparel and other textile products	3.94	4.23	4.31	4.32	4.38	4.44	4.45	4.49	4.46	4.45	4.51	4.50	4.60	4.70	4.71
Paper and allied products	6.52	7.13	7.36	7.43	7.50	7.49	7.52	7.55	7.63	7.65	7.79	7.97	7.99	8.05	8.07
Printing and publishing	6.51	6.95	7.10	7.13	7.21	7.24	7.29	7.34	7.34	7.44	7.46	7.53	7.63	7.72	7.72
Chemicals and allied products	7.02	7.60	7.83	7.88	7.92	7.97	8.01	8.05	8.12	8.17	8.24	8.35	8.39	8.44	8.52
Petroleum and coal products	8.63	9.36	9.48	9.56	9.48	9.46	9.37	9.29	9.83	10.07	10.22	10.25	10.22	10.33	10.34
Rubber and miscellaneous plastics products	5.52	5.96	6.12	6.14	6.21	6.25	6.25	6.27	6.30	6.34	6.39	6.48	6.57	6.65	6.73
Leather and leather products	3.89	4.22	4.31	4.33	4.35	4.45	4.47	4.51	4.52	4.53	4.54	4.54	4.59	4.59	4.60
TRANSPORTATION AND PUBLIC UTILITIES	7.57	8.17	8.43	8.51	8.54	8.55	8.58	8.62	8.71	8.72	8.75	8.90	8.95	9.02	9.14
WHOLESALE AND RETAIL TRADE	4.67	5.06	5.15	5.18	5.18	5.34	5.36	5.40	5.40	5.42	5.43	5.48	5.48	5.55	5.57
WHOLESALE TRADE	5.88	6.39	6.52	6.58	6.69	6.72	6.77	6.83	6.87	6.89	6.95	6.99	7.01	7.06	7.09
RETAIL TRADE	4.20	4.53	4.59	4.62	4.61	4.78	4.78	4.81	4.80	4.82	4.83	4.88	4.89	4.94	4.96
FINANCE, INSURANCE, AND REAL ESTATE	4.89	5.27	5.35	5.41	5.48	5.53	5.60	5.68	5.68	5.70	5.77	5.77	5.82	5.87	5.92
SERVICES	4.99	5.36	5.48	5.55	5.61	5.65	5.70	5.75	5.75	5.79	5.81	5.79	5.81	5.92	5.98

18. Hourly Earnings Index for production or nonsupervisory workers on private nonagricultural payrolls, by industry division

[Seasonally adjusted data: 1967=100]

Industry	1979			1980									Sept. 1980 to Oct. 1980	Oct. 1979 to Oct. 1980
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. P	Oct. P		
TOTAL PRIVATE (in current dollars)	235.0	237.3	239.4	240.3	242.4	245.2	246.2	248.3	250.9	252.1	254.0	255.1	257.2	0.8	9.4
Mining	267.7	272.0	274.6	277.0	278.5	280.9	283.7	284.2	286.3	285.3	288.9	289.4	295.2	2.0	10.3
Construction	224.7	226.5	228.1	225.8	229.8	232.2	233.0	234.2	235.3	236.7	239.0	239.1	241.1	.8	7.3
Manufacturing	239.9	241.9	244.1	245.2	247.8	250.2	252.4	255.0	258.3	260.6	262.4	264.4	266.0	.6	10.9
Transportation and public utilities	255.8	258.7	260.1	260.8	262.4	265.9	267.2	268.7	270.6	272.8	273.2	273.7	278.3	1.7	8.8
Wholesale and retail trade	227.6	229.7	231.4	234.2	235.2	237.8	238.0	239.8	241.8	243.5	245.3	246.1	247.1	.4	8.6
Finance, insurance, and real estate	212.9	215.7	217.9	218.4	221.1	225.7	224.9	226.3	230.2	229.0	232.7	233.1	235.1	.9	10.4
Services	232.3	234.9	237.8	237.7	239.7	242.7	243.0	245.7	248.4	247.6	249.8	251.4	253.4	.8	9.1
TOTAL PRIVATE (in constant dollars)	104.1	104.1	103.8	102.7	102.2	102.0	101.4	101.4	101.5	102.0	102.0	101.4	...	...	...

19. Weekly earnings, by industry division and major manufacturing group

[Gross averages, production or nonsupervisory workers on private nonagricultural payrolls]

Industry division and group	Annual average		1979			1980									
	1978	1979	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. p	Oct. p
TOTAL PRIVATE	$203.70	$219.30	$225.27	$225.70	$229.04	$225.34	$226.75	$229.15	$228.55	$229.95	$233.33	$234.39	$237.14	$239.69	$240.77
MINING	332.88	365.50	375.38	380.63	384.13	385.39	384.48	388.43	389.48	387.72	395.71	380.45	395.66	403.68	410.71
CONSTRUCTION	318.69	342.99	358.15	348.43	356.38	335.00	343.08	350.42	355.62	360.51	371.80	373.61	374.87	386.84	386.32
MANUFACTURING	249.27	268.94	274.16	276.86	285.07	277.01	278.60	280.99	279.35	280.21	283.68	282.85	286.89	295.32	296.96
Durable goods	270.44	290.90	295.80	297.43	308.67	297.82	300.64	303.86	301.64	301.72	306.06	303.81	308.87	318.79	322.00
Lumber and wood products	222.88	239.55	247.95	241.34	244.61	236.60	243.71	243.21	232.99	240.64	251.90	256.70	264.99	267.92	264.32
Furniture and fixtures	183.92	195.82	203.97	204.75	209.87	202.37	204.29	206.75	204.28	202.17	204.78	199.82	208.30	213.89	215.22
Stone, clay, and glass products	263.33	284.28	292.32	295.24	297.20	283.11	286.31	295.89	296.54	302.47	308.73	306.28	310.95	316.42	319.66
Primary metal industries	342.76	371.36	372.60	376.88	379.55	378.51	384.21	384.62	386.92	377.67	377.32	379.05	383.76	397.01	401.60
Fabricated metal products	260.35	278.39	285.48	287.41	299.17	287.85	288.46	293.94	292.25	292.07	297.54	290.86	299.20	307.04	308.66
Machinery except electrical	285.44	305.98	308.76	313.50	325.80	317.89	319.14	322.04	320.21	322.73	325.18	322.00	326.03	339.90	341.09
Electric and electronic equipment	234.55	254.70	261.55	266.02	274.23	268.13	269.74	271.20	268.88	266.45	270.68	267.96	275.18	283.86	285.84
Transportation equipment	333.80	350.99	359.31	355.78	381.31	352.40	357.94	365.22	359.79	361.49	368.68	368.93	374.00	388.40	402.37
Instruments and related products	233.54	251.74	257.86	264.55	271.05	269.37	268.87	269.18	267.85	270.82	275.40	271.66	273.71	276.69	276.51
Miscellaneous manufacturing	181.97	195.16	199.41	202.12	205.40	204.86	204.58	207.19	206.21	206.28	207.59	206.39	210.21	214.89	214.18
Nondurable goods	217.88	235.80	241.92	245.92	249.77	244.92	243.90	245.07	246.13	248.45	251.42	254.10	257.52	261.19	261.69
Food and kindred products	230.26	250.17	254.00	261.30	264.62	261.10	259.62	260.52	262.58	270.75	270.86	274.91	278.07	279.28	276.61
Tobacco manufactures	233.55	252.70	246.24	270.44	275.01	264.08	271.58	285.39	297.58	295.67	305.25	294.19	284.83	280.49	290.16
Textile mill products	173.72	188.26	197.06	200.72	202.11	200.41	199.92	201.23	195.91	195.02	195.23	194.81	203.45	207.63	208.30
Apparel and other textile products	140.26	149.32	153.01	153.79	157.24	156.29	157.53	158.95	157.44	157.09	160.56	158.85	162.84	165.44	166.73
Paper and allied products	279.71	303.74	314.27	318.75	326.25	319.82	318.85	320.12	321.99	318.24	324.84	329.96	333.98	341.32	341.36
Printing and publishing	244.78	260.63	266.25	270.23	274.70	269.33	269.73	273.05	270.11	274.54	273.78	277.10	283.84	287.96	286.41
Chemicals and allied products	294.14	318.44	326.51	332.54	334.22	332.35	333.22	335.69	337.79	337.42	339.49	339.85	343.15	348.57	352.73
Petroleum and coal products	376.27	409.97	418.07	428.29	412.38	342.45	371.99	366.03	404.01	425.96	432.31	437.68	431.28	446.26	445.65
Rubber and miscellaneous plastics products	225.77	241.38	247.86	247.44	252.75	251.88	249.38	250.80	250.11	247.26	251.13	250.13	262.80	268.66	273.91
Leather and leather products	144.32	154.03	157.32	159.34	162.26	163.32	164.50	164.16	165.88	167.61	169.80	165.26	167.99	167.08	166.52
TRANSPORTATION AND PUBLIC UTILITIES	302.80	325.98	337.20	342.10	341.60	337.73	338.05	340.49	344.05	342.70	346.50	355.11	355.32	357.19	361.03
WHOLESALE AND RETAIL TRADE	153.64	164.96	166.86	167.83	170.42	170.35	170.98	172.80	171.72	172.90	175.39	178.10	179.20	178.16	177.68
WHOLESALE TRADE	228.14	247.93	253.63	255.96	261.58	258.72	259.97	262.27	263.81	265.27	265.49	267.02	269.18	271.10	272.26
RETAIL TRADE	130.20	138.62	139.54	140.45	142.91	142.44	142.44	143.82	142.56	144.12	146.83	149.82	151.10	148.69	148.30
FINANCE, INSURANCE, AND REAL ESTATE	178.00	190.77	193.67	196.38	199.47	200.19	203.28	206.18	205.62	205.77	210.03	208.87	211.27	211.91	213.12
SERVICES	163.67	175.27	178.65	180.93	184.01	183.63	185.25	186.88	186.30	187.02	190.57	191.65	192.31	192.99	194.35

20. Gross and spendable weekly earnings, in current and 1967 dollars, 1960 to date

[Averages for production or nonsupervisory workers on private nonagricultural payrolls]

Year and month	Private nonagricultural workers						Manufacturing workers					
	Gross average weekly earnings		Spendable average weekly earnings				Gross average weekly earnings		Spendable average weekly earnings			
			Worker with no dependents		Married worker with 3 dependents				Worker with no dependents		Married worker with 3 dependents	
	Current dollars	1967 dollars	Current dollars	1967 dollars	Current dollars	1967 dollars	Current dollars	1967 dollars	Current dollars	1967 dollars	Current dollars	1967 dollars
1960	$80.67	$90.95	$65.59	$73.95	$72.96	$82.25	$89.72	$101.15	$72.57	$81.82	$80.11	$90.32
1961	82.60	92.19	67.08	74.87	74.48	83.13	92.34	103.06	74.60	83.26	82.18	91.72
1962	85.91	94.82	69.56	76.78	76.99	84.98	96.56	106.58	77.86	85.94	85.53	94.40
1963	88.46	96.47	71.05	77.48	78.56	85.67	99.23	108.21	79.51	86.71	87.25	95.15
1964	91.33	98.31	75.04	80.78	82.57	88.88	102.97	110.84	84.40	90.85	92.18	99.22
1965	95.45	101.01	79.32	83.94	86.63	91.67	107.53	113.79	89.08	94.26	96.78	102.41
1966	98.82	101.67	81.29	83.63	88.66	91.21	112.19	115.42	91.45	94.08	99.33	102.19
1967	101.84	101.84	83.38	83.38	90.86	90.86	114.49	114.49	92.97	92.97	100.93	100.93
1968	107.73	103.39	86.71	83.21	95.28	91.44	122.51	117.57	97.70	93.76	106.75	102.45
1969	114.61	104.38	90.96	82.84	99.99	91.07	129.51	117.95	101.90	92.81	111.44	101.49
1970	119.83	103.04	96.21	82.73	104.90	90.20	133.33	114.64	106.32	91.42	115.58	99.38
1971	127.31	104.95	103.80	85.57	112.43	92.69	142.44	117.43	114.97	94.78	124.24	102.42
1972	136.90	109.26	112.19	89.54	121.68	97.11	154.71	123.47	125.34	100.03	135.57	108.20
1973	145.39	109.23	117.51	88.29	127.38	95.70	166.46	125.06	132.57	99.60	143.50	107.81
1974	154.76	104.78	124.37	84.20	134.61	91.14	176.80	119.70	140.19	94.92	151.56	102.61
1975	163.53	101.45	132.49	82.19	145.65	90.35	190.79	118.36	151.61	94.05	166.29	103.16
1976	175.45	102.90	143.30	84.05	155.87	91.42	209.32	122.77	167.83	98.43	181.32	106.35
1977	189.00	104.13	155.19	85.50	169.93	93.63	228.90	126.12	183.80	101.27	200.06	110.23
1978	203.70	104.30	165.39	84.69	180.71	92.53	249.27	127.63	197.40	101.08	214.87	110.02
1979	219.30	100.73	177.55	81.56	194.35	89.27	268.94	123.54	212.43	97.58	232.07	106.60
1979: October	225.27	99.85	181.90	80.63	198.94	88.18	274.16	121.52	215.97	95.73	236.04	104.63
November	225.70	99.17	182.22	80.06	199.27	87.55	276.86	121.64	217.80	95.69	238.08	104.60
December	229.04	9.58	184.59	80.26	201.80	87.74	285.07	123.94	223.38	97.12	244.31	106.22
1980: January	225.34	96.59	181.96	77.99	199.00	85.30	277.01	118.74	217.91	93.40	238.20	102.10
February	226.75	95.88	182.98	77.37	200.07	84.60	278.60	117.80	218.99	92.60	239.40	101.23
March	229.15	95.52	184.67	76.98	201.89	84.16	280.99	117.13	220.61	91.96	241.22	100.55
April	228.55	94.21	184.25	75.95	201.43	83.03	279.35	115.15	219.49	90.47	239.97	98.92
May	229.95	93.82	185.23	75.57	202.49	82.62	280.21	114.32	220.08	89.79	240.63	98.18
June	233.33	94.16	187.59	75.70	205.06	82.75	283.68	114.48	222.43	89.76	243.26	98.17
July	234.39	94.51	188.33	75.94	205.86	83.01	282.85	114.05	221.87	89.46	242.63	97.83
August	237.14	95.01	190.25	76.22	207.95	83.31	286.89	114.94	224.61	89.99	245.69	98.43
September[p]	239.69	95.15	192.03	76.23	209.88	83.32	295.32	117.24	230.33	91.44	252.09	100.08
October[p]	240.77	...	192.79	...	210.70	...	296.96	...	231.45	...	253.33	...

[1]Not available.

NOTE: The earnings expressed in 1967 dollars have been adjusted for changes in price level as measured by the Bureau's Consumer Price Index for Urban Wage Earners and Clerical Workers. These series are described in "The Spendable Earnings Series: A Technical Note on its Calculation," **Employment and Earnings and Monthly Report on the Labor Force,** February 1969, pp. 6–13. See also "Spendable Earnings Formulas, 1978–80," **Employment and Earnings,** March 1980, pp. 10–11.

UNEMPLOYMENT INSURANCE DATA

UNEMPLOYMENT INSURANCE DATA are compiled monthly by the Employment and Training Administration of the U.S. Department of Labor from records of State and Federal unemployment insurance claims filed and benefits paid. Railroad unemployment insurance data are prepared by the U.S. Railroad Retirement Board.

Definitions

Data for **all programs** represent an unduplicated count of insured unemployment under State programs, Unemployment Compensation for Ex-Servicemen, and Unemployment Compensation for Federal Employees, and the Railroad Insurance Act.

Under both State and Federal unemployment insurance programs for civilian employees, insured workers must report the completion of at least 1 week of unemployment before they are defined as unemployed. Persons not covered by unemployment insurance (about one-third of the labor force) and those who have exhausted or not yet earned benefit rights are excluded from the scope of the survey. **Initial claims** are notices filed by persons in unemployment insurance programs to indicate they are out of work and wish to begin receiving compensation. A claimant who continued to be unemployed a full week is then counted in the insured unemployment figure. The **rate of insured unemployment** expresses the number of insured unemployed as a percent of the average insured employment in a 12-month period.

An **application** for benefits is filed by a railroad worker at the beginning of his first period of unemployment in a benefit year; no application is required for subsequent periods in the same year. **Number of payments** are payments made in 14-day registration periods. The **average amount of benefit payment** is an average for all compensable periods, not adjusted for recovery of overpayments or settlement of underpayments. However, **total benefits** paid have been adjusted.

21. Unemployment Insurance and employment service operations

[All items except average benefits amounts are in thousands]

Item	1979				1980								
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
All programs:													
Insured unemployment	2,164	2,236	2,559	3,047	3,740	3,730	3,652	3,629	3,680	3,790	4,140	3,911	3,961
State unemployment insurance program:[1]													
Initial claims[2]	1,219	1,641	1,827	2,263	2,837	1,818	1,705	2,190	P2,248	2,319	2,737	....	....
Insured unemployment (average weekly volume)	2,024	2,057	2,384	2,864	3,537	3,518	3,356	3,278	3,343	3,455	3,692	3,408	3,087
Rate of insured unemployment	2.4	2.4	2.8	3.4	4.1	4.1	3.9	3.8	3.9	4.0	4.3	3.9	3.6
Weeks of unemployment compensated	6,993	7,638	8,107	9,171	13,792	12,801	13,170	12,689	P12,302	12,441	14,398	....	....
Average weekly benefit amount for total unemployment	$89.07	$90.59	$92.39	$94.54	$96.41	$98.39	$99.15	$99.52	P$99.55	$99.88	$98.75	....	....
Total benefits paid	$606,095	$673,965	$728,370	$843,869	$1,283,946	$1,229,877	$1,218,231	$1,232,173	$1,196,836	$1,213,595	$1,397,508	....	....
Unemployment compensation for ex-servicemen:[3]													
Initial claims[1]	23	26	24	24	25	21	21	21	P20	23	27	....	....
Insured unemployment (average weekly volume)	52	52	54	56	60	58	63	52	50	45	58	55	56
Weeks of unemployment compensated	211	236	232	233	299	255	249	246	P220	122	331	....	....
Total benefits paid	$19,634	$23,325	$23,093	$23,093	$29,635	$25,308	$24,928	$24,518	$22,025	$11,761	$33,342	....	....
Unemployment compensation for Federal civilian employees:[4]													
Initial claims	13	18	15	15	19	11	12	11	P12	14	17	....	....
Insured unemployment (average weekly volume)	25	28	29	31	34	32	30	25	22	20	26	25	29
Weeks of unemployment compensated	91	109	118	118	150	129	123	108	P88	50	124	....	....
Total benefits paid	$8,453	$10,093	$11,063	$11,047	$14,118	$12,226	$11,901	$10,323	$8,280	$4,665	$11,296	....	....
Railroad unemployment insurance:													
Applications	13	11	10	11	22	7	5	4	6	24	44	13	....
Insured unemployment (average weekly volume)	21	18	20	19	40	39	30	27	23	27	44	39	....
Number of payments	32	51	36	41	80	71	68	62	54	55	66	86	....
Average amount of benefit payment	$189.08	$189.61	$183.38	$197.22	$199.01	$208.73	$210.79	$201.87	$193.44	$199.06	$207.08	$211.87	....
Total benefits paid	$5,747	$8,003	$6,462	$8,085	$14,967	$14,573	$13,884	$13,002	$9,953	$10,140	$13,320	$17,336	....
Employment service:[5]													
New applications and renewals	15,525	1,855	3,183	4,378	5,980	7,285	8,708	10,021	11,446	12,864	....	....	....
Nonfarm placements	4,349	458	768	1,044	1,314	1,561	1,853	2,143	2,413	2,730	....	....	....

[1] Initial claims and State insured unemployment include data under the program for Puerto Rican sugarcane workers.

[2] Includes interstate claims for the Virgin Islands. Excludes transition claims under State programs.

[3] Excludes data on claims and payments made jointly with other programs.

[4] Includes the Virgin islands. Exludes data on claims and payments made jointly with State programs.

[5] Cumulative total for fiscal year (October 1 - September 30).

NOTE: Date for Puerto Rico included. Dashes indicate data not available.

PRICE DATA

PRICE DATA are gathered by the Bureau of Labor Statistics from retail and primary markets in the United States. Price indexes are given in relation to a base period (1967 = 100, unless otherwise noted).

Definitions

The **Consumer Price Index** is a monthly statistical measure of the average change in prices in a fixed market basket of goods and services. Effective with the January 1978 index, the Bureau of Labor Statistics began publishing CPI's for two groups of the population. One index, a new CPI for All Urban Consumers, covers 80 percent of the total noninstitutional population; and the other index, a revised CPI for Urban Wage Earners and Clerical Workers, covers about half the new index population. The All Urban Consumers index includes, in addition to wage earners and clerical workers, professional, managerial, and technical workers, the self-employed, short-term workers, the unemployed, retirees, and others not in the labor force.

The CPI is based on prices of food, clothing. shelter, fuel, drugs, transportation fares, doctor's and dentist's fees, and other goods and services that people buy for day-to-day living. The quantity and quality of these items is kept essentially unchanged between major revisions so that only price changes will be measured. Prices are collected from over 18,000 tenants, 24,000 retail establishments, and 18,000 housing units for property taxes in 85 urban areas across the country. All taxes directly associated with the purchase and use of items are included in the index. Because the CPI's are based on the expenditures of two population groups in 1972–73, they may not accurately reflect the experience of individual families and single persons with different buying habits.

Though the CPI is often called the "Cost-of-Living Index," it measures only price change, which is just one of several important factors affecting living costs. Area indexes do not measure differences in the level of prices among cities. They only measure the average change in prices for each area since the base period.

Producer Price Indexes measure average changes in prices received in primary markets of the United States by producers of commodities in all stages of processing. The sample used for calculating these indexes contains about 2,800 commodities and about 10,000 quotations per month selected to represent the movement of prices of all commodities produced in the manufacturing, agriculture, forestry, fishing, mining, gas and electricity, and public utilities sectors. The universe includes all commodities produced or imported for sale in commercial transactions in primary markets in the United States.

Producer Price Indexes can be organized by stage of processing or by commodity. The stage of processing structure organizes products by degree of fabrication (that is, finished goods, intermediate or semifinished goods, and crude materials). The commodity structure organizes products by similarity of end-use or material composition.

To the extent possible, prices used in calculating Producer Price Indexes apply to the first significant commercial transaction in the United States, from the production or central marketing point. Price data are generally collected monthly, primarily by mail questionnaire. Most prices are obtained directly from producing companies on a voluntary and confidential basis. Prices generally are reported for the Tuesday of the week containing the 13th day of the month.

In calculating Producer Price Indexes, price changes for the various commodities are averaged together with implicit quantity weights representing their importance in the total net selling value of all commodities as of 1972. The detailed data are aggregated to obtain indexes for stage of processing groupings, commodity groupings, durability of product groupings, and a number of special composite groupings.

Price indexes for the output of selected SIC industries measure average price changes in commodities produced by particular industries, as defined in the *Standard Industrial Classification Manual 1972* (Washington, U.S. Office of Management and Budget, 1972). These indexes are derived from several price series, combined to match the economic activity of the specified industry and weighted by the value of shipments in the industry. They use data from comprehensive industrial censuses conducted by the U.S. Bureau of the Census and the U.S. Department of Agriculture.

Notes on the data

Beginning with the May 1978 issue of the *Review,* regional CPI's cross classified by population size, were introduced. These indexes will enable users in local areas for which an index is not published to get a better approximation of the CPI for their area by using the appropriate population size class measure for their region. The cross-classified indexes will be published bimonthly. (See table 24.)

For further details about the new and the revised indexes and a comparison of various aspects of these indexes with the old unrevised CPI, see *Facts About the Revised Consumer Price Index,* a pamphlet in the Consumer Price Index Revision 1978 series. See also *The Consumer Price Index: Concepts and Content Over the Years.* Report 517, revised edition (Bureau of Labor Statistics, May 1978).

For interarea comparisons of living costs at three hypothetical standards of living, see the family budget data published in the *Handbook of Labor Statistics, 1977,* Bulletin 1966 (Bureau of Labor Statistics, 1977), tables 122–133. Additional data and analysis on price changes are provided in the *CPI Detailed Report* and *Producer Prices and Price Indexes,* both monthly publications of the Bureau.

As of January 1976, the Wholesale Price Index (as it was then called) incorporated a revised weighting structure reflecting 1972 values of shipments. From January 1967 through December 1975, 1963 values of shipments were used as weights.

