



# MONTHLY LABOR REVIEW

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Bureau of Labor Statistics  
June 1981

*In this issue:*  
Unions turn to managerial techniques  
The lag in southern earnings





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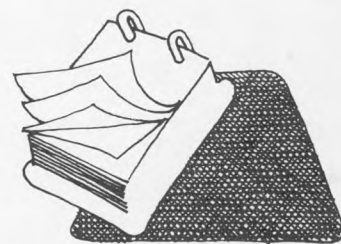
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# Labor Month In Review



**REFLECTIONS OF AMERICA.** To mark the 100th anniversary of the *Statistical Abstract of the United States*, the U.S. Census Bureau asked 26 prominent users of statistics to reflect on their view of America. Some excerpts:

**John Kenneth Galbraith** on the GNP: Government policy derived from the national accounts works with great political ease when the economy needs expansion; there are no politically easy solutions when the problem is inflation. And though once it could be supposed that inflation could be controlled by putting the magnitudes given in the accounts in reverse, this can no longer be imagined.

**Walter W. Heller** on fighting inflation: What the Great Depression was to the 1930's, the Great Inflation is a half century later to the 1980's.

In the Great Depression, economic policymakers could see and feel the country's economic agony, but they could not measure it except in the most rudimentary way, and then only with much delay.

Surely one of the great differences between economic policy in the Great Depression and in the Great Inflation is that, statistically, we are no longer operating in the dark. We now have the data to measure the inflationary beast—though data alone, alas, do not enable us to bring it to bay. That takes will and wisdom as well.

**Andrew F. Brimmer** on employment and income: The last two decades tell sharply contrasting stories: the 1960's was a period of sustained economic expansion while the 1970's was a period of inflation, recession, and stagnation. The lesson is unmistakable: a sustained, high level of noninflationary real economic growth is a necessary underpinning for low levels of unemployment.

In general, over the last decade, income was redistributed in favor of the better off versus the poor, the newer regions of the country versus the old, and the suburbs versus both rural areas and central cities. The income gains achieved by blacks compared with whites were also slowed.

**Jeane J. Kirkpatrick** on women: I see no grounds to expect a brave new unisex world just over the horizon but good reason for thinking that by the beginning of the next century, young women will have more choices, more freedom, and problems quite different from the ones confronting those who came of age at the beginning of this century.

**Ben J. Wattenberg and David Gergen** on attitudes: The sixties and seventies were a time of great sorting out on the social front: there were some ideas that suddenly seemed so obvious that they were welcomed, civil rights and civil liberties the most prominent among them; other ideas stirred deeply divided emotions and they remain controversial today (abortion, for example); while still others—drugs, violence, obscenity, promiscuity—clashed headlong with American traditionalism and were dismissed by the vast majority.

**William Marlin** on cities: The American city is undergoing a revolution. So is the town. The disciplined use of energy, building materials, and capital—put together with a spirited interest in preserving old buildings, conserving old neighborhoods, and bringing old streets back to life—is resulting in the rediscovery and recycling of hundreds of communities. This is refreshing, given our endemic lust for newness, and smart given the comparatively high cost of brand new buildings, the labor-intensive benefits of conserving and converting older ones, and the fact that reusing

old materials is a way to save energy.

**Marion Clawson** on conservation: Knowledge firmly based on objective research and statistics will become increasingly important in the use and conservation of natural resources in the future. We must know, as far as we can; we may still disagree on what to do or when to do it, but we can avoid much time and controversy on impossible, impractical, or nonexistent issues and solutions if we have a good foundation of common knowledge.

**James A. Michener** on American life: I have used the *Abstract* to clarify and fortify my thinking, and I find that I use it in three distinct ways: to explain my homeland, to make comparisons with other nations, and to amuse myself in idle exploration. The first is by far the most important, but the last is sometimes the more revealing.

**Norman Cousins** on the value of data: To paraphrase the old story about the blind men and the elephant, one could measure the tail and think he had a rope, the second a leg and insist the dimensions proved it was a tree, while the third would investigate the trunk and conclude the beast was a snake. Had they pooled their information, they would have been further along in realizing what they had. Any aspect of American life, is obviously far more complex than an elephant but none can be dealt with adequately with incomplete information. This is particularly true today, when the phenomenon of unlimited resources no longer applies.

*Reflections of America: Commemorating the Statistical Abstract Centennial* is available for \$6.50 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. □

# Unions implementing managerial techniques

*National unions are gradually adopting the sophisticated management selection and training practices of business and government but employment and promotion decisions remain essentially political*

LOIS S. GRAY

In sharp contrast to their counterparts at the bargaining tables, labor unions have traditionally given relatively little attention to the selection and training of their professional staff.<sup>1</sup> Results of a 1977-78 survey of national unions and employee organizations suggest an emerging trend bringing them more into line with established personnel practices of business and government. College graduates, long sought by other employers, find doors beginning to open in labor unions; the recent elections of college graduates as president and secretary-treasurer of the AFL-CIO symbolize this change.<sup>2</sup> Formalized training, generally required for upward mobility in business and government, is gaining acceptance among unions. Even more striking, some of the recently inaugurated union staff training programs resemble in content and format those offered for management in other organizations.

The literature describing and analyzing personnel policies of business and government is voluminous. By contrast, little is known about the personnel practices of labor unions.<sup>3</sup> This study, designed as a first step in filling this gap, addressed several key questions: How do national unions recruit and select their representatives? What functions do these staff members perform? What qualifications are expected of them? And, how are they trained for their responsibilities? In analyzing the survey

results, comparisons are made, where possible, with the selection and training of managers in business and government.

## Divergent personnel practices

*Selection.* In business and government, selection of management personnel is usually a carefully planned and somewhat elaborate process based on formal criteria and objective tests designed to screen applicants for desired attributes. Education and job-related training are given heavy weight in the selection criteria.

National unions, however, have traditionally used a political staff selection process, rewarding demonstrated leadership and loyalty at the local level.<sup>4</sup> In 1956, Harold Wilensky's path-breaking study of *Intellectuals in Labor Unions* found that the relatively few college graduates then employed by national unions functioned in narrowly defined roles. These "intellectuals" tended to be viewed with suspicion by union officials and tried to downplay their college educations by "proclaiming their faith in the superiority of the untrained man."<sup>5</sup>

*Training.* Business organizations invest heavily in personnel training. A recent survey by the Conference Board reports that most companies require their managers to continue their professional education. In 1975, approximately 1.3 million managers and supervisors were trained at a direct cost to employers of almost half a billion dollars. As a result, in-house management

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training has become a major profession, accounting for the employment of 45,000 specialists.<sup>6</sup>

Several companies operate year-round campuses which rival institutions of higher education. For example, American Telephone and Telegraph Co. sends 10,000 of its managers each year to its residential training center, which has an annual budget of \$20 million.<sup>7</sup>

Corporations supplement in-house training with support for the American Management Association, whose educational programs annually attract more than 60,000 managers, and with numerous special courses offered by colleges and universities. Moreover, the business training boom has created a whole new industry of 1,000 or more management consultants specializing in the field.<sup>8</sup> Mid-level managers, the counterparts to international representatives in labor unions, are the principal targets of these business-sponsored training programs.<sup>9</sup>

The training of managers generally deals with the functions of planning, organization, and control, with emphasis on interpersonal skills, problem-solving, and goal-setting. A heavy investment in methodology has produced a variety of approaches to teaching, including videotapes and computer simulations. Supervised on-the-job training, through a planned system of job rotation, is widely used to supplement classroom instruction.<sup>10</sup>

In contrast, staff members of labor unions have traditionally acquired their skills and knowledge in the "School of Hard Knocks"—in the shop, at the bargaining table, and on the picket line. Until recently, few alternatives have been available. Moreover, efforts to fill the training void have been mainly short-lived and out of the mainstream of American labor union practice.<sup>11</sup>

Given the growing complexity of union-management relations, how are unions responding to the obvious disparity in formal education and training between union and management representatives? This is the question which led to our study, the first analysis of union staff training since the Survey of Labor Education conducted under the auspices of the National Institute of Labor Education more than a decade ago.<sup>12</sup>

### Survey results and some hypotheses

The survey of national unions reveals increased recruiting of both service staff and specialists from outside the unions, growing union emphasis on staff training, and emerging elements of similarity between union and management training in content and methodology. (See appendix for a description of the survey scope and method.)

These are the major generalizations which emerge from survey data. There are, however, differences among unions, resulting, in part, from such factors as: (1) size of organization, (2) type of membership, (3)

union structure, (4) employer practices, (5) changes facing the organization, and (6) union traditions and current outlook of leadership.

It is logical to expect that union personnel practices will vary with size of membership, because this largely determines the resources which are available. Thus, larger unions are more likely to hire specialists to provide a wide range of services to their members, and to mount their own staff training programs. Also, one might predict that membership characteristics will be reflected in the selection and training of staff representatives. In particular, the weight given to formal education may be expected to vary with the level of education of the membership, with unions of professional employees more likely to hire college graduates and turn to universities for staff training than unions which represent manual workers. However, observation of the labor scene suggests that structure is the most important variable in explaining differences among unions. Industrial unions which deal in national and international product markets are characterized by a centralized structure, while those which function in local labor markets tend to be decentralized. Thus, industrial unions might be expected to employ relatively larger numbers of national representatives to perform a wider variety of assignments. With greater responsibility at the national level, industrial unions would also be likely to place more emphasis on training.

Other potential influences on union personnel practices are less tangible and therefore more difficult to assess. For example, unions may emulate the practices of the employers with which they negotiate. Accordingly, unions dealing with major corporations, such as General Motors or American Telephone and Telegraph, are more likely to hire technical specialists from outside the organization, and to provide staff training than unions which represent employees in small firms. Inspiration to adopt new programs may also come about as a result of challenges facing the union; rapid expansion, competition from rival unions, employer opposition, government regulation, and economic decline may give impetus to training and hiring trained personnel from outside. And finally, not to be discounted are union traditions and the viewpoints of current leadership. Unions with a history of social and political involvement have traditionally emphasized education, and those headed by college graduates or self-educated "intellectuals" might also be expected to look for and encourage these attributes among staff.

### Recruitment and selection

*International representatives.* While union experience remains the primary criterion for selection of international representatives and organizers, approximately 3 out of 10 of the surveyed unions currently hire some "outsid-

ers" to perform these basic functions. Choosing international staff is normally the prerogative of national officers who, under most union constitutions, have the exclusive power to hire and fire. Most unions tend to recruit negotiators and organizers exclusively within their own ranks, from among local officers or activists. Sixty percent of our respondents reported that prior membership in the union and experience as a union officer are requirements for appointment to international representative positions, with an additional 12 percent indicating that there are few exceptions to the prior membership requirement. In total, approximately 3 out of 4 unions select their negotiators, administrators, and organizers on the basis of demonstrated qualities of leadership within the organization. Unions tend to see experience as the best teacher and expect prospective staff members to serve an apprenticeship at the local level.

This internal method of selection for union staff is longstanding and well-known.<sup>13</sup> What is surprising is the number of unions (28 percent of our respondents) which currently do look outside the organization to fill some of their openings for international representatives and organizers. The unions which recruit outside their ranks differ from others in type of membership represented, stage of organization, and record of growth.

Unions recruiting staff from outside tend to fall into two extremes based on the characteristics of their members: (1) well-paid professional and technical, and (2) relatively low-paid semi-skilled and unskilled. In the case of the former, outside recruitment is explained by the fact that members are dedicated to their occupational goals and are therefore reluctant to assume full-time union leadership roles. For the achievers in these professions, assumption of union staff positions may be seen as a reduction in status. In contrast, unions which represent mainly low-skilled workers with limited formal education sometime report that it is difficult to recruit "qualified" representatives from the ranks. In both cases, officers supplement inside talent with "outsiders." It has also been observed that some unions recruit "outsiders" in the initial phases of organization when pay is low and the work demanding and onerous. As the union becomes better established, full-time representative positions are more attractive to "insiders."

Rapid growth is another factor motivating outside search for personnel. For example, the outside hiring practices of public employee organizations, which constitute the principal growth sector of the American labor movement, reflect pressures stemming from relative inexperience in bargaining and the demands of expanding membership.

Whether they recruit exclusively from within or look to the outside, labor organizations do not specify or enforce a formal education requirement for employment of

international representatives and organizers. However, a growing number recruit new staff from among the graduates of college and university labor relations programs. Many send recruiters to the campus, following the corporate practice. Some try out college students through on-the-job experience: Several recruit at colleges for intern programs which provide experience for potential staff; some merely provide short-term work experience for college students; and a few use this avenue directly for staff recruitment.

*Specialists.* While international representatives and organizers continue to come mainly from the ranks, an increasing number and variety of specialists are recruited from outside sources. Almost all unions (81 percent of our respondents) search outside for specialized talent to fill technical positions. For example, legal counsel has traditionally been recruited in this way. Other positions for which outsiders are most commonly employed, in order of frequency, are: research, education, pension administration, legislative and political affairs, and publications.

This outside talent search for specialists is not new. Professor Wilensky attributed the trend to (1) the emergence of multi-industry unions and (2) growing union involvement with the Federal government, which gives rise to a need for specialized and technical knowledge.<sup>14</sup> What has changed is the number and variety of specialists hired. Unions which currently look outside the membership to fill technical positions are representative of the broad spectrum of organizations in the American labor movement—industrial and craft, white-collar and blue-collar, and public and private sector. The eight reporting unions which rely solely on internal recruitment to fill technical and professional specialties are relatively small organizations with limited resources.

Today, almost all unions hire some of their staff from outside the membership ranks. The only variation occurs with respect to the numbers hired and the roles performed.<sup>15</sup>

## Training

How do union staff representatives acquire the skills and knowledge required to fulfill their responsibilities? The survey confirms the impression that, in contrast to the selection of business managers, formal training is rarely a requirement for appointment to union staff and that the "School of Hard Knocks" has been, and still is, the major source of training.

The traditional trade union attitude toward staff development was described by Lawrence Rogin and Marjorie Rachlin in a 1968 study:

"... many union leaders do not see any need for training or education. They point out that present union leaders at all levels learned in the school of experience and on the

### Functions of national staff

Responding unions report employing 5,006 full-time international representatives, or persons with an equivalent title such as district representative or, in smaller unions, vice president. The vast majority of professional staff members in national unions are designated "international" representatives, because the unions have membership in more than one country, normally the United States and Canada. Their duties are generally not set forth in written document, such as union constitutions, or in standardized job descriptions as is the practice in most other organizations.

International representatives, as the title implies, represent the national union in relationships with local unions, with collective bargaining as their primary activity. They are also expected to be a source of information about and interpretation of union policy for the membership, and to provide national officers with continuing feedback on membership points of view. Less tangible but often more important is their political responsibility for building support and loyalty at the local level.

Unions responding to our survey report that the four most common functions of international representatives are: (1) negotiating contracts, (2) handling grievances, (3) organizing, and (4) advising local unions on administrative questions. These duties are performed by staff carrying the title of international representative (or the equivalent) in almost all unions. Other reported functions associated with the title include arbitration (five unions), education and training (four), legislative and political activity (three), auditing (three), and community service (two). Unions which expect representatives to perform more diversified functions are usually industrial in structure. This is not surprising, given the greater centralization and broader scope of activities which generally characterize industrial, as compared with craft, unions.

Approximately half of the surveyed unions employ full-time organizers—728 in all—who do not also serve as international representatives. With a few exceptions, these unions are industrial in structure with large memberships. Small craft unions include organizing with other staff assignments or handle this function at the local level.

Our survey, in contrast to earlier reports by the U.S. Department of Labor, indicates an upward trend in employment of staff specialists by national unions. Gus Tyler, assistant president of the International Ladies' Garment Workers Union, explains that unions have to:

"develop the equivalent of the corporate 'system' man at many levels. They also need specialists to play labor's newly enlarged role in the total society. In the media age they need their own image makers; in our politicized economy, they need their own politicians and economists; in this time of the minority movements, they need their own savants about women, youth, the elderly, blacks, and Hispanics." (See Gus Tyler, "The University and the Labor Unions: Educating the Proletariat," *Change*, February 1979, p. 35.)