For a discussion of the general method of computing consumer, producer, and industry price indexes, see *BLS Handbook of Methods for Surveys and Studies,* Bulletin 1910 (Bureau of Labor Statistics, 1976), chapters 13–15. See also John F. Early, "Improving the measurement of producer price change," *Monthly Labor Review,* April 1978, pp. 7–15. For industry prices, see also Bennett R. Moss, "Industry and Sector Price Indexes," *Monthly Labor Review,* August 1965, pp. 974–82.

22. Consumer Price Index for Urban Wage Earners and Clerical Workers, annual averages and changes, 1967–79

[1967=100]

Year	All items		Food and beverages		Housing		Apparel and upkeep		Transportation		Medical care		Entertainment		Other goods and services	
	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change
1967	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...
1968	104.2	4.2	103.6	3.6	104.0	4.0	105.4	5.4	103.2	3.2	106.1	6.1	105.7	5.7	105.2	5.2
1969	109.8	5.4	108.8	5.0	110.4	6.2	111.5	5.8	107.2	3.9	113.4	6.9	111.0	5.0	110.4	4.9
1970	116.3	5.9	114.7	5.4	118.2	7.1	116.1	4.1	112.7	5.1	120.6	6.3	116.7	5.1	116.8	5.8
1971	121.3	4.3	118.3	3.1	123.4	4.4	119.8	3.2	118.6	5.2	128.4	6.5	122.9	5.3	122.4	4.8
1972	125.3	3.3	123.2	4.1	128.1	3.8	122.3	2.1	119.9	1.1	132.5	3.2	126.5	2.9	127.5	4.2
1973	133.1	6.2	139.5	13.2	133.7	4.4	126.8	3.7	123.8	3.3	137.7	3.9	130.0	2.8	132.5	3.9
1974	147.7	11.0	158.7	13.8	148.8	11.3	136.2	7.4	137.7	11.2	150.5	9.3	139.8	7.5	142.0	7.2
1975	161.2	9.1	172.1	8.4	164.5	10.6	142.3	4.5	150.6	9.4	168.6	12.0	152.2	8.9	153.9	8.4
1976	170.5	5.8	177.4	3.1	174.6	6.1	147.6	3.7	165.5	9.9	184.7	9.5	159.8	5.0	162.7	5.7
1977	181.5	6.5	188.0	6.0	186.5	6.8	154.2	4.5	177.2	7.1	202.4	9.6	167.7	4.9	172.2	5.8
1978	195.3	7.6	206.2	9.7	202.6	8.6	159.5	3.4	185.8	4.9	219.4	8.4	176.2	5.1	183.2	6.4
1979	217.7	11.5	228.7	10.9	227.5	12.3	166.4	4.3	212.8	14.5	240.1	9.4	187.6	6.5	196.3	7.2

23. Consumer Price Index for All Urban Consumers and revised CPI for Urban Wage Earners and Clerical Workers, U.S. city average—general summary and groups, subgroups, and selected items

[1967=100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1979	1980						1979	1980					
	Sept.	Apr.	May	June	July	Aug.	Sept.	Sept.	Apr.	May	June	July	Aug.	Sept.
All items	223.4	242.5	244.9	247.6	247.8	249.4	251.7	223.7	242.6	245.1	247.8	248.0	249.6	251.9
Food and beverages	231.0	242.8	244.1	245.7	248.3	252.0	254.2	231.2	243.2	244.7	246.4	249.1	252.5	255.1
Housing	234.6	257.9	261.7	266.7	265.1	265.8	267.7	234.5	257.8	261.7	266.9	265.1	265.8	267.6
Apparel and upkeep	169.8	177.3	177.5	177.2	176.2	178.6	182.2	169.3	176.1	176.8	176.0	175.4	177.9	181.4
Transportation	221.4	246.8	249.0	249.7	251.0	252.7	254.7	222.4	247.7	249.9	250.6	251.9	253.5	255.2
Medical care	243.7	262.0	263.4	264.7	266.6	268.4	270.6	244.7	263.1	264.9	265.9	267.8	270.0	272.2
Entertainment	191.1	202.5	204.0	205.3	206.6	208.0	209.8	190.2	201.3	202.4	204.0	204.4	205.6	208.1
Other goods and services	201.7	209.8	211.2	212.5	213.5	214.5	220.6	200.6	209.2	210.6	212.1	212.9	214.0	219.0
Commodities	214.1	229.9	231.4	232.8	234.1	236.7	239.0	214.4	230.1	231.7	233.0	234.4	236.9	239.2
Commodities less food and beverages	203.3	220.4	222.0	223.2	224.0	226.0	228.4	203.5	220.6	222.3	223.4	224.2	226.2	228.4
Nondurables less food and beverages	213.2	239.5	240.3	241.1	241.4	242.6	244.1	214.8	241.7	242.6	243.2	243.5	244.8	246.0
Durables	194.5	204.9	207.1	208.6	209.8	212.4	215.3	193.5	203.3	205.4	206.8	208.0	210.5	213.5
Services	240.7	265.3	269.2	274.2	272.4	272.5	274.8	241.0	265.8	269.9	275.1	273.1	273.3	275.4
Rent, residential	179.0	187.0	188.9	191.1	192.1	193.2	195.1	178.9	186.9	188.7	190.8	191.8	193.0	194.8
Household services less rent	276.7	313.4	319.6	328.8	323.3	321.5	322.6	278.2	315.8	322.2	331.9	325.9	324.2	325.3
Transportation services	216.6	238.1	241.5	242.6	243.8	246.4	249.4	216.8	238.0	241.5	242.7	243.9	246.3	248.2
Medical care services	262.8	283.4	284.7	285.9	288.0	289.8	292.3	263.8	284.5	286.3	287.3	289.3	291.7	294.3
Other services	204.7	214.5	215.9	216.9	218.1	219.2	225.3	204.9	214.6	216.5	217.9	218.6	219.5	225.4
Special indexes:														
All items less food	219.6	239.9	242.6	245.5	245.1	246.3	248.6	219.8	240.2	242.9	245.7	245.3	246.6	248.7
All items less mortgage interest costs	216.7	231.8	233.7	235.4	236.8	239.0	241.5	217.2	232.4	234.2	235.7	237.4	239.6	242.0
Commodities less food	201.8	218.6	220.2	221.4	222.2	224.2	226.6	202.0	218.9	220.5	221.6	222.4	224.4	226.5
Nondurables less food	209.6	234.6	235.5	236.3	236.6	237.8	239.3	211.0	236.7	237.7	238.3	238.7	239.9	241.1
Nondurables less food and apparel	232.7	266.5	267.9	269.3	270.3	270.9	271.3	234.2	268.7	270.0	271.4	272.2	272.9	273.0
Nondurables	223.1	242.2	243.2	244.5	245.9	248.3	250.2	223.9	243.3	244.6	245.7	247.2	249.6	251.5
Services less rent	252.1	280.0	284.4	290.0	287.6	287.4	289.8	252.6	280.8	285.4	291.2	288.6	288.6	290.7
Services less medical care	236.7	261.5	265.7	271.0	268.9	268.7	271.0	236.9	261.9	266.3	271.8	269.4	269.4	271.4
Domestically produced farm foods	223.7	232.7	233.6	234.8	238.5	243.5	246.2	223.6	232.4	233.4	234.7	238.4	242.9	246.1
Selected beef cuts	255.3	268.0	265.6	264.8	269.2	274.5	278.8	258.0	269.5	267.5	267.1	271.2	275.9	280.8
Energy	304.3	358.8	363.2	367.8	370.4	370.7	370.1	307.0	363.3	367.3	371.8	373.9	374.2	373.1
All items less energy	217.3	233.4	235.7	238.3	238.3	240.0	242.5	217.0	232.7	235.1	237.6	237.6	239.4	242.0
All items less food and energy	211.5	228.5	231.0	233.7	233.1	234.3	236.9	211.0	227.5	230.0	232.7	232.1	233.4	235.9
Commodities less food and energy	188.2	198.2	199.9	201.2	202.0	204.3	207.2	187.5	196.9	198.6	199.8	200.6	202.9	205.7
Energy commodities	325.3	402.3	403.0	404.1	404.8	404.2	401.7	326.5	404.0	404.7	405.6	406.1	405.5	402.7
Services less energy	238.4	263.5	267.0	271.5	269.1	269.0	271.3	238.7	264.2	267.8	272.5	269.8	269.9	271.9
Purchasing power of the consumer dollar, 1967 = $1	$0.448	$0.412	$0.408	$0.404	$0.404	$0.401	$0.397	$0.447	$0.412	$0.408	$0.404	$0.403	$0.401	$0.397

23. Continued—Consumer Price Index—U.S. city average

[1967=100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1979	1980						1979	1980					
	Sept.	Apr.	May	June	July	Aug.	Sept.	Sept.	Apr.	May	June	July	Aug.	Sept.
FOOD AND BEVERAGES	231.0	242.8	244.1	245.7	248.3	252.0	254.2	231.2	243.2	244.7	246.4	249.1	252.5	255.1
Food	237.1	249.1	250.4	252.0	254.8	258.7	261.1	237.3	249.5	251.0	252.7	255.5	259.2	261.9
Food at home	234.7	245.3	246.5	248.0	251.5	256.3	258.9	234.2	245.0	246.1	247.7	251.1	255.6	258.6
Cereals and bakery products	225.6	242.0	244.5	245.9	247.8	249.2	250.3	226.6	242.2	244.4	245.7	248.0	249.6	251.1
Cereals and cereal products (12/77 = 100)	120.0	129.4	131.5	133.1	135.0	136.3	137.1	120.6	130.1	132.4	133.9	135.5	136.8	137.8
Flour and prepared flour mixes (12/77 = 100)	123.4	127.8	129.0	131.1	132.9	133.6	133.3	125.1	128.9	129.9	131.4	132.8	133.9	134.1
Cereal (12/77 = 100)	118.8	129.4	131.5	133.0	135.5	137.6	138.5	118.7	129.7	132.0	133.3	135.5	137.7	138.6
Rice, pasta, and cornmeal (12/77 = 100)	118.6	130.8	133.8	135.2	136.2	136.8	138.4	119.1	131.9	135.2	137.0	137.9	138.4	140.2
Bakery products (12/77 = 100)	119.2	127.6	128.7	129.1	129.8	130.4	130.9	119.7	127.5	128.3	128.8	129.8	130.5	131.2
White bread	200.7	215.1	216.7	216.9	218.4	217.9	219.6	200.5	215.1	216.0	215.4	217.5	217.2	219.3
Other breads (12/77 = 100)	119.6	127.0	128.3	128.1	129.4	129.7	130.9	122.5	129.3	130.6	130.8	132.3	133.3	134.3
Fresh biscuits, rolls, and muffins (12/77 = 100)	119.0	126.9	127.8	129.5	129.2	130.0	129.2	118.6	125.3	126.4	127.9	128.1	128.9	128.1
Fresh cakes and cupcakes (12/77 = 100)	116.7	126.5	127.4	127.6	127.9	129.8	129.5	116.8	125.4	126.5	126.9	127.3	129.4	129.7
Cookies (12/77 = 100)	115.9	125.3	126.1	126.3	127.1	128.7	129.9	117.8	126.3	126.8	126.9	128.3	130.1	131.7
Crackers and bread and cracker products (12/77 = 100)	114.8	122.0	122.2	123.6	125.5	124.6	124.2	114.9	122.2	123.0	124.5	125.7	124.7	124.5
Fresh sweetrolls, coffeecake, and donuts (12/77 = 100)	118.8	126.6	128.4	129.1	129.5	131.4	131.6	121.6	128.0	129.2	130.0	130.0	131.6	132.0
Frozen and refrigerated bakery products and fresh pies, tarts, and turnovers (12/77 = 100)	121.7	129.7	131.0	131.2	131.5	131.4	132.1	118.6	125.3	126.0	127.2	129.6	129.2	129.9
Meats, poultry, fish, and eggs	231.0	235.1	231.5	231.2	236.7	245.4	251.8	230.5	234.3	230.7	230.4	236.1	244.3	251.2
Meats, poultry, and fish	236.0	241.1	238.2	237.9	243.4	251.0	257.7	235.4	240.2	237.2	237.1	242.8	249.8	257.1
Meats	238.1	242.6	239.2	238.1	243.3	251.1	257.8	237.7	241.3	238.1	237.5	242.8	250.0	257.2
Beef and veal	254.2	267.0	264.8	263.8	267.9	273.1	277.5	256.4	268.2	266.3	265.6	269.6	274.1	279.1
Ground beef other than canned	261.4	272.9	269.4	266.9	266.6	272.9	276.8	263.5	274.7	270.6	269.0	268.7	275.6	279.9
Chuck roast	261.0	277.9	273.0	268.6	277.7	279.8	287.7	267.9	286.1	280.0	275.0	285.3	287.9	295.4
Round roast	229.2	242.7	243.4	240.9	243.2	248.8	248.0	231.0	242.1	245.5	243.8	246.2	248.2	249.0
Round steak	239.2	253.5	250.6	247.4	253.2	258.0	260.7	235.7	249.6	250.2	247.3	253.6	256.4	261.4
Sirloin steak	251.0	256.1	256.2	264.8	270.2	274.1	280.9	253.9	257.8	257.5	268.3	274.2	278.8	282.2
Other beef and veal (12/77 = 100)	145.6	153.3	152.4	152.5	155.9	159.0	161.8	146.6	153.1	152.2	152.4	155.2	157.6	161.2
Pork	206.5	197.1	191.8	190.4	200.3	212.0	222.7	206.1	196.7	191.8	190.5	200.7	212.0	222.8
Bacon	194.0	182.1	177.4	173.1	186.3	201.5	220.1	195.6	183.9	177.7	175.6	189.1	205.6	223.0
Pork chops	198.1	187.0	182.4	182.7	193.1	199.9	206.2	196.1	184.7	180.9	180.6	193.3	198.5	205.0
Ham other than canned (12/77 = 100)	95.2	90.6	87.4	87.8	92.1	98.4	102.2	94.3	88.7	85.4	86.1	90.5	96.3	100.7
Sausage	258.4	255.1	250.2	246.2	249.2	262.5	277.9	258.4	258.0	253.9	249.6	252.0	263.6	280.0
Canned ham	216.6	213.5	210.0	208.1	208.6	217.0	225.1	215.3	214.5	213.0	210.1	207.6	219.1	225.9
Other pork (12/77 = 100)	117.4	110.7	107.1	106.3	115.1	123.1	128.6	117.5	110.0	106.5	105.9	114.9	122.7	128.5
Other meats	240.2	243.9	240.2	239.4	239.1	247.8	254.9	236.6	239.0	235.6	235.9	236.5	244.1	251.5
Frankfurters	235.9	240.6	234.8	230.9	229.1	245.8	256.1	236.1	239.3	234.0	231.0	231.5	245.9	254.3
Bologna, liverwurst, and salami (12/77 = 100)	133.2	134.9	133.5	133.4	135.1	138.5	143.5	129.5	131.1	129.5	130.7	131.4	134.5	141.2
Other lunchmeats (12/77 = 100)	121.6	121.9	121.4	121.0	120.6	123.7	125.7	119.0	118.4	117.6	118.1	118.8	121.5	123.5
Lamb and organ meats (12/77 = 100)	135.6	140.1	136.3	137.6	137.2	140.4	143.8	136.9	141.3	138.4	139.3	138.2	140.8	145.0
Poultry	174.8	177.2	176.5	177.9	187.9	197.5	205.2	172.8	176.0	173.8	175.7	186.0	195.1	203.3
Fresh whole chicken	169.9	174.7	172.9	176.3	193.6	205.3	214.0	165.8	170.6	168.0	170.7	189.1	199.9	209.6
Fresh and frozen chicken parts (12/77 = 100)	111.8	114.5	114.4	115.7	120.9	127.8	134.0	110.9	114.7	112.7	115.6	120.8	128.1	134.1
Other poultry (12/77 = 100)	119.2	117.3	117.4	115.9	117.0	120.3	122.9	119.8	118.1	117.7	116.1	116.6	119.1	122.0
Fish and seafood	309.7	325.3	324.5	329.1	330.1	331.8	335.8	304.4	325.1	323.0	324.9	326.4	327.3	333.4
Canned fish and seafood (12/77 = 100)	113.9	122.9	125.4	127.3	129.2	131.2	133.2	113.5	121.8	124.0	125.7	127.3	129.3	131.0
Fresh and frozen fish and seafood (12/77 = 100)	120.4	124.5	122.5	124.2	123.7	123.6	124.8	117.5	125.1	122.4	122.6	122.5	121.8	124.5
Eggs	170.7	161.2	148.4	147.9	154.2	178.3	179.9	170.5	161.5	148.9	147.2	153.5	177.1	178.4
Dairy products	211.3	222.4	226.2	227.2	228.6	229.7	230.6	212.0	223.1	226.9	227.8	229.2	229.9	230.9
Fresh milk and cream (12/77 = 100)	119.0	124.7	127.0	127.1	127.7	127.9	128.0	119.5	124.9	127.2	127.4	128.0	128.0	128.2
Fresh whole milk	195.4	204.9	208.5	208.6	209.4	209.8	209.7	195.6	204.8	208.4	208.7	209.8	209.7	209.8
Other fresh milk and cream (12/77 = 100)	118.1	123.5	125.9	126.0	126.9	127.1	127.7	119.3	124.1	126.8	127.2	127.5	127.6	128.3
Processed dairy products (12/77 = 100)	120.1	127.0	129.1	130.4	131.4	132.5	133.6	120.5	128.0	129.9	130.7	131.9	132.9	134.1
Butter	209.9	219.9	222.2	225.0	226.9	231.2	236.2	212.3	222.7	225.3	227.2	229.7	233.7	238.8
Cheese (12/77 = 100)	120.1	126.2	127.8	128.8	130.0	130.4	132.3	120.2	126.8	128.5	129.0	130.1	130.9	132.7
Ice cream and related products (12/77 = 100)	120.1	128.6	131.9	133.7	134.6	137.0	135.7	120.7	130.4	132.9	133.8	135.5	136.1	135.4
Other dairy products (12/77 = 100)	115.5	124.0	126.1	127.3	127.5	128.3	128.9	115.6	123.6	125.7	127.4	127.7	128.8	129.3
Fruits and vegetables	231.8	240.9	246.6	250.1	253.9	258.4	257.4	229.6	239.8	245.5	250.2	253.0	256.6	255.8
Fresh fruits and vegetables	234.7	245.2	255.1	260.0	265.8	273.0	269.6	232.9	244.8	254.4	261.4	265.2	270.8	267.8
Fresh fruits	271.6	257.0	264.7	273.9	282.7	302.3	286.3	271.2	255.6	263.8	274.9	282.3	300.1	284.9
Apples	244.7	265.5	276.3	293.3	316.6	340.8	295.2	243.1	264.4	277.3	297.4	318.7	342.2	295.3
Bananas	210.3	242.8	249.7	242.6	232.6	234.0	238.0	208.4	243.5	244.5	237.7	228.7	228.0	234.3
Oranges	312.3	240.6	243.9	264.4	273.9	297.1	296.5	291.8	234.3	237.6	251.0	261.5	285.5	284.2
Other fresh fruits (12/77 = 100)	147.1	136.5	140.8	143.7	147.5	158.5	150.8	152.3	135.7	140.9	146.5	148.7	157.9	151.9
Fresh vegetables	200.3	234.2	246.2	247.0	250.1	245.6	253.9	198.4	235.2	246.0	249.4	249.8	244.4	252.4
Potatoes	199.3	201.7	210.1	246.3	310.5	327.1	313.2	193.4	198.2	205.6	244.4	309.4	325.4	309.2
Lettuce	219.6	271.9	279.9	238.8	205.9	213.1	265.9	222.9	281.9	288.6	241.7	200.6	209.3	262.5
Tomatoes	178.5	201.2	230.8	230.6	209.2	205.4	214.2	179.2	197.7	228.4	228.6	210.8	199.6	210.8
Other fresh vegetables (12/77 = 100)	109.5	134.6	140.1	140.2	137.1	126.2	127.1	108.0	135.3	139.7	143.4	138.0	127.0	127.6
Processed fruits and vegetables	230.6	238.4	239.4	241.4	243.0	244.5	246.3	227.9	236.2	237.6	239.7	241.5	242.9	244.6
Processed fruits (12/77 = 100)	120.6	125.0	125.4	126.4	126.6	126.9	127.4	119.8	124.9	125.7	126.7	126.8	127.2	127.6
Frozen fruit and fruit juices (12/77 = 100)	116.3	119.3	118.1	120.1	118.5	119.2	119.3	114.9	118.4	117.5	118.9	117.8	118.1	118.5
Fruit juices and other than frozen (12/77 = 100)	119.3	128.3	129.3	129.5	130.6	130.1	130.8	119.7	128.4	129.8	130.4	130.9	130.7	131.0
Canned and dried fruits (12/77 = 100)	125.5	126.3	127.5	128.3	129.0	130.0	130.7	123.9	126.4	127.8	128.9	129.5	130.7	131.5
Processed vegetables (12/77 = 100)	111.2	114.5	115.2	116.2	117.6	118.8	120.1	109.9	113.2	113.9	115.0	116.6	117.5	118.7
Frozen vegetables (12/77 = 100)	109.8	113.3	114.7	116.4	118.4	119.6	119.7	109.4	113.0	114.6	116.3	118.2	119.2	119.4