In smaller unions, the officers are expected to handle all functions with little or no specialized help, while larger organizations, like the Steelworkers and the Auto Workers, have specialized departments for legal advice, administration and negotiation of pension and welfare plans, arbitration, and a number of other services. In particular, the number of union staff employed in education, research, and public relations has grown since the first Bureau of Labor Statistics survey of labor unions in 1949. (See *Directory of National Unions and Employee Associations*, 1979, Bulletin 2079, Bureau of Labor Statistics, 1980, p. 74.)



whole learned well. These unionists feel that the new generation of leaders will learn as they did, by participating in union activity."<sup>16</sup>

This attitude or, in any case, the practice seems to be changing. More than 9 out of 10 of the surveyed unions reported they are involved in some form of staff training. The unions which do not mount their own in-house training programs have been sending staff to programs at the George Meany Center (AFL-CIO) or to university labor education programs. Only three of the surveyed unions are not involved in any type of staff development. The 43 unions engaged in some form of training in 1977-78 represent a substantial increase from the 25 unions which reported such activity in the 1965-66 period.<sup>17</sup> During the same interval, the number of unions conducting their own internal training programs increased from 17 to 37.

What accounts for the recent upsurge in union-sponsored staff training? Reasons cited by the responding unions include: (1) recognized need for developing new leadership, (2) actual or anticipated changes in top leadership, (3) increased responsibilities assigned to international staff, and (4) the growing complexity of staff roles. One union cited its experience in apprenticeship training as an encouragement to train officers and staff at all levels of the organization. Respondents also pointed to the perceived rise in opposition to unions by employers, government officials, and the public as an incentive to strengthen the knowledge and skills of staff.

*The George Meany Center.* The leading center for union staff training in the United States is the George Meany Center for Labor Studies, established by the AFL-CIO in 1968. Catering almost exclusively to full-time union staff, the center in 1979 attracted 3,200 participants to a wide range of course offerings.<sup>18</sup> Even more significant, most (94 out of 106) of the AFL-CIO affiliates have sent staff to the center.<sup>19</sup>

Groundwork for establishment of the center was laid during the early 1960's in a series of Brookings Institution seminars for national union presidents. These top officials, who had themselves participated in educational sessions, subsequently gave their backing to a year-round program of education for their staff members.

Housed in an attractive residential campus setting in Silver Spring, Md., the center is supported by a more than \$1 million annual appropriation from the AFL-CIO which allows courses to be offered tuition-free. Although early plans projected long-term residential programs, most of the course offerings are only 1 week in duration. Subjects include both "bread and butter" (Collective Bargaining and Union Administration), and broader public interest topics ("Energy, Environment, and Transportation," "Dimensions of Corporate Pow-

er," and "International Affairs"). The curriculum also features a number of specialized technical offerings, such as "Labor Journalism" and "Publications Design" for union editors, "Audio Visual Techniques" for union educators, and "Grantsmanship" for the growing number of union officials who seek public and private funding for demonstration and service programs.

Job-related subjects, which dominate the curriculum, are offered on a more advanced level at the center than is generally the case in staff training programs conducted in-house by national unions. For example, study of collective bargaining at the George Meany Center includes a sequence of courses on "Negotiation Techniques," "Advanced Negotiating Techniques," "New Developments in Bargaining," "Pension Bargaining," "Arbitration," and "Advanced Arbitration." The opportunity for sequential study makes possible in-depth treatment even within the limitations of a one-week-at-a-time schedule.

For staff who are encouraged to continue their education because of their experience at the center, a unique college degree program has been developed in cooperation with Antioch College. Its curriculum combines 2 weeks per year of residential study at the center with mentored self-study leading to a bachelor's degree with a major in labor studies. Specifically designed for full-time staff whose work schedules conflict with their college attendance, the George Meany Center-Antioch curriculum grants credit for experience and encourages credit transfers from local educational institutions, thereby facilitating progress toward a degree. Approximately 100 national union staff members are currently enrolled in this degree program. The first diploma was presented by George Meany at the 1975 AFL-CIO Convention. To date, 21 degrees have been awarded.

The center also cooperates in "tailor-made" programs in response to requests by national unions. A practice encouraged by the center is to incorporate educational sessions into staff meetings, making it possible to reach larger numbers of staff and a greater variety of unions.

Surprisingly, building trade unions are currently the leading consumers of center educational services. This illustrates the fact that the center has also broken through to organizations with little or no tradition of educational activity.<sup>20</sup>

Despite its successful record, the center struggles with problems endemic to the history of labor education: (1) continuing resistance on the part of many union officials who do not see the value of staff training, (2) the difficulty of attracting participants to programs which deal with broad social issues or conceptual disciplines, (3) the limitations of a 1-week format prescribed by staff work schedules, and (4) need for research support.<sup>21</sup>

*In-house training.* The major constraints on internal training activity are (1) possibilities for offering released time to staff and (2) training expertise. Results of our survey indicate that the decisive factor in whether international unions sponsor their own staff training programs is size of membership, which is, of course, reflected in resources available. All but one of the unions which do not conduct some form of staff training are small organizations. Twenty-three of the 26 unions with 100,000 or more members run their own programs, while only 3 out of 9 unions with fewer than 50,000 members do so. Where resources are scarce, unions either limit training to "briefings" at staff meetings or to programs conducted by the George Meany Center or a university. A few small unions have no staff training at all.

The importance a union places on training may be judged by whether participation is required. Two out of 3 of the unions which conduct their own training programs report that staff are required to attend. However, many qualified this response by explaining that it is not always possible for employees to comply with the requirement. The United Brotherhood of Carpenters mandates staff training in its constitution, while several other unions require training only for new staff.

According to our respondents, staff reactions to training opportunities have been mixed. One union hinted at a lack of incentive among staff members to attend the sessions, "especially as the staff are usually overloaded with negotiations, arbitrations, grievances, or organizing. Conveniently, one or all of these seem to occur whenever a school is scheduled." Two unions, the Auto Workers and the Teamsters, at one time required all staff members to participate in a residential training program, but later abandoned the requirement, in part due to staff resistance. At the other extreme, the American Federation of Government Employees reported that training was initiated at the insistence of staff who "asked for, and were successful in obtaining a written agreement for one training program per year."

### **Predominant themes**

While training programs vary in form and emphasis, there are common themes. Almost all cover such core subjects as collective bargaining, labor law, and organizing. Fifteen of the reporting unions—almost half of those with staff training programs—concentrate exclusively on core subjects relating directly to the principal functions performed by international staff. Most commonly offered, in order of frequency, are courses on organizing, labor law, collective bargaining, grievance handling, and arbitration.

In other unions, training also normally orients staff to the organization's structure (such as the roles of headquarters departments, and the duties of the of-

ficers), policies (political, economic, and administrative), and philosophy. Interspersed are briefings on current developments in labor and labor-management relations. Major variations from or add-ons to core subject matter usually involve training in legislation, intergroup relations, and such personal skills as speaking, writing, and listening. Several national unions also educate some staff as instructors. New and emerging are programs designed to provide international representatives with skills in administrative management—planning, supervising, and evaluating the results of union activities.

*Collective bargaining.* Almost all of the reported staff training programs include some aspect of collective bargaining. Even though this is the subject with which national staff members are most familiar through experience, training programs aim to sharpen skills in techniques of negotiating contracts, handling grievances, and presenting cases for third-party dispute settlement. A variety of action training methods is employed including role playing, case study analysis, and video feedback. Expertise in collective bargaining is of particular importance to unions which have been recently organized. For example, the Farm Workers union, which recently faced the challenge of reorienting its staff from organizing to bargaining, established a year-long training program which combines classroom education with field work.

*Legislation and political action.* Many union training programs also include topics which focus on legislation and political action as related to the bargaining function. Among the most common are pension bargaining and its legal complement, the Employee Retirement Income Security Act; implications of Equal Employment Opportunity legislation for contract negotiations; and health and safety issues in bargaining, within the context of the Occupational Safety and Health Act.

Staff training conducted by the International Union of Electrical Workers affords an example of a program in which legislation, particularly affirmative action, receives major emphasis. The Teamsters' recently inaugurated training program for national and local staff includes exposure to legislation of special concern to the trucking industry, such as deregulation and its implications for collective bargaining.<sup>22</sup> And, as a result of the U.S. Department of Labor's New Directions grant program, an increasing number of unions, in such industries as steel, textiles, oil and chemicals, auto manufacturing, and building trades, offer specialized training in occupational safety and health for national staff and local union leadership.

While economics is rarely offered as a separate subject, eight reporting unions deal with economic issues in relation to bargaining and political action. For example,

the Amalgamated Clothing and Textile Workers Union offers perspectives on the national economy as a background for political action questions.<sup>23</sup> And, the Ladies' Garment Workers Union also includes national economic issues and the economic problems of the garment industry in its curriculum for new staff.<sup>24</sup>

*Organizing the unorganized.* Twenty-three unions provide their staff with instruction in ways to reach heretofore unorganized or inactive workers. Recognizing that women and minorities have traditionally been underrepresented in unions, particularly in leadership and activist roles, several unions not only train their staff in EEOC regulations but also orient them to the problems and interests of minorities and women. In the public sector, where minorities have been gaining in employment and women constitute a large percentage of the membership, two unions offer courses on special techniques for organizing these groups. Similarly, a few unions offer courses specially designed to prepare staff members for the challenges of organizing professional and white-collar workers. In the construction industry, where the percentage of unionized workers has been declining, one organization developed a course dealing with outreach to young workers.

Several unions train their full-time organizing staff members in such techniques as communications and public relations skills, and legal regulations relating to union organizing campaigns. The Organizing Department of the Auto Workers, for example, conducts periodic training sessions designed to evaluate past experience and devise more effective approaches to enlisting new membership.<sup>25</sup> The American Federation of State, County, and Municipal Employees has used the services of a nonprofit consulting organization to train organizers in the dynamics of interpersonal relations as applied to organizing.<sup>26</sup> The Industrial Union Department of the AFL-CIO, in addition to conducting briefings on legal regulations, provides training in community action techniques based on the Saul Alinsky model.<sup>27</sup>

*Education of new staff.* Forty-four responding unions report some form of training for new staff members; almost all list "on-the-job training" as the main component, while 27 organizations report that new employees are supervised by experienced staff for the purpose of orientation and training. The Retail Clerks (recently merged into the Food and Commercial Workers Union) is the only union which reported a planned system of job rotation, a practice common in business and government.

Thirty unions conduct classroom training programs for orientation purposes. These programs usually focus on the union's structure, history, and resources avail-

able from the national headquarters. Several organizations send all new representatives to the George Meany Center. Notable in terms of training provided for new staff are the Ladies' Garment Workers Union and the Communications Workers of America.

The Ladies' Garment Workers Union inaugurated the first and most comprehensive of these programs. Its staff training institute, established in 1950, was an innovative break from tradition, offering a year-long, full-time training experience for recent or potential recruits. Training included both classroom and field work. After a few years, the format was drastically altered and reduced in length and the union's recruiting emphasis shifted from "outsiders" to "insiders." Currently the Ladies' Garment Workers Union conducts one institute of 6-weeks' duration each year for potential or recently appointed staff members, to orient them to their responsibilities, the problems of the garment industry, and relevant political issues.<sup>28</sup>

Another longstanding and intensive training program for new staff is offered by the Communication Workers. Like the Ladies' Garment Workers Union program, the Communication Workers staff training has undergone a number of revisions, reflecting continuing reappraisal of training needs. In its original form, the program involved exposure to a "college type" liberal arts education. Parallel to the much-publicized Executive Liberal Arts seminars offered by the American Telegraph and Telephone Co. (the Communication Workers' counterpart at the bargaining table), the union offered new staff a 6-month residential experience on a university campus with seminars focusing on the humanities and social sciences. The liberal arts program was discontinued because the officers considered the time off the job to be excessive and, more importantly, observed no relationship between training and job performance.<sup>29</sup>

As an alternative, the union president decided on a shift in training design which would better equip staff members for their assignments. When the training needs of new staff were assessed, the key finding was the need to ease the transition from closely supervised work as telephone employees to independent assignments as staff representatives. As a result, the union inaugurated a 6-week training program for new staff which emphasized problem solving and interpersonal relations. Borrowing from "Management by Objectives" concepts used in business and government, the training sessions stimulate participants to set specific measurable goals, and develop plans related to their functions as organizers, negotiators, and administrators. A mid-term, back-on-the-job recess is used as a testing period for new concepts, the results of which are subsequently reported and analyzed. Staff members are also trained in techniques of evaluating results of planning and goal-setting.<sup>30</sup>

*Personal skills.* Almost half the unions with educational programs for staff include training in such basic skills as public speaking, writing, reading, and problem solving, in addition to core subjects. Several of the education directors interviewed indicated that, when staff members were polled with respect to their training needs, personal skills led the list.

An interesting experiment with new approaches to developing individual skills is the staff training program inaugurated by the International Union of Operating Engineers. In response to observed limitations of international staff members in written and oral communications skills, the union contracted with a consulting firm for a training design. The result was a training program in "The Communications and Influence Process." Drawing on management education experience and methodology, the Operating Engineers' program focuses on leadership style—"controlling," "defensive," "relinquishing," and "developmental"—with the latter considered to be the ideal. Case studies are drawn from union political activities, jurisdictional disputes, and other conflict situations. Participants meet in small groups with observers, where they practice oral and written communication skills and problem solving. At the conclusion, each participant is given a take-home assignment designed to reinforce training.<sup>31</sup>

*Managerial and behavioral effectiveness.* The application of the behavioral sciences to related goals and problems, a central theme of training for managers in business and government, is currently featured in several union staff training programs. Among the unions, diverse in structure and tradition, which have incorporated this type of subject matter in their staff training efforts are the Communications Workers, the American Federation of Government Employees, the Steelworkers, and the Operating Engineers (AFL-CIO), and the National Education Association (unaffiliated). Key components of the programs are borrowed from management theory and practice. While materials and illustrations have been adapted to the needs and practices of unions, the basic concepts are the same. In several cases, the instructors and materials suppliers have been consultants who specialized in the training of business managers.

As noted above, training for new Communications Workers' staff members includes intensive exposure to "Management by Objectives," a popular subject in managerial training programs. The training program of the Operating Engineers also introduced international staff to a concept of leadership styles common to a wide variety of management training programs.

The American Federation of Government Employees adapted "Transactional Analysis," based on the best-selling book *The Games People Play*<sup>32</sup> and widely used in management training, as the centerpiece of its

3-week training program, on the theme: "Creating an Effective Communications Climate." The purpose of the program was to encourage national representatives to examine their roles, and to assess ways to relate to others in the organization.

Classroom sessions were videotaped so that the participants could see themselves in action. According to the union's Education Director this nontraditional approach to leadership training was selected to stimulate fresh thinking about employee relations in Federal agencies, to cope with the need for continuous organizing in the absence of an agency or union shop, to encourage an active outreach to women and minorities and to confront the rigidities of civil service regulations and the "paternalism of government administration."<sup>33</sup>

The National Education Association conducts a year-round program of staff training, with strong emphasis on interpersonal relations, communications, and decision-making. Among the workshops offered are "Psychology of Groups," and "Models for Management," which focus on interpersonal relations and ways to make decisions and motivate people, subjects which are also popular in the training of managers in business and government. The concept of union leadership as a form of management is further reflected in such workshop titles as "Strike Management" and "Representation Election Management."<sup>34</sup>

The Steelworkers recently opened a residential school at Linden Hall, near Pittsburgh, which is largely devoted to staff training. The curriculum emphasizes "Human Sciences," including behavior and communications.<sup>35</sup>

A characteristic common to three of the unions which have experimented with management training concepts and methodology (the National Education Association, Communication Workers, and the American Federation of Government Employees) is a bargaining relationship with large-scale organizations having centralized personnel policies. New approaches to staff training represent attempts to equip staff to make independent and analytical decisions in an environment in which rules and regulations dominate the behavior of employees.

*Instructor training.* In many unions, international staff members are expected to provide leadership training for local union officials. Several unions, therefore, conduct specialized training in methods of teaching. Among these are the Auto Workers, the American Federation of State, County, and Municipal Employees, the Steelworkers, the Hospital and Health Care Workers, and the Farm Workers. Not surprisingly, given the nature of its membership, the American Federation of Teachers gives major emphasis to the membership training function of its staff. Because teaching is a basic function of all leadership positions, knowledge of psychology and

techniques of adult education is seen as a valuable tool for international representatives both in and out of the classroom. The Farm Workers union, for example, relies heavily on staff as instructors. Its trainers studied both content and teaching methodology at Cornell University's School of Industrial and Labor Relations, and are responsible for all staff training in their union.

### Outside training sources

*Colleges and universities.* Institutions of higher learning play a relatively minor role in training union staff. The one continuing university-sponsored program for union staff is conducted by Harvard University. Harvard offers an annual 13-week seminar with the announced objective of "training for executive responsibility in unions." Initiated in 1942, this seminar, while highly rated by participants, reaches a relatively small number of international union executives and staff.

Current contributions by other colleges and universities include: (1) resident degree offerings which prepare students for a career in labor-related fields, (2) part-time credit, certificate, and degree programs which enroll union activists, including some full-time union representatives, (3) occasional staff training seminars offered in cooperation with the George Meany Center or national unions, and (4) conferences and workshops on specialized topics designed to attract union leadership. While half of the responding unions reported sending national staff members to a college or university program, only 11 universities with labor education centers (a minority of the questionnaire respondents) reported conducting programs which were designed exclusively for union staff. Although this number is small in comparison with the large scale educational service which universities provide to business and industry, the number of such institutions directly involved in staff training has more than doubled since the Rogin-Rachlin survey in 1965.

Resident degree programs in industrial relations, a major source of personnel specialists for business and government, place relatively few of their graduates in unions. For example, less than 2 percent of the graduates of Cornell's School of Industrial and Labor Relations, the largest in the field, find jobs in unions. Reports from other university industrial and labor relations centers indicate a similar pattern. Again the trend is upward, but the numbers remain small.

There are three resident degree programs specially designed for individuals aspiring to a union career; Pennsylvania State University, Rutgers University, and the University of Massachusetts place most of their labor studies graduates in unions or union-related positions. Nevertheless, university labor and labor relations centers, in total, supply a relatively small number of staff members to international unions. As previously indicated, the underutilization of resident degree pro-

grams for staff training is related to unions' tendency to select staff from the ranks; once on staff, union representatives find it difficult, if not impossible, to take time out for full-time study.

However, part-time study for union members, activists, and staff is growing in importance.

Labor studies constitutes a major in more than 75 colleges<sup>36</sup> which enroll actual and potential staff members and provide them with a combination of work-related skills (such as collective bargaining, political action, organizing, union administration, and communications), along with a broader exposure to the social sciences and humanities. The contribution of labor studies credit and degree programs is difficult to assess because they are relatively new and their impact is likely to be long term in nature. Full-time union staff constitute a relatively small portion of total enrollment;<sup>37</sup> even the George Meany Center-Antioch College labor studies program, designed exclusively for full-time union staff, has an annual enrollment of fewer than 100, a tiny fraction of the total eligible population. However, there is some evidence that graduates of these programs are subsequently promoted to union staff positions, suggesting a potential role of colleges and universities in the professionalization of the occupation.

In recent years, university labor centers have responded to an increasing number of staff training requests from national unions and the George Meany Center. Preparation for arbitration, collective bargaining, and labor legislation are dominant themes in these requested programs. Several universities have developed specializations in other subjects for which they are known among national unions; for example, industrial engineering and employment testing at the University of Wisconsin, international affairs at Georgetown University, psychology of organizing at the University of Missouri, and instructor training at Cornell.

From time to time, university labor education centers initiate conferences and workshops which are promoted on an inter-union basis and designed primarily for full-time union representatives. Conferences generally deal with public policy issues of concern to unions; examples include "Labor and International Trade," "Duty of Fair Representation," and "Urban Planning." Workshops provide training in such skills as "Preparation for Arbitration," "Organizing," and "Legislative Lobbying."

To summarize, the contribution of higher education to union staff training, while growing, is miniscule when compared with its massive role in training business management.

*Other resources.* Consultants are leading providers of management education to business and government. In recent years, a few of these consultants have played a

role in union staff training. Several labor education professionals are periodically called on for advice, but there is no true counterpart to management consulting in the labor field. Nor is there the equivalent of the American Management Association and the Conference Board, independently organized institutions which cater to the educational and research needs of business.

The Midwest Academy, a nonprofit organization specializing in training community organizers, has been used by several unions for training of organizers. Union staff also participate in training sessions conducted by the American Arbitration Association and the Federal Mediation and Conciliation Service.

To date, while there are actual or potential outside resources, unions have relied primarily on internally designed programs and the George Meany Center for staff training.

AMERICAN LABOR UNIONS are increasingly adopting two personnel practices which have been characteristic

of business in the United States—the search for outside talent and support for personnel training. Nonetheless, important differences persist, reflecting the essentially political structure of labor unions. As membership organizations, the leadership imperative is not the market test but responsiveness to the expressed needs and preferences of the rank and file. Thus, staff selection continues to rely on a record of achievement and loyalty at the local level. Political reality limits the role of “outsiders” as well as the emphasis which unions place on formal training and education.

Fred Hoehler, Jr., executive director of the George Meany Center, in a recent article on the “coming of age” of labor education, pointed to its growing acceptance and support by union leadership. Nonetheless, taking account of the contrast in volume and investment when compared with the training activities of business and government he concluded: “We are coming of age, perhaps, but we still have a long trek ahead.”<sup>38</sup> □

— FOOTNOTES —

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<sup>1</sup> In 1964, Russell Allen, a long-time labor educator and union activist, commented that “the cultural lag in the labor movement with respect to leadership programs is frightening. No other institution in American society is so careless of the technical and intellectual preparation of its staff and of the training and retraining of its leadership.” See “The Professional in Unions and His Educational Preparation,” *Industrial and Labor Relations Review*, October 1964, pp. 16–19. This point is also discussed by Al Nash and May Nash in *Labor Unions and Labor Education*, Monograph Series No. 1 (New York, University Labor Education Association, 1970); and by Lois Gray in “Training of Union Officials,” *Labor Law Journal*, August 1975, pp. 472–76.

<sup>2</sup> A. H. Raskin, in “Unions Turning to the Law College for Top Officials,” *The New York Times*, June 22, 1977, pp. D1 and D7, notes that a number of recently elected international union officers were college graduates, including several with law degrees. An earlier survey found that only 17 percent of international union presidents, vice-presidents, and secretary-treasurers had completed college. See also Abraham Friedman, “Characteristics of National and International Union Leaders,” unpublished manuscript, October 1967, quoted in Derek C. Bok and John T. Dunlop, *Labor and the American Community*, (New York, Simon and Schuster, 1970), p. 181.

<sup>3</sup> Bok and Dunlop, in *Labor and the American Community*, p. 138, note: “The administration of unions is a subject about which very little is known. This information gap grows increasingly serious in an era when the techniques of management have become highly sophisticated and the importance of administration so widely understood.” The authors raise a number of questions about the selection and training of union leadership, emphasizing the impact of the political process (pp. 138–88). The only published empirical study dealing with the functions of international union staff is an article by Myron Joseph, “The Role of the Field Staff Representative,” *Industrial and Labor Relations Review*, April 1955, pp. 353–69. British industrial relations literature includes several studies dealing with this topic, including William Brown and Margaret Lawson, “The Training of Trade Union Officers,” *British Journal of Industrial Relations*, November 1973, pp. 431–48 (Reprint Series No. 10 of the Social Sciences

Research Council); and H. A. Clegg, A. J. Kitlick, and Rex Adams, *Trade Union Officers* (Oxford, England, Basil Blackwell, 1961). For Canadian experience, see Roy J. Adams, “The Work of the Trade Union Field Officers,” Reference Paper No. 77–01 (Hamilton, Ont., McMaster University, 1978).

<sup>4</sup> A 1951 study found that “International representatives, organizers, directors of organizations, line negotiators, and administrators, made their way up the ranks by election, then appointment.” See C. Wright Mills, “Leaders of Unions,” in B. S. Hardman and Maurice F. Neufeld, eds., *House of Labor* (New York, Prentice-Hall, 1951), p. 37. Bok and Dunlop, in *Labor and the American Community*, reported that “Almost all unions are alike in choosing the bulk of their leaders from within the organization.” They note the recruitment of “outsiders” only for specialist positions as attorneys, accountants, and statisticians.

<sup>5</sup> Harold Welinsky, *Intellectuals in Labor Unions* (Glencoe, Ill., The Free Press, 1956), p. 273.

<sup>6</sup> Seymour Lusterman, *Education in Industry* (New York, The Conference Board, Inc., 1977), pp. 6, and 11–22.

<sup>7</sup> Stan Luxenberg, “Business is Big in Education, Too,” *The New York Times*, Jan. 7, 1979, Education Supplement, p. 15.

<sup>8</sup> “The Big Business of Teaching Managers,” *Business Week*, July 25, 1977, p. 106.

<sup>9</sup> “The Big Business of Teaching Managers,” p. 106. Conclusions in the article are based on the records of Mantread, Inc., a company which acts as a clearing house for company selection of training programs.

<sup>10</sup> Lusterman, *Education in Industry*, pp. 86–90.

<sup>11</sup> Gray, “Training of Labor Union Officials,” recounts the rise and fall of various union staff training programs.

<sup>12</sup> The most recent survey of union education and training programs was in 1965. See Lawrence Rogin and Marjorie Rachlin, *Labor Education in the United States*, (Washington, D.C., National Institute of Labor Education, 1968).

<sup>13</sup> This traditional route to union staff appointment was described by C. Wright Mills in “Leaders of Unions,” p. 37.

<sup>14</sup> Harold Welinsky, *Intellectuals in Labor Unions*, p. 197.

<sup>15</sup> Implications for universities and colleges in the trend toward hiring “outsiders” are developed in Lois Gray, “Trends in Selection and Training of Union Staff—Implications for Colleges and Universities,”

*Labor Studies Journal*, Spring 1980, pp. 13-24.

<sup>16</sup> Rogin and Rachlin, *Labor Education in the United States*, p. 55.

<sup>17</sup> *Ibid.*, pp. 84-88.

<sup>18</sup> *AFL-CIO News*, Nov. 17, 1979, p. 3. The George Meany Center accepts both local and international staff.

<sup>19</sup> Interviews with Fred Hoehler, Jr., Director of the George Meany Center, April 1977 and October 1979.

<sup>20</sup> Rogin and Rachlin, *Labor Education in the United States*, pp. 83-95. Until recently, the major supporters of union education, whether for officials or rank and file, were the industrial unions.

<sup>21</sup> Fred K. Hoehler, Jr., "Staff Training Programs," speech before the AFL-CIO Education Directors Conference, Mar. 6, 1978.

<sup>22</sup> Interview with Art Kane, Director of Education, IBT, October 1980.

<sup>23</sup> Interview with William Elkuss, Director of Education, ACTWU, April 1978.

<sup>24</sup> Interviews with Gus Tyler, Assistant President, ILGWU, March 1977 and October 1979.

<sup>25</sup> Interview with Martin Gerber, Vice President and Director of Organization, UAW, June 1980.

<sup>26</sup> Interview with Larry Rogin, Educational Consultant to AFSCME, March 1979.

<sup>27</sup> Interview with Howard Samuel, Director of Industrial Union Department, AFL-CIO, May 1980.

<sup>28</sup> Tyler interview, October 1979.

<sup>29</sup> Interview with Steve Confer, former Director of Education for CWA, March 1977.

<sup>30</sup> From author's own review of course materials: Confer interview, March 1977; and discussion with John Kutstad, Director of Education, CWA, October 1979.

<sup>31</sup> Interview with Reese Hammond, Director of Education and Training, IUOE, June 1977, and author's review of course materials.

<sup>32</sup> Eric Berne, *The Games People Play* (New York, Ballantine Books, Inc., 1964).

<sup>33</sup> Interview with Art Kane, former Director of Education for AFGE (who was responsible for introducing the program described), June 1977, and review of course materials.

<sup>34</sup> Interview with Carl Elvin, Organization Specialist, NEA, July 1978, and review of course materials.

<sup>35</sup> Interview with George Butsika, former Director of Education, USA, AFL-CIO, April 1978, and review of course outlines.

<sup>36</sup> Interview with Art Shy, Administrator of Education Programs, UAW, March 1979.

<sup>37</sup> Lois Gray, "Academic Degrees for Labor Studies," *Monthly Labor Review*, June 1977, p. 17, lists 47 programs, based on a 1976 survey. For 1980, the American Association of Community and Junior Colleges reported an additional 28 programs.

<sup>38</sup> *The 1980 Laborite* (Silver Spring, Md., George Meany Center for Labor Studies, 1980).

## APPENDIX: Survey methodology

In 1977, a questionnaire dealing with selection and training of professional staff was distributed to all national unions affiliated with the AFL-CIO and all major independent unions. (Local unions were not included.) Forty unions responded to the questionnaire. Additional information was obtained through interviews during 1977-79 with 31 labor educators associated with the most active union staff training programs, most of whom had replied to the questionnaire.

Based on BLS estimates for 1974, the 48 unions for which information was eventually collected had a combined membership of 16.4 million, or 76 percent of the total membership of all national unions in the United States. Ranging in membership from 3,000 to over 1.5 million, the responding unions represent a cross-section of labor organizations, both AFL-CIO and independent;

craft and industrial; and public and private sector. While most have a long tradition of collective bargaining, a number have only recently undertaken this function. Some have been growing in membership; others have experienced a decline.

To assess the use of outside resources for staff training, a second questionnaire was mailed to colleges and universities affiliated with the University and College Labor Education Association, with telephone follow-up of nonrespondents. Twenty-four of 42 institutions responded to the mail survey. Additional information was obtained through personal interviews with 10 directors of university labor education centers. Responding universities are the major centers for labor education at the college level, and represent the range of activity characteristic of this field.

# Inflation cross-currents: energy, food, and homeownership

*During the first quarter, energy prices soared, especially those of gasoline and fuel oil, but a sharp slowdown in food prices and mortgage rates held the CPI rise to a 9.6-percent rate, considerably less than the previous quarter*

DAVID CALLAHAN, ANDREW CLEM,  
AND JOHN WETMORE

Inflation slowed during the first quarter of 1981 despite a sharp advance in energy prices. The Consumer Price Index for All Urban Consumers (CPI-U) increased at a seasonally adjusted annual rate of 9.6 percent, following a 13.2-percent rate in the fourth quarter of 1980. The deceleration was largely attributable to much smaller increases in the housing and food and beverage components. However, the transportation element registered its largest increase since the first quarter of 1980. This acceleration was primarily caused by rising gasoline prices. (See table 1.)

Following very moderate increases in the last two quarters of 1980, prices paid by consumers for energy items were up at an annual rate of 49.1 percent in first-quarter 1981. This happened largely as a result of the Organization of Petroleum Exporting Countries (OPEC) price increase announced in December, the phased decontrol already in effect, and the total decontrol of prices for domestic crude oil and gasoline announced in January 1981. However, consumer prices for goods and services other than energy slowed to an annual rate of 5.2 percent during the period, the smallest increase since the fourth quarter of 1976. Prices of grocery store foods and houses registered declines.

At the primary market level, the Producer Price Index (PPI) for Finished Goods advanced at a seasonally adjusted annual rate of 12.5 percent, a faster rate than in the fourth quarter of 1980. Prices of finished energy goods accelerated sharply from moderate increases in the third and fourth quarters. Finished consumer food price increases slowed to an annual rate of 1.0 percent, continuing the deceleration started in the fourth quarter of 1980. Prices for finished goods other than food and energy rose slightly more than in the preceding 3 months. Prices of intermediate goods advanced at about the same rate as in the last half of 1980, and crude material prices rose at a rate of less than 5 percent for the second consecutive quarter.