23. Continued—Consumer Price Index—U.S. city average

[1967=100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1979	1980						1979	1980					
	Sept.	Apr.	May	June	July	Aug.	Sept.	Sept.	Apr.	May	June	July	Aug.	Sept.
FOOD AND BEVERAGES—Continued														
Food—Continued														
Food at home—Continued														
Fruits and vegetables—Continued														
Cut corn and canned beans except lima (12/77=100)	114.7	115.6	116.0	116.6	118.1	119.4	121.4	112.6	114.3	114.2	115.2	117.0	118.1	119.6
Other canned and dried vegetables (12/77=100)	110.1	114.7	115.1	115.9	117.0	118.0	119.6	108.7	112.7	113.3	114.2	115.6	116.4	117.9
Other foods at home	276.0	295.1	298.1	301.8	304.3	307.8	309.2	274.7	294.6	298.0	301.4	303.7	307.4	309.1
Sugar and sweets	282.0	319.5	326.8	342.0	353.1	355.1	361.1	281.2	320.8	328.0	342.9	354.6	356.6	361.8
Candy and chewing gum (12/77=100)	119.7	126.3	128.9	130.5	131.6	132.6	134.2	119.3	126.5	129.0	130.8	132.0	133.2	134.7
Sugar and artificial sweeteners (12/77=100)	115.9	156.9	161.4	180.3	194.2	194.6	200.2	116.4	158.6	163.3	180.7	194.5	195.1	199.7
Other sweets (12/77=100)	115.3	121.3	123.6	125.8	127.2	128.3	129.2	114.0	120.0	122.2	124.6	126.5	126.9	127.7
Fats and oils (12/77=100)	231.5	238.3	239.5	240.0	239.3	242.0	243.6	230.7	238.3	240.1	240.5	240.6	242.4	244.6
Margarine	245.5	247.9	246.1	249.0	247.0	249.3	249.2	242.8	248.3	248.4	249.4	248.6	251.5	251.8
Nondairy substitutes and peanut butter (12/77=100)	114.6	119.8	121.4	123.1	123.6	124.7	125.8	114.5	120.0	121.6	123.5	124.0	124.8	125.8
Other fats, oils, and salad dressings (12/77=100)	120.6	124.8	125.8	124.9	124.6	126.2	127.4	120.4	124.4	125.5	124.9	125.0	125.7	127.4
Nonalcoholic beverages	367.7	390.3	393.0	395.9	397.4	402.8	403.9	365.0	389.2	392.3	395.1	396.2	403.0	403.6
Cola drinks, excluding diet cola	242.7	261.7	265.4	267.8	268.4	275.2	276.7	240.1	260.1	263.2	267.1	265.6	274.7	274.9
Carbonated drinks, including diet cola (12/77=100)	117.9	125.6	126.2	128.3	129.2	131.3	132.5	115.7	123.4	124.8	125.2	127.4	128.8	130.2
Roasted coffee	425.9	434.0	433.5	432.4	435.3	433.9	426.1	418.2	430.4	430.0	429.2	432.3	430.4	423.1
Freeze dried and instant coffee	359.9	380.2	381.9	380.2	381.0	380.3	376.1	358.9	379.2	380.4	378.7	379.2	379.7	374.8
Other noncarbonated drinks (12/77=100)	114.0	120.7	120.7	121.8	122.1	123.1	124.5	112.7	119.6	120.0	120.8	121.1	122.3	123.8
Other prepared foods	212.6	226.6	229.1	230.9	232.3	234.9	235.2	212.4	226.6	229.6	230.8	232.1	234.2	235.6
Canned and packaged soup (12/77=100)	113.1	120.5	122.0	122.9	123.3	123.7	123.8	113.3	120.6	122.5	123.7	123.5	124.2	124.7
Frozen prepared foods (12/77=100)	123.1	130.4	131.3	132.0	132.4	134.6	133.9	121.1	128.8	131.0	130.8	131.3	131.7	131.6
Snacks (12/77=100)	118.4	124.8	126.1	127.2	128.3	129.3	129.8	119.0	126.0	127.3	127.9	128.5	129.9	130.4
Seasonings, olives, pickles, and relish (12/77=100)	117.4	125.2	125.4	127.5	128.0	129.4	130.7	116.3	124.5	125.5	127.3	127.3	127.8	129.5
Other condiments (12/77=100)	115.9	127.1	127.9	128.8	130.2	131.8	133.0	117.5	128.1	129.2	129.9	131.6	133.4	135.0
Miscellaneous prepared foods (12/77=100)	116.8	124.4	127.6	128.6	129.3	130.9	130.6	116.3	123.7	127.0	128.3	128.9	130.2	131.1
Other canned and packaged prepared foods (12/77=100)	116.7	123.1	124.6	125.2	126.0	127.5	126.9	116.7	123.3	124.3	124.1	125.4	126.8	127.2
Food away from home	247.6	263.0	264.6	266.6	267.8	269.5	271.4	249.3	265.3	267.6	269.9	271.2	272.8	274.9
Lunch (12/77=100)	120.7	127.9	128.5	129.3	130.0	131.2	132.1	121.7	128.9	129.9	130.7	131.1	131.8	132.9
Dinner (12/77=100)	120.3	127.9	128.7	129.5	130.1	130.7	131.9	120.9	129.1	130.5	131.0	132.0	132.8	133.8
Other meals and snacks (12/77=100)	118.6	126.4	127.4	129.0	129.3	130.0	130.4	119.9	127.7	128.6	131.1	131.6	132.3	133.3
Alcoholic beverages	174.2	183.9	185.4	186.4	187.2	188.7	189.6	174.9	185.0	186.9	188.0	189.2	190.6	191.7
Alcoholic beverages at home (12/77=100)	113.3	119.9	120.9	121.4	122.1	123.1	123.6	114.3	120.8	122.0	122.7	123.6	124.6	125.1
Beer and ale	172.3	185.9	187.7	188.2	189.2	190.1	190.8	171.8	185.1	187.5	188.8	189.7	191.1	191.9
Whiskey	129.0	133.4	133.9	134.7	135.2	136.9	137.6	130.4	134.6	135.1	135.4	136.6	137.8	138.5
Wine	195.2	206.6	208.5	211.5	212.6	213.9	214.7	202.7	209.8	212.0	213.7	217.4	218.1	219.8
Other alcoholic beverages (12/77=100)	105.5	108.2	109.0	108.7	109.6	111.2	111.7	105.3	107.8	108.7	108.9	109.6	111.1	111.2
Alcoholic beverages away from home (12/77=100)	115.1	120.5	121.5	122.3	122.5	123.5	124.5	113.4	120.5	121.7	122.5	122.9	123.6	124.8
HOUSING	234.6	257.9	261.7	266.7	265.1	265.8	267.7	234.5	257.8	261.7	266.9	265.1	265.8	267.6
Shelter	247.4	276.0	280.2	286.3	282.9	283.3	285.3	248.2	277.2	281.6	288.0	284.3	284.8	286.8
Rent, residential	179.0	187.0	188.9	191.1	192.1	193.2	195.1	178.9	186.9	188.7	190.8	191.8	193.0	194.8
Other rental costs	239.3	260.7	261.9	264.2	265.7	267.5	268.9	238.6	260.5	261.7	263.9	265.5	267.3	268.6
Lodging while out of town	251.8	279.3	279.9	282.1	283.8	286.4	287.0	249.9	278.0	278.6	280.8	282.3	285.1	285.6
Tenants' insurance (12/77=100)	113.7	119.9	121.2	122.6	123.1	122.2	124.7	114.1	120.1	121.4	122.7	123.3	122.7	125.2
Homeownership	271.9	307.7	312.9	320.4	315.4	315.4	317.6	273.3	310.0	315.4	323.4	317.9	318.1	320.2
Home purchase	229.8	246.5	249.7	252.6	253.9	258.1	261.5	230.0	246.5	249.8	253.0	254.3	258.6	262.1
Financing, taxes, and insurance	323.0	390.6	399.7	416.1	399.6	393.6	393.5	325.6	395.3	404.9	422.0	405.0	398.8	398.9
Property insurance	316.7	338.9	344.9	351.8	355.5	355.9	359.8	318.5	340.4	346.4	352.7	357.2	357.9	362.9
Property taxes	184.7	188.4	187.6	187.7	188.3	190.3	191.2	186.1	190.1	189.3	189.4	190.0	192.0	193.0
Contracted mortgage interest cost	396.7	499.4	513.6	538.9	512.2	501.8	500.9	397.1	500.9	515.6	541.5	514.6	504.2	503.6
Mortgage interest rates	169.7	199.4	202.4	210.3	199.0	192.0	188.9	169.7	199.8	202.8	210.8	199.6	192.5	189.5
Maintenance and repairs	262.5	282.9	284.9	285.9	287.6	288.5	291.6	263.4	281.7	283.4	283.8	285.1	287.7	290.3
Maintenance and repair services	284.4	307.9	310.1	310.6	312.1	312.4	315.9	287.2	307.7	309.1	308.5	309.0	312.1	315.6
Maintenance and repair commodities	211.5	224.3	225.8	228.0	230.3	232.7	234.9	210.8	224.3	226.5	228.8	231.3	233.2	233.9
Paint and wallpaper, supplies, tools, and equipment (12/77=100)	117.0	126.6	128.7	131.3	133.4	134.4	135.6	116.1	126.0	128.7	130.9	132.2	133.1	132.7
Lumber, awnings, glass, and masonry (12/77=100)	115.2	118.8	118.0	118.9	119.1	120.1	122.2	115.7	119.7	118.4	118.5	119.3	120.4	121.8
Plumbing, electrical, heating, and cooling supplies (12/77=100)	111.9	119.1	119.3	119.9	121.1	122.7	123.2	112.6	120.0	122.0	123.8	125.9	126.6	126.1
Miscellaneous supplies and equipment (12/77=100)	112.9	118.2	118.7	119.1	120.1	122.1	122.7	111.2	119.4	120.1	120.7	122.5	123.9	125.2
Fuel and other utilities	251.2	270.5	275.9	282.2	285.5	286.8	288.2	251.7	271.0	276.4	283.0	286.1	287.4	288.7
Fuels	306.6	337.8	346.4	355.8	360.8	362.5	364.5	306.6	337.6	346.0	355.8	360.3	362.1	363.8
Fuel oil, coal, and bottled gas	461.6	556.4	556.0	558.7	560.4	561.5	561.5	462.5	557.1	557.1	559.8	561.9	562.7	562.9
Fuel oil	482.5	580.7	580.4	583.2	585.1	586.1	585.4	483.3	580.7	580.5	583.3	585.6	586.4	585.9
Other fuels (6/78 = 100)	114.4	139.6	139.4	140.1	140.4	140.8	142.1	114.6	140.8	141.3	141.9	142.1	142.5	143.8
Gas (piped) and electricity	270.1	288.0	298.2	308.8	314.3	316.1	318.4	269.9	287.6	297.5	308.5	313.5	315.4	317.4
Electricity	230.6	241.5	248.1	261.9	267.4	268.3	269.2	231.1	241.5	248.0	262.3	267.6	268.6	269.6
Utility (piped) gas	317.5	347.9	364.6	366.7	371.8	375.2	380.2	315.8	346.4	362.3	364.9	368.6	372.0	376.1

23. Continued—Consumer Price Index—U.S. city average

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1979	1980						1979	1980					
	Sept.	Apr.	May	June	July	Aug.	Sept.	Sept.	Apr.	May	June	July	Aug.	Sept.
HOUSING—Continued														
***Fuel and other utilities*—Continued**														
Other utilities and public services	159.8	162.3	163.1	164.9	165.9	166.5	167.1	159.8	162.3	163.1	164.9	165.9	166.4	167.1
Telephone services	132.4	133.4	134.0	135.5	136.3	136.5	137.0	132.4	133.2	133.9	135.4	136.1	136.4	136.9
Local charges (12/77 = 100)	100.4	103.5	104.3	105.3	105.4	105.4	106.0	100.5	103.3	104.0	105.1	105.2	105.2	105.9
Interstate toll calls (12/77 = 100)	98.4	97.3	97.3	99.5	101.6	101.9	102.1	98.4	97.4	97.4	99.5	101.6	101.9	102.1
Intrastate toll calls (12/77 = 100)	101.4	99.0	99.4	99.6	99.5	99.9	100.1	101.3	98.9	99.3	99.5	99.3	99.7	100.0
Water and sewerage maintenance	245.3	255.2	256.5	259.3	261.3	263.5	264.5	245.5	256.2	257.6	260.5	262.4	264.5	265.5
Household furnishings and operations	192.2	203.0	204.2	205.5	206.2	207.2	209.2	190.6	200.7	201.9	202.9	203.5	204.5	206.0
Housefurnishings	164.1	172.7	173.4	174.6	174.7	175.2	177.3	163.5	171.5	172.2	172.9	172.9	173.5	175.0
Textile housefurnishings	175.3	188.2	187.3	189.4	188.2	189.1	194.1	174.9	186.3	186.1	189.6	188.7	189.6	192.5
Household linens (12/77 = 100)	106.7	114.8	114.4	116.0	114.6	114.1	118.4	106.3	113.8	113.4	116.2	114.8	114.7	117.7
Curtains, drapes, slipcovers, and sewing materials (12/77 = 100)	112.0	119.9	119.3	120.1	120.2	121.9	123.6	112.2	118.9	119.0	120.5	121.0	122.4	122.7
Furniture and bedding	178.3	190.9	191.9	193.6	192.8	192.6	195.7	178.5	189.4	190.1	190.8	189.7	189.9	192.0
Bedroom furniture (12/77 = 100)	114.8	124.3	125.0	126.2	125.4	125.8	127.9	113.0	120.9	121.7	123.1	122.6	123.6	124.5
Sofas (12/77 = 100)	107.1	111.6	111.4	113.0	112.2	111.3	112.7	108.6	111.8	112.0	112.7	111.7	110.4	111.1
Living room chairs and tables (12/77 = 100)	105.1	110.9	110.8	110.6	110.7	111.6	114.1	106.7	112.6	112.6	111.7	111.3	112.3	115.1
Other furniture (12/77 = 100)	113.9	124.0	125.6	127.1	126.6	125.7	127.5	114.2	123.1	123.5	123.9	123.0	122.5	123.6
Appliances including TV and sound equipment	136.2	139.3	139.9	140.2	140.5	141.4	142.0	135.7	139.7	140.2	140.1	140.1	140.6	141.2
Television and sound equipment (12/77 = 100)	104.7	105.7	105.7	105.6	105.8	106.6	107.0	104.4	105.4	105.4	105.2	105.0	105.2	105.7
Television	102.9	104.0	104.1	104.2	104.4	105.0	105.0	101.9	102.8	102.8	103.1	102.7	103.3	103.2
Sound equipment (12/77 = 100)	107.5	108.3	108.3	107.9	108.2	109.1	109.8	107.4	108.6	108.7	108.0	108.0	107.9	108.8
Household appliances	155.8	161.4	162.6	163.4	163.7	164.6	165.5	155.2	162.3	163.4	163.6	163.8	164.5	165.2
Refrigerators and home freezer	154.1	160.6	162.7	163.2	163.6	164.4	164.8	156.5	163.5	166.0	166.8	166.4	168.0	169.1
Laundry equipment (12/77 = 100)	110.9	117.5	118.2	119.1	119.6	120.2	120.9	111.2	117.8	118.5	118.9	118.7	120.1	120.0
Other household appliances (12/77 = 100)	109.1	111.5	112.1	112.7	112.6	113.3	114.2	107.2	111.6	111.8	111.7	112.1	112.0	112.5
Stoves, dishwashers, vacuums, and sewing machines (12/77 = 100)	108.6	110.0	110.3	111.2	111.6	111.8	111.8	107.7	111.6	111.9	111.4	112.8	111.4	111.8
Office machines, small electric appliances, and air conditioners (12/77 = 100)	109.7	113.1	114.2	114.4	113.8	115.1	117.0	106.8	111.6	111.7	112.0	111.3	112.6	113.4
Other household equipment (12/77 = 100)	110.9	118.4	119.0	120.2	121.3	121.7	123.0	110.3	117.0	117.8	118.5	119.7	120.5	121.6
Floor and window coverings, infants' laundry cleaning and outdoor equipment (12/77 = 100)	111.1	118.2	117.6	120.2	120.8	121.7	123.0	105.8	113.1	113.2	114.3	114.7	115.3	116.8
Clocks, lamps, and decor items (12/77 = 100)	108.0	115.6	117.6	118.8	119.0	119.8	120.6	107.0	112.6	114.4	115.9	116.6	117.1	118.2
Tableware, serving pieces, and nonelectric kitchenware (12/77 = 100)	114.7	123.4	124.1	125.4	126.4	125.8	128.2	114.5	121.4	121.7	122.2	124.0	125.1	126.3
Lawn equipment, power tools, and other hardware (12/77 = 100)	107.6	113.5	114.0	113.7	115.9	117.1	117.2	109.5	115.9	117.4	117.6	118.7	119.6	120.3
Housekeeping supplies	224.1	240.7	243.6	245.4	247.3	249.9	252.0	222.6	238.1	241.2	243.0	245.2	247.8	249.6
Soaps and detergents	215.1	233.2	235.0	234.9	237.2	240.1	243.7	214.5	231.1	232.1	232.3	234.4	236.8	241.1
Other laundry and cleaning products (12/77 = 100)	112.3	117.6	119.8	121.1	122.3	124.4	125.6	112.4	118.1	119.5	120.8	122.3	123.9	125.0
Cleansing and toilet tissue, paper towels and napkins (12/77 = 100)	116.4	126.2	128.6	129.4	130.2	132.2	133.8	117.1	128.1	130.8	131.5	132.7	135.1	135.8
Stationery, stationery supplies, and gift wrap (12/77 = 100)	109.9	115.6	116.3	116.9	117.6	117.4	118.0	108.3	114.9	116.0	116.5	117.9	117.4	116.9
Miscellaneous household products (12/77 = 100)	113.3	122.0	123.0	124.4	125.4	127.7	129.0	111.6	119.2	120.9	122.1	123.5	125.5	126.6
Lawn and garden supplies (12/77 = 100)	112.7	123.8	125.2	126.8	127.6	127.5	127.1	109.9	116.5	118.9	121.0	120.7	121.4	120.5
Housekeeping services	253.4	266.0	267.6	269.1	270.4	271.6	273.3	252.1	264.3	265.6	267.0	268.1	269.0	270.2
Postage	257.3	257.3	257.3	257.3	257.3	257.3	257.3	257.2	257.3	257.3	257.3	257.3	253.7	257.3
Moving, storage, freight, household laundry, and drycleaning services (12/77 = 100)	118.1	128.3	129.4	130.5	131.0	131.3	132.8	118.6	127.8	128.5	129.2	129.7	129.7	130.3
Appliance and furniture repair (12/77 = 100)	111.7	116.5	117.2	117.7	118.7	119.4	119.8	111.1	116.2	116.7	117.4	117.8	118.3	118.7
APPAREL AND UPKEEP	169.8	177.3	177.5	177.2	176.2	178.6	182.2	169.3	176.1	176.8	176.0	175.4	177.9	181.4
Apparel commodities	164.2	170.2	170.1	169.7	168.5	171.0	174.9	163.9	169.5	169.8	168.8	168.0	170.7	174.4
Apparel commodities less footwear	161.5	167.2	166.9	166.4	165.0	167.8	171.8	161.2	166.3	166.4	165.3	164.4	167.3	171.1
Men's and boys'	162.7	166.9	168.0	166.8	165.9	167.9	171.7	163.2	167.3	168.9	168.1	167.2	168.4	171.6
Men's (12/77 = 100)	102.7	105.0	105.7	104.8	103.9	105.6	108.1	103.2	105.2	106.3	105.5	104.7	106.1	108.3
Suits, sport coats, and jackets (12/77 = 100)	100.0	101.1	101.2	99.7	97.1	99.2	103.2	98.3	97.3	97.1	95.4	93.2	95.2	98.3
Coats and jackets (12/77 = 100)	96.5	96.5	97.3	96.3	96.0	96.7	99.9	99.1	97.0	97.2	97.1	97.1	98.0	100.0
Furnishings and special clothing (12/77 = 100)	110.6	116.6	117.9	118.2	118.4	119.3	120.8	108.6	114.2	116.4	115.4	115.7	116.3	117.5
Shirts (12/77 = 100)	107.2	111.5	112.2	110.8	110.7	114.9	116.9	107.1	111.7	113.7	112.9	111.2	115.1	117.4
Dungarees, jeans, and trousers (12/77 = 100)	99.0	99.4	100.2	99.5	99.2	99.5	101.2	102.5	104.2	105.2	105.0	104.8	105.0	107.1
Boys' (12/77 = 100)	104.8	108.9	109.7	109.5	110.0	109.5	111.4	103.9	108.7	109.6	109.8	110.0	108.6	110.2
Coats, jackets, sweaters, and shirts (12/77 = 100)	102.7	104.4	105.2	104.6	104.4	106.0	108.1	102.0	107.2	107.7	107.8	107.4	107.1	109.6
Furnishings (12/77 = 100)	109.4	113.3	114.3	114.6	114.7	114.6	116.6	108.8	111.6	112.7	113.3	113.3	112.9	113.7
Suits, trousers, sport coats, and jackets (12/77 = 100)	104.5	110.7	111.3	111.3	112.6	110.3	111.9	103.5	108.8	109.9	110.1	110.9	108.2	109.4
Women's and girls'	155.9	155.9	154.1	153.0	150.6	153.7	159.0	154.4	154.7	154.1	151.2	149.9	154.1	159.8
Women's (12/77 = 100)	103.9	103.9	102.4	101.7	99.8	101.7	105.7	103.0	103.3	103.0	100.8	99.6	102.5	107.0
Coats and jackets	174.1	168.3	162.0	158.1	158.8	164.0	168.9	175.7	167.8	162.4	155.2	157.5	170.2	177.0
Dresses	171.1	167.8	163.9	163.3	153.9	158.3	168.5	158.5	154.1	154.5	152.5	146.2	151.1	156.8
Separates and sportswear (12/77 = 100)	99.8	101.1	100.3	99.5	96.8	98.5	102.2	100.4	101.6	101.2	99.2	97.1	99.7	104.6
Underwear, nightwear, and hosiery (12/77 = 100)	106.2	111.5	111.8	112.1	113.2	114.2	114.6	107.4	111.7	112.2	112.3	112.8	114.3	114.8
Suits (12/77 = 100)	96.7	90.4	88.0	86.5	85.5	86.5	95.4	98.1	98.2	98.2	91.7	90.1	91.3	105.7
Girls (12/77 = 100)	102.4	102.6	102.7	102.1	102.0	104.5	105.8	101.1	101.1	100.5	99.6	100.0	102.3	103.3
Coats, jackets, dresses, and suits (12/77 = 100)	102.8	99.8	99.4	98.1	98.9	103.4	102.1	98.5	96.8	95.3	93.8	95.6	99.5	97.3
Separates and sportswear (12/77 = 100)	100.3	101.4	101.8	100.7	99.7	102.0	105.3	102.1	100.5	99.9	98.5	98.2	100.7	104.2
Underwear, nightwear, hosiery, and accessories (12/77 = 100)	105.7	109.5	110.0	111.4	111.4	111.2	113.0	103.5	108.9	110.0	110.9	110.4	109.6	111.3

23. Continued—Consumer Price Index—U.S. city average

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1979	1980						1979	1980					
	Sept.	Apr.	May	June	July	Aug.	Sept.	Sept.	Apr.	May	June	July	Aug.	Sept.
APPAREL AND UPKEEP—Continued														
Apparel commodities—Continued														
Apparel commodities less footwear—Continued														
Infants' and toddlers'	223.4	234.3	237.4	240.9	243.0	243.9	242.4	226.0	241.1	242.8	246.8	249.2	252.6	248.3
Other apparel commodities	172.6	201.9	202.7	205.3	205.5	209.9	210.5	174.9	198.5	197.4	201.0	200.8	204.1	204.4
Sewing materials and notions (12/77 = 100)	102.3	107.9	109.1	110.2	109.3	110.2	110.9	100.4	106.9	108.6	110.9	108.8	110.0	110.7
Jewelry and luggage (12/77 = 100)	115.6	140.1	140.4	142.2	142.8	146.5	146.8	118.9	138.1	136.3	138.6	139.4	142.0	142.0
Footwear	180.1	188.3	189.3	189.0	189.5	190.3	193.2	179.4	188.1	189.3	188.9	189.3	190.0	193.3
Men's (12/77 = 100)	115.0	119.7	120.0	121.3	121.1	121.3	123.6	116.3	122.4	122.7	123.6	123.2	123.4	124.9
Boys' and girls' (12/77 = 100)	111.6	119.5	121.3	121.0	123.5	122.8	123.3	111.6	119.5	121.5	121.3	123.1	123.9	124.6
Womens' (12/77 = 100)	112.0	115.6	115.8	114.6	113.8	115.4	117.7	109.6	112.6	112.9	111.7	111.3	111.7	115.1
Apparel services	210.2	230.0	232.2	233.6	234.4	235.4	237.3	208.7	226.0	230.8	231.8	232.6	233.7	234.5
Laundry and drycleaning other than coin operated (12/77 = 100)	123.6	135.5	136.9	137.5	137.7	138.3	140.0	123.2	134.1	135.6	137.3	137.5	138.4	139.1
Other apparel services (12/77 = 100)	113.0	123.3	124.5	125.5	126.3	126.9	126.9	112.3	120.4	125.0	123.9	124.7	125.0	125.1
TRANSPORTATION	221.4	246.8	249.0	249.7	251.0	252.7	254.7	222.4	247.7	249.9	250.6	251.9	253.5	255.2
Private	222.0	247.0	249.2	249.7	250.5	251.6	253.2	222.7	248.0	250.1	250.8	251.5	252.7	254.1
New cars	166.1	177.0	178.9	178.5	179.2	181.1	181.7	165.9	177.7	179.6	179.4	180.0	181.9	182.3
Used cars	202.9	196.7	199.3	200.7	203.4	206.4	214.6	202.9	196.8	199.3	200.8	203.4	206.4	214.6
Gasoline	301.0	374.7	375.4	376.2	376.7	375.9	373.0	302.3	376.3	377.1	377.6	377.8	377.1	373.9
Automobile maintenance and repair	247.1	264.1	266.1	267.3	269.0	271.1	273.8	247.5	264.3	266.1	268.0	269.7	272.2	273.9
Body work (12/77 = 100)	119.4	129.1	130.6	131.4	131.8	133.0	133.8	119.2	128.4	129.7	130.8	131.3	132.4	133.0
Automobile drive train, brake, and miscellaneous mechanical repair (12/77 = 100)	118.1	126.1	126.6	127.5	128.1	129.0	130.9	119.0	127.4	127.8	128.8	129.9	131.5	131.8
Maintenance and servicing (12/77 = 100)	116.9	124.7	125.9	126.1	127.3	128.4	129.4	116.8	124.2	125.4	126.2	127.2	128.4	129.5
Power plant repair (12/77 = 100)	116.7	124.4	125.1	125.9	126.4	127.3	128.7	117.0	124.6	125.4	126.2	126.6	127.5	128.5
Other private transportation	201.7	221.3	224.5	225.0	224.5	224.7	226.0	202.3	223.1	226.7	227.3	226.7	226.8	227.6
Other private transportation commodities	177.7	194.1	195.3	195.5	197.7	198.3	200.9	178.7	195.8	196.7	196.8	200.1	200.6	201.9
Motor oil, coolant, and other products (12/77 = 100)	114.4	129.8	132.2	134.1	136.3	136.3	137.5	114.5	129.1	131.5	133.6	135.5	136.1	135.6
Automobile parts and equipment (12/77 = 100)	114.9	124.8	125.4	125.3	126.6	127.0	128.8	115.7	126.2	126.5	126.3	128.4	128.7	129.8
Tires	156.4	171.2	172.6	172.3	174.9	175.9	178.8	158.1	174.9	175.6	174.9	178.9	179.9	181.5
Other parts and equipment (12/77 = 100)	119.1	127.1	126.5	126.8	126.6	126.2	127.3	118.6	125.1	125.0	125.4	125.7	125.2	125.8
Other private transportation services	210.1	230.6	234.5	235.0	233.8	233.9	234.9	210.6	232.6	236.8	237.6	236.0	236.0	236.7
Automobile insurance	233.5	245.2	247.1	248.5	249.1	250.2	251.3	233.5	244.9	246.9	248.2	248.7	249.9	250.9
Automobile finance charges (12/77 = 100)	117.7	148.6	155.0	153.7	149.7	148.2	148.6	117.0	147.8	153.8	153.5	149.1	147.5	147.5
Automobile rental, registration, and other fees (12/77 = 100)	107.8	111.5	112.1	112.9	113.3	114.0	114.5	108.4	112.2	113.1	114.0	114.7	115.4	115.8
State registration	144.0	146.4	146.4	146.4	146.4	146.5	146.5	143.9	146.5	146.5	146.5	146.5	146.5	146.5
Drivers' license (12/77 = 100)	104.5	104.7	104.7	104.7	104.9	104.9	104.9	104.3	104.4	104.4	104.4	104.6	104.6	104.6
Vehicle inspection (12/77 = 100)	114.6	119.7	120.4	121.5	122.6	122.8	122.8	115.5	120.3	121.0	122.1	123.3	123.5	123.5
Other vehicle related fees (12/77 = 100)	116.1	122.7	124.0	126.1	126.8	128.3	129.8	120.3	127.8	130.0	132.7	134.6	136.6	137.8
Public	205.2	235.9	239.5	242.2	250.5	261.5	271.0	204.1	229.7	232.9	234.9	245.8	256.9	264.4
Airline fare	214.1	264.3	270.0	275.5	276.9	289.8	310.3	214.2	263.9	270.0	275.4	275.5	287.9	308.6
Intercity bus fare	268.0	291.5	293.6	293.8	294.2	297.9	304.7	268.0	291.0	293.4	293.6	293.9	298.0	304.5
Intracity mass transit	190.5	203.0	204.6	204.4	222.6	234.1	234.8	190.2	200.8	202.0	201.9	221.8	233.8	234.4
Taxi fare	228.5	256.4	259.9	262.0	263.3	266.2	266.8	233.9	261.6	265.7	267.6	269.2	273.0	273.6
Intercity train fare	221.0	237.3	250.0	255.2	255.3	255.4	255.5	221.3	237.2	251.1	255.5	255.4	255.6	255.6
MEDICAL CARE	243.7	262.0	263.4	264.7	266.6	268.4	270.6	244.7	263.1	264.9	265.9	267.8	270.0	272.2
Medical care commodities	155.8	164.9	166.4	167.9	169.1	170.2	171.3	156.7	166.0	167.2	168.5	169.7	170.8	171.8
Prescription drugs	143.5	152.2	153.5	154.8	155.6	156.4	157.5	144.4	153.5	154.6	155.8	156.6	157.4	158.5
Anti-infective drugs (12/77 = 100)	113.1	118.5	118.7	120.5	121.2	120.5	122.4	114.1	120.4	120.7	122.0	122.3	121.6	123.4
Tranquillizers and sedatives (12/77 = 100)	114.9	122.9	124.1	124.9	125.5	126.1	126.3	115.0	122.7	123.5	124.2	124.7	125.4	125.4
Circulatories and diuretics (12/77 = 100)	109.3	114.2	114.6	115.1	115.4	116.0	116.9	110.0	115.9	116.8	117.3	117.6	118.2	118.9
Hormones, diabetic drugs, biologicals, and prescription and supplies (12/77 = 100)	120.9	131.3	133.2	134.3	135.5	138.2	138.9	120.8	131.3	132.4	133.7	134.8	137.0	138.1
Pain and symptom control drugs (12/77 = 100)	114.8	121.4	122.9	124.2	124.5	125.2	125.6	116.0	122.6	124.2	125.5	126.1	127.6	128.1
Supplements, cough and cold preparations, and respiratory agents (12/77 = 100)	110.9	117.1	118.2	118.6	119.3	119.9	120.5	112.2	118.5	119.5	120.2	120.9	121.2	121.8
Nonprescription drugs and medical supplies (12/77 = 100)	112.0	118.4	119.5	120.6	121.7	122.6	123.3	112.8	119.2	120.1	121.0	122.0	122.9	123.6
Eyeglasses (12/77 = 100)	109.2	115.0	116.5	118.2	118.7	119.9	120.5	109.3	115.3	116.3	117.3	117.8	118.4	119.0
Internal and respiratory over-the-counter drugs	173.0	184.4	186.0	187.3	189.1	190.4	191.2	174.7	185.4	186.9	188.4	190.1	191.6	192.4
Nonprescription medical equipment and supplies (12/77 = 100)	110.8	115.3	116.5	117.5	119.1	119.9	120.8	111.2	116.3	117.1	117.5	119.0	119.9	121.2
Medical care services	262.8	283.4	284.7	285.9	288.0	289.8	292.3	263.8	284.5	286.3	287.3	289.3	291.7	294.3
Professional services	230.3	248.2	250.3	251.8	253.5	254.7	257.3	233.1	251.2	253.5	255.1	256.1	257.8	260.4
Physicians' services	248.4	264.8	267.5	269.2	270.9	272.2	274.2	251.5	269.7	272.3	273.9	275.4	277.6	280.5
Dental services	217.2	237.2	238.8	240.3	241.1	242.2	245.8	220.7	238.9	241.2	243.1	243.0	244.5	247.3
Other professional services (12/77 = 100)	112.4	121.7	122.2	122.9	125.0	126.0	126.7	111.7	121.1	121.6	122.2	123.6	123.9	124.5
Other medical care services	302.0	325.8	326.3	327.2	329.7	332.3	334.7	301.3	325.3	326.5	326.5	329.8	333.3	335.6
Hospital and other medical services (12/77 = 100)	119.6	129.7	130.4	131.4	133.4	135.4	137.1	118.9	128.6	129.7	130.3	132.6	134.9	136.4
Hospital room	376.4	408.0	410.1	412.6	418.2	424.0	428.4	374.1	403.6	406.7	408.5	414.9	422.4	427.2
Other hospital and medical care services	118.8	128.8	129.5	130.6	132.8	135.1	137.0	118.0	128.0	129.1	129.7	132.3	134.4	136.0

23. Continued—Consumer Price Index—U.S. city average

[1967=100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1979	1980						1979	1980					
	Sept.	Apr.	May	June	July	Aug.	Sept.	Sept.	Apr.	May	June	July	Aug.	Sept.
ENTERTAINMENT	191.1	202.5	204.0	205.3	206.6	208.0	209.8	190.2	201.3	202.4	204.0	204.4	205.6	208.1
Entertainment commodities	192.0	205.7	207.0	208.3	209.3	210.8	212.8	189.9	202.8	203.4	204.5	204.8	206.4	208.6
Reading materials (12/77 = 100)	111.9	120.1	121.5	122.3	123.0	123.2	126.1	111.4	119.7	121.1	121.8	122.5	122.7	125.5
Newspapers	214.5	234.8	237.2	239.0	240.0	240.7	242.3	214.2	234.3	236.4	238.2	239.3	239.9	241.5
Magazines, periodicals, and books (12/77 = 100)	115.0	120.8	122.4	123.1	124.1	124.0	129.3	114.8	120.6	122.3	122.8	123.7	123.7	129.3
Sporting goods and equipment (12/77 = 100)	111.3	118.7	118.5	118.6	119.5	120.9	121.1	107.5	114.1	114.0	114.2	114.2	115.3	115.8
Sport vehicles (12/77 = 100)	NA	120.6	119.9	119.8	120.7	122.2	NA	NA	113.0	112.5	112.6	112.5	113.5	NA
Indoor and warm weather sport equipment (12/77 = 100)	106.1	111.3	112.0	111.1	112.4	113.5	113.8	104.7	110.5	110.3	110.2	110.6	111.7	112.1
Bicycles	165.6	178.6	179.7	180.6	181.6	183.6	184.7	164.7	179.8	180.9	181.4	181.4	183.2	184.9
Other sporting goods and equipment (12/77 = 100)	109.3	113.1	113.7	114.6	115.0	116.5	117.2	108.5	114.0	114.6	115.3	116.1	116.9	117.4
Toys, hobbies, and other entertainment (12/77 = 100)	110.4	118.4	119.4	120.6	121.0	121.8	122.6	110.4	118.0	118.1	119.0	119.1	120.3	121.3
Toys, hobbies, and music equipment (12/77 = 100)	110.4	117.3	118.5	119.6	119.0	120.4	121.4	109.6	116.5	115.8	117.0	115.9	117.8	119.0
Photographic supplies and equipment (12/77 = 100)	108.9	120.1	120.8	121.8	122.8	122.5	123.1	108.8	118.9	120.5	121.1	122.4	121.7	121.8
Pet supplies and expense (12/77 = 100)	111.6	119.2	120.1	121.7	123.2	123.9	124.4	112.9	120.0	120.9	121.4	122.9	123.8	125.2
Entertainment services	190.2	198.5	200.1	201.4	203.1	204.3	206.1	191.8	199.9	201.8	204.3	204.8	205.2	208.4
Fees for participant sports (12/77 = 100)	113.0	119.0	120.2	120.9	122.1	123.2	124.5	113.4	119.3	120.5	121.5	121.9	121.8	124.7
Admissions (12/77 = 100)	115.2	118.7	118.8	120.4	121.3	122.1	122.6	116.3	120.1	121.0	123.2	123.2	124.2	124.1
Other entertainment services (12/77 = 100)	109.4	114.8	116.4	116.6	117.4	117.4	118.3	110.9	115.1	116.5	118.2	118.8	119.1	120.8
OTHER GOODS AND SERVICES	201.7	209.8	211.2	212.5	213.5	214.5	220.6	200.6	209.2	210.6	212.1	212.9	214.0	219.0
Tobacco products	190.9	198.8	200.4	203.4	203.8	204.5	204.5	190.9	198.9	200.5	203.6	204.0	204.4	204.3
Cigarettes	193.6	201.4	202.9	206.0	206.4	207.0	206.8	193.7	201.6	203.2	206.4	206.8	207.0	206.8
Other tobacco products and smoking accessories (12/77 = 100)	112.2	117.6	119.0	120.2	120.7	122.0	122.8	111.0	117.2	118.5	119.5	120.3	121.7	122.7
Personal care	199.0	209.7	211.6	212.4	214.4	215.4	216.7	198.4	209.5	210.9	211.8	213.1	214.7	216.6
Toilet goods and personal care appliances	191.4	201.8	204.1	205.1	207.9	209.0	210.3	191.0	201.8	203.9	204.5	206.6	208.8	210.4
Products for the hair, hairpieces and wigs (12/77 = 100)	111.6	117.9	120.0	120.7	121.4	121.7	121.8	110.6	117.9	120.0	119.7	120.5	122.5	123.6
Dental and shaving products (12/77 = 100)	114.3	120.5	121.0	122.3	124.0	125.2	125.3	112.5	119.3	118.8	120.4	122.0	123.6	124.0
Cosmetics, bath and nail preparations, manicure and eye makeup implements (12/77 = 100)	110.4	115.7	116.5	116.7	119.1	119.6	121.3	110.6	115.2	116.2	116.6	117.9	118.5	119.7
Other toilet goods and small personal care appliances (12/77 = 100)	108.6	115.4	117.4	117.6	119.4	119.9	120.8	110.3	117.2	119.0	119.1	120.4	121.5	122.1
Personal care services	206.4	217.2	218.8	219.6	220.9	221.7	223.1	205.8	217.2	218.1	219.1	219.8	220.7	222.9
Beauty parlor services for women	207.7	218.6	220.4	220.6	222.1	222.5	224.5	207.4	218.6	219.4	220.2	221.0	222.0	225.0
Haircuts and other barber shop services for men (12/77 = 100)	115.5	121.7	122.2	123.4	123.9	124.8	124.8	114.7	121.5	122.0	122.8	123.0	123.4	123.9
Personal and educational expenses	223.3	228.7	229.2	229.5	229.9	231.4	249.5	223.5	228.7	229.4	229.8	230.3	231.8	249.8
School books and supplies	201.5	207.1	207.1	207.1	207.2	207.7	221.0	205.0	210.9	210.9	210.9	210.9	211.5	224.8
Personal and educational services	228.6	234.0	234.7	235.0	235.5	237.1	256.2	228.4	233.4	234.2	234.8	235.4	237.1	256.1
Tuition and other school fees	117.7	118.6	118.6	118.6	118.7	119.4	131.6	117.9	118.7	118.7	118.7	118.8	119.5	131.8
College tuition (12/77 = 100)	116.9	117.9	117.9	117.9	118.0	118.7	130.7	116.8	117.9	117.9	117.9	118.0	118.7	130.7
Elementary and high school tuition (12/77 = 100)	120.9	120.9	120.9	120.9	120.9	122.0	134.4	120.7	120.7	120.7	120.7	120.7	121.8	134.3
Personal expenses (12/77 = 100)	115.1	126.1	127.8	128.7	129.5	130.7	130.5	114.4	123.3	125.1	126.4	127.4	128.5	129.7
Special indexes:														
Gasoline, motor oil, coolant, and other products	297.1	369.3	370.1	370.9	371.5	370.7	367.9	298.3	370.8	371.6	372.2	372.5	371.8	368.7
Insurance and finance	283.5	335.2	342.6	353.8	342.3	338.3	338.6	283.1	335.2	342.8	354.0	342.6	338.7	339.0
Utilities and public transportation	219.3	233.4	238.9	244.8	249.1	251.9	254.8	219.5	232.6	237.9	244.0	248.4	251.2	253.6
Housekeeping and home maintenance services	276.6	295.7	297.6	298.6	300.1	300.8	303.6	277.8	295.1	296.5	296.7	297.5	299.7	302.3

24. Consumer Price Index for All Urban Consumers: Cross classification of region and population size class by expenditure category and commodity and service group

[December 1977 = 100]

Category and group	Size class A (1.25 million or more)			Size class B (385,000 - 1.250 million)			Size class C (75,000 - 385,000)			Size class D (75,000 or less)		
	1980			1980			1980			1980		
	Apr.	June	Aug.	Apr.	June	Aug.	Apr.	June	Aug.	Apr.	June	Aug.
	Northeast											
EXPENDITURE CATEGORY												
All items	125.0	127.1	129.1	129.0	131.0	134.8	132.7	135.6	138.3	127.4	131.0	134.1
Food and beverages	124.5	126.2	129.5	127.1	128.6	131.0	128.8	130.5	133.4	125.2	127.6	130.4
Housing	126.1	129.6	131.2	130.0	133.1	139.7	140.2	144.9	148.4	127.9	133.5	138.7
Apparel and upkeep	112.5	111.5	112.0	111.1	111.3	113.1	112.7	113.2	113.9	113.0	115.0	115.0
Transportation	133.8	135.3	138.0	140.8	141.7	143.5	136.2	138.2	140.3	138.1	140.2	141.4
Medical care	122.4	123.0	125.1	122.4	123.2	124.4	122.5	123.5	125.0	122.7	124.4	125.2
Entertainment	116.7	117.7	118.3	117.9	120.2	121.1	115.7	116.5	118.9	121.5	123.8	124.4
Other goods and services	114.7	116.1	117.2	117.5	119.0	120.0	119.6	121.9	123.3	116.0	116.8	118.3
COMMODITY AND SERVICE GROUP												
Commodities	126.5	128.4	130.4	130.8	132.1	136.1	131.6	133.8	136.9	128.0	131.5	135.1
Commodities less food and beverages	127.8	129.7	131.0	132.5	133.8	138.5	132.9	135.4	138.6	129.3	133.3	137.3
Services	122.9	125.4	127.4	126.3	129.2	132.8	134.5	138.5	140.4	126.5	130.2	132.5
	North Central											
EXPENDITURE CATEGORY												
All items	133.2	136.7	136.8	130.9	134.4	134.7	128.9	131.9	132.9	128.7	131.9	131.7
Food and beverages	126.8	128.1	131.5	124.9	126.7	129.8	127.0	128.7	131.8	128.9	129.6	133.9
Housing	141.1	147.5	145.4	135.8	141.2	139.4	130.4	135.6	135.3	129.1	134.5	131.5
Apparel and upkeep	109.2	108.5	109.0	111.2	111.0	112.9	110.7	111.0	112.0	113.6	114.6	113.6
Transportation	138.1	140.1	141.0	137.6	140.7	141.3	139.3	140.4	141.6	137.4	139.8	140.4
Medical care	125.3	126.1	127.8	125.0	125.8	128.8	125.7	126.6	129.1	127.4	128.9	133.7
Entertainment	118.9	120.1	122.4	114.0	117.1	118.6	118.7	121.3	122.7	116.1	117.3	116.9
Other goods and services	116.2	117.9	118.6	121.5	123.2	124.4	116.7	117.5	118.8	119.8	121.6	122.9
COMMODITY AND SERVICE GROUP												
Commodities	130.9	132.9	134.5	127.9	129.9	132.4	128.1	129.7	131.9	126.0	128.0	129.8
Commodities less food and beverages	132.8	135.2	135.9	129.2	131.2	133.4	128.5	130.1	131.9	124.8	127.3	128.0
Services	136.6	142.3	140.3	135.6	141.7	138.4	130.3	135.5	134.5	132.9	138.1	134.8
	South											
EXPENDITURE CATEGORY												
All items	130.7	133.5	134.8	131.7	134.7	135.4	131.3	133.1	133.7	128.3	131.4	131.9
Food and beverages	126.4	128.5	132.3	127.0	127.9	131.3	127.8	129.1	132.8	126.2	128.1	132.4
Housing	133.9	138.5	138.2	136.7	141.4	140.5	136.6	138.9	137.1	129.7	134.0	132.4
Apparel and upkeep	116.4	116.4	116.7	112.9	112.6	114.1	108.2	107.3	109.4	104.7	107.2	105.6
Transportation	139.7	140.9	143.5	138.4	140.6	142.0	137.2	139.7	141.1	136.5	138.7	140.4
Medical care	121.9	124.1	125.4	123.3	125.8	127.5	126.4	127.5	128.8	131.2	133.9	133.9
Entertainment	115.7	116.3	119.5	119.8	122.5	124.0	118.3	120.3	122.0	124.4	128.0	130.5
Other goods and services	119.3	120.9	122.3	118.1	119.5	121.3	118.8	120.2	121.6	121.9	123.9	125.1
COMMODITY AND SERVICE GROUP												
Commodities	129.3	130.9	133.1	129.0	130.6	132.7	128.7	129.7	131.9	127.2	129.0	131.3
Commodities less food and beverages	130.6	132.0	133.5	129.8	131.7	133.3	129.1	130.0	131.5	127.7	129.3	130.9
Services	132.6	137.2	137.1	135.8	140.9	139.5	135.3	138.4	136.4	129.8	135.1	132.7
	West											
EXPENDITURE CATEGORY												
All items	132.8	136.1	135.5	134.1	136.0	136.8	131.4	133.6	134.2	130.4	134.3	135.4
Food and beverages	126.5	127.7	130.5	128.8	130.2	133.1	125.7	127.6	129.5	128.0	129.6	132.9
Housing	136.3	142.5	139.2	139.1	141.4	140.9	134.8	137.9	137.2	129.7	135.9	135.6
Apparel and upkeep	115.7	114.5	116.4	115.8	118.4	119.5	107.7	107.4	108.5	121.8	123.6	126.3
Transportation	141.2	141.1	142.8	139.2	140.7	142.4	141.2	142.1	143.6	139.6	141.7	143.5
Medical care	128.8	129.5	130.6	126.9	127.9	129.0	126.7	129.4	132.2	128.9	132.5	134.1
Entertainment	117.8	119.5	120.8	123.1	123.9	125.9	121.0	122.4	125.2	127.5	130.3	131.5
Other goods and services	121.2	121.7	122.8	121.5	124.3	125.7	117.7	119.0	120.2	122.5	124.4	124.5
COMMODITY AND SERVICE GROUP												
Commodities	129.5	130.4	132.3	131.5	132.5	134.6	129.0	130.1	132.2	129.8	131.7	134.1
Commodities less food and beverage	130.8	131.6	133.1	132.7	133.5	135.2	130.4	131.1	133.3	130.6	132.6	134.6
Services	137.2	143.6	139.7	137.7	140.8	140.0	134.8	138.5	137.1	131.2	138.2	137.3

25. Consumer Price Index—U.S. city average, and selected areas

[1967=100 unless otherwise specified]

Area[1]	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1979	1980						1979	1980					
	Sept.	Apr.	May	June	July	Aug.	Sept.	Sept.	Apr.	May	June	July	Aug.	Sept.
U.S. city average[2]	223.4	242.5	244.9	247.6	247.8	249.4	251.7	223.7	242.6	245.1	247.8	248.0	249.6	251.9
Anchorage, Alaska (10/67=100)	213.2	...	226.5	...	228.4	...	230.9	210.9	...	223.1	...	224.8	...	226.7
Atlanta, Ga.	...	235.3	...	242.2	...	246.5	...	...	239.3	...	244.7	...	249.7	...
Baltimore, Md.	224.9	...	249.1	...	252.4	...	255.0	224.9	...	247.8	...	250.8	...	253.2
Boston, Mass.	218.1	...	236.9	...	240.9	...	244.4	217.9	...	236.8	...	240.9	...	244.5
Buffalo, N.Y.	...	233.7	...	235.4	...	236.8	...	...	233.3	...	234.6	...	235.5	...
Chicago, Ill.-Northwestern Ind.	221.3	240.1	243.1	248.2	246.8	245.2	250.1	220.6	239.8	243.0	248.0	247.0	245.4	249.5
Cincinnati, Ohio-Ky.-Ind.	229.0	...	251.6	...	256.7	...	259.9	230.8	...	252.9	...	259.1	...	261.7
Cleveland, Ohio	...	247.3	...	250.1	...	253.9	...	...	248.4	...	250.5	...	254.4	...
Dallas-Ft. Worth, Tex.	...	251.4	...	256.4	...	258.5	...	...	249.6	...	254.5	...	257.4	...
Denver-Boulder, Colo.	240.8	...	258.0	...	261.6	...	266.6	243.6	...	262.4	...	265.8	...	270.9
Detroit, Mich.	223.7	248.2	248.4	256.7	253.7	255.1	259.5	223.5	248.0	248.9	255.8	252.1	253.8	257.7
Honolulu, Hawaii	...	227.4	...	227.5	...	230.1	...	...	228.4	...	228.0	...	229.5	...
Houston, Tex.	...	260.8	...	266.5	...	268.6	...	...	257.3	...	262.8	...	265.6	...
Kansas City, Mo.-Kansas	...	243.8	...	247.8	...	250.8	...	...	242.2	...	246.3	...	249.3	...
Los Angeles-Long Beach, Anaheim, Calif.	220.7	244.6	249.1	250.1	248.7	247.3	249.6	223.0	247.8	252.6	253.4	251.5	250.1	252.0
Miami, Fla. (11/77=100)	117.4	...	129.7	...	133.6	...	133.1	118.7	...	130.9	...	134.7	...	134.9
Milwaukee, Wis.	226.0	...	250.3	...	251.6	...	258.4	228.7	...	255.2	...	255.9	...	263.2
Minneapolis-St. Paul, Minn.-Wis.	...	244.3	...	246.4	...	250.1	...	...	245.7	...	248.4	...	250.6	...
New York, N.Y.-Northeastern N.J.	218.1	233.1	234.5	237.2	238.9	240.8	241.8	217.8	232.4	234.1	236.7	238.4	240.7	241.5
Northeast, Pa. (Scranton)	215.4	...	232.5	...	239.8	...	243.1	217.1	...	235.8	...	243.2	...	246.9
Philadelphia, Pa.-N.J.	219.5	237.4	239.4	242.5	244.1	246.0	247.2	220.3	237.9	239.9	243.8	245.3	247.3	248.3
Pittsburgh, Pa.	...	240.9	...	246.1	...	250.7	...	...	242.2	...	246.8	...	251.2	...
Portland, Oreg.-Wash.	232.2	...	257.3	...	252.7	...	256.9	232.6	...	255.9	...	252.2	...	255.4
St. Louis, Mo.-Ill.	222.2	...	241.8	...	245.0	...	252.4	222.5	...	242.6	...	245.9	...	252.7
San Diego, Calif.	240.4	...	269.7	...	269.9	...	271.8	237.7	...	264.8	...	265.7	...	267.7
San Francisco-Oakland, Calif.	...	243.5	...	248.0	...	251.0	...	...	242.8	...	247.7	...	251.4	...
Seattle-Everett, Wash.	222.6	...	249.6	...	255.1	...	258.1	221.0	...	246.8	...	251.6	...	254.6
Washington, D.C.-Md.-Va.	222.9	...	241.2	...	247.2	...	249.2	224.4	...	242.0	...	248.7	...	251.8

[1] The areas listed include not only the central city but the entire portion of the Standard Metropolitan Statistical Area, as defined for the 1970 Census of Population, except that the Standard Consolidated Area is used for New York and Chicago.