## **A focus on energy**

*Consumer energy prices.* Once again, energy items became a major factor in the inflation situation for the first quarter of 1981. After 6 months of relatively moderate changes, energy prices in the CPI increased 10.5 percent for the 3 months ending in March, which is an annual rate of 49.1 percent, the largest since March 1980. Energy items alone accounted for approximately 50 percent of the overall CPI increase in the first quarter. The greatest acceleration occurred in gasoline and fuel oil (home heating oil) prices, while natural gas and electricity experienced much more moderate increases compared with the previous quarter. (See table 2.) The higher gasoline prices were rather pervasive across the

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country, while increased fuel oil costs had a more severe impact on the high-consumption areas in the Northeast.

*Crude oil imports.* At the December conference of the Organization of Petroleum Exporting Countries in Bali, the ceiling price for top-quality African crude oil was

raised from \$37 to \$41 per barrel. Most OPEC members raised their prices, including Saudi Arabia, which lifted its standard crude price by \$2 to \$32 per barrel. The increases announced by OPEC represented a compromise between Saudi Arabia and those OPEC members calling for an even larger boost. These advances were prompted

**Table 1. Changes in selected components of the Consumer and the Producer Price Indexes, 1980-81, seasonally adjusted**

Index	Relative importance Dec. 1980	Percent change Dec. 80-Mar. 81	Effect on overall index <sup>1</sup> Dec. 80-Mar. 81	Compound annual rates, seasonally adjusted except as noted, for 3 months ended—			
				1980			1981
				June	Sept.	Dec.	Mar.
<b>Consumer Price Index for All Urban Consumers (CPI-U)<sup>2</sup></b>							
All items	100.0	2.3	2.3	11.4	7.8	13.2	9.6
Food and beverages	18.3	0.7	.143	5.9	19.1	12.5	2.9
Food at home	12.0	0.0	-.004	4.7	24.8	13.2	-.1
Food away from home	5.3	2.3	.121	8.1	9.0	12.3	9.5
Alcoholic beverages	1.0	2.6	.025	9.8	8.2	5.2	10.8
Housing	45.5	1.9	.872	19.7	1.7	15.8	8.0
Shelter	31.7	1.1	.313	23.1	-1.4	20.2	4.4
Rent, residential <sup>3</sup>	5.1	1.7	.087	10.0	8.6	9.6	7.0
Homeownership	25.8	0.8	.196	26.4	-3.5	23.1	3.1
Home purchase <sup>3</sup>	10.3	-2.3	-.232	14.9	14.9	9.0	-8.8
Financing, taxes, and insurance <sup>3</sup>	12.0	2.7	.323	43.9	-20.0	41.8	11.4
Maintenance and repairs	3.6	3.0	.105	8.3	8.2	10.1	12.5
Fuel and other utilities	6.6	5.8	.389	17.0	9.8	8.5	25.5
Household furnishings and operation	7.3	2.4	.171	8.4	7.8	5.1	9.8
Apparel and upkeep	4.9	1.6	.076	1.1	8.9	4.3	6.7
Transportation	19.0	5.1	.963	2.6	11.3	13.9	22.2
Private transportation	17.8	5.1	.904	1.8	8.9	13.8	22.0
Gasoline	5.9	13.2	.788	-5.8	-3.3	10.5	64.2
Public transportation <sup>3</sup>	1.2	4.9	.058	18.6	56.7	14.1	21.2
Medical care	4.7	2.9	.134	8.9	9.2	7.9	11.9
Medical care commodities	0.8	3.0	.024	10.7	10.2	8.9	12.4
Medical care services	3.9	2.9	.110	8.4	8.9	7.7	12.0
Entertainment	3.6	2.4	.092	9.1	10.5	5.0	10.1
Other goods and services	4.0	1.9	.082	9.3	11.1	9.0	7.9
All items	100.0	2.3	2.3	11.4	7.8	13.2	9.6
Food	17.3	0.5	.117	5.8	19.7	13.1	2.1
Energy <sup>3</sup>	10.8	10.5	1.135	15.2	2.5	0.3	49.1
Commodities less food and energy	33.7	0.4	.139	7.7	12.9	9.6	1.7
Services less energy	38.1	2.4	.961	20.0	-4	17.9	10.1
All items	100.0	2.3	2.3	11.4	7.8	13.2	9.6
Services	41.6	2.5	1.075	20.5	.7	16.8	10.3
Commodities	58.4	2.2	1.286	5.4	13.2	11.0	8.9
All items less food, energy, and mortgage interest cost <sup>3</sup>	62.0	1.4	.805	8.6	11.0	9.3	5.8
<b>Producer Price Index (PPI) by stage of processing<sup>2</sup></b>							
Finished goods	100.0	3.0	3.0	8.4	13.5	7.8	12.5
Finished energy goods	12.0	12.9	1.541	18.8	3.6	14.4	62.3
Finished consumer foods	23.0	.2	.055	-1.4	31.0	3.6	1.0
Finished goods less foods	77.0	3.8	2.951	11.8	8.3	9.3	16.2
Finished goods less foods and energy	65.0	2.2	1.418	10.5	9.2	8.2	9.0
Finished consumer goods less foods	56.6	4.2	2.388	12.2	7.5	8.4	18.0
Finished consumer goods less foods and energy	44.7	1.9	.846	10.2	8.7	6.7	7.8
Capital equipment	20.3	-2.8	-.576	10.9	9.9	11.4	11.8
Intermediate materials, supplies, and components	100.0	2.7	2.7	6.6	10.1	11.9	11.1
Intermediate energy goods	16.2	10.2	1.658	9.9	13.0	19.5	47.7
Intermediate foods and feeds	6.4	-5.4	-.349	14.1	52.7	.7	-20.0
Intermediate materials less foods and feeds	93.6	3.2	2.981	6.2	7.8	12.7	13.4
Intermediate materials less foods and energy	77.4	1.8	1.366	5.7	6.9	10.8	7.2
Crude materials for further processing	100.0	0.5	0.5	-1	55.2	4.4	2.1
Crude energy materials <sup>3</sup>	26.2	23.1	6.041	19.3	20.4	19.2	129.5
Crude foodstuffs and feedstuffs	58.2	-6.3	-3.674	-3	73.9	-4.1	-22.9
Crude nonfood materials	41.8	10.1	4.234	.2	32.3	17.6	47.1
Crude nonfood materials less energy	15.6	-11.0	-1.709	-24.4	55.0	15.1	-37.1

<sup>1</sup> Amount of overall percentage points increase attributable to each specific item.

<sup>2</sup> See "Definitions" and "Notes" preceding tables 22-30 of Current Labor Statistics in this Review.

<sup>3</sup> Not seasonally adjusted.

NOTE: Monthly data for Producer Price Indexes have been revised through November 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.

Table 2. Changes in retail and producer prices for energy items, 1980-81

Item	Index	Relative importance Dec. 1980	Percent change Mar. 1980 to Mar. 1981	Compound annual rate, seasonally adjusted except as noted, for 3 months ended —			
				1980			1981
				June	Sept.	Dec.	Mar.
<b>Finished items (Sold to consumers)</b>							
Energy items <sup>1</sup> .....	CPI	100.0	15.3	15.2	2.5	0.3	49.1
Finished energy goods .....	PPI	100.0	22.9	18.8	3.6	14.4	62.3
Gasoline, motor oil, coolants, etc. <sup>1</sup> .....	CPI	55.7	13.4	6.0	-3.2	0.4	60.4
Gasoline <sup>2</sup> .....	CPI	54.9	13.4	-5.8	-3.3	10.5	64.2
	PPI	56.8	21.7	16.9	-3.9	10.7	76.4
Household fuels .....	CPI	44.3	17.9	20.6	11.5	8.5	33.1
Fuel oil <sup>1,2</sup> .....	CPI	10.5	26.5	3.7	1.5	17.9	106.1
	PPI	14.2	31.1	14.1	2.5	11.7	126.4
Gas (piped) <sup>1,2,3</sup> .....	CPI	13.0	14.9	29.3	15.6	1.4	15.2
	PPI	18.2	25.9	25.9	37.9	30.3	11.0
Electricity .....	CPI	19.3	15.1	28.1	14.0	7.3	12.5
<b>Intermediate materials (Sold to businesses)</b>							
Intermediate energy goods .....	PPI	100.0	21.5	9.9	13.0	19.5	47.7
Diesel fuel <sup>2,3</sup> .....	PPI	9.0	26.0	9.7	9.6	2.9	103.7
Commercial jet fuel <sup>2,3</sup> .....	PPI	8.4	22.9	24.6	13.1	1.0	60.1
Residual fuel <sup>2</sup> .....	PPI	15.5	33.3	-42.5	65.8	99.6	65.7
Liquified petroleum gas <sup>3</sup> .....	PPI	4.8	11.3	7.4	-9.1	34.3	17.2
Electric power <sup>4</sup> .....	PPI	30.0	14.7	22.6	16.9	10.9	8.9
<b>Crude materials</b>							
Crude energy materials <sup>3</sup> .....	PPI	100.0	40.8	19.3	20.4	19.2	129.5
Natural gas <sup>2,3</sup> .....	PPI	31.6	25.9	25.9	37.9	30.3	11.0
Crude petroleum <sup>3</sup> .....	PPI	53.3	61.2	21.6	17.3	18.4	300.2
Coal .....	PPI	15.1	4.2	-2.2	5.4	6.3	7.9

<sup>1</sup> Not seasonally adjusted in the CPI.<sup>2</sup> Prices for these items are lagged 1 month in the PPI.<sup>3</sup> Not seasonally adjusted in the PPI.<sup>4</sup> Includes commercial and industrial electric power, but not residential.

by fears of tightened oil supplies after the outbreak of war between Iraq and Iran in late September. However, the war did not spread to other Persian Gulf nations, and the crude oil supply situation improved as the two countries repaired their export facilities and resumed oil shipments by 1980's end. Saudi Arabia again increased its crude oil shipments, to a level almost 2 million barrels per day above its pre-1979 levels. The resulting surplus on world markets led to price discounting by some oil-exporting countries at the end of first-quarter 1981.

Most of the industrialized nations reduced their imports of petroleum considerably during 1980 and early 1981. The declining level of demand for petroleum stemmed in part from recessions in several of these countries, substitution of nonpetroleum fuels, and steps taken to improve energy efficiency. From mid-1980 through the first quarter of 1981, the United States imported an average of about 4.6 million barrels of crude oil per day, compared with an average daily import rate of 6.4 million barrels for 1979.

*Crude oil—domestic.* On January 28, the Administration announced the total decontrol of prices for crude oil, gasoline, and propane. The controls had been scheduled to be phased out by September 1981. The im-

mediate effect of decontrol was to raise the average wellhead price of domestically produced crude oil from \$28.85 in January to \$34.14 per barrel in February; refined product prices also rose as a result of increased crude oil costs. There were also indications of stepped-up oil exploration activity in the wake of higher crude oil prices, while consumers continued to buy less gasoline and other refined products in reaction to higher prices.

*Household fuels.* Gasoline prices probably would have risen more were it not for a slackening in demand. While the monthly production levels of gasoline have remained relatively unchanged over the last 2 years, inventories reached a record high of 288.1 million barrels in late March. This overproduction vis-a-vis demand is reflected in the short-run adjustment of reduced refinery capacity utilization, which dipped to 68.7 percent in early April. Some refiners have already announced plans for further cutbacks in production. As a result of the abundant supplies and increased costs, retailers have not been able to maintain their margins, which has helped to restrain prices. Gasoline prices showed a significant deceleration in March after some wholesalers began charging less in the early part of the month. If in-

ventory levels remain high and there are no further OPEC increases, then prices should continue to moderate into the second quarter.

After huge increases in the first 2 months of 1981, fuel oil prices also experienced a sharp slowdown in March. The restraining influences were the relatively mild February weather in the Northeast and the seasonal decline in demand near the end of the heating season. Because the refinery output of fuel oil is directly tied to the production of gasoline, any decisions to reduce production levels of the latter will also affect the future supplies (and therefore the prices) of the former.

Electricity prices increased at an annual rate of 12.5 percent for the 3 months ending in March. While these figures show an acceleration compared with fourth-quarter 1980, it is a significant improvement over the first 9 months of 1980. Most higher prices resulted from fuel adjustment charges caused by the increased cost of fuels to the utilities, particularly the electricity generated from oil.

Natural gas prices have followed a similar pattern to electricity. The slowdown in the fourth quarter has been followed by an acceleration through March. But the annual rate of 15.2 percent in the first quarter is still below the level of price increases experienced in the first three quarters of 1981. Purchase gas adjustments, which reflect the increased cost of natural gas to the utility, and higher rates caused the first-quarter acceleration in prices. The proposed deregulation of natural gas would have a significant impact on price levels if it is implemented.

*Industrial fuels.* Intermediate energy goods in the PPI accelerated to a 47.7-percent annual rate of increase in the first quarter of 1981, much more than during any of the three preceding quarters. Diesel fuel prices climbed at an annual rate in excess of 100 percent, as steady demand allowed the pass-through of the full impact of higher crude oil prices. Strong demand for home heating oil put further upward pressure on diesel fuel prices; these two fuels are virtually identical. Residual fuel prices also moved up substantially, although not as rapidly as diesel fuel. The rate of increase slowed largely because many electric utilities and industrial plants continued the process of conversion to cheaper fuels, such as coal and natural gas. This process has depressed demand for residual fuel over the last year. There was also a greater volume of residual fuels produced relative to other refined petroleum products, because of the higher proportion of domestic crude petroleum being refined. Air pollution laws have resulted in particularly weak demand for residual fuels with a sulfur content greater than 1 percent; prices for these grades rose much less than higher-grade residual fuel in the first quarter.<sup>1</sup>

Commercial jet fuel prices also advanced, but less

than either diesel or residual fuel. This was partly attributable to a decrease in airline traffic; in addition, because most jet fuel sales are contractual, these prices are slower to adjust than those of other types of petroleum fuels. (Refined petroleum product prices are lagged 1 month in the PPI; therefore, first-quarter data reflect price developments from November to February.)

The PPI for electric power rose at an 8.9-percent annual rate, the slowest pace in 2 years. The deceleration over the past two quarters was reflective of stable coal prices and the weakness in residual fuel prices during mid-1980. The liquefied petroleum gas index moved up substantially for the second consecutive quarter, following several months of relatively little movement. The first-quarter advance was caused by higher crude petroleum costs, as well as increased demand for propane as a home heating fuel. The phased decontrol of natural gas prices (which were up 30 percent at the wellhead in 1980) has encouraged many homeowners to switch to propane.

### **Increases in food prices relax**

From December to March, retail food prices showed their smallest rise since first-quarter 1980. Much of the slowdown was caused by declining prices for meats and sugar, as a result of abundant supplies. The effect of last summer's drought, along with unfavorable winter weather, continued to be reflected in large price increases for fresh vegetables and peanut butter. Most other categories of foods continued to experience moderate advances in price. At the farm level, the PPI for crude foodstuffs and feedstuffs decreased for the second consecutive quarter, after an unusually steep advance in the third quarter of 1980. (See table 3.)

*Meats and fish.* Burdensome supplies of hogs in early 1981 resulted in lower prices for pork, as well as a slackening in prices for competing beef and veal. However, as fewer hogs were slaughtered near the end of first-quarter 1981, producer pork prices began to turn up. Pork supplies were expected to be significantly reduced later in the year, as many producers were dumping stock after operating at a loss for 2 years. Record production had kept pork prices low, despite higher feed and fuel prices, interest rates, and other costs.

Cattle supplies were also more than ample from the fall through the first quarter, as ranchers kept fewer cows for breeding. As a result, offerings will decrease in the future, and upward pressure will be exerted on prices. The poultry industry was also marked by heavy supplies, falling prices, and high costs for feed and energy. If prices for red meats rise later in the year, poultry demand is expected to increase substantially.

Fish prices were up from December to March, as fishing activity was limited by bad weather in many areas

of the country. Escalating fuel costs also forced many in the fishing business, particularly small operators, to curtail their operations.