[2] Average of 85 cities.

26. Producer Price Indexes, by stage of processing

[1967=100]

Commodity grouping	Annual average 1979	1979			1980									
		Oct.	Nov.	Dec.	Jan.	Feb	Mar.	Apr.	May	June [1]	July	Aug.	Sept.	Oct.
FINISHED GOODS														
Finished goods	216.1	224.2	226.3	228.1	232.4	235.7	238.5	240.5	241.6	r243.0	246.6	249.0	248.9	252.2
Finished consumer goods	215.7	224.7	227.1	229.1	233.5	237.6	240.8	242.1	243.4	r245.0	249.1	251.8	251.8	253.6
Finished consumer foods	226.3	226.7	230.5	232.1	231.4	231.6	233.1	228.9	230.0	231.0	239.5	249.9	245.8	245.9
Crude	231.4	215.5	228.1	227.9	226.0	220.1	230.9	222.3	226.1	r223.6	230.7	240.7	253.2	231.3
Processed	223.8	225.5	228.6	230.3	229.7	230.4	231.1	227.2	228.1	229.4	238.0	243.0	242.9	244.8
Nondurable goods less foods	225.9	243.3	245.5	247.9	254.7	262.7	270.9	276.9	279.6	r281.0	282.8	284.3	284.7	284.9
Durable goods	181.9	189.0	190.0	191.8	199.1	202.1	200.3	201.2	201.0	r203.5	205.3	206.3	204.9	211.0
Consumer nondurable goods less food and energy	([2])	177.6	178.3	179.1	182.9	185.1	187.0	189.3	190.6	r192.1	193.4	194.6	195.5	196.6
Capital equipment	216.7	222.8	223.9	225.3	229.3	230.5	232.2	236.2	236.6	r237.7	240.2	241.9	241.3	248.2
INTERMEDIATE MATERIALS														
Intermediate materials, supplies, and components	242.8	255.0	256.3	258.7	r265.9	271.6	273.7	275.1	276.4	r278.2	280.3	282.6	284.1	286.3
Materials and components for manufacturing	234.1	244.3	245.5	247.8	255.5	259.8	259.5	260.3	262.2	r264.1	264.7	267.2	268.4	271.8
Materials for food manufacturing	223.6	225.5	227.8	230.4	226.0	245.6	240.1	238.7	255.5	r260.4	262.6	277.5	275.9	296.4
Materials for nondurable manufacturing	220.1	231.4	233.4	235.3	241.1	244.0	247.4	253.0	255.5	r256.3	256.9	258.8	258.3	259.6
Materials for durable manufacturing	271.3	284.7	284.6	287.8	303.7	306.5	301.4	296.6	295.5	r298.2	297.9	298.1	301.4	305.0
Components for manufacturing	206.8	213.2	214.8	216.3	219.2	223.2	225.3	227.7	228.6	r230.0	231.2	234.5	236.2	237.6
Materials and components for construction	246.9	254.7	254.0	253.7	257.7	262.1	265.5	265.6	265.7	r267.1	269.2	271.1	271.5	272.1
Processed fuels and lubricants	360.9	410.6	416.5	424.6	444.0	464.0	481.0	486.9	488.8	r493.0	504.9	508.1	510.2	507.1
Manufacturing industries	298.9	322.5	325.2	332.2	340.5	351.4	356.6	358.3	364.3	r373.0	378.4	381.3	385.9	384.9
Nonmanufacturing industries	422.9	500.6	510.0	519.1	550.3	579.9	609.5	620.0	617.2	r616.4	635.3	638.9	638.2	632.7
Containers	235.3	242.6	243.8	247.1	250.9	251.6	253.8	262.6	263.8	r265.5	267.1	266.5	266.8	270.0
Supplies	217.6	224.9	226.4	229.2	232.5	239.0	240.8	241.7	241.8	r243.2	246.2	248.2	251.7	253.7
Manufacturing industries	204.4	212.2	213.7	216.3	220.9	222.5	223.7	227.1	228.5	r230.6	232.3	232.2	233.1	234.4
Nonmanufacturing industries	224.7	231.7	233.3	236.1	238.7	247.8	249.8	249.5	248.9	r249.9	253.6	256.7	261.5	263.8
Feeds	224.1	228.9	226.9	230.4	224.4	223.3	218.9	206.6	210.5	r207.7	223.0	235.4	251.9	256.3
Other supplies	221.5	228.9	231.2	233.9	238.3	249.6	252.9	255.2	253.7	r255.6	256.6	257.6	259.8	261.6
CRUDE MATERIALS														
Crude materials for further processing	282.2	289.5	290.8	296.2	296.8	308.4	303.5	297.0	300.7	r299.6	316.3	327.7	331.8	336.0
Foodstuffs and feedstuffs	247.2	247.5	246.4	249.7	243.0	252.6	245.9	235.5	242.9	242.5	263.3	276.6	276.7	279.1
Nonfood materials	([2])	368.9	374.9	384.2	398.9	414.3	412.7	413.9	410.5	407.9	416.8	424.3	436.3	444.1
Nonfood materials except fuel	284.5	298.1	304.6	311.6	330.1	341.7	339.8	337.0	329.3	324.4	331.3	340.5	348.1	353.5
Manufacturing industries	293.3	307.8	314.9	322.5	342.1	354.9	352.5	349.1	340.3	r334.7	342.3	352.6	360.6	366.0
Construction	207.0	212.6	214.8	216.6	226.0	228.7	229.9	232.4	232.8	r234.1	235.3	235.8	239.6	245.3
Crude fuel	568.2	612.9	617.4	634.5	636.3	664.8	664.1	678.9	690.3	r695.6	711.0	713.2	740.5	756.1
Manufacturing industries	607.6	662.5	667.8	688.3	690.3	725.7	724.5	742.2	756.1	r762.9	781.9	784.5	818.0	837.9
Nonmanufacturing industries	548.3	585.5	589.3	603.9	605.7	628.8	628.8	641.3	650.8	655.1	667.8	669.8	692.3	704.7
SPECIAL GROUPINGS														
Finished goods excluding foods	([2])	221.3	222.8	224.6	230.5	234.6	237.8	241.7	242.8	r244.3	246.4	247.9	247.4	251.7
Finished consumer goods excluding foods	208.2	220.6	223.1	225.3	232.3	238.3	242.3	246.2	247.6	r249.5	251.4	252.7	252.3	255.0
Finished consumer goods less energy	([2])	202.8	204.7	206.1	209.4	211.2	211.9	211.5	212.4	r214.0	218.0	220.7	220.9	223.2
Intermediate materials less foods and feeds	244.0	256.8	258.1	260.5	268.4	273.7	276.2	278.0	278.6	r280.5	282.3	283.9	285.2	286.6
Intermediate materials less energy	([2])	246.4	247.1	249.1	255.3	259.8	260.5	261.4	262.6	r264.2	265.5	267.8	269.3	272.0
Intermediate foods and feeds	223.2	226.0	226.9	229.8	224.8	237.5	232.4	227.3	239.7	242.1	248.7	262.7	267.1	282.2
Crude materials less agricultural products	390.5	417.0	424.1	435.0	452.9	469.3	469.0	469.9	464.7	r463.8	470.5	479.3	491.5	502.5
Crude materials less energy	([2])	243.7	243.8	246.9	244.0	254.8	248.4	238.7	241.5	r239.0	237.0	268.7	270.7	273.5

[1] Data for June 1980 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

[2] Not available.

r=revised.

27. Producer Price Indexes, by commodity groupings

[1967=100 unless otherwise specified]

Code	Commodity group and subgroup	Annual average 1979	1979			1980									
			Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June [1]	July	Aug.	Sept.	Oct.
	All commodities	235.6	245.6	247.2	249.7	254.9	260.2	261.9	262.8	264.2	r265.6	269.8	273.1	274.1	277.0
	All commodities (1957-59 = 100)	250.0	260.6	262.3	267.3	270.2	275.6	277.4	278.8	280.3	r281.8	286.3	289.8	290.8	293.9
	Farm products and processed foods and feeds	229.8	230.6	232.3	234.6	231.9	237.0	234.9	229.3	233.8	r234.3	246.1	254.8	256.3	258.8
	Industrial commodities	236.5	249.0	250.6	253.1	260.6	265.9	268.6	271.3	271.9	r273.5	275.6	277.3	278.2	281.2
	FARM PRODUCTS AND PROCESSED FOODS AND FEEDS														
01	Farm products	241.4	239.6	240.2	242.5	236.4	242.3	239.3	228.9	233.5	233.4	253.9	263.6	266.6	263.4
01-1	Fresh and dried fruits and vegetables	229.0	218.0	216.5	210.7	219.0	220.6	218.5	223.2	244.0	r233.5	247.5	253.8	266.0	240.4
01-2	Grains	214.8	229.0	226.6	227.9	214.6	223.3	217.9	210.8	219.0	215.3	244.8	256.5	260.6	269.2
01-3	Livestock	260.3	251.7	248.3	252.5	247.8	257.2	251.8	230.5	233.3	240.0	260.5	275.7	266.8	263.0
01-4	Live poultry	194.3	162.0	195.5	194.7	195.2	184.6	180.1	171.9	171.3	166.6	227.2	224.5	241.0	222.9
01-5	Plant and animal fibers	209.9	212.9	215.4	222.0	239.0	269.5	254.9	266.9	272.7	247.0	267.0	274.6	295.2	278.5
01-6	Fluid milk	250.1	260.8	262.5	264.0	262.3	263.8	263.1	265.4	265.4	265.5	265.8	271.6	275.5	280.9
01-7	Eggs	176.5	155.9	178.7	198.4	165.6	150.4	184.2	153.3	140.5	146.8	159.3	176.9	188.4	175.2
01-8	Hay, hayseeds, and oilseeds	244.3	235.6	229.8	230.3	218.1	224.7	215.9	205.1	206.9	207.4	251.4	261.5	280.7	284.4
01-9	Other farm products	289.0	313.6	318.3	319.4	301.1	304.7	311.5	304.8	311.0	309.4	292.4	282.7	283.9	282.9
02	Processed foods and feeds	222.5	224.8	227.1	229.3	228.5	233.1	231.6	228.6	233.1	r233.9	241.1	249.1	249.8	255.4
02-1	Cereal and bakery products	210.3	219.8	222.5	223.6	225.4	229.9	231.8	232.4	234.7	r233.2	234.6	235.5	238.0	241.3
02-2	Meats, poultry, and fish	242.0	234.2	239.3	242.8	239.6	239.6	239.2	226.0	224.5	r226.6	248.5	259.9	257.7	255.8
02-3	Dairy products	211.2	218.1	219.3	219.9	221.0	220.8	223.0	227.5	228.5	r229.5	230.5	233.0	234.1	238.4
02-4	Processed fruits and vegetables	221.9	223.4	222.4	222.6	222.9	223.3	223.7	224.6	225.4	r227.2	229.5	230.6	231.9	234.5
02-5	Sugar and confectionery	214.7	218.9	222.9	234.4	235.0	287.5	264.1	275.0	327.8	r325.4	313.7	347.1	341.4	399.9
02-6	Beverages and beverage materials	210.7	218.9	221.2	221.6	224.0	224.8	225.9	227.9	231.2	r234.3	234.4	237.3	236.2	236.7
02-7	Fats and oils	243.3	246.0	241.9	235.6	225.1	226.4	222.6	214.5	212.0	r212.8	221.7	236.8	237.8	231.1
02-8	Miscellaneous processed foods	216.5	220.8	222.2	223.1	225.4	223.5	224.7	225.1	223.7	r223.4	223.6	224.0	226.9	230.6
02-9	Manufactured animal feeds	219.4	224.0	222.4	224.9	219.7	219.8	216.6	205.0	207.2	r205.0	220.6	230.1	243.8	247.2
	INDUSTRIAL COMMODITIES														
03	Textile products and apparel	168.7	172.0	172.8	173.1	175.2	176.5	179.3	181.2	182.0	r183.0	184.3	185.2	186.2	187.8
03-1	Synthetic fibers (12/75 = 100)	119.0	124.7	124.2	124.7	127.0	127.2	129.1	130.4	133.2	r134.5	136.3	137.8	139.3	140.9
03-2	Processed yarns and threads (12/75 = 100)	109.2	112.1	112.5	112.7	114.6	118.0	119.3	122.1	124.2	r122.8	121.9	122.6	123.4	124.2
03-3	Gray fabrics (12/75 = 100)	127.1	129.7	130.7	132.3	132.7	132.3	136.8	137.0	136.5	r134.8	134.8	136.6	139.2	142.5
03-4	Finished fabrics (12/75 = 100)	107.4	108.9	109.7	109.9	110.5	111.1	113.2	114.5	115.3	r115.8	116.5	116.7	116.8	118.2
03-81	Apparel	160.4	162.2	163.1	162.6	165.5	166.8	168.0	170.0	170.2	r172.7	174.1	174.8	174.7	175.5
03-82	Textile housefurnishings	190.4	196.3	196.5	197.1	199.0	199.7	201.3	201.6	202.6	202.7	210.7	211.0	217.1	218.0
04	Hides, skins, leather, and related products	252.4	253.9	248.9	249.2	255.7	250.9	246.8	243.5	240.7	r240.9	244.9	251.1	247.8	247.3
04-1	Hides and skins	535.4	478.8	447.6	443.9	468.8	404.8	348.7	328.6	289.7	315.7	356.6	398.4	356.1	381.5
04-2	Leather	356.7	343.6	319.8	324.8	347.6	340.3	311.0	297.6	290.4	284.4	292.2	314.2	300.2	272.5
04-3	Footwear	218.0	227.5	227.9	227.9	229.1	228.0	231.8	231.9	231.9	r231.9	232.9	233.9	235.7	236.8
04-4	Other leather and related products	205.0	209.7	208.4	208.0	213.1	214.8	217.8	216.2	217.4	r215.9	216.3	217.4	217.6	221.9
05	Fuels and related products and power	408.1	468.5	476.9	487.9	508.0	532.7	553.5	566.6	572.1	r576.5	585.4	589.5	593.0	592.5
05-1	Coal	450.9	454.6	455.1	458.6	459.3	459.6	461.7	465.2	466.5	r466.6	467.8	469.0	472.1	471.0
05-2	Coke	429.2	431.2	431.2	431.2	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.6
05-3	Gas fuels [1]	544.1	619.9	637.0	662.4	677.5	716.6	716.6	730.1	745.1	r749.2	763.3	762.3	785.3	801.1
05-4	Electric power	270.2	283.5	281.9	287.0	290.5	299.3	305.5	310.1	316.5	r326.0	331.4	333.8	338.6	337.6
05-61	Crude petroleum [2]	376.5	436.7	450.4	470.8	513.6	515.1	522.8	533.9	540.1	549.0	550.9	566.3	570.8	579.6
05-7	Petroleum products, refined [3]	444.8	533.7	545.4	555.2	583.3	620.4	659.0	678.0	680.9	r681.7	693.3	697.5	695.5	689.6
06	Chemicals and allied products	222.3	234.2	236.0	238.2	246.0	248.7	252.8	259.8	262.5	r262.8	262.7	264.3	263.2	264.6
06-1	Industrial chemicals [4]	264.0	285.7	288.4	292.3	302.9	307.9	313.3	322.1	328.5	r329.5	327.8	329.0	326.2	329.0
06-21	Prepared paint	204.4	206.7	209.4	210.7	223.3	223.3	228.7	231.5	238.8	238.8	236.8	239.1	239.6	239.6
06-22	Paint materials	241.2	253.6	256.6	256.8	259.9	263.4	267.5	272.1	273.9	r275.0	277.0	278.2	278.9	279.5
06-3	Drugs and pharmaceuticals	159.4	162.8	163.0	164.4	166.5	167.6	168.9	172.6	172.8	r174.4	175.4	175.7	176.7	178.3
06-4	Fats and oils, inedible	376.7	366.9	344.3	327.1	325.6	302.2	299.9	298.2	294.7	255.8	260.0	307.6	304.5	302.0
06-5	Agricultural chemicals and chemical products	214.4	224.3	229.5	232.9	241.9	248.0	256.1	258.5	258.5	r257.6	258.2	259.6	260.4	260.0
06-6	Plastic resins and materials	235.9	260.0	261.4	262.5	270.4	272.1	274.5	287.6	288.4	r287.6	286.2	282.0	277.1	276.7
06-7	Other chemicals and allied products	191.8	197.0	198.8	201.4	209.4	211.3	215.0	223.1	224.8	r226.9	228.0	229.9	229.4	231.3
07	Rubber and plastic products	194.3	203.0	204.9	205.9	207.8	210.7	212.7	214.1	215.0	r217.3	218.3	219.9	221.2	222.7
07-1	Rubber and rubber products	209.2	220.3	223.7	224.3	226.1	231.5	231.5	233.4	234.7	r236.8	239.4	240.7	242.5	245.4
07-11	Crude rubber	221.4	236.5	237.2	240.2	252.7	263.9	255.8	264.7	263.9	r264.1	262.5	263.4	266.3	270.7
07-12	Tires and tubes	205.9	218.3	223.1	223.1	225.1	231.6	231.6	231.8	233.2	r235.6	237.0	237.0	239.9	244.7
07-13	Miscellaneous rubber products	206.4	214.7	217.1	217.7	215.9	217.8	220.6	222.1	224.0	r226.4	231.8	234.6	234.8	234.8
07-2	Plastic products (6/78 = 100)	110.0	114.0	114.3	115.2	116.3	116.7	119.0	119.7	119.9	r121.4	121.1	122.4	122.8	123.0
08	Lumber and wood products	300.4	308.8	298.9	290.1	290.0	294.7	294.9	275.6	272.1	279.8	288.9	295.3	291.8	288.7
08-1	Lumber	354.3	370.3	355.6	339.5	336.3	341.4	340.6	310.1	301.4	313.0	327.3	333.5	326.6	319.2
08-2	Millwork	254.3	255.6	252.3	250.3	254.1	258.0	262.2	257.5	251.8	253.0	255.9	260.3	264.5	265.4
08-3	Plywood	250.5	254.0	242.2	237.9	238.2	243.4	240.0	219.8	230.6	r241.7	251.1	262.3	253.6	253.1
08-4	Other wood products	235.4	237.7	239.9	240.5	242.2	243.4	243.1	241.7	240.7	238.7	236.9	236.2	236.8	236.7

See footnotes at end of table.

27. Continued—Producer Price Indexes, by commodity groupings

[1967=100 unless otherwise specified]

Code	Commodity group and subgroup	Annual average 1979	1979			1980									
			Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June [1]	July	Aug.	Sept.	Oct.
	INDUSTRIAL COMMODITIES—Continued														
09	Pulp, paper, and allied products	219.0	227.5	229.5	231.7	237.4	239.2	242.6	247.8	249.2	r251.1	252.4	252.2	252.7	254.4
09-1	Pulp, paper, and products, excluding building paper and board	220.7	229.0	231.1	233.4	239.2	240.8	244.1	249.4	250.6	r252.4	253.7	253.6	254.1	255.8
09-11	Woodpulp	314.3	337.5	338.0	338.0	356.6	356.4	356.8	385.6	385.6	r387.7	388.6	388.6	390.6	329.1
09-12	Wastepaper	206.6	206.7	220.0	221.2	222.9	223.4	224.9	242.5	226.1	206.6	194.0	193.8	192.5	192.8
09-13	Paper	229.6	238.7	241.8	242.7	245.5	247.2	250.3	253.5	256.1	r257.9	258.5	258.8	258.9	262.5
09-14	Paperboard	202.1	211.3	212.8	215.4	221.8	223.7	227.4	232.1	235.5	r238.9	237.5	238.1	239.2	241.0
09-15	Converted paper and paperboard products	209.9	217.3	219.0	221.9	227.7	229.5	233.0	236.7	237.6	r239.8	242.4	242.0	242.5	243.4
09-2	Building paper and board	182.4	183.5	183.6	184.6	186.2	191.7	198.7	201.3	206.8	208.9	211.8	209.2	209.6	212.1
10	Metals and metal products	259.3	269.6	271.1	273.6	284.6	288.9	286.8	284.4	281.8	r281.9	281.5	282.7	286.2	290.4
10-1	Iron and steel	283.5	289.2	292.0	292.8	297.4	300.3	301.8	307.2	304.8	r303.4	300.4	302.3	304.3	310.4
10-13	Steel mill products	280.4	288.3	288.8	289.3	293.6	294.2	295.5	304.1	305.5	305.8	301.0	301.0	301.0	307.5
10-2	Nonferrous metals	261.7	283.1	284.1	291.9	326.3	337.7	321.4	298.3	289.7	r288.8	289.0	288.9	297.9	303.9
10-3	Metal containers	269.2	279.9	280.9	280.9	283.3	284.4	288.5	304.1	302.7	302.7	303.0	303.2	303.2	304.4
10-4	Hardware	218.7	224.0	225.5	226.2	228.2	230.4	231.5	237.3	238.4	r240.5	241.9	242.6	245.1	245.8
10-5	Plumbing fixtures and brass fittings	217.1	223.5	225.4	226.5	232.8	236.7	242.4	243.8	247.5	r248.6	249.6	250.4	250.5	250.6
10-6	Heating equipment	187.1	192.2	193.1	195.6	199.5	202.6	202.6	204.2	204.0	r205.0	206.1	208.0	208.8	210.0
10-7	Fabricated structural metal products	248.9	256.3	256.7	257.7	258.9	259.7	265.1	269.1	269.9	r270.1	271.9	272.6	273.8	276.2
10-8	Miscellaneous metal products	231.4	238.5	238.6	239.1	240.6	241.6	244.2	246.1	246.7	r250.4	251.8	254.1	255.8	257.1
11	Machinery and equipment	213.9	220.0	221.3	223.4	227.6	230.2	232.5	236.4	237.6	r239.2	241.3	242.2	244.3	246.4
11-1	Agricultural machinery and equipment	232.1	240.0	243.4	244.2	248.4	249.9	252.0	254.4	256.4	r257.1	257.3	258.9	262.5	262.8
11-2	Construction machinery and equipment	256.2	263.9	265.4	268.8	276.0	278.3	279.5	284.2	285.9	r287.6	290.9	292.8	295.0	298.4
11-3	Metalworking machinery and equipment	241.3	249.6	252.2	254.6	258.9	261.8	264.1	270.2	272.9	275.4	278.0	278.9	280.2	282.2
11-4	General purpose machinery and equipment	236.4	242.8	244.2	247.6	251.0	253.3	256.7	261.1	262.8	r264.8	265.8	266.6	268.9	271.9
11-6	Special industry machinery and equipment	247.0	253.8	254.9	256.1	260.6	263.2	265.5	271.9	273.0	r274.3	277.2	277.3	283.2	286.2
11-7	Electrical machinery and equipment	178.9	184.3	184.9	186.6	190.6	194.3	196.5	198.9	199.9	r201.6	203.5	204.7	206.0	207.0
11-9	Miscellaneous machinery	208.9	213.6	214.9	216.3	220.3	221.1	223.2	227.2	227.3	r228.2	230.7	231.5	233.1	236.1
12	Furniture and household durables	171.3	175.1	176.4	177.9	183.4	185.6	185.7	184.4	185.4	r186.5	186.7	187.3	187.8	189.1
12-1	Household furniture	186.3	190.1	193.0	194.8	197.4	198.5	198.9	200.3	203.0	r204.0	204.3	206.3	206.6	207.7
12-2	Commercial furniture	221.8	223.3	223.3	225.1	226.9	231.4	232.8	233.6	233.9	235.5	237.1	237.1	237.4	241.2
12-3	Floor coverings	147.9	152.1	152.8	152.9	159.0	158.5	160.8	162.2	161.9	r162.1	163.2	163.5	163.9	164.5
12-4	Household appliances	160.9	163.2	164.5	165.3	166.5	168.9	169.9	171.1	173.2	r175.5	174.8	175.0	176.2	176.6
12-5	Home electronic equipment	91.3	90.3	90.3	90.5	91.0	91.2	91.3	91.4	92.0	r91.8	89.3	88.9	89.1	88.9
12-6	Other household durable goods	228.2	245.6	248.2	254.4	287.4	295.3	288.3	267.3	265.6	r266.5	271.1	273.0	273.2	277.8
13	Nonmetallic mineral products	248.6	256.2	257.4	259.6	268.4	274.0	276.5	283.7	284.0	r283.4	284.0	284.8	286.0	287.8
13-11	Flat glass	183.9	184.7	185.4	186.4	191.0	191.0	191.4	195.3	195.3	r193.6	194.3	199.5	199.7	200.7
13-2	Concrete ingredients	244.0	248.3	249.6	251.0	265.0	266.6	267.5	271.7	272.4	r273.2	272.5	272.7	274.6	277.8
13-3	Concrete products	244.1	250.1	250.6	253.2	265.4	266.7	269.1	272.9	275.2	r275.8	275.9	275.9	277.5	276.9
13-4	Structural clay products excluding refractories	217.9	221.1	221.8	226.7	229.6	231.0	231.4	235.0	230.0	r230.1	230.2	229.8	230.2	233.4
13-5	Refractories	236.5	244.6	247.4	248.0	248.5	251.1	253.9	261.7	264.4	r265.8	269.6	271.4	271.4	274.1
13-6	Asphalt roofing	325.3	337.5	347.4	346.5	356.6	372.5	388.8	408.9	401.1	r400.9	412.0	409.4	406.2	408.4
13-7	Gypsum products	252.3	255.3	256.2	255.0	255.4	262.2	267.6	264.0	256.5	257.1	253.1	251.8	251.8	249.5
13-8	Glass containers	261.1	265.2	265.2	274.2	274.3	274.3	274.3	294.3	294.3	r294.3	294.6	294.6	294.6	305.0
13-9	Other nonmetallic minerals	313.7	341.2	342.2	342.2	351.8	381.7	387.0	399.6	400.7	r394.8	396.1	397.1	400.7	400.6
14	Transportation equipment (12/68 = 100)	188.1	194.2	194.8	195.6	198.7	198.2	198.8	203.2	202.5	r203.1	204.9	208.6	204.2	215.8
14-1	Motor vehicles and equipment	190.5	197.1	197.4	198.2	200.7	200.1	200.7	205.4	204.5	r205.2	207.1	211.4	205.3	217.8
14-4	Railroad equipment	277.3	286.3	288.2	289.0	297.5	299.3	302.1	309.9	310.5	r312.2	316.4	316.4	320.4	323.3
15	Miscellaneous products	208.7	218.9	221.4	227.4	242.9	262.9	256.1	252.8	251.7	r258.0	261.3	259.9	264.4	265.0
15-1	Toys, sporting goods, small arms, ammunition	176.2	181.1	181.2	183.0	190.9	193.5	194.5	195.4	196.0	r197.5	200.3	201.0	201.6	202.0
15-2	Tobacco products	217.8	222.1	222.2	226.6	236.6	237.2	237.3	238.1	247.7	r248.1	247.6	247.6	247.6	248.9
15-3	Notions	191.8	195.7	195.8	196.8	203.1	203.2	207.2	216.8	217.0	217.0	221.7	223.8	223.9	224.0
15-4	Photographic equipment and supplies	153.7	157.4	161.2	164.3	165.9	218.6	219.1	212.3	199.6	r201.7	202.0	202.3	201.3	201.2
15-51	Mobile homes (12/74 = 100)	138.1	142.9	144.0	144.1	144.7	146.8	147.1	149.4	150.4	150.6	151.2	151.4	151.0	152.0
15-9	Other miscellaneous products	263.7	288.3	293.3	308.8	351.6	378.3	351.3	340.9	340.2	r360.2	369.4	363.3	380.5	381.0