*Grains.* Corn and soybean prices rose dramatically last summer because of the drought. However, soybean prices later weakened somewhat as a result of a large buildup of world soybean oil stocks and expectations of another extremely large harvest of soybeans in Brazil. In addition, high interest rates discouraged speculation.

*Sugar.* Retail sugar prices fell sharply during the first quarter, following a plunge in world raw cane sugar prices in December. Earlier in 1980, sugar prices had reached the highest level in 7 years. As in 1974, the 1980 increase was the result of reduced world inventories in the face of growing world demand. Several major sugar-producing countries had poor harvests in 1980. Prices for beet sugar, corn syrup, and other competing sweeteners had followed those of cane sugar—up last year, down in the first quarter.

The downturn was triggered by a cessation of large purchases of sugar on the world market by the Soviet

Union. This coincided with the buildup of large inventories of beet sugar. Fears of future price drops, coupled with high interest rates and inventory costs, caused beet sugar producers to become more aggressive in East Coast markets, formerly dominated by cane sugar. Also, high prices led to an expansion of sugar beet planting in Europe; thus, a large crop is expected there this year.

*Fruits and vegetables.* In contrast to meats and sugar, fresh vegetable prices resumed the sharp upward climb that had been registered in the third quarter, before much smaller increases late last year. Supplies of many vegetables were still tight as a result of reduced acreage and poor yields from last summer's drought. Low inventories of potatoes and onions led to substantial rises in price. Severe weather took its toll on winter crops. Florida tomatoes were hit hard by freezing temperatures in January, followed by rain in late February. Tomatoes in Mexico had been damaged by rains last autumn, and again in January and March, keeping imports low. As a result, tomato prices soared. Sweet corn, snap beans, green peppers, and several other vegetables also suffered

Table 3. Changes in retail and producer prices for consumer foods, 1980-81

Commodity	Index	Relative importance Dec. 1980	Percent change Mar. 1980 to Mar. 1981	Compound annual rate, seasonally adjusted except as noted, for 3 months ended			
				1980			1981
				June	Sept.	Dec.	Mar.
Consumer foods <sup>1</sup>	CPI	100.0	10.1	5.8	19.7	13.1	2.1
	PPI	100.0	7.8	-1.4	31.0	3.6	1.0
Beef and veal	CPI	9.8	0.4	-16.3	48.8	1.4	-19.4
	PPI	12.1	-6.5	-8.0	35.0	-11.6	-30.4
Pork <sup>2</sup>	CPI	4.7	9.4	-22.0	87.2	12.0	-12.5
	PPI	6.5	12.2	-23.5	171.7	-2.7	-21.6
Poultry	CPI	2.3	11.6	8.9	89.0	10.3	-18.6
	PPI	3.3	17.5	-19.4	262.0	-15.3	-22.7
Cereal and bakery products <sup>2</sup>	CPI	8.7	11.8	12.8	7.4	13.8	13.3
	PPI	13.1	8.7	8.8	7.0	14.4	4.8
Dairy products	CPI	9.3	10.1	12.3	6.9	11.2	10.3
	PPI	13.6	10.1	13.9	4.6	13.7	8.4
Fresh fruits and vegetables	CPI	5.2	27.8	27.4	53.7	0.3	36.1
	PPI	5.2	33.5	41.3	100.5	-27.9	55.4
Processed fruits and vegetables <sup>2</sup>	CPI	4.5	11.0	7.3	8.4	7.7	21.3
	PPI	6.4	12.6	7.1	5.7	7.8	31.5
Eggs	CPI	1.3	9.7	11.3	31.3	31.8	24.8
	PPI	2.0	-2.1	-19.9	47.9	16.4	33.3
Sugar and sweets <sup>3</sup>	CPI	2.9	22.2	34.8	33.8	39.5	-11.1
	PPI	4.8	14.6	130.5	21.2	-7.7	-33.1
Roasted coffee <sup>2</sup>	CPI	0.8	-17.9	-4.7	-5.7	-30.0	27.7
	PPI	3.6	-14.0	-11.7	-20.2	-21.0	-1.8
Fats and oil products <sup>4</sup>	CPI	1.9	13.6	-2.0	6.5	19.5	33.4
	PPI	1.6	3.7	-7.2	11.1	8.6	3.2

<sup>1</sup> Includes items not listed. The CPI includes prices of food away from home, which accounts for about 31 percent of the food index. The PPI for finished consumer foods does not reflect restaurant prices.

<sup>2</sup> Not seasonally adjusted in the CPI.

<sup>3</sup> "Sugar and confectionary" in the PPI. Not seasonally adjusted in the PPI.

<sup>4</sup> "Vegetable oil end products" in the PPI. Peanut butter prices are included in this CPI but not in this PPI.

frost damage. However, increased production led to lower prices for lettuce, celery, carrots, and cabbage.

Florida oranges also were harmed by the January freezes. Although much of the damaged fruit was salvaged for juicing, both juice and fresh fruit production were well below the high levels predicted prior to the frost. As a result of the reduced supply, Florida orange prices rose substantially by February. However, the increase was moderated by lower prices for abundant California oranges.

*Peanut butter.* The sharp price increases in peanut butter, which started in late 1980 following the smallest peanut harvest since 1964, continued into early 1981. Peanut inventories were well below year-ago levels despite relaxation of import quotas. Little improvement is likely until harvest of the 1981 crop this fall.

### Homeownership developments

Mortgage interest rates, which rose 15 percent in 1980, increased at an annual rate of 23 percent in the first quarter. In late 1980, conventional mortgage interest rates started to advance as the inflow of funds into saving and loans was generally low. Consumer demand for mortgage loans dropped in January and the cost of funds increased, which lowered the difference between the interest return on mortgages held and the cost of funds. As a result of the increase in conventional rates, points on FHA and VA guaranteed loans increased. (Points are the percentage of the loan amount charged to the seller in order to "correct" any differences between FHA/VA rates and conventional rates.) During this temporary disequilibrium, homeowners were discouraged from offering their houses through either FHA or VA.

To remain competitive, both types of guaranteed loans increased mortgage rates in early March. Although short-term interest rates declined over the first 3 months of 1981, rates for long-term obligations, with which mortgage loans must compete, remained fairly constant.

Despite the large rise in mortgage interest rates, increases for contracted mortgage interest costs moderated in the first quarter because home purchase prices declined at an annual rate of 8.8 percent. This was the largest 3-month decline in the history of the index. The housing market weakened considerably at the start of 1981 as the number of single-family homes sold and housing starts dropped sharply in February, and the inventory of completed but unsold homes rose. In March 1981, the National Association of Realtors reported that the February sales volume of existing homes was 22 percent below that of September 1980, and that the median price of \$64,100 for an existing single-family home in February was at the same level as in July 1980.

### Other consumer services

The index for transportation services moved up at an annual rate of 9.9 percent, slightly less than the previous quarter. This reflected increases in auto maintenance and repairs, insurance, and finance charges, as interest rates in the general money markets remained at high levels. The public transportation index moved up at a 21.2-percent rate, more than the preceding quarter and about the same as a year ago, reflecting rises in airline and intracity mass transit fares. Airline ticket prices showed some moderation compared with the rate of increase experienced in recent months. However, a 5.7-percent industry-wide increase was granted by the Civil Aeronautics Board effective March 1, 1981. This advance was justified on the basis of higher fuel plus nonfuel costs. Intracity mass transit rose moderately, reflecting higher wage rates and other operating costs. (See table 4.)

The index for medical care services moved up at a rate of 12.0 percent, slightly more than during the previous 3 months, but less than that of a year ago, reflecting moderate increases in professional and hospital services. Wages and overhead expenses play significant roles in price advances in these service areas. The apparel services index rose at a 12.3-percent rate, about the same as the preceding quarter, because of increased overhead and materials costs—particularly cleaning fluid and labor. The index for entertainment services went up at a rate of 10.4 percent, accelerating from the previous quarter, but near the levels of a year ago. The principal causes of these increases were the higher prices for first-run movies and big-name concert artists because of rising labor and operating expenses and seasonal changes. Prices for other types of services, including personal care and personal and educational services, experienced moderate changes similar to the prior quarter. These increases reflected higher costs for labor, materials, utilities, and other operating expenses.

### Other producer prices

The PPI for finished goods other than food and energy moved up at a seasonally adjusted annual rate of 9.0 percent from December to March, slightly faster than the 8.2-percent rate in the previous quarter but slower than in any other one of 1980. Prices for consumer nondurables climbed at an 11.6-percent rate, much more than in either of the preceding two quarters; however, the consumer durables index rose at a 2.5-percent pace, the slowest in nearly 5 years. Capital equipment prices advanced at an 11.8-percent rate, virtually the same as in 1980.

Much of the acceleration in the consumer nondurables index was caused by a sharp rise in the newly introduced indexes for the publishing industry, particu-

larly newspapers. Prices for tires, prescription drugs, textile housefurnishings, soaps and detergents, and luggage moved up considerably more than in the last quarter of 1980. Among consumer durable goods, prices of jewelry fell even more sharply than in the previous quarter, and a steep drop in flatware prices erased a 21.3-percent advance registered in 1980; both developments reflected continued weakness in precious metal prices. Passenger car prices rose at a rate of 6.0 percent, much slower than the 9.2-percent increase recorded for all of 1980, as some domestic manufacturers reinstated rebate programs to promote sales of slower-selling models. Although motortruck price increases slowed somewhat from the unusually high rate in the last quarter of 1980, the 12.7-percent first-quarter rate was faster than the 11.2-percent rise recorded from December 1979 to December 1980.

Prices weakened dramatically during the first quarter for a broad range of basic industrial materials. Among precious metals, silver prices declined even more precipitously than in the previous 3 months; gold prices also

kept falling, although not as much as silver. Lower precious metal prices were reflected in continued rapid decreases in prices for jewelers' materials. Prices for several other primary nonferrous metals—including copper, cobalt, tin, and lead—were also sharply lower. As a result, the costs of copper-base scrap decreased markedly after showing virtually no net change from September to December, and those of lead scrap fell even more rapidly than did copper-base scrap. Steep first-quarter declines were also registered for crude natural rubber, raw cotton, wastepaper, and cattle hides. After recording a substantial advance in the final quarter of 1980, iron and steel scrap costs edged down slightly in the opening quarter of 1981; ferrous scrap prices normally rise considerably from December to March as firms rebuild their inventories.

The return of record-high interest rates at the end of 1980 had a major depressing effect on material prices in several ways. Industrial users generally tried to minimize their material inventories, and thus their current purchases, because of the extremely high costs of fi-

Table 4. Price changes in consumer services less energy and in consumer goods other than foods and energy, 1980-81

CPI grouping	Relative importance Dec. 1980	Percent change Mar. 1980 to Mar. 1981	Compound annual rate, seasonally adjusted except as noted, for 3 months ended			
			1980			1981
			June	Sept.	Dec.	Mar.
<b>Services less energy</b>	100.0	11.7	20.0	.4	17.9	10.1
Rent, residential <sup>1</sup>	13.4	8.8	10.0	8.6	9.6	7.0
Household services less rent and energy <sup>1</sup>	50.1	13.2	29.5	-10.8	26.9	12.1
Home financing, taxes, and insurance <sup>1</sup>	31.4	16.1	43.9	20.0	41.8	11.4
Mortgage interest costs <sup>1</sup>	25.8	18.2	55.0	25.4	51.3	11.6
Home maintenance and repairs services	7.2	9.7	7.0	7.0	11.0	13.8
Housekeeping services <sup>1</sup>	5.0	8.0	8.6	6.4	5.7	11.6
Transportation services	15.1	12.5	16.6	13.5	10.3	9.9
Auto maintenance and repairs	3.8	10.3	11.0	10.9	10.8	8.4
Other private transportation services	8.2	8.7	18.6	2.1	8.8	6.3
Public transportation <sup>1</sup>	3.1	26.6	18.6	56.7	14.1	21.2
Medical care services	10.3	9.2	8.4	8.9	7.7	12.0
Entertainment services <sup>1</sup>	3.9	8.1	9.2	9.7	3.3	10.4
Personal care services <sup>1</sup>	2.3	7.4	7.4	6.5	6.8	8.9
Apparel services	1.7	11.7	13.8	9.2	11.7	12.3
Personal and educational services	3.1	11.8	9.2	21.7	8.6	8.4
<b>Commodities less food and energy</b>	100.0	8.0	7.7	12.9	9.6	1.7
Alcoholic beverages	2.9	8.5	9.8	8.2	5.2	10.8
Home purchase <sup>1</sup>	30.5	7.0	14.9	14.9	9.0	8.8
Maintenance and repair commodities <sup>1</sup>	2.4	10.2	12.5	12.7	7.3	8.3
Textile housefurnishings	1.5	6.7	7.6	10.4	0.6	8.5
Furniture and bedding	3.5	6.6	5.8	7.3	2.7	10.5
Appliances, including radio and T.V. <sup>1</sup>	4.1	3.9	4.1	5.2	1.1	5.2
Other household equipment <sup>1</sup>	2.6	10.1	10.3	9.6	6.0	14.5
Housekeeping supplies <sup>1</sup>	4.3	11.0	13.0	11.2	9.4	10.5
Apparel commodities less footwear	10.5	3.9	1.4	8.7	2.9	6.2
Footwear	1.9	5.6	3.7	9.2	6.1	3.5
New cars	9.4	4.5	8.7	15.4	3.4	1.7
Used cars	8.0	20.6	12.1	39.0	62.3	6.5
Auto parts and equipment <sup>1</sup>	1.8	6.3	3.3	11.7	5.7	4.7
Medical care commodities	2.3	10.5	10.7	10.2	8.9	12.4
Entertainment commodities	6.4	9.2	9.2	11.0	6.1	10.4
Tobacco products <sup>1</sup>	3.1	7.1	10.5	2.2	12.9	3.3
Toilet goods and personal care appliances <sup>1</sup>	2.1	11.1	10.2	10.5	9.7	14.1
Schoolbooks and supplies	0.5	11.4	7.6	27.4	3.4	16.3

<sup>1</sup> Not seasonally adjusted.

nancing their holdings. Speculators increasingly turned away from precious metals and other commodities because of the favorable returns they could reap from high-yielding investments in financial markets. By their adverse impact on residential construction activity, high interest rates curtailed demand for copper, tin, and other materials which depend on a healthy housing market. High interest rates also encouraged foreign investments in this country, thereby strengthening the dollar; however, this served to discourage foreign demand for American commodities such as scrap metals, cotton, and hides.

A number of specific factors also served to reduce basic metal prices during late 1980 and early 1981. For example, lead prices dropped sharply in the wake of new Federal regulations effective last fall which cut the allowable level of lead in gasoline. The world's leading cobalt producing nation, Zaire, reduced cobalt prices 20 percent early in 1981. This followed many months of

unusually high and stable prices which resulted in decreased world industrial consumption, while Zaire's production and inventories mounted. Unusually high silver prices in early 1980 led to lower demand for silverware, silver jewelry, and other products which are heavy users of this metal. The result was a large silver surplus in 1980 following 3 years of deficit, and hence silver prices fell rapidly from late 1980 through early 1981. Settlement of a long copper strike in late 1980 was followed by a substantial rise in production, but at a time when industrial and residential construction demand for copper was quite weak.

Among other basic industrial materials, prices of cattle hides were driven down by the heavy cattle slaughter in early 1981. Raw cotton prices retreated somewhat after climbing rapidly late last year in the face of severe drought-related damage. Both domestic and foreign cotton mills were generally well-stocked through the spring of 1981. □

— FOOTNOTE —

<sup>1</sup> Residual fuel prices graded according to sulfur content were first published in the PPI with the release of January 1981 data. Before that, the PPI for residual fuel was subject to occasional variations re-

sulting from changes in the relative proportion of different grades of residual fuel sold from month to month.

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### Poverty income level raised

The level of annual family income used to determine whether a person is poor has been raised an average of \$920 by the U.S. Department of Labor to reflect increases in consumer prices.

Under the new criteria, an urban family of four can earn up to \$8,450 and still be considered poor, an increase of \$1,000 over last year. The change became effective March 11, 1981.

The revised poverty level guidelines are based on recommendations by the Office of Management and Budget. OMB defines the Federal Government's official poverty line.

These guidelines are used by a number of agencies to determine the eligibility of applicants for programs that assist the poor.

The new income levels for nonfarm families living in the continental United States average \$920 higher than last year; for a farm family, \$780, reflecting the increases in living costs since the last criteria were set in April 1980.

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# The Employment Cost Index in 1980: a first look at total compensation

*With the introduction of fringe benefits,  
the index increased 9.8 percent last year,  
as wages and salaries rose a record 9 percent;  
the addition of benefit cost data completes  
quarterly measure of compensation change*

PATRICIA B. SMITH

Rates of total compensation for employees in the private nonfarm sector of the economy increased by 9.8 percent in 1980, and wages and salaries rose by 9.0 percent. This is the first full year in which the Employment Cost Index (ECI) measured total compensation change,<sup>1</sup> that is, wages and salaries and employer costs for employee benefits such as paid holidays and vacations and retirement plans. Data on benefits were included last year; the index began publication with the wages and salaries component in 1975.

The 1980 change in compensation, compared with the wage and salary change, reflects a continuing increase in the importance of employee benefit costs. Wages and salaries, however, still account for about three-quarters of total compensation.

The movements of compensation and of wages in the ECI occurred during varying economic conditions: a 12.5-percent advance in the Consumer Price Index; an additional 2.2 million workers on nonagricultural payrolls; unemployment that increased from 6.2 percent in January to 7.6 percent in May and remained at approximately that level for the balance of the year; and a relatively heavy schedule of collective bargaining—settlements were reached for 3.7 of the 9.2 million workers in major bargaining units (1,000 workers or more) in the private sector.

Other influences on the movement of compensation

and its wages and salaries component stemmed from changes initiated by the Federal Government. The Council on Wage and Price Stability eased its pay increase guideline to a 7.5–9.5 percent range in 1980, from the 7.0-percent guideline in effect for most of 1979. On January 1, 1980, the maximum taxable earnings base under social security was increased from \$22,900 to \$25,900, and the Federal minimum wage rose by almost 7.0 percent, from \$2.90 to \$3.10 an hour.

## Total compensation

Among occupational groups, blue-collar workers had the greatest compensation gain during 1980 (10.1 percent), and service workers, the lowest (9.4 percent). (See table 1.) The compensation advance of white-collar employees averaged 9.5 percent. Manufacturing and nonmanufacturing industries matched the 9.8-percent total compensation gain of the private nonfarm sector.

In each quarter of 1980, the rate of change in total compensation exceeded that of wages and salaries. The greatest difference between the two measures occurred in the first quarter (2.7 versus 2.4 percent), in part, because of adjustments in social security and other legally required payments which were effective on January 1. An estimated four-fifths of the compensation rise during 1980 is accounted for by wage change, which also affects costs for wage-related benefits, such as paid holidays and vacations and employer contributions for social security.

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## Wages and salaries

As noted, the average wage and salary change of private nonfarm workers was 9.0 percent in 1980. (See table 2.) The gain for blue-collar workers (9.6 percent) was greater than that for white-collar employees (8.7 percent) and service workers (8.1 percent). Professional and technical employees had the largest earnings rise in the white-collar group, 10.5 percent; and operatives, except transport, led the wage advance of blue-collar workers, 10.2 percent. The lowest earnings gain of all occupations was that for salesworkers, 6.7 percent.

Wages and salaries in manufacturing industries increased by 9.4 percent, compared with 8.8 percent in nonmanufacturing. Among individual nonmanufacturing industries, workers in transportation and public utilities had the highest wage advance, 11.1 percent; and those in retail trade the lowest, 7.0 percent. Union workers' pay rose 10.9 percent, while nonunion earnings rose 8.0 percent.

The 2.4-percent wage and salary change in the first quarter of 1980 matched the record increase in the fourth quarter of 1979. In the remaining quarters of 1980, changes were lower, ranging between 2.0 and 2.2 percent. The ECI is not seasonally adjusted; thus, it is not possible to determine to what extent quarterly movements reflect underlying economic conditions or seasonal patterns. Nevertheless, some quarterly movements can be traced, in part, to Federal government actions and the collective bargaining cycle. For example, service workers, who tend to be clustered at or near the minimum wage, received their greatest pay advance in the first quarter of 1980 when the Federal minimum wage was increased from \$2.90 to \$3.10 an hour. On the other hand, in subsequent quarters, pay gains for these workers were among the lowest of any occupational group. One possible impact of minimum wage change, therefore, is to cluster pay changes for low-wage employees in the first quarter of the year. This pattern is similar to that in past years when the

minimum wage was raised in January.

Blue-collar workers, in a well-established pattern, had larger wage gains in the second quarter than in the first. This results from the concentration of collective bargaining (notably for construction, trucking, and basic steel) in the spring months. Under collective bargaining, pay change may result from newly negotiated contracts, deferred wage increases, or cost-of-living adjustments. Similar patterns of high second-quarter pay gains are evident in the ECI for the construction industry and transport equipment operatives.

### Trends, 1976-80

For most groups of workers, the advance in wages and salaries was higher in 1980 than in any year since 1975, when the ECI began. A number of economic factors are important in interpreting the trend of the wages and salaries component of the ECI for the overall private nonfarm sector and the individual series. Prior to the third quarter of 1978, the 12-month increases in the CPI were below those of the ECI. Beginning in the third quarter of 1978, however, the advance of the CPI outpaces the rate of wage and salary change in the ECI. The difference increases until the 12-month period ending in the first quarter of 1980, when the 14.6-percent advance of the CPI compares with a 9.1-percent rise in wages and salaries. By the end of 1980, the gap was narrowed somewhat, with the CPI increasing by 12.5 percent and the ECI by 9.0 percent.

Unemployment in the private nonfarm sector fell from 7.7 percent in 1976 to 5.8 percent in 1979, then rose again in 1980 to 7.1 percent. Collective bargaining has become characterized by cycles of activity over, generally, a 3-year period in which two years of heavy negotiations (as in 1976 and 1977) are followed by a year of comparatively light activity (1978). Collective bargaining was heavy again in 1979 and 1980.

The President's Council on Wage and Price Stability, in October 1978, announced a pay increase standard of 7.0 percent which was raised to a range of 7.5 to 9.5 percent in 1980. The increases in the Federal minimum wage, effective on January 1 of each year, were of differing magnitudes; the largest adjustment being a 15.2-percent increase in 1978, with smaller changes in 1979, 9.4 percent, and in 1980, 6.9 percent.

Chart 1 compares the change in wages and salaries for all workers in the private nonfarm sector with those in manufacturing and nonmanufacturing industries. Three periods of wage and salary movement emerge between 1976 and 1980 for private nonfarm workers. The first, from the third quarter of 1976 to the third quarter of 1978, is one of moderately increasing wage advance until a high of 8.0 percent is reached. During this period, wages increased more rapidly than consumer prices

**Table 1. Rate of total compensation change in the Employment Cost Index, 1980**

[In percent]

Characteristic	3 months ended				12 months ended
	March	June	September	December	December
All private nonfarm workers .....	2.7	2.3	2.3	2.1	9.8
White-collar workers .....	2.8	2.3	2.0	2.1	9.5
Blue-collar workers .....	2.4	2.5	2.7	2.1	10.1
Service workers .....	4.3	1.1	2.1	1.7	9.4
Manufacturing industries .....	2.8	2.0	2.3	2.2	9.8
Nonmanufacturing industries ..	2.7	2.5	2.3	2.0	9.8

**Table 2. Rate of wage and salary change in the Employment Cost Index, 1980**

[In percent]

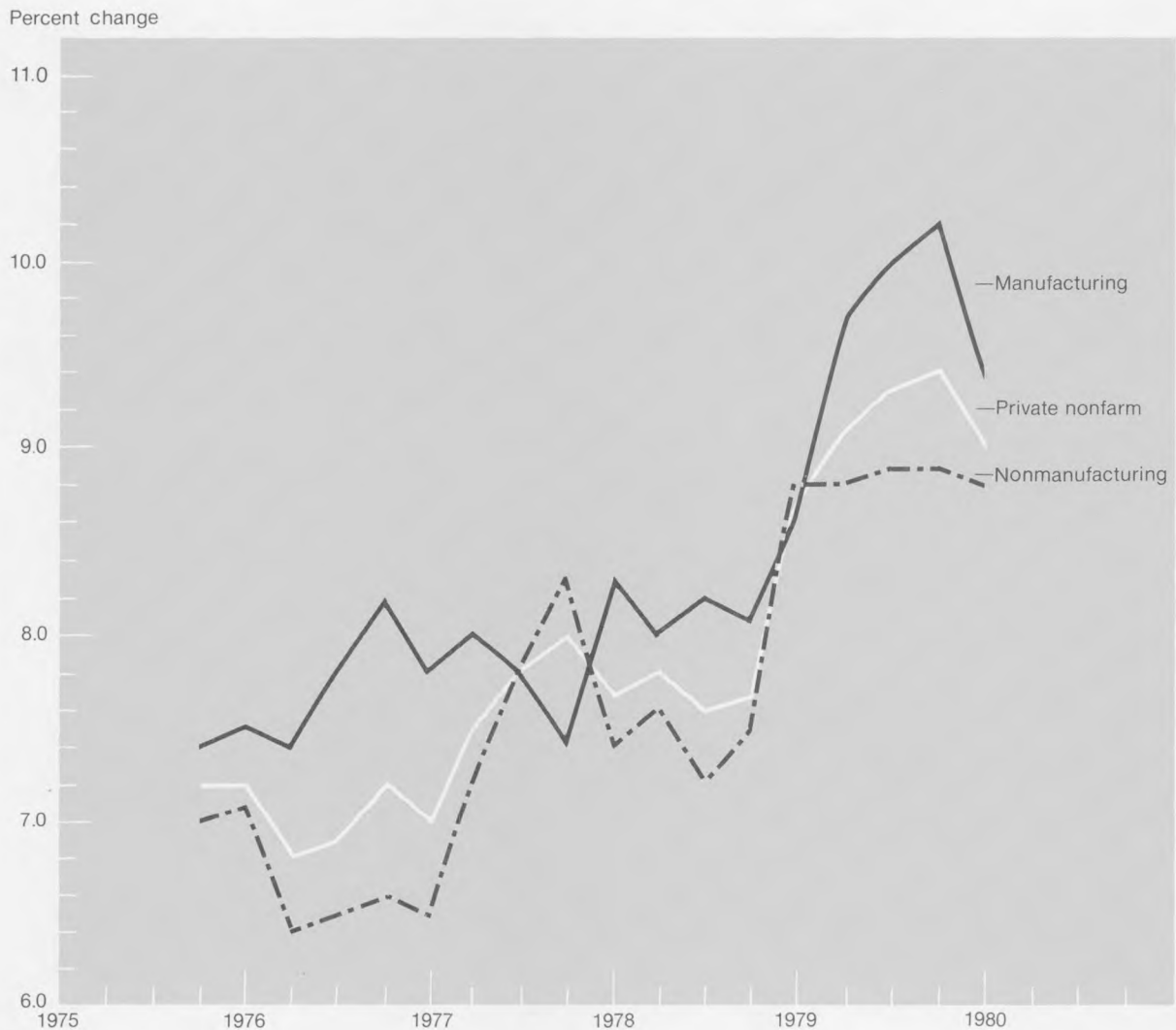
Characteristics	3 months ended					12 months ended				
	December 1979	March	June	September	December	December 1979	March	June	September	December
All private nonfarm workers . . . . .	2.4	2.4	2.1	2.2	2.0	8.7	9.1	9.3	9.4	9.0
By occupation:										
White-collar workers . . . . .	2.4	2.4	1.9	2.1	2.0	8.6	9.2	9.3	9.1	8.7
Professional and technical workers . . . . .	2.8	3.3	1.8	2.7	2.2	8.8	10.3	11.1	11.1	10.5
Managers and administrators . . . . .	1.4	2.6	1.6	1.6	1.3	7.4	7.7	7.8	7.3	7.2
Salesworkers . . . . .	3.9	-5	2.5	1.7	2.8	8.8	8.6	6.8	7.8	6.7
Clerical workers . . . . .	2.1	3.0	1.8	2.0	2.1	9.4	9.6	10.1	9.2	9.1
Blue-collar workers . . . . .	2.5	2.3	2.5	2.4	2.1	9.0	9.4	9.6	10.0	9.6
Craft and kindred workers . . . . .	1.9	1.7	2.4	2.8	2.2	8.6	8.2	8.5	9.1	9.4
Operatives, except transport . . . . .	3.1	3.2	2.4	2.3	2.0	9.2	10.5	10.7	11.3	10.2
Transport equipment operatives . . . . .	2.4	1.2	3.5	1.4	1.9	10.2	9.8	9.9	8.8	8.2
Nonfarm laborers . . . . .	2.9	2.5	2.4	2.3	2.0	9.1	10.1	9.9	10.5	9.5
Service workers . . . . .	1.8	3.5	1.1	1.7	1.5	7.2	7.6	7.8	8.4	8.1
By industry:										
Manufacturing . . . . .	3.1	2.8	2.0	2.0	2.3	8.6	9.7	10.0	10.2	9.4
Durables . . . . .	3.3	2.5	2.1	2.5	2.3	9.0	9.7	10.4	10.8	9.8
Nondurables . . . . .	2.7	3.2	1.9	1.2	2.1	7.8	9.7	9.2	9.2	8.6
Nonmanufacturing . . . . .	2.0	2.2	2.1	2.3	1.9	8.8	8.8	8.9	8.9	8.8
Construction . . . . .	1.1	1.2	2.9	2.9	1.5	7.2	7.1	7.5	8.4	8.8
Transportation and public utilities . . . . .	2.0	2.5	2.3	3.2	2.7	9.4	9.3	10.1	10.4	11.1
Wholesale and retail trade . . . . .	1.3	2.6	1.9	1.5	1.7	7.9	8.4	7.8	7.4	7.8
Wholesale trade . . . . .	2.1	2.9	2.7	.9	3.2	7.9	9.4	9.2	8.9	10.0
Retail trade . . . . .	1.0	2.4	1.5	1.8	1.1	7.9	8.0	7.3	6.9	7.0
Finance, insurance, and real estate . . . . .	4.3	.4	2.7	2.0	2.1	13.2	10.2	9.6	9.7	7.4
Services . . . . .	2.5	2.7	1.6	2.5	1.6	8.5	9.2	9.8	9.6	8.7
By region:										
Northeast . . . . .	2.1	2.5	2.1	1.9	1.9	7.3	8.3	8.7	8.9	8.6
South . . . . .	2.4	2.8	1.9	1.9	1.9	8.5	8.8	9.0	9.3	8.8
North Central . . . . .	2.6	2.4	2.0	1.9	2.2	9.4	9.9	9.3	9.2	8.8
West . . . . .	1.8	2.6	2.4	3.4	2.0	8.5	9.2	9.6	10.6	10.8
By bargaining status:										
Union . . . . .	2.6	2.3	2.8	2.9	2.5	9.0	9.5	10.2	10.9	10.9
Manufacturing . . . . .	3.4	2.6	2.8	2.8	2.4	9.4	10.3	11.1	12.0	11.0
Nonmanufacturing . . . . .	1.7	2.0	2.8	3.0	2.6	8.5	8.8	9.5	9.9	10.8
Nonunion . . . . .	2.3	2.5	1.7	1.8	1.8	8.5	8.9	8.7	8.6	8.0
Manufacturing . . . . .	2.7	3.0	1.4	1.2	2.1	7.9	9.3	9.0	8.6	7.9
Nonmanufacturing . . . . .	2.1	2.3	1.9	2.0	1.7	8.8	8.8	8.6	8.6	8.1
By area:										
Metropolitan areas . . . . .	2.5	2.1	2.2	2.3	2.0	8.9	9.1	9.3	9.5	9.0
Other areas . . . . .	1.9	3.6	1.6	1.5	2.4	7.9	9.5	8.9	8.9	9.4

and, in 1978, collective bargaining activity was light. The following four quarters (fourth quarter 1978 to third quarter 1979) experienced fairly stable wage change, with the rise ranging between 7.6 and 7.8 percent. This stability occurred in a period of heavy collective bargaining (1979), a falling rate of unemployment, and greater increases in consumer prices than in wages. It was, however, the first year in which the national pay increase standard was in effect. Beginning in the third quarter of 1979, wage and salary rates climbed rapidly and peaked at 9.4 percent for the 12-months ending in the third quarter of 1980. Although the rate of change declined to 9.0 percent for the 12 months ending in the fourth quarter, that change was higher than any previous four-quarter period.