[1] Data for June 1980 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

[2] Prices for natural gas are lagged 1 month.

[3] Includes only domestic production.

[4] Most prices for refined petroleum products are lagged 1 month.

[5] Some prices for industrial chemicals are lagged 1 month.

r=revised.

28. Producer Price Indexes, for special commodity groupings

[1967=100 unless otherwise specified]

Commodity grouping	Annual average 1979	1979			1980									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June [1]	July	Aug.	Sept.	Oct.
All commodities—less farm products	234.4	245.3	247.0	249.5	255.7	260.9	262.9	264.8	265.9	r267.5	270.3	273.0	273.9	277.3
All foods	226.4	226.9	230.0	232.2	231.2	235.8	234.8	231.9	237.3	237.7	245.4	253.9	254.2	258.3
Processed foods	227.2	228.9	231.8	234.2	233.3	238.6	236.9	234.1	239.0	239.9	247.1	255.5	254.8	261.2
Industrial commodities less fuels	218.3	225.9	226.9	228.5	234.7	238.0	238.9	240.5	240.6	r242.0	243.3	244.8	245.4	248.8
Selected textile mill products (Dec. 1975 = 100)	113.9	116.4	117.0	117.2	118.9	119.3	121.3	122.2	122.9	r123.7	125.4	125.8	126.9	127.9
Hosiery	112.6	113.3	114.6	115.3	119.2	119.4	120.3	121.1	121.5	122.2	123.1	125.5	126.1	126.4
Underwear and nightwear	168.9	171.2	171.6	172.9	175.3	177.4	182.1	182.4	182.8	r187.1	188.5	189.4	189.7	189.9
Chemicals and allied products, including synthetic rubber and manmade fibers and yarns	212.4	224.3	226.3	228.7	236.3	239.2	243.2	250.0	252.8	r253.8	253.8	254.7	253.8	255.3
Pharmaceutical preparations	152.0	155.6	155.4	156.9	159.2	160.3	161.7	165.6	165.9	r167.6	167.8	168.2	168.8	170.8
Lumber and wood products, excluding millwork and other wood products	325.0	337.3	323.3	310.8	308.6	313.9	312.2	284.7	282.0	293.5	306.4	314.3	306.7	301.4
Special metals and metal products	234.6	243.4	244.5	246.3	253.7	256.0	255.1	255.8	254.0	r254.4	254.9	257.5	257.0	264.6
Fabricated metal products	236.8	244.0	244.6	245.3	247.2	248.4	252.0	255.9	256.8	r258.6	260.0	261.3	262.7	264.2
Copper and copper products	299.3	212.2	213.8	217.1	227.7	260.7	240.9	222.0	212.2	r208.5	211.7	209.0	214.1	216.9
Machinery and motive products	207.0	213.4	214.3	215.9	219.7	220.9	222.5	226.7	227.1	r228.3	230.2	232.5	231.7	238.1
Machinery and equipment, except electrical	234.2	240.8	242.5	244.8	249.1	251.1	253.5	258.2	259.6	r261.2	263.2	264.1	266.7	269.4
Agricultural machinery, including tractors	237.4	246.3	250.8	251.5	256.1	257.2	260.0	261.9	263.9	r264.7	264.1	266.4	270.8	271.1
Metalworking machinery	259.1	269.5	272.7	276.0	281.9	284.4	287.5	293.6	296.8	r299.7	303.6	304.7	306.5	309.4
Numerically controlled machine tools (Dec. 1971 = 100)	199.8	208.5	208.8	211.2	213.1	215.4	216.7	223.8	226.9	r228.5	228.7	229.3	230.0	231.7
Total tractors	251.6	261.2	262.5	266.2	273.0	275.1	276.6	280.8	282.9	r284.0	286.1	289.3	294.0	296.4
Agricultural machinery and equipment less parts	232.7	241.0	244.9	245.8	250.0	251.5	254.1	256.2	258.0	r258.7	258.9	260.8	264.6	264.9
Farm and garden tractors less parts	236.1	247.6	250.5	251.1	256.0	257.5	261.5	263.7	264.7	r264.8	264.9	269.3	276.3	276.3
Agricultural machinery excluding tractors less parts	238.7	245.4	251.3	252.0	256.4	257.3	258.9	260.7	263.6	r265.0	263.7	264.3	266.6	267.0
Industrial valves	256.0	261.8	263.1	266.1	271.0	273.5	280.0	287.8	288.4	r290.1	289.5	289.6	290.1	291.8
Industrial fittings	261.7	272.6	276.8	276.8	276.8	280.4	282.8	289.9	291.5	295.9	295.9	295.9	295.9	298.4
Abrasive grinding wheels	226.2	239.0	239.0	239.0	239.0	244.0	244.0	261.4	261.3	261.3	261.3	261.3	261.3	268.4
Construction materials	251.4	258.5	256.7	255.4	259.3	262.6	265.1	262.3	261.8	r264.2	266.5	268.9	268.8	269.4

[1] Data for June 1980 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

29. Producer Price Indexes, by durability of product

[1967=100]

Commodity grouping	Annual average 1979	1979			1980									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June [1]	July	Aug.	Sept.	Oct.
Total durable goods	226.9	234.6	235.3	237.0	243.8	247.1	247.0	247.7	247.1	r248.7	250.3	252.1	252.9	257.2
Total nondurable goods	241.7	253.7	256.2	259.3	263.2	270.2	273.4	274.4	277.6	r278.8	285.3	289.9	291.1	292.7
Total manufactures	228.8	239.0	240.6	242.6	248.4	253.2	255.2	257.0	258.3	r259.8	262.5	265.0	265.4	268.8
Durable	226.1	234.0	234.6	236.2	242.9	245.7	245.6	246.7	246.7	r248.5	250.1	251.7	252.3	256.5
Nondurable	231.1	244.0	246.6	249.0	253.9	260.8	265.2	267.9	270.7	r271.7	275.6	279.3	279.4	281.8
Total raw or slightly processed goods	270.4	278.7	281.0	285.9	287.6	295.9	295.4	290.4	292.7	r293.8	307.5	314.8	319.5	319.5
Durable	262.1	259.2	265.8	267.8	282.8	305.3	303.4	286.0	262.2	249.9	253.9	263.1	273.1	282.7
Nondurable	270.1	279.2	281.2	286.3	286.9	294.2	293.8	289.8	294.0	r296.1	310.4	317.6	321.9	321.1

[1] Data for June 1980 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

30. Producer Price Indexes for the output of selected SIC industries

[1967=100 unless otherwise specified]

1972 SIC code	Industry description	Annual average 1979	1979			1980									
			Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June [1]	July	Aug.	Sept.	Oct.
	MINING														
1011	Iron ores (12/75 = 100)	134.8	140.2	140.2	142.0	142.0	147.3	152.6	152.6	152.6	152.6	155.8	155.8	155.8	155.8
1092	Mercury ores (12/75 = 100)	234.4	275.0	252.1	300.0	308.3	335.4	330.0	337.5	337.5	r322.9	331.2	329.1	335.4	338.7
1211	Bituminous coal and lignite	451.3	455.1	455.5	458.9	459.2	459.6	461.7	464.6	466.0	r466.0	467.2	468.2	471.2	470.0
1311	Crude petroleum and natural gas	459.8	522.1	533.9	551.3	582.7	598.0	600.6	612.5	619.6	r631.5	637.8	650.0	666.4	680.6
1442	Construction sand and gravel	217.6	224.0	224.7	225.6	238.8	243.2	243.9	248.6	249.3	r250.0	249.6	250.6	251.9	261.4
1455	Kaolin and ball clay (6/76 = 100)	125.8	126.7	124.2	129.3	136.6	136.6	136.6	136.6	136.6	136.6	136.6	136.6	136.6	137.2
	MANUFACTURING														
2011	Meat packing plants	247.4	238.9	241.5	243.9	240.8	240.1	238.9	225.6	227.2	r230.0	249.1	265.2	257.1	257.9
2013	Sausages and other prepared meats	219.6	211.9	213.4	220.0	211.9	207.8	209.4	197.9	193.3	r190.9	213.4	232.8	239.3	246.4
2016	Poultry dressing plants	187.1	163.1	188.3	188.5	186.1	178.2	173.5	164.5	164.7	164.2	214.2	212.1	226.0	211.3
2021	Creamery butter	228.8	240.1	241.7	243.1	241.8	242.8	243.4	252.7	253.7	255.7	256.3	268.6	265.8	273.2

See footnote at end of table.

30. Continued—Producer Price Indexes for the output of selected SIC industries

[1967 = 100 unless otherwise specified]

1972 SIC code	Industry description	Annual average 1979	1979			1980									
			Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June [1]	July	Aug.	Sept.	Oct.
	MANUFACTURING—Continued														
2022	Cheese natural and processed (12/72 = 100)	189.2	196.8	193.6	193.9	195.4	192.9	195.7	201.9	201.9	r202.5	205.1	208.6	209.8	215.5
2024	Ice cream and frozen desserts (12/72 = 100)	172.5	177.5	179.9	180.1	180.9	181.5	185.0	191.3	192.1	195.2	195.2	195.5	196.1	199.5
2033	Canned fruits and vegetables	208.6	212.9	212.2	212.2	213.4	213.6	214.7	216.3	217.3	r219.9	222.6	223.5	225.4	228.5
2034	Dehydrated food products (12/73 = 100)	174.2	158.2	156.2	157.3	157.6	159.0	156.4	157.5	156.4	156.3	157.7	159.6	159.9	162.6
2041	Flour mills (12/71 = 100)	173.1	184.2	184.4	184.1	181.7	183.6	181.6	175.0	182.3	r180.8	189.6	193.1	196.1	201.5
2044	Rice milling	204.0	227.3	231.8	218.1	217.5	233.0	258.0	260.4	254.5	236.0	225.3	219.9	225.9	237.2
2048	Prepared foods, n.e.c. (12/75 = 100)	120.4	123.6	124.3	125.0	122.0	122.6	121.5	116.5	116.9	r116.2	122.6	127.0	130.0	129.5
2061	Raw cane sugar	210.3	224.3	223.3	248.4	260.5	374.9	276.0	320.2	456.1	402.4	381.8	484.0	458.9	588.2
2063	Beet sugar	202.6	204.7	210.6	223.2	224.6	293.2	305.7	296.6	339.9	r348.0	343.5	366.3	384.7	429.4
2067	Chewing gum	245.8	242.9	262.3	262.3	262.3	262.3	281.9	282.0	282.0	282.0	282.4	282.4	302.4	322.4
2074	Cottonseed oil mills	207.4	214.9	204.7	205.6	182.4	184.4	170.4	154.7	150.4	155.1	190.1	213.5	232.9	218.7
2075	Soybean oil mills	245.0	244.7	242.4	241.9	235.1	230.4	222.3	211.9	212.9	r208.6	224.6	242.9	274.9	278.5
2077	Animal and marine fats and oils	338.4	333.7	315.2	300.7	298.1	292.6	297.4	274.0	262.9	r238.9	274.4	297.1	307.0	311.0
2083	Malt	203.7	214.9	228.2	228.2	244.1	244.1	244.1	244.1	244.1	244.1	244.1	244.1	244.1	267.4
2085	Distilled liquor, except brandy (12/75 = 100)	113.7	117.1	118.1	118.1	118.6	118.7	118.7	118.7	118.9	r120.5	118.9	127.7	127.7	127.9
2091	Canned and cured seafoods (12/73 = 100)	146.4	154.3	155.6	159.8	160.9	164.0	165.7	170.2	173.1	175.3	175.9	177.5	178.6	180.0
2092	Fresh or frozen packaged fish	381.6	400.1	391.4	388.4	389.7	385.5	391.6	370.5	360.0	r361.2	365.2	365.7	355.5	354.3
2095	Roasted coffee (12/72 = 100)	254.5	280.0	287.5	287.5	281.3	273.9	274.0	273.9	273.9	283.1	274.5	274.7	263.9	257.0
2098	Macaroni and spaghetti	199.7	210.4	221.5	227.7	227.7	227.7	227.7	230.5	230.5	230.5	230.5	230.5	239.3	243.6
2111	Cigarettes	225.0	229.2	229.2	234.3	245.8	245.9	246.0	246.3	257.3	r257.4	257.2	257.2	257.2	257.6
2121	Cigars	147.3	149.8	150.4	150.4	151.2	154.2	154.4	155.3	155.3	r159.8	157.2	157.2	157.2	161.0
2131	Chewing and smoking tobacco	248.4	260.4	260.8	260.8	260.9	265.1	267.3	279.2	278.6	r278.6	274.7	274.9	274.9	290.1
2211	Weaving mills, cotton (12/72 = 100)	195.3	201.1	201.6	201.9	204.4	206.9	209.5	211.3	212.9	r212.9	217.4	218.7	221.4	223.0
2221	Weaving mills, synthetic (12/77 = 100)	115.0	116.8	117.3	117.2	118.1	118.3	122.7	123.0	122.4	r121.2	122.3	124.2	126.1	129.9
2251	Women's hosiery, except socks (12/75 = 100)	97.5	98.2	100.3	100.2	103.3	103.3	104.3	105.0	105.4	105.4	105.4	108.8	108.8	108.9
2254	Knit underwear mills	173.3	174.3	174.6	178.3	182.5	184.1	186.5	186.8	187.1	r190.4	192.5	192.8	194.0	194.1
2257	Circular knit fabric mills (6/76 = 100)	95.2	96.9	98.4	98.6	99.3	100.4	103.4	104.0	104.4	r105.0	105.1	105.4	105.5	106.4
2261	Finishing plants, cotton (6/76 = 100)	121.8	126.1	126.3	126.6	128.7	129.6	131.9	132.4	134.5	r134.6	137.2	137.2	136.8	139.0
2262	Finishing plants, synthetics, silk (6/76 = 100)	107.2	109.3	109.7	109.8	110.3	109.4	110.4	110.7	111.8	r112.1	173.7	114.1	115.1	117.3
2272	Tufted carpets and rugs	128.0	129.8	130.1	130.1	134.7	134.5	137.0	137.3	137.1	r137.4	137.6	137.9	138.3	139.0
2281	Yarn mills, except wool (12/71= 100)	176.7	181.2	183.0	183.7	188.0	197.8	199.5	203.7	204.5	202.8	203.0	204.3	205.7	207.8
2282	Throwing and winding mills (6/76 = 100)	107.4	110.4	109.6	109.2	110.1	110.6	112.0	114.8	118.1	r115.8	113.4	114.2	115.3	115.8
2284	Thread mills (6/76 = 100)	123.7	128.4	128.4	128.6	128.7	129.2	130.0	134.6	143.0	r142.9	143.0	143.1	143.1	143.8
2298	Cordage and twine (12/77 = 100)	107.0	114.9	114.9	114.9	115.0	117.2	118.5	123.6	123.8	125.0	125.0	125.0	125.0	127.1
2311	Men's and boys' suits and coats	204.2	206.6	206.8	206.7	209.0	208.1	208.3	209.7	210.9	r211.6	214.9	214.9	214.9	215.9
2321	Men's and boys' shirts and nightwear	194.0	196.1	196.6	196.3	197.7	196.2	199.3	204.0	203.7	r205.1	205.4	205.7	206.7	206.9
2322	Men's and boys' underwear	188.9	190.0	190.0	194.0	199.8	202.0	204.0	204.2	204.3	208.5	211.1	211.1	212.8	212.8
2323	Men's and boys' neckwear (12/75 = 100)	106.5	110.9	110.9	110.9	112.4	112.4	112.4	112.4	112.4	r112.4	106.3	112.4	112.4	112.4
2327	Men's and boys' separate trousers	161.5	162.9	163.4	163.5	164.2	174.2	174.3	174.9	174.9	175.1	175.3	175.3	175.3	175.3
2328	Men's and boys' work clothing	208.6	213.4	219.1	219.6	225.1	233.6	235.4	241.2	241.8	r242.6	244.8	244.1	243.8	243.9
2331	Women's and misses' blouses and waists (6/78 = 100)	102.0	103.0	105.9	106.8	107.1	106.6	106.7	107.6	107.6	107.8	111.4	112.6	112.6	112.8
2335	Women's and misses' dresses (12/77 = 100)	107.0	108.7	108.8	108.8	112.9	113.8	113.8	113.9	113.9	114.0	114.0	115.4	115.4	116.3
2341	Women's and children's underwear (12/72 = 100)	144.3	146.7	147.4	147.7	149.4	150.0	153.1	153.1	153.2	r155.0	155.4	156.8	155.7	156.0
2342	Brassieres and allied garments (12/75 = 100)	116.9	117.8	117.8	118.8	119.7	122.9	124.9	125.4	125.4	r126.6	128.2	129.4	129.4	129.4
2361	Children's dresses and blouses (12/77 = 100)	104.8	105.7	105.7	105.6	105.3	105.3	105.5	106.3	105.6	r108.0	112.4	112.4	111.9	112.3
2381	Fabric dress and work gloves	241.4	245.4	246.9	246.9	257.7	261.7	265.0	267.5	271.1	271.1	271.1	271.1	271.1	271.1
2394	Canvas and related products (12/77 = 100)	109.3	112.3	112.1	120.1	122.1	122.8	123.4	123.4	123.4	123.4	123.4	123.4	124.5	125.6
2396	Automotive and apparel trimmings (12/77 = 100)	111.3	114.3	114.3	114.3	114.3	114.3	122.3	122.3	122.3	122.3	122.3	122.3	122.3	122.3
2421	Sawmills and planing mills (12/71 = 100)	251.0	262.2	250.2	237.9	234.8	239.5	239.1	215.8	209.4	218.1	228.8	233.9	228.0	222.1
2436	Softwood veneer and plywood (12/75 = 100)	152.3	153.1	142.9	138.9	138.5	143.7	139.8	121.9	130.3	140.5	148.7	157.2	150.3	149.2
2439	Structural wood members, n.e.c. (12/75 = 100)	151.2	158.2	158.2	158.2	158.2	158.2	158.3	158.2	152.1	152.1	152.1	152.2	155.5	158.9
2448	Wood pallets and skids (12/75 = 100)	166.5	167.9	171.0	170.5	169.8	167.0	166.3	164.6	162.8	159.7	157.1	156.0	154.9	154.6
2451	Mobile homes (12/74 = 100)	138.2	143.0	144.0	144.1	144.8	146.9	147.2	149.5	150.5	r150.7	151.2	151.4	151.1	152.1
2492	Particleboard (12/75 = 100)	139.1	139.5	136.8	134.5	136.9	150.7	158.9	161.9	167.3	171.7	168.7	167.4	162.5	158.6
2511	Wood household furniture (12/71 = 100)	165.5	169.3	172.3	174.5	177.5	178.2	178.9	180.0	182.2	r183.5	183.8	185.7	186.0	187.0
2512	Upholstered household furniture (12/71 = 100)	150.0	151.8	153.8	155.7	155.9	158.7	158.7	160.9	161.1	r162.5	163.3	163.4	163.4	164.9
2515	Mattresses and bedsprings	165.7	168.9	172.3	172.3	169.9	170.5	170.5	172.8	176.0	r176.0	180.7	186.3	186.3	186.3
2521	Wood office furniture	215.3	217.6	217.6	221.9	226.2	233.8	233.8	233.9	233.9	r234.0	236.1	236.1	236.2	240.3
2611	Pulp mills (12/73 = 100)	200.6	213.5	213.9	213.9	225.2	225.1	225.5	243.8	243.9	r243.9	246.6	246.6	246.6	248.3
2621	Paper mills, except building (12/74 = 100)	130.2	135.1	136.5	136.8	139.0	139.8	142.5	145.0	145.8	r146.2	146.7	146.9	146.9	148.5
2631	Paperboard mills (12/74 = 100)	119.8	125.4	126.3	127.6	131.3	132.3	134.6	137.9	139.5	r141.2	140.4	140.9	141.6	142.5
2647	Sanitary paper products	277.7	286.3	288.4	290.9	295.8	303.9	311.7	316.7	319.3	r321.2	328.4	332.0	332.1	333.6
2654	Sanitary food containers	188.7	195.8	198.2	199.9	202.6	204.8	208.9	212.9	215.5	r217.2	219.4	221.5	223.4	223.4
2655	Fiber cans, drums, and similar products (12/75 = 100)	134.8	138.5	138.5	142.3	143.2	143.2	143.3	146.6	148.7	150.6	155.2	155.2	155.2	155.5
2812	Alkalies and chlorine (12/73 = 100)	208.8	214.1	216.7	217.3	220.4	226.5	233.7	241.2	246.5	r250.0	250.4	261.9	261.8	262.8
2821	Plastics materials and resins (6/76 = 100)	121.2	132.9	133.8	134.1	138.5	139.7	140.8	146.4	147.3	r146.9	146.3	144.6	141.9	141.8
2822	Synthetic rubber	210.3	225.7	228.0	230.4	240.9	244.2	244.7	256.8	259.3	r259.6	258.9	259.4	259.1	259.9
2824	Organic fiber, noncellulosic	117.6	123.6	123.2	122.6	124.1	124.7	126.9	128.5	131.7	r132.8	133.6	135.1	136.7	138.6
2873	Nitrogenous fertilizers (12/75 = 100)	103.4	108.0	111.7	113.5	114.3	119.8	122.1	123.6	124.5	123.4	122.6	123.7	123.7	130.3
2874	Phosphatic fertilizers	193.8	213.2	221.6	223.4	229.2	233.2	235.0	237.2	236.3	r235.7	234.9	240.2	240.5	239.2
2875	Fertilizers, mixing only	203.8	218.3	227.0	227.1	233.2	239.8	242.5	245.2	248.5	r249.0	248.3	247.5	249.7	249.3
2892	Explosives	239.4	250.8	251.7	252.5	253.6	255.2	260.2	271.4	272.8	r273.7	273.6	273.3	273.2	273.4
2911	Petroleum refining (6/76 = 100)	163.6	196.4	201.0	204.8	213.9	228.4	242.3	250.5	253.0	r253.3	255.8	257.0	256.3	254.5
2951	Paving mixtures and blocks (12/75 = 100)	134.3	145.6	145.6	145.7	150.0	161.5	167.9	172.7	172.7	r172.6	173.7	175.0	175.9	176.5
2952	Asphalt felts and coatings (12/75) = 100)	162.5	147.6	152.2	151.9	156.1	162.7	169.9	178.2	174.8	175.0	180.1	179.0	177.6	178.5
3011	Tires and inner tubes (12/73 = 100)	176.4	186.9	191.2	191.4	193.0	198.7	198.8	199.1	200.1	r202.2	203.3	203.3	205.7	209.5