Wage change for both manufacturing and nonmanufacturing moved in the same direction as that in the private nonfarm sector, with changes in manufacturing generally higher than those in nonmanufacturing. Wage change for nonmanufacturing was fairly stable throughout 1980, after reaching a level of 8.8 percent in the 12 months ending in the fourth quarter of 1979, while wage change for manufacturing continued to increase, peaking at 10.2 percent in the 12 months ending in the third quarter of 1980, then declining to 9.4 percent by the end of the year.

Wage and salary trends for the three major groups of occupations, are shown in chart 2. In the pattern of the overall private nonfarm sector, the rates of pay change for blue-collar and white-collar workers increased rapid-

Chart 1. Rates of wage and salary change in the Employment Cost Index, by industry, 1976-80



NOTE: Rates of change are for the 12 months ending in the quarter indicated.

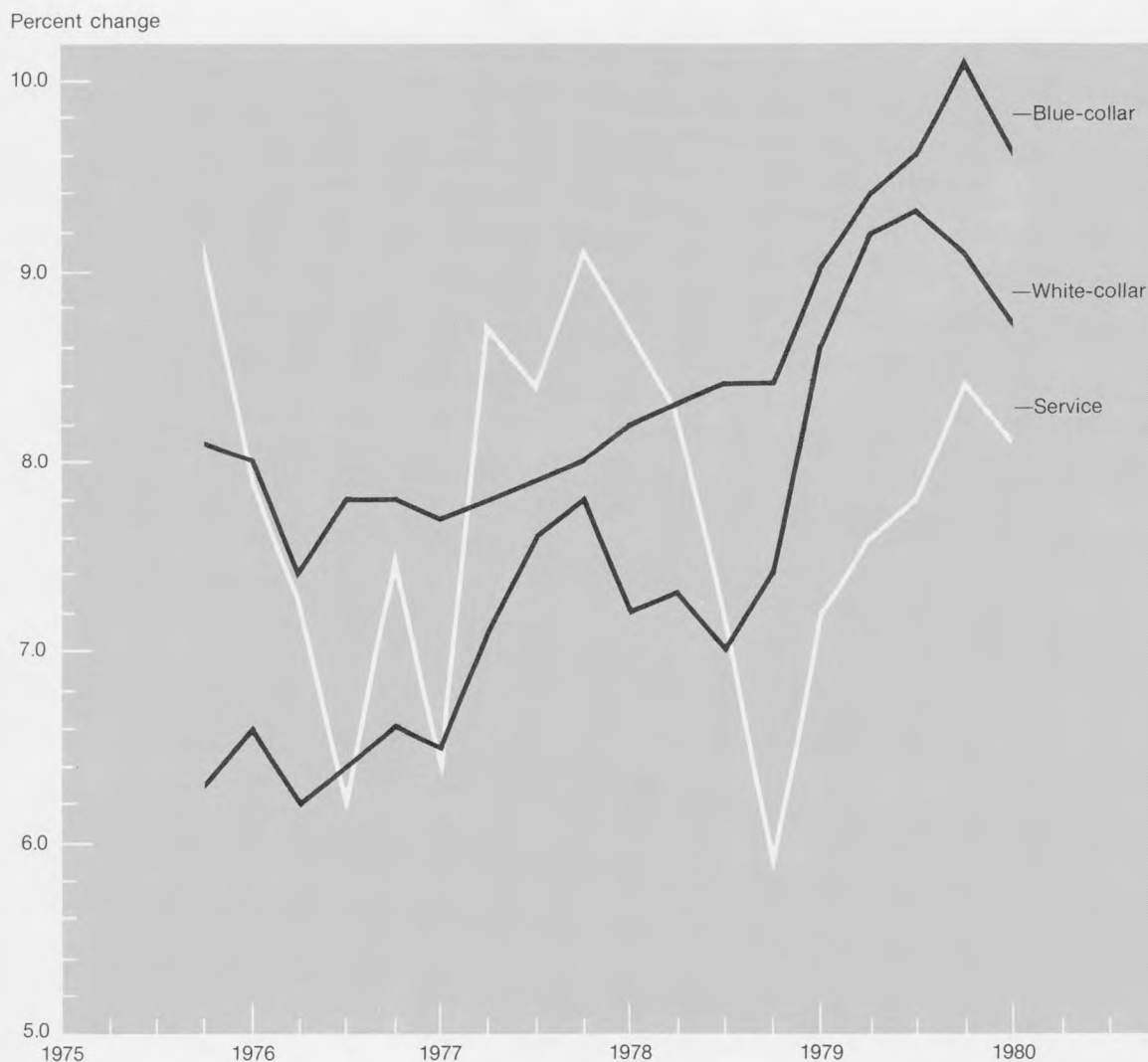
ly, beginning in 1979, until new records were reached in 1980. Only service workers had higher rates of wage change prior to 1980. For all three groups of workers, the 12-month changes declined from their highest levels by the end of 1980.

Before 1979, the pattern of wage and salary change for the three major employment groups differed markedly. Most notable are the peaks in the rate of change for white-collar and service workers that occurred in 1978, the year in which the Federal minimum wage was increased by its greatest amount, 15.2 percent. It was also the year in which the wage change in nonmanu-

facturing industries, with a greater proportion of service workers, exceeded the change in manufacturing.

For both union and nonunion workers, rapid earnings increases began in 1979. A continuing advance in pay for union workers began in the 12-month period ending in the third quarter of 1978 and reached a record plateau, 10.9 percent, by the end of 1980. Non-union workers, on the other hand, reached their peak gain (8.9 percent) in the 12-month period ending in the first quarter of 1980, after which the 12-month rate of wage increase fell in each succeeding quarter, reaching 8.0 percent by the end of the year.

**Chart 2. Rates of wage and salary change in the Employment Cost Index, by occupation, 1976-80**



NOTE: Rates of change are for the 12 months ending in the quarter indicated.

— FOOTNOTES —

<sup>1</sup> Employment cost is defined as employer expenditures per employee-hour worked for a standardized or fixed mix of labor services. The fixed labor weights are derived from occupational employment in the industries covered by the index, as reported in the 1970 Census of Population. In addition to the series on wages and salaries and total compensation, series or benefit costs may be published separately at a later date. Benefits include: *Hours-related benefits*—premium pay for overtime and work on weekends and holidays, paid holidays, paid vacations, paid sick leave, and other paid leave; *supplemental pay*—shift differentials, nonproduction bonuses, severance pay, and supplemental unemployment plans; *insurance benefits*—life, health, and sickness and accident insurance; *retirement and savings benefits*—pension and other retirement plans and savings and thrift plans; *legally required benefits*—social security, railroad retirement and supplemental retirement, railroad unemployment insurance, Federal and State unemploy-

ment insurance, workers' compensation, and other legally required benefits such as State temporary disability insurance; and *other benefits*—merchandise discounts in department stores. For a further discussion of ECI concepts and methodology, see Victor J. Sheifer, "Employment Cost Index: a measure of change in the 'price of labor'," *Monthly Labor Review* July 1975, pp. 3-12; *Handbook of Methods for Surveys and Studies*, Bulletin 1910 (Bureau of Labor Statistics, 1976), pp. 184-91; and Victor J. Sheifer, "How benefits will be incorporated into the Employment Cost Index," *Monthly Labor Review*, January 1978, pp. 18-26.

ECI data are published quarterly in a press release issued by the Bureau of Labor Statistics and subsequently in the Current Labor Statistics department of the *Monthly Labor Review*. The data also appear in *Current Wage Developments*, a monthly publication of the Bureau of Labor Statistics.

# The puzzling lag in southern earnings

*Business booms but average earnings remain relatively low in the South; contributory factors include interregional differences in urbanization, and in the racial composition, training, and union status of the work force*

GEORGE D. STAMAS

During the 1970's, the South experienced rapid economic growth and a sharp increase in population.<sup>1</sup> While the region attracted workers from other parts of the country, the reversal of the longstanding pattern of migration to the North accelerated.<sup>2</sup> More Southerners found employment at home, as the boom created thousands of jobs. Nevertheless, average wages remained considerably lower than in the rest of the country.

This study takes another look at this phenomenon, finding that a wage differential of about 17 percent existed between May 1973 and May 1978. In order to examine the differential, a number of variables (industry, occupation, education, age, race, sex, city size, and union status) were chosen for their potential contribution to the observed gross differential in regional earnings. These labor market variables were used in regression analysis to estimate, sequentially, alternative specifications of a wage equation. This procedure permits estimates of the interregional wage differential net of the influence of various combinations of the explanatory variables. Accordingly, we were able to explain approximately 60 percent of the gross differential between wages in the South and those in the rest of the Nation

by controlling for worker characteristics.

The study is based on data from the Current Population Survey (CPS) from May 1973 to May 1978 with emphasis on 1978. The CPS not only provides household-derived information on weekly earnings and hours used to compute an average hourly wage, but also a wealth of information on the personal characteristics of workers.<sup>3</sup>

## An overview

Assuming perfect competition and free flow of resources, regional differences in the costs of doing business should vanish in the long run. These costs include outlays for equipment and raw materials (capital) and workers (labor). A change in output resulting from a 1-unit change in either the capital or the labor input is a function of the relative amounts of each input used in the production process. In the region with the most labor relative to capital, an additional unit of capital is more productive, and so would receive a higher return. Similarly, an additional unit of labor is more productive—and receives a higher wage—in the region where labor is least plentiful relative to capital. Thus, capital should migrate to low-wage areas while labor migrates from low-wage areas, until each factor cost is the same in all regions.<sup>4</sup> In reality, however, the gross differential

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in earnings between the low-wage South and the rest of the Nation has demonstrated a stubborn persistence.<sup>5</sup>

According to data from the May 1978 CPS, median earnings of all workers were about 17 percent lower in the South than in the rest of the country. (See table 1.) Averaged across all industries, workers in the South had median hourly earnings of \$4.26, compared to \$5.13 in other regions and \$4.86 for the Nation as a whole. Between 1973 and 1978, earnings increased 41 percent in the South and 39 percent elsewhere, resulting in a small reduction in the interregional wage differential. In manufacturing industries, however, southern earnings remained about 25 percent below those outside the South over the 1973-78 period.

Economists have tried to identify barriers to the free movement of capital or labor which might explain the observed wage differences. Theoretically, a regional differential could develop and be perpetuated if production functions or outputs differ, or if there are unusual transportation costs. Under some circumstances capital is attracted to high-wage areas.<sup>6</sup> And some economists have cited institutional factors such as low union penetration or domination of the labor market by large employers as evidence that employers in the South may have an advantage over other employers in their relationships to employees, thus creating a regional wage differential.

Alternately, wage differentials across regions may be compensating for differences in worker skill levels, living costs, and other factors. For instance, because skilled labor is more productive, and often incurs costs in acquiring its skill, it receives a higher wage than unskilled labor. And, differences in area living costs could persuade workers in the South to accept a smaller nominal wage than other workers. Thus, a regional wage differential need not be inconsistent with profit maximization by the firm or utility maximization by workers.

## Industry forces

Wages differ by industry for a variety of reasons including differences in capital intensity, unionization, skill requirements, working conditions, and sensitivity of industry employment to the business cycle. Accordingly, wage differentials could result in part from regional differences in industry composition. Using Census of Manufactures data for 1952 to standardize wages for industry composition, Victor Fuchs and Richard Perlman explained about half of the regional differential in earnings of manufacturing workers.<sup>7</sup>

An examination of the distribution of wage and salary employment by industry in the South and other regions in 1978 shows that the service-producing sector accounted for about two-thirds, and the goods-producing sector, one-third of the total in both. Within the service sector, the distribution by major industry group was very similar. But within the goods-producing sector, the proportions of employees in the relatively high-wage construction and mining industries and in the lower-paying nondurable goods industries were a little higher in the South.

The estimating procedure for the present study included controls to standardize wages for industry composition. Regression results indicate that standardization at the level of aggregation used does not change the net differential.

At the industry level as well, earnings were lower in the South. In both durable and nondurable manufacturing, the earnings ratios of the South to other regions were about 79 percent. The ratio for all manufacturing was even lower—about 75 percent—because of the higher concentration of southern employment in low-wage nondurable industries, especially in labor-intensive textile and apparel firms.

The regional earnings ratio for workers in construc-

**Table 1. Median hourly earnings of wage and salary workers in and out of the South, by industry, May 1973 and May 1978**

Industry	Number employed (in thousands)				Median hourly earnings					
	May 1973		May 1978		May 1973			May 1978		
	South	Rest of U.S.	South	Rest of U.S.	South	Rest of U.S.	South as a percent of rest of U.S.	South	Rest of U.S.	South as a percent of rest of U.S.
Total	23,285	52,281	26,772	58,196	\$3.03	\$3.69	82	\$4.26	\$5.13	83
Agriculture, forestry, and fisheries	563	774	575	986	1.76	2.11	83	2.66	3.14	85
Mining	319	308	418	333	4.76	4.78	100	7.24	7.79	93
Construction	1,791	2,873	1,960	3,025	3.81	5.32	72	5.24	6.78	77
Manufacturing	5,627	14,631	6,016	14,772	3.07	4.04	76	4.48	5.94	75
Durable	2,646	9,433	2,921	9,566	3.39	4.20	81	4.94	6.23	79
Nondurable	2,981	5,198	3,095	5,207	2.74	3.66	75	4.15	5.31	78
Transportation and utilities	1,616	3,525	1,873	3,936	3.97	4.99	80	6.09	6.92	88
Wholesale and retail trade	4,520	10,276	5,360	11,870	2.28	2.70	84	3.28	3.60	91
Wholesale	896	2,031	1,047	2,418	3.28	4.13	79	4.87	5.56	88
Retail	3,625	8,245	4,313	9,453	2.13	2.44	87	3.10	3.24	96
Finance, insurance, and real estate	1,201	2,906	1,321	3,436	3.15	3.55	89	4.34	4.93	88
Other services	6,115	14,064	7,493	16,676	2.69	3.20	84	3.86	4.46	87
Public administration	1,533	2,923	1,757	3,162	4.43	4.72	94	5.98	6.58	91

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

tion was about the same as in manufacturing, 77 percent. This lower wage of construction workers in the South may have been partly the result of a compensating differential awarded northern construction workers for the seasonality in their employment. However, differences in union penetration and other factors may have played a role. For example, 20 percent of the construction workers in the South were unionized compared to 44 percent of those in the rest of the Nation.

The earnings differential was not as large in most of the other major industry groups. In transportation and utilities, trade, finance, insurance and real estate, and public administration, southern workers earned about 10 percent less than workers elsewhere. In mining, where many of the southern workers were employed in highly paid oil extraction jobs, the differential appeared to be even less. Nationwide union agreements in the mining industry would also tend to make wages more uniform throughout the country.

Market and institutional factors could interact to produce the variation in the regional earnings differential across industries. An excess of unskilled laborers in the South would bid wages of these workers down, increasing the regional differential in industries using unskilled labor. Similarly, differences in industry unionization across regions could contribute to variation in the differential. Industries characterized by national markets, small numbers of large firms, or multiplant and geographically dispersed firms would tend to have more nationally uniform wages, especially if they are unionized.<sup>8</sup> Regions producing a large share of industry output could be expected to have industry wages as high or higher than in other regions. Finally, because capital in the South is more modern and possibly more efficient, southern workers in capital intensive industries may be more productive and so receive relatively higher wages than their counterparts elsewhere.<sup>9</sup>

Table 2 provides some examples. The petroleum, chemical, and significant portions of the paper products industries are relatively capital intensive. In addition, more than half of the workers in paper products in each region are unionized, and chemicals workers are more unionized in the South (34 percent) than elsewhere (26 percent). In these industries, southern workers earn as much or only slightly less than other workers.