30. Continued—Producer Price Indexes for the output of selected SIC industries

[1967=100 unless otherwise specified]

1972 SIC code	Industry description	Annual average 1979	1979			1980									
			Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June[1]	July	Aug.	Sept.	Oct.
3021	Rubber and plastic footwear (12/71 = 100)	171.1	173.5	173.5	173.5	173.5	173.6	173.6	173.7	173.7	r173.8	181.9	182.1	182.1	182.7
3031	Reclaimed rubber (12/73 = 100)	170.0	178.8	179.2	179.5	179.7	180.0	184.9	185.9	186.5	r186.5	184.4	183.7	183.9	182.0
3079	Miscellaneous plastic products (6/78 = 100)	109.9	114.3	114.6	115.6	116.6	117.0	119.1	120.3	120.5	r122.2	121.9	123.1	123.6	123.7
3111	Leather tanning and finishing (12/77 = 100)	167.5	161.9	150.8	153.5	164.3	160.8	146.7	140.8	137.9	134.6	137.7	147.9	141.0	129.1
3142	*House slippers* (12/75 = 100)	135.8	135.8	135.9	135.9	143.5	145.4	145.4	145.4	145.4	r145.4	152.5	152.5	152.5	154.9
3143	Men's footwear, except athletic (12/75 = 100)	152.7	160.4	160.3	160.3	160.3	157.9	158.5	158.5	158.5	r158.5	158.6	159.5	161.6	161.7
3144	Women's footwear, except athletic	194.5	202.3	204.0	204.0	205.6	206.3	213.5	213.8	213.8	213.8	214.3	214.3	215.2	217.1
3171	Women's handbags and purses (12/75 = 100)	128.9	131.8	131.8	131.8	131.9	131.9	132.1	132.1	140.8	140.9	140.9	140.9	140.9	140.9
3211	Flat glass (12/71 = 100)	151.7	152.6	153.3	153.9	157.6	157.6	157.9	160.8	160.8	158.9	159.5	162.6	162.8	163.8
3221	Glass containers	261.1	265.2	265.2	274.2	274.3	274.3	274.3	294.2	294.2	r294.2	294.5	294.5	294.5	304.9
3241	Cement, hydraulic	283.1	285.4	285.5	286.2	305.7	305.9	306.3	312.6	313.8	r313.8	310.5	310.3	309.4	309.0
3251	Brick and structural clay tile	258.6	261.3	261.3	262.7	268.3	270.4	271.9	276.4	278.5	278.5	278.5	277.6	278.5	282.6
3253	Ceramic wall and floor tile (12/75 = 100)	117.2	120.2	120.2	130.3	130.4	130.4	130.4	130.4	117.6	117.6	117.6	117.6	117.6	120.1
3255	Clay refractories	242.1	251.0	252.9	254.0	255.1	259.4	263.7	273.9	275.6	r275.9	280.7	281.1	281.3	281.6
3259	Structural clay products, n.e.c.	189.2	192.8	192.3	196.5	196.3	198.1	196.4	203.1	204.1	r204.4	205.1	205.4	205.2	205.3
3261	Vitreous plumbing fixtures	207.4	214.5	215.7	217.3	219.2	224.6	226.7	227.6	236.1	235.8	237.2	240.4	241.1	241.5
3262	Vitreous china food utensils	295.2	298.0	305.4	308.2	308.2	308.2	308.2	313.4	313.4	318.6	318.2	318.2	318.7	327.4
3263	Fine earthenware food utensils	244.9	246.0	248.4	294.3	294.3	294.3	294.3	295.1	293.9	r294.7	294.3	294.3	296.1	297.6
3269	Pottery products, n.e.c. (12/75 = 100)	132.5	133.3	135.5	150.1	150.1	150.1	150.1	151.4	151.5	r152.7	152.6	152.6	153.2	155.4
3271	Concrete block and brick	233.0	240.0	240.0	240.2	249.5	250.6	252.3	259.3	259.4	259.4	259.4	259.5	260.4	259.3
3273	Ready-mixed concrete	248.2	254.0	254.6	257.0	270.8	272.6	275.5	278.8	281.5	282.5	282.5	282.6	283.5	282.8
3274	Lime (12/75 = 100)	141.0	144.6	144.3	144.6	149.5	153.5	155.6	157.1	157.3	r157.7	159.6	159.9	158.8	160.9
3275	Gypsum products	252.8	255.9	256.8	255.6	255.9	262.8	268.1	264.6	257.0	257.5	253.5	252.3	252.2	250.0
3291	Abrasive products (12/71 = 100)	187.8	195.1	195.3	196.5	199.4	203.3	203.9	212.0	211.8	213.5	215.2	215.7	217.2	218.8
3297	Nonclay refractories (12/74 = 100)	145.6	150.1	152.3	152.3	152.6	153.3	154.2	157.4	159.7	161.2	162.8	164.9	164.9	167.9
3312	Blast furnaces and steel mills	288.8	296.4	297.1	297.7	302.4	302.9	304.1	312.0	313.3	r313.5	308.5	308.4	308.5	314.8
3313	Electrometallurgical products (12/75 = 100)	111.9	116.2	117.5	117.6	117.8	117.8	118.0	118.7	118.6	118.7	117.0	117.1	117.2	117.3
3316	Cold finishing of steel shapes	265.5	271.7	273.4	273.9	274.1	277.1	277.2	285.9	288.1	288.2	282.2	282.3	282.3	288.1
3317	Steel pipes and tubes	268.6	272.7	273.1	273.2	280.5	281.0	283.2	286.8	286.9	r290.4	292.5	292.6	292.6	294.3
3321	Gray iron foundries (12/68 = 100)	255.8	267.1	269.6	269.7	273.7	276.9	277.2	279.8	280.5	r282.5	280.4	280.6	280.7	288.2
3333	Primary zinc	265.7	265.2	257.8	265.7	266.1	272.4	279.6	274.3	268.2	268.6	255.8	255.8	260.9	269.9
3334	Primary aluminum	243.1	256.0	263.2	266.6	267.0	267.0	267.8	276.0	287.0	r290.1	293.3	310.7	313.7	327.6
3351	Copper rolling and drawing	213.2	226.3	222.6	225.0	231.0	253.1	238.6	227.4	222.8	r220.2	223.3	224.1	220.2	222.2
3353	Aluminum sheet plate and foil (12/75 = 100)	148.9	150.7	151.3	151.7	153.2	153.5	155.5	157.8	157.6	r157.8	158.2	157.6	157.6	161.4
3354	Aluminum extruded products (12/75 = 100)	149.3	155.2	157.4	158.0	158.8	158.9	160.9	167.7	167.7	167.7	168.3	168.3	168.1	173.1
3355	Aluminum rolling, drawing, n.e.c. (12/75 = 100)	132.4	136.9	139.9	140.5	140.7	141.0	141.1	143.8	145.2	r146.7	147.2	147.6	147.6	150.5
3411	Metal cans	264.1	273.8	274.6	274.7	276.6	277.3	279.9	295.1	295.2	294.9	295.6	295.9	296.1	297.9
3425	Hand saws and saw blades (12/72 = 100)	163.3	167.1	169.5	169.8	173.1	174.6	176.4	178.0	181.5	r181.9	183.3	185.2	185.6	186.6
3431	Metal sanitary ware	224.8	230.1	231.7	232.9	237.8	242.1	243.1	245.5	249.7	249.9	250.9	251.4	251.3	251.5
3465	Automotive stampings (12/75 = 100)	128.5	132.4	132.4	132.4	132.4	132.4	132.7	133.5	133.8	r137.8	138.1	140.1	140.4	140.5
3482	Small arms ammunition (12/75 = 100)	132.2	133.2	133.6	143.2	143.2	143.2	142.6	141.7	141.4	r144.6	149.8	152.1	150.1	150.6
3493	Steel springs, except wire	219.8	223.7	224.1	225.6	226.1	226.6	228.6	229.2	229.2	r230.3	230.1	230.6	231.7	232.8
3494	Valves and pipe fittings (12/71 = 100)	204.8	210.4	212.5	214.3	216.9	219.6	223.1	229.4	229.9	r231.8	231.8	232.0	232.3	234.7
3498	Fabricated pipe and fittings	289.2	297.3	297.4	297.4	301.7	301.8	303.5	313.0	313.1	313.8	317.2	317.2	319.9	325.0
3519	Internal combustion engines, n.e.c.	243.3	254.2	254.9	254.9	260.5	261.8	266.1	270.6	271.6	r271.7	275.1	276.3	281.8	283.8
3531	Construction machinery (12/76 = 100)	125.1	128.9	129.4	130.9	134.6	135.7	136.3	138.6	139.5	r140.3	141.5	142.5	143.5	145.1
3532	Mining machinery (12/72 = 100)	229.4	233.1	235.4	236.4	245.8	247.1	247.8	256.0	257.3	r258.2	259.4	262.0	263.4	265.2
3533	Oilfield machinery and equipment	291.6	300.5	302.8	309.1	314.2	316.2	318.9	329.8	333.1	337.4	342.6	343.8	344.7	350.8
3534	Elevators and moving stairways	215.9	219.4	220.6	220.9	225.6	226.1	229.1	232.6	234.1	r242.8	244.2	243.8	246.4	248.3
3542	Machine tools, metal forming types (12/71 = 100)	242.8	249.8	253.7	256.7	266.1	268.1	269.4	274.3	275.1	r279.2	284.9	285.9	286.2	287.1
3546	Power driven hand tools (12/76 = 100)	119.3	122.0	122.8	124.4	126.3	126.6	127.4	129.0	131.2	r131.1	133.5	134.4	134.7	136.3
3552	Textile machinery (12/69 = 100)	194.7	199.3	200.6	200.6	202.6	205.2	207.0	213.4	213.6	217.0	222.1	222.1	222.2	223.7
3553	Woodworking machinery (12/72 = 100)	185.4	192.6	192.7	192.9	201.2	201.6	205.1	212.3	212.1	r213.7	216.3	216.4	216.5	217.4
3576	Scales and balances, excluding laboratory	194.2	195.7	199.5	201.0	204.2	205.8	206.6	207.5	208.2	208.6	208.8	217.0	217.0	217.1
3592	Carburetors, pistons, rings, valves (6/76 = 100)	139.6	142.8	145.1	145.3	147.5	147.8	148.6	152.6	153.0	r153.5	158.3	158.9	159.9	164.7
3612	Transformers	168.1	171.2	170.4	171.6	172.9	176.6	177.5	180.5	181.5	r182.9	186.2	189.5	190.9	194.0
3623	Welding apparatus, electric (12/72 = 100)	192.2	196.9	198.6	200.3	201.3	203.3	206.0	207.0	209.2	211.0	212.3	212.3	211.4	213.8
3631	Household cooking equipment (12/75 = 100)	122.2	124.4	125.9	126.3	128.7	129.3	129.4	129.7	133.1	r134.7	134.7	134.1	134.6	134.7
3632	Household refrigerators, freezers (6/76 = 100)	113.6	115.1	115.7	116.3	117.0	118.5	118.6	119.3	119.4	r122.0	121.7	121.7	121.9	122.8
3633	Household laundry equipment (12/73 = 100)	148.8	150.9	152.3	153.5	154.0	156.6	158.3	160.3	161.7	162.3	160.1	161.5	165.5	166.1
3635	Household vacuum cleaners	141.7	144.5	144.7	145.8	146.1	149.7	151.3	148.6	149.3	r155.8	151.9	151.9	152.1	152.2
3636	Sewing machines (12/75 = 100)	121.4	122.6	122.6	122.6	122.6	129.2	129.2	129.2	129.2	r129.2	129.4	129.4	129.4	129.7
3641	Electric lamps	235.2	244.8	238.7	240.8	248.5	252.4	251.8	252.3	251.3	r258.1	266.4	268.0	267.8	268.9
3644	Noncurrent-carrying wiring devices (12/72 = 100)	204.6	210.5	211.9	215.0	212.9	215.2	215.3	217.4	218.2	r220.4	222.3	222.8	223.0	223.8
3646	Commercial lighting fixtures (12/75 = 100)	126.5	131.4	131.6	131.9	133.4	134.3	136.2	138.0	138.5	r139.2	139.6	140.9	141.9	142.3
3648	Lighting equipment, n.e.c. (12/75 = 100)	126.0	129.6	129.8	130.5	133.0	133.2	134.6	139.4	140.2	r140.7	140.5	140.8	143.3	143.4
3671	Electron tubes receiving type	220.3	227.2	227.4	227.7	229.1	229.4	229.7	254.0	254.7	r255.2	255.1	255.2	255.7	264.6
3674	Semiconductors and related devices	84.8	85.1	85.6	86.4	86.8	88.5	89.3	90.4	91.2	r92.0	91.6	91.3	91.7	91.7
3675	Electronic capacitors (12/75 = 100)	125.2	133.9	135.8	138.0	147.7	149.1	151.3	157.0	160.7	r160.5	164.3	164.5	174.0	170.0
3676	Electronic resistors (12/75 = 100)	124.4	126.6	126.7	127.3	127.4	128.8	131.8	131.9	133.0	r135.2	135.1	136.1	136.9	137.7
3678	Electronic connectors (12/75 = 100)	131.7	138.9	140.7	142.1	145.1	146.4	146.7	146.5	146.8	r148.7	149.0	149.2	149.7	150.0
3692	Primary batteries, dry and wet	170.1	173.1	173.1	174.1	174.2	176.5	176.6	176.8	176.4	176.4	176.4	176.7	176.8	176.9
3711	Motor vehicles and car bodies (12/75 = 100)	125.1	130.2	130.1	130.4	132.7	131.6	131.8	135.5	134.5	r134.6	136.8	138.1	131.1	144.0
3942	Dolls (12/75 = 100)	110.8	112.9	112.9	113.0	122.7	125.4	125.6	127.7	128.4	r128.4	126.7	126.7	126.7	126.6
3944	Games, toys, and children's vehicles	182.7	186.2	186.3	186.6	198.7	203.8	204.0	205.0	205.3	r205.9	204.4	204.5	204.5	204.7
3955	Carbon paper and inked ribbons (12/75 = 100)	118.6	123.1	125.2	125.2	126.2	128.2	128.3	131.5	133.3	136.4	136.4	136.4	136.4	135.0
3995	Burial caskets (6/76 = 100)	122.5	123.1	124.8	124.8	128.3	128.3	128.3	128.4	130.3	132.2	132.2	132.2	132.9	132.9
3996	Hard surface floor coverings (12/75 = 100)	126.3	131.0	134.1	134.1	138.6	138.7	138.7	143.2	143.3	143.3	146.1	146.6	146.6	146.6

[1] Data for June 1980 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

r=revised.

PRODUCTIVITY DATA

PRODUCTIVITY DATA are compiled by the Bureau of Labor Statistics from establishment data and from estimates of compensation and output supplied by the U.S. Department of Commerce and the Federal Reserve Board.

Definitions

Output is the constant dollar gross domestic product produced in a given period. Indexes of **output per hour of labor input,** or labor productivity, measure the value of goods and services produced per hour of labor. **Compensation per hour** includes wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. The data also include an estimate of wages, salaries, and supplementary payments for the self-employed, except for nonfinancial corporations, in which there are no self-employed. **Real compensation per hour** is compensation per hour adjusted by the Consumer Price Index for All Urban Consumers.

Unit labor cost measures the labor compensation cost required to produce one unit of output and is derived by dividing compensation by output. **Unit nonlabor payments** include profits, depreciation, interest, and indirect taxes per unit of output. They are computed by subtracting compensation of all persons from the current dollar gross domestic product and dividing by output. In these tables, **Unit nonlabor costs** contain all the components of unit nonlabor payments except unit profits. **Unit profits** include corporate profits and inventory valuation adjustments per unit of output.

The **implicit price deflator** is derived by dividing the current dollar estimate of gross product by the constant dollar estimate, making the deflator, in effect, a price index for gross product of the sector reported.

The use of the term "man-hours" to identify the labor component of productivity and costs, in tables 31 through 34, has been discontinued. **Hours of all persons** is now used to describe the labor input of payroll workers, self-employed persons, and unpaid family workers. **Output per all-employee hour** is now used to describe labor productivity in nonfinancial corporations where there are no self-employed.

Notes on the data

In the private business sector and the nonfarm business sector, the basis for the output measure employed in the computation of output per hour is Gross Domestic Product rather than Gross National Product. Computation of hours includes estimates of nonfarm and farm proprietor hours.

Output data are supplied by the Bureau of Economic Analysis, U.S. Department of Commerce, and the Federal Reserve Board. Quarterly manufacturing output indexes are adjusted by the Bureau of Labor Statistics to annual estimates of output (gross product originating) from the Bureau of Economic Analysis. Compensation and hours data are from the Bureau of Economic Analysis and the Bureau of Labor Statistics.

Beginning with the September 1976 issue of the *Review,* tables 31–34 were revised to reflect changeover to the new series—private business sector and nonfarm business sector—which differ from the previously published total private economy and nonfarm sector in that output imputed for owner-occupied dwellings and the household and institutions sectors, as well as the statistical discrepancy, are omitted. For a detailed explanation, see J. R. Norsworthy and L. J. Fulco, "New sector definitions for productivity series," *Monthly Labor Review,* October 1976, pages 40–42.

31. Annual indexes of productivity, hourly compensation, unit costs, and prices, 1950–79

[1967=100]

Item	1950	1955	1960	1965	1970	1972	1973	1974	1975	1976	1977	1978	1979
Private business sector:													
Output per hour of all persons	61.2	70.6	79.0	95.1	104.4	111.5	113.6	110.2	112.6	116.6	118.7	119.3	118.3
Compensation per hour	42.6	56.1	72.2	88.7	123.3	139.8	151.3	165.2	181.7	197.6	213.3	231.4	253.1
Real compensation per hour	59.2	69.9	81.4	93.9	106.0	111.6	113.6	111.8	112.7	115.9	117.5	118.4	116.4
Unit labor cost	69.6	79.4	91.4	93.3	118.2	125.4	133.2	149.8	161.3	169.5	179.7	194.0	214.0
Unit nonlabor payments	73.1	80.4	85.4	95.9	105.8	118.9	124.9	130.3	150.3	157.9	165.5	174.3	184.4
Implicit price deflator	70.8	79.8	89.3	94.2	113.9	123.2	130.3	143.1	157.5	165.5	174.8	187.2	203.8
Nonfarm business sector:													
Output per hour of all persons	67.2	74.6	81.2	96.0	103.2	110.1	112.0	108.6	110.7	114.6	116.4	116.9	115.7
Compensation per hour	45.6	59.0	74.5	89.4	121.9	138.4	149.2	163.0	179.3	194.2	209.6	227.5	247.9
Real compensation per hour	63.3	73.6	84.1	94.6	104.8	110.5	112.1	110.4	111.2	113.9	115.5	116.4	114.0
Unit labor cost	68.0	79.1	91.7	93.2	118.1	125.7	133.2	150.1	161.9	169.5	180.1	194.6	214.4
Unit nonlabor payments	71.4	80.1	84.4	95.8	106.0	117.4	117.8	124.7	145.9	156.0	163.8	169.9	178.6
Implicit price deflator	69.1	79.4	89.2	94.1	114.0	122.9	127.9	141.4	156.4	164.8	174.5	186.1	202.1
Nonfinancial corporations:													
Output per hour of all employees	(1)	(1)	80.6	96.9	103.7	110.6	112.9	108.7	112.2	115.8	117.0	118.0	117.5
Compensation per hour	(1)	(1)	76.0	90.1	121.8	136.7	147.6	161.7	177.9	192.7	208.0	225.0	244.9
Real compensation per hour	(1)	(1)	85.7	95.3	104.7	109.1	110.9	109.5	110.4	113.0	114.6	115.2	112.7
Unit labor cost	(1)	(1)	94.3	93.0	117.4	123.7	130.7	148.8	158.6	166.4	177.7	190.6	208.4
Unit nonlabor payments	(1)	(1)	90.8	100.1	103.5	114.8	116.8	124.8	148.1	156.8	164.4	170.6	179.5
Implicit price deflator	(1)	(1)	93.1	95.5	112.5	120.5	125.8	140.2	154.9	163.0	173.0	183.5	198.1
Manufacturing:													
Output per hour of all persons	65.8	75.0	79.8	98.4	105.0	115.7	118.9	113.0	118.8	124.0	127.7	128.2	129.2
Compensation per hour	45.6	61.2	78.0	91.1	122.3	136.6	146.5	161.7	181.1	196.1	212.7	229.9	250.8
Real compensation per hour	63.3	76.3	88.0	96.4	105.1	109.0	110.1	109.5	112.3	115.0	117.2	117.6	115.3
Unit labor cost	69.4	81.6	97.7	92.6	116.5	118.1	123.2	143.1	152.4	158.2	166.6	179.4	194.1
Unit nonlabor payments	82.3	88.6	92.3	103.3	96.2	107.4	106.4	105.6	128.4	139.6	147.4	152.4	154.4
Implicit price deflator	73.3	83.8	96.1	95.9	110.3	114.8	118.0	131.6	145.1	152.5	160.7	171.1	181.9

[1] Not available.

32. Annual changes in productivity, hourly compensation, unit costs, and prices, 1969–79

Item	Year											Annual rate of change	
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1950-79	1960-79
Private business sector:													
Output per hour of all persons	0.2	0.7	3.3	3.4	1.9	−3.0	2.1	3.5	1.8	0.5	−0.8	2.5	2.1
Compensation per hour	6.9	7.2	6.7	6.2	8.2	9.2	10.0	8.8	8.0	8.5	9.4	5.9	6.9
Real compensation per hour	1.4	1.2	2.3	2.8	1.9	−1.6	.8	2.8	1.4	0.8	−1.7	2.5	2.0
Unit labor cost	6.6	6.4	3.3	2.8	6.2	12.5	7.7	5.0	6.0	8.0	10.3	3.3	4.7
Unit nonlabor payments	1.0	1.2	6.8	5.3	5.0	4.4	15.3	5.1	4.8	5.3	5.8	3.0	4.2
Implicit price deflator	4.7	4.7	4.4	3.6	5.8	9.8	10.1	5.0	5.6	7.1	8.9	3.2	4.5
Nonfarm business sector:													
Output per hour of all persons	−.2	.2	3.0	3.6	1.7	−3.1	2.0	3.5	1.5	.5	−1.1	2.1	1.9
Compensation per hour	6.4	6.8	6.7	6.4	7.8	9.2	10.0	8.3	7.9	8.6	9.0	5.6	6.7
Real compensation per hour	1.0	.8	2.3	3.0	1.5	−1.6	.8	2.4	1.4	.8	−2.1	2.2	1.7
Unit labor cost	6.7	6.5	3.5	2.7	6.0	12.7	7.9	4.7	6.3	8.0	10.2	3.4	4.7
Unit nonlabor payments	.4	1.6	6.7	3.8	.3	5.9	17.0	6.9	5.0	3.7	5.1	2.9	4.0
Implicit price deflator	4.5	4.9	4.5	3.1	4.1	10.5	10.6	5.4	5.9	6.6	8.6	3.3	4.5
Nonfinancial corporations:													
Output per hour of all employees	.4	.0	3.3	3.1	2.1	−3.7	3.2	3.2	1.1	.9	−.4	(1)	1.9
Compensation per hour	6.8	6.8	6.2	5.7	7.9	9.6	10.0	8.3	7.9	8.2	8.9	(1)	6.5
Real compensation per hour	1.3	.8	1.8	2.4	1.6	−1.3	.8	2.4	1.4	.5	−2.2	(1)	1.6
Unit labor cost	6.3	6.8	2.7	2.5	5.7	13.8	6.6	4.9	6.8	7.3	9.3	(1)	4.5
Unit nonlabor payments	0	.5	7.3	3.3	1.8	6.8	18.7	5.8	4.9	3.8	5.2	(1)	3.6
Implicit price deflator	4.1	4.6	4.2	2.8	4.4	11.5	10.5	5.2	6.1	6.1	7.9	(1)	4.2
Manufacturing:													
Output per hour of all persons	1.3	−.1	5.2	4.8	2.8	−5.0	5.1	4.4	3.0	.4	0.8	2.5	2.5
Compensation per hour	6.6	7.1	6.2	5.2	7.2	10.4	12.0	8.3	8.4	8.1	9.1	5.5	6.5
Real compensation per hour	1.2	1.1	1.9	1.8	.9	−.5	2.6	2.4	1.9	.4	−2.0	2.1	1.5
Unit labor cost	5.2	7.2	.9	.4	4.3	16.1	6.6	3.8	5.3	7.7	8.2	2.9	3.9
Unit nonlabor payments	−4.4	−3.2	9.2	2.3	−1.0	−.7	21.6	8.8	5.5	3.4	1.3	1.9	2.5
Implicit price deflator	2.3	4.2	3.1	1.0	2.8	11.5	10.2	5.1	5.4	6.5	6.3	2.6	3.5

[1] Not available.

r = revised.

33. Quarterly indexes of productivity, hourly compensation, unit costs, and prices, seasonally adjusted

[1967 = 100]

Item	Annual average		Quarterly indexes										
			1978				1979				1980		
	1978	1979	I	II	III	IV	I	II	III	IV	I	II	III
Private business sector:													
Output per hour of all persons	119.3	118.3	118.5	119.1	119.7	119.8	118.9	118.3	117.8	117.7	117.7	r116.8	p117.3
Compensation per hour	231.4	253.1	224.6	228.8	233.7	238.4	244.8	250.4	255.7	260.3	267.6	275.3	p280.8
Real compensation per hour	118.4	116.4	118.8	118.3	118.2	117.9	117.9	117.0	115.8	114.2	112.9	r112.5	p112.7
Unit labor cost	194.0	214.0	189.4	192.1	195.2	199.0	205.9	211.7	217.0	221.1	227.5	r235.6	p239.5
Unit nonlabor payments	174.3	184.4	164.8	173.9	177.0	181.3	180.8	183.7	185.6	188.3	190.0	r192.3	p200.4
Implicit price deflator	187.2	203.8	180.9	185.8	188.9	192.9	197.2	202.0	206.1	209.7	214.5	220.6	p226.0
Nonfarm business sector:													
Output per hour of all persons	116.9	115.7	116.2	116.7	117.4	117.6	116.6	115.4	115.0	115.2	114.9	r113.8	p114.6
Compensation per hour	227.5	247.9	221.0	224.9	229.5	234.4	240.2	244.9	249.9	255.6	262.2	269.0	p274.4
Real compensation per hour	116.4	114.0	116.9	116.3	116.1	115.9	115.7	114.4	113.2	112.1	110.6	109.9	p110.2
Unit labor cost	194.6	214.4	190.2	192.8	195.6	199.3	206.0	212.1	217.3	221.8	228.2	r236.3	p239.6
Unit nonlabor payments	169.9	178.6	161.1	169.1	173.0	176.1	174.3	177.6	180.5	182.5	185.9	r190.0	p197.6
Implicit price deflator	186.1	202.1	180.2	184.7	187.8	191.4	195.1	200.3	204.7	208.4	213.7	r220.4	p225.2
Nonfinancial corporations:													
Output per hour of all employees	118.0	117.5	116.9	118.0	118.5	118.8	118.1	117.3	117.2	117.1	117.1	r116.5	(1)
Compensation per hour	225.0	244.9	219.0	222.6	226.9	231.3	237.3	242.1	247.1	252.1	258.8	265.7	(1)
Real compensation per hour	115.2	112.7	115.8	115.1	114.8	114.4	114.3	113.1	111.9	110.6	109.2	108.5	(1)
Total unit costs	193.3	210.4	190.8	191.6	194.0	196.8	202.3	208.0	213.2	218.0	224.3	r233.6	(1)
Unit labor cost	190.6	208.4	187.3	188.7	191.5	194.8	201.0	206.4	210.8	215.3	221.1	r228.0	(1)
Unit nonlabor costs	201.8	216.6	201.5	200.8	201.6	203.1	206.5	213.2	220.5	226.1	234.4	r250.8	(1)
Unit profits	127.2	127.8	107.1	129.2	132.7	138.7	130.3	129.2	127.5	124.0	120.5	r108.3	(1)
Implicit price deflator	183.5	198.1	178.3	182.3	184.9	188.2	191.6	196.3	200.4	204.0	208.9	215.0	(1)
Manufacturing:													
Output per hour of all persons	128.2	129.2	r126.4	127.7	129.3	r129.4	r128.4	r128.7	r129.5	129.1	r128.2	r126.7	p125.8
Compensation per hour	229.9	250.8	223.9	227.1	231.7	236.6	242.3	248.0	252.7	258.0	264.6	274.1	p282.0
Real compensation per hour	117.6	115.3	118.4	117.5	117.2	117.0	116.7	115.9	114.4	113.2	111.6	112.0	p113.2
Unit labor cost	179.4	194.1	177.2	r177.8	179.1	r182.8	r188.8	192.6	r195.1	r199.9	r206.4	r216.4	p224.2

[1] Not available.

r = revised.

34. Percent change from preceding quarter and year in productivity, hourly compensation, unit costs, and prices, seasonally adjusted at annual rate

[1967=100]

Item	Quarterly percent change at annual rate						Percent change from same quarter a year ago					
	I 1979 to II 1979	II 1979 to III 1979	III 1979 to IV 1979	IV 1979 to I 1980	I 1980 to II 1980	II 1980 to III 1980	II 1978 to II 1979	III 1978 to III 1979	IV 1978 to IV 1979	I 1979 to I 1980	II 1979 to II 1980	III 1979 to III 1980
Private business sector:												
Output per hour of all persons	−2.0	−1.4	−0.3	−0.3	r −2.7	p 1.4	−0.7	−1.6	−1.7	−1.0	−1.2	p −0.5
Compensation per hour	9.5	8.7	7.5	11.7	r 12.0	p 8.3	9.4	9.4	9.2	9.3	9.9	p 9.8
Real compensation per hour	−2.9	−4.1	−5.4	−4.5	r −1.5	p 1.0	−1.1	−2.1	−3.2	−4.2	−3.9	p −2.6
Unit labor cost	11.8	10.3	7.8	12.1	r 15.1	p 6.8	10.2	11.2	11.1	10.5	r 11.3	p 10.4
Unit nonlabor payments	6.5	4.2	5.9	3.8	r 4.9	p 17.9	5.7	4.8	3.9	5.1	r 4.7	p 8.0
Implicit price deflator	10.1	8.3	7.2	9.4	r 11.9	p 10.0	8.7	9.1	8.7	8.8	9.2	p 9.6
Nonfarm business sector:												
Output per hour of all persons	−3.9	−1.5	0.8	−1.1	r −3.7	p 2.6	−1.1	−2.0	−2.0	−1.4	r −1.4	p −0.4
Compensation per hour	8.1	8.5	9.5	10.7	r 10.8	p 8.4	8.9	8.9	9.1	r 9.8	9.8	p 9.8
Real compensation per hour	−4.2	−4.4	−3.6	−5.3	−2.6	p 1.1	−1.6	−2.5	−3.3	−4.4	−4.0	p −2.6
Unit labor cost	12.5	10.1	8.6	12.0	r 15.0	p 5.7	10.1	11.1	11.3	10.8	r 11.4	p 10.3
Unit nonlabor payments	7.7	6.6	4.6	7.5	r 9.1	p 17.0	5.0	4.3	3.7	6.6	r 7.0	p 9.5
Implicit price deflator	11.0	9.0	7.4	10.6	r 13.2	p 8.9	8.5	9.0	8.9	9.5	r 10.0	p 10.0
Nonfinancial corporations:												
Output per hour of all employees	−2.7	−0.3	−0.4	−0.1	r −1.9	(1)	−.6	−1.1	−1.4	−0.9	r −0.7	(1)
Compensation per hour	8.3	8.5	8.4	11.0	11.1	(1)	8.7	8.9	9.0	9.0	9.7	(1)
Real compensation per hour	−4.1	−4.3	−4.5	−5.1	−2.3	(1)	−1.8	−2.6	−3.3	−4.5	−4.1	(1)
Total unit costs	11.8	10.2	9.3	12.2	r 17.6	(1)	8.6	9.9	10.8	10.9	12.1	(1)
Unit labor costs	11.2	8.8	8.9	11.1	r 13.2	(1)	9.4	10.1	10.6	10.0	r 10.5	(1)
Unit nonlabor costs	13.5	14.6	10.6	15.4	r 31.1	(1)	6.2	9.4	11.3	13.5	r 17.7	(1)
Unit profits	−3.4	−5.3	−10.4	−10.9	r −34.7	(1)	0	−3.9	−10.6	−7.6	r −16.2	(1)
Implicit price deflator	10.2	8.6	7.3	9.9	r 12.1	(1)	7.7	8.4	8.4	9.0	9.5	(1)
Manufacturing:												
Output per hour of all persons	r 1.1	2.5	r −1.3	r −2.8	r −4.7	p −2.7	r 0.8	r 0.1	−0.3	r 0.2	r −1.6	p −2.9
Compensation per hour	9.6	7.8	8.8	10.5	15.2	p 12.0	9.2	9.1	9.1	9.2	10.5	p 11.6
Real compensation per hour	−2.8	−4.9	−4.2	−5.5	r 1.4	p 4.5	−1.3	−2.4	−3.3	−4.4	−3.4	p −1.1
Unit labor cost	r 8.5	5.2	r 10.2	r 13.7	r 20.9	p 15.1	r 8.3	8.9	r 9.3	r 9.3	r 12.4	p 14.9

[1] Not available.

r=revised.

LABOR-MANAGEMENT DATA

MAJOR COLLECTIVE BARGAINING DATA are obtained from contracts on file at the Bureau of Labor Statistics, direct contact with the parties, and from secondary sources. Additional detail is published in *Current Wage Developments,* a monthly periodical of the Bureau. Data on work stoppages are based on confidential responses to questionnaires mailed by the Bureau of Labor Statistics to parties involved in work stoppages. Stoppages initially come to the attention of the Bureau from reports of Federal and State mediation agencies, newspapers, and union and industry publications.

Definitions

Data on wage changes apply to private nonfarm industry agreements covering 1,000 workers or more. Data on wage and benefit changes *combined* apply only to those agreements covering 5,000 workers or more. **First-year wage settlements** refer to pay changes going into effect within the first 12 months after the effective date of the agreement. **Changes over the life of the agreement** refer to total agreed upon settlements (exclusive of potential cost-of-living escalator adjustments) expressed at an average annual rate. **Wage-rate changes** are expressed as a percent of straight-time hourly earnings, while **wage and benefit changes** are expressed as a percent of total compensation.

Effective wage-rate adjustments going into effect in major bargaining units measure changes actually placed into effect during the reference period, whether the result of a newly negotiated increase, a deferred increase negotiated in an earlier year, or as a result of a cost-of-living escalator adjustment. Average adjustments are affected by workers receiving no adjustment, as well as by those receiving increases or decreases.

Work stoppages include all known strikes or lockouts involving six workers or more and lasting a full shift or longer. Data cover all workers idle one shift or more in establishments directly involved in a stoppage. They do not measure the indirect or secondary effect on other establishments whose employees are idle owing to material or service shortages.

35. Wage and benefit settlements in major collective bargaining units, 1975 to date

[In percent]

Sector and measure	Annual average					Quarterly average							
	1975	1976	1977	1978	1979	1978	1979				1980 p		
						IV	I	II	III	IV	I	II	III
Wage and benefit settlements, all industries:													
First-year settlements	11.4	8.5	9.6	8.3	9.0	6.1	2.8	10.5	9.0	8.5	8.6	10.1	11.6
Annual rate over life of contract	8.1	6.6	6.2	6.3	6.6	5.2	5.3	7.8	6.1	6.0	6.4.	6.8	7.3
Wage rate settlements, all industries:													
First-year settlements	10.2	8.4	7.8	7.6	7.4	7.4	5.7	8.9	6.8	6.3	7.8	8.7	10.7
Annual rate over life of contract	7.8	6.4	5.8	6.4	6.0	5.9	6.6	7.2	5.1	5.3	6.3	6.8	7.4
Manufacturing:													
First-year settlements	9.8	8.9	8.4	8.3	6.9	9.5	8.7	9.7	6.3	5.6	7.0	6.6	8.7
Annual rate over life of contract	8.0	6.0	5.5	6.6	5.4	7.4	7.7	8.1	4.7	4.2	5.6	4.9	5.5
Nonmanufacturing (excluding construction):													
First-year settlements	11.9	8.6	8.0	8.0	7.6	6.4	3.2	8.5	9.4	7.8	9.1	10.4	9.4
Annual rate over life of contract	8.0	7.2	5.9	6.5	6.2	5.1	5.6	5.8	6.5	7.4	7.1	8.6	5.8
Construction:													
First-year settlements	8.0	6.1	6.3	6.5	8.8	8.4	9.7	8.7	9.7	7.5	9.6	12.7	15.7
Annual rate over life of contract	7.5	6.2	6.3	6.2	8.3	7.1	8.2	8.3	8.5	7.6	9.3	10.3	13.3

36. Effective wage adjustments going into effect in major collective bargaining units, 1975 to date

[In percent]

Sector and measure	Average annual changes					Average quarterly changes								
	1975	1976	1977	1978	1979	1978		1979				1980 p		
						III	IV	I	II	III	IV	I	II	III
Total effective wage rate adjustment, all industries	8.7	8.1	8.0	8.2	9.1	2.7	1.4	1.4	2.6	3.3	1.6	1.5	2.9	3.1
Change resulting from—														
Current settlement	2.8	3.2	3.0	2.0	3.0	.5	.4	.2	1.1	1.0	.5	.4	1.0	1.5
Prior settlement	3.7	3.2	3.2	3.7	3.0	1.2	.5	.6	1.0	1.0	.4	.5	1.2	1.1
Escalator provision	2.2	1.6	1.7	2.4	3.1	1.0	.5	.6	.5	1.2	.7	.6	.6	.6
Manufacturing	8.5	8.5	8.4	8.6	9.6	2.9	1.9	1.5	2.3	3.2	2.4	1.8	3.2	2.6
Nonmanufacturing	8.9	7.7	7.6	7.9	8.8	2.5	1.1	1.4	2.8	3.4	1.0	1.3	2.7	3.6

NOTE: Because of rounding and compounding, the sums of individual items may not equal totals.

37. Work stoppages, 1947 to date

Month and year	Number of stoppages		Workers involved		Days idle	
	Beginning in month or year	In effect during month	Beginning in month or year (thousands)	In effect during month (thousands)	Number (thousands)	Percent of estimated working time
1947	3,693		2,170		34,600	.30
1948	3,419		1,960		34,100	.28
1949	3,606		3,030		50,500	.44
1950	4,843		2,410		38,800	.33
1951	4,737		2,220		22,900	.18
1952	5,117		3,540		59,100	.48
1953	5,091		2,400		28,300	.22
1954	3,468		1,530		22,600	.18
1955	4,320		2,650		28,200	.22
1956	3,825		1,900		33,100	.24
1957	3,673		1,390		16,500	.12
1958	3,694		2,060		23,900	.18
1959	3,708		1,880		69,000	.50
1960	3,333		1,320		19,100	.14
1961	3,367		1,450		16,300	.11
1962	3,614		1,230		18,600	.13
1963	3,362		941		16,100	.11
1964	3,655		1,640		22,900	.15
1965	3,963		1,550		23,300	.15
1966	4,405		1,960		25,400	.15
1967	4,595		2,870		42,100	.25
1968	5,045		2,649		49,018	.28
1969	5,700		2,481		42,869	.24
1970	5,716		3,305		66,414	.37
1971	5,138		3,280		47,589	.26
1972	5,010		1,714		27,066	.15
1973	5,353		2,251		27,948	.14
1974	6,074		2,778		47,991	.24
1975	5,031		1,746		31,237	.16
1976	5,648		2,420		37,859	.19
1977	5,506		2,040		35,822	.17
1978	4,230		1,623		36,922	.17
1979[r]: September	474		152		2,804	.16
October	439		208		3,372	.17
November	272		91		3,201	.17
December	149		45		2,424	.13
1980[p]: January	352	441	207	292	3,142	.16
February	354	590	114	332	3,025	.17
March	396	631	123	310	2,705	.14
April	425	663	116	231	2,786	.14
May	505	752	139	214	2,464	.13
June	435	714	164	201	2,553	.13
July	491	768	270	394	4,030	.21
August	409	768	64	238	3,363	.17
September	438	711	163	269	3,169	.16

[r] = revised.

[p] = preliminary.

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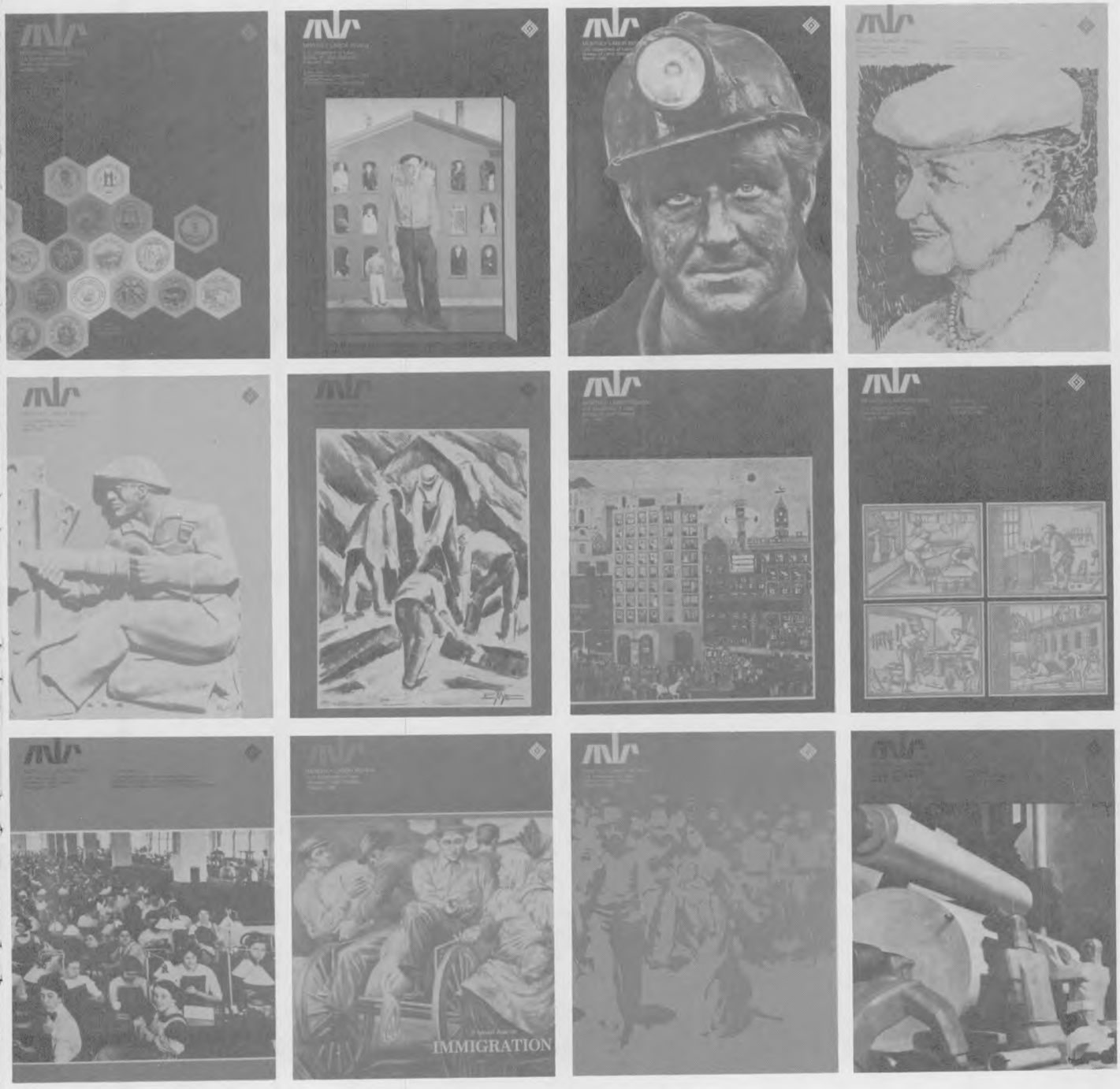

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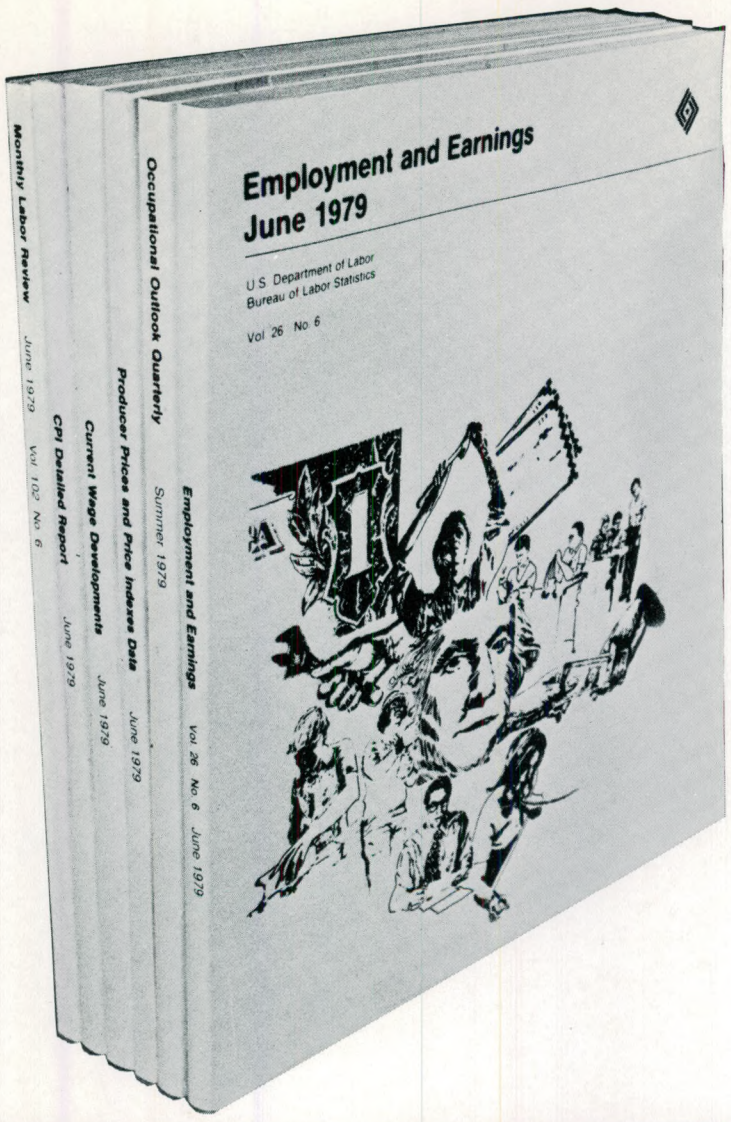

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