While CPS estimates of the earnings differential for workers in automobile manufacturing are volatile, the ratio for other transportation equipment was consistently well over 90 percent during the May 1973–1978 period. Transportation equipment industries are highly concentrated and unionized.

Other industries demonstrate earnings ratios well below average. In food processing, an industry with regional markets and low union penetration in the South (22 versus 49 percent elsewhere), southern workers earn less than 80 percent of the wage in other regions. The

**Table 2. Median hourly earnings in the South as a percent of those outside the South, selected manufacturing industries, May 1973–78**

Industry	Number employed, May 1978 (in thousands)		Percent					
	South	Rest of U.S.	1973	1974	1975	1976	1977	1978
<b>Durables:</b>								
Lumber .....	257	379	65	65	64	60	62	60
Furniture .....	279	282	79	78	77	72	79	84
Automobiles .....	155	1,079	77	77	73	94	85	82
Aircraft .....	81	437	101	95	94	93	106	100
Other transport equipment .....	165	254	97	93	94	94	101	94
<b>Nondurables:</b>								
Food .....	504	1,304	71	71	69	74	71	78
Textiles .....	610	198	92	84	75	86	82	91
Apparel .....	582	672	80	84	80	83	81	82
Paper and paper products .....	206	472	90	88	94	92	101	95
Chemicals .....	464	762	94	88	101	99	99	102
Petroleum .....	106	131	101	95	99	95	111	108

lumber products industries provide an extreme example of a low earnings ratio; southern workers earn 65 percent or less of the levels elsewhere. Their earnings are about as much as those in the northern region, but only about half the level in the West.<sup>10</sup> Small, often family-run, establishments still produce much of the lumber milled in the South, and employment is less unionized than in the West.

In general, the interregional wage differential is smaller between workers covered by union contracts than it is for workers not covered. Persons with jobs covered by union contracts earned \$6.12 in the South compared with a median of \$6.42 elsewhere, an earnings ratio of 95 percent. Southern workers not covered by union agreements earned \$3.90 compared to \$4.35 in other regions, for an earnings ratio of 90 percent. In manufacturing, southern workers with no union ties earned about 75 percent as much as others in this group. The wage ratio for manufacturing workers covered by union contracts was much higher—90 percent. As already shown, regional differences in union coverage vary widely across manufacturing industries. However, the rate of coverage is about 60 percent as extensive in the South as elsewhere, both in manufacturing and overall.

### Labor market characteristics

Given the lower wages in the South, labor theory predicts that workers would migrate from the South to a higher-wage region. This is just what occurred until the early 1960's. Subsequently, the South experienced net immigration, even if one excludes retirees moving to the region. A net out-migration of the poor continued until 1968, yet the South remained with a high proportion of unskilled labor.<sup>11</sup>

This relative surplus of unskilled labor could have served to depress the wages of these workers below the

**Table 3. Median hourly earnings of wage and salary workers in and out of the South, by occupation, May 1973 and May 1978**

Occupation	Number employed, May 1978 (in thousands)		Median hourly earnings					
			1973			1978		
	South	Rest of U.S.	South	Rest of U.S.	South as a percent of rest of U.S.	South	Rest of U.S.	South as a percent of rest of U.S.
Total .....	26,772	58,196	\$3.03	\$3.69	82	\$4.26	\$5.13	83
White-collar .....	12,839	29,739	3.46	3.95	88	5.01	5.44	92
Professional and technical .....	3,929	9,341	4.43	5.06	88	6.12	6.86	89
Managerial and administrative .....	2,558	5,586	4.49	5.36	84	6.31	7.03	90
Sales .....	1,502	3,542	2.55	2.79	91	3.62	4.00	91
Clerical .....	4,805	11,270	2.80	3.17	88	3.84	4.28	90
Blue-collar .....	9,877	19,428	3.07	3.94	78	4.42	5.57	79
Craft .....	3,744	7,247	3.90	4.90	80	5.64	6.81	83
Operatives, except transport .....	3,418	6,912	2.59	3.34	78	3.81	4.91	78
Transport operatives .....	1,110	2,168	3.10	4.04	77	4.53	5.68	80
Nonfarm laborers .....	1,604	3,101	2.56	3.31	77	3.44	4.56	75
Service .....	3,629	8,391	1.85	2.31	80	2.84	3.19	89
Private household .....	446	665	1.16	1.27	91	2.16	1.80	120
Service, except private household .....	3,183	7,727	2.03	2.48	82	2.93	3.25	90
Farmworkers .....	427	638	1.53	2.02	76	2.53	2.84	89

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

level outside the South. In contrast, the relative shortage of skilled labor in the South would have exerted upward pressure on the wage levels of such workers. And, persons with more education are more likely than others to migrate, thus tending to equalize wages nationally among the better-educated.

*Occupation.* For the white-collar occupations, the regional ratio of wages exceeded the 83-percent level for all wage and salary workers. (See table 3.) The higher earnings ratios for white-collar workers may relate to the aforementioned propensity of these workers to migrate and their relatively limited numbers in the South. Many white-collar skills are traded in a national labor market. These higher earnings ratios may also be partly due to the concentration of the highest-paid Federal workers and of Federally dependent white-collar workers in the Washington, D.C., area, which is part of the southern region. Federal white-collar workers of similar grade are paid the same regardless of where they are located in the country.

The differential for each major blue-collar group is near or below the overall regional differential in median earnings. This includes workers in crafts usually considered skilled, indicating that these workers are less inclined to migrate and so equalize wages, or that they are usually in lower-paying trades than craftworkers elsewhere. Bureau of Labor Statistics Industry Wage Surveys do show that wage differentials for higher-paying jobs are smaller than those for lower-paying jobs, and that there is greater uniformity of wages among skilled workers than among unskilled workers.<sup>12</sup> The gap for nonfarm laborers is by far the greatest; CPS data show that southern laborers earn 75 percent of the median outside the South. In general, blue-collar and service labor is exchanged in local markets.

According to table 3, the earnings ratios were about the same in 1978 as in May 1973 except among managers and administrators, service workers, and farmworkers. The increase in the ratios for service and farm occupations could be due to the extended coverage of the minimum wage provisions of the Fair Labor Standards Act.<sup>13</sup>

*Education, age, race, and sex.* Two basic determinants of one's occupation and earnings are education and work experience. Although the total amount of work experience is not measured in the CPS, a reasonable proxy for experience can be obtained by subtracting years of schooling from an individual's age minus six. Both "human capital" and "dual labor market" theorists recognize the importance of these factors in determining levels of earnings though they do not agree on the exact roles they play. Whether they function as an investment in earnings capacity by the worker (supply side) or as an employment screening device for the firm (demand side), the empirical relation between these factors and earnings is well documented.<sup>14</sup> It is clearly feasible that the differences in the distribution of education and work experience across the work force in each region could explain, in part, the magnitude of the gross differential in earnings. And, in fact, education and age did explain about 60 percent of the regional wage differential in a 1974 study of men age 25 to 64.<sup>15</sup>

When education is measured as the highest grade completed, CPS data for May 1978 show that the relative differences in median earnings between the South and the rest of the Nation diminished as years of schooling increased. (See table 4.) While median years of education were about the same in each region, the South had a higher proportion of its population at lower education levels; 30 percent of the workers in the



South had not graduated from high school, compared with 23 percent elsewhere. This supports the notion that a surplus of lower-skilled workers is depressing the general wage level in the South. A smaller proportion of workers in the South have 5 or more years of college (6 compared to 8 percent elsewhere), but because jobs requiring these levels of education are likely to have a national labor market this is probably more a function of where the jobs are located, rather than any shortage of labor supply.

The size of the regional differential increases with age. This pattern in the differential could be a life cycle phenomenon and the differential might widen for the cohorts as they age. Alternatively, within younger cohorts, a narrowing could result from "vintage" improvement. Differences in educational attainment, measured in both quantity and quality, are becoming smaller with time. James P. Smith and Finis Welch note this trend among black workers (more than half of whom reside in the South, making up 17 percent of the wage and salary workers in the region). They suggest that the narrowing of the earnings gap between blacks and whites is the result of a relative improvement in the human capital stock of blacks and should persist as cohorts age.<sup>16</sup>

Nationwide, blacks earn, on average, 82 percent as much as whites. This gap may be the result of different levels and quality of education, on-the-job training, and work experience, but it may also reflect the effect of discriminatory practices. Years of education are lower for blacks than whites, and both Owen and Welch, as well as many others, have documented that, on average, the quality of education received by blacks, though improving, has been inferior to that received by whites.<sup>17</sup> In addition, on average, blacks tend to experience higher unemployment and may lack the opportunity for on-the-job training, either by nature of the jobs they hold or because of discrimination on the job. These factors

inhibit accumulation of work experience. Thus, the concentration of black workers in the South may partly explain the gross regional differential in hourly earnings.

The following tabulation shows that the interregional differential in median earnings is also much larger for blacks than for whites:

	South	Elsewhere	Ratio
Race:			
Black . . . . .	\$3.50	\$5.11	68
White . . . . .	4.46	5.14	87
Ratio . . . . .	78	99	—
Sex:			
Women . . . . .	\$3.46	\$3.93	88
Men . . . . .	5.23	6.25	84
Ratio . . . . .	66	63	—

Blacks in the South earned 68 percent as much as those elsewhere, while whites earned 87 percent as much as other whites. Differences in skill may partly explain these results. In contrast, the ratio of women's earnings to those of men is about the same in each region. And because women account for about the same proportion of workers in each region (42 percent), the male-female gap in earnings, although very wide, does not appear to play much of a role in the overall wage gap between the South and the balance of the Nation.

Differences in the average quality of education indicate that there will be error in measuring education with years of schooling. This error will be associated with race to the extent the quality of schooling differs by race. Similarly, differences in labor force participation, unemployment, and actual on-the-job training will lead to errors in measurement of experience when experience is measured as the difference between an individual's age and education. These errors will correlate with race and sex. Therefore, a standardization of wages using the measures of education and work experience employed in this analysis should control for race and sex composition of the population, as well.<sup>18</sup>

*An urban-rural differential.* Economists have observed that workers in larger cities, on average, receive higher wages than those in smaller cities. As David Segal has shown, firms in cities may benefit from agglomerative economies which increase the value of the marginal product of the labor they employ. In addition, the higher wage in a larger city could be the result of compensating differentials for higher cost of living, congestion, pollution, and so on.<sup>19</sup>

A larger proportion of the southern population resides outside of metropolitan areas. Of persons living in metropolitan areas, the proportion living in central cities is lower in the South than elsewhere. A smaller share live in metropolitan areas of 1 million or more inhabitants as well.<sup>20</sup> Thus, the regional wage differential may be partly the result of an urban-rural or metropolitan-nonmetropolitan wage differential. Victor Fuchs

**Table 4. Median hourly earnings of wage and salary workers in and out of the South, by education and age, May 1978**

Education and age	Median hourly earnings		
	South	Rest of U.S.	South as percent of rest of U.S.
Education:			
No school . . . . .	\$2.78	\$2.74	101
1-8 years . . . . .	3.24	4.18	78
9-11 years . . . . .	3.27	3.58	91
12 years . . . . .	4.23	4.94	86
13-15 years . . . . .	4.68	5.36	87
16 years . . . . .	6.00	6.53	92
17 years or more . . . . .	7.39	7.92	93
Age:			
16-24 years . . . . .	3.24	3.47	93
25-34 years . . . . .	4.93	5.62	88
35-44 years . . . . .	5.14	6.15	84
45-54 years . . . . .	4.91	6.02	82
55-64 years . . . . .	4.28	5.48	78
65 years and over . . . . .	2.77	3.24	85

found that demographic characteristics explained one-third and city size, another one-third of the regional gap in earnings.<sup>21</sup> In the following regression analysis, observations are controlled for residency in large Standard Metropolitan Statistical Areas (SMSA's), including 12 SMSA's in the South.

### Regression results

Regression analysis is often used to estimate the impact of wage-determining variables on wages and to isolate net differentials existing between groups which cannot be explained by any of the variables. In this section, May 1978 CPS data on earnings and personal characteristics of 43,826 wage and salary workers are used to estimate alternative specifications of a standard wage equation. Usual hourly earnings are the wage measure. Regression results pertain to the differential in *mean* earnings, as opposed to the differentials in *median* earnings examined above.

The dependent variable in the wage equation, the natural log of wage, is a linear function of race, sex, education, experience, experience squared, city size, union status, occupation, and industry. In addition to these explanatory variables, the equation has a regional variable, with residence in the South embodied in the regression coefficient. In the log-linear formulation, estimated coefficients approximate proportionate impacts of the associated variables on wages; thus, the coefficient of the regional variable is an estimate of the proportionate difference between wages of workers in the South and those elsewhere.<sup>22</sup> All data pertain only to the worker's primary job. The appendix to this article presents definitions of the variables as well as their sample means and standard deviations.

To investigate the gross differential between the South and the rest of the Nation and the differential net of the effects of the explanatory variables, the variables were entered sequentially in eight regression equations. The first equation, which determined the log of wage using only the regional variable, provided an estimate of the gross differential. Each subsequent equation incorporated all the variables of the equation preceding it and additional explanatory variables. The coefficient of the regional variable in each equation provided an estimate of the regional differential net of the other explanatory variables included in that equation. Estimates underlying the following discussion are presented in appendix table A-1.

The initial regression, the log of wage regressed on the regional variable, shows that when other factors influencing wages were not controlled, the wages of workers in the South were an average 11 percent less than those elsewhere. In regression 2, race is added as an explanatory variable in the model and the estimated differential falls to 9 percent. The introduction of the sex variable in the third regression does not alter the esti-

mated differential significantly. However, including the human capital variables education, experience, and experience squared reduces the regional differential to 7 percent. Thus, controlling for systematic regional differences in race, sex, and human capital reduces the estimated wage differential by about one-third.<sup>23</sup>

Entering the city-size variable into the equation leaves unexplained an estimated differential of about 5 percent. Allowing union workers to earn a different average wage by including the union variable in the model reduces the estimate to 2 percent, about one-fifth of the gross regional differential estimated initially.

Thus far, the results have been expected. Blacks, on average, earn less than whites and they make up a larger proportion of the population in the South than elsewhere. And because women earn about two-thirds as much as men regardless of regional location and are represented in equal proportions between regions, sex would not have a significant influence on the regional differential. Workers living in larger cities receive a higher wage, and given the relatively greater concentration of the population in larger cities outside the South, these higher earnings would produce higher average earnings in these regions unless calculations controlled for city size. Similarly, the concentration of union workers, with their higher wages, outside the South has an impact on the size of the gross differential.

However, when the series of occupational variables is introduced, the estimated regional differential does not decrease. In fact, when both occupational and industry variables are included in the regression, the estimated relative distance between wage levels actually increases to 4 percent. Replacing the occupational and industry variables with a more detailed list of 25 occupational and 31 industry-group variables in the wage equation does not change this estimate significantly. In both cases, the occupational and industry variables do not make a significant contribution to explaining the total variation in wages. Regressing log wage against the regional variable and the occupational variables or the industry variables alone, or even the regional variable and the occupational and industry variables combined, will not yield an estimated net differential smaller than the 11-percent gross differential.<sup>24</sup>

Much of the information conveyed by the occupational and industry distribution of workers is related to human capital. Occupation and industry may actually provide the estimating process with information on human capital in addition to that provided by race, sex, and the human capital variables. Industry and occupational variables also provide additional information about unions as some unions influence wages more than others. Apparently at this level of aggregation, employment in the South is composed of occupational and industry groups with wages, on average, as high as or higher than these workers could command elsewhere.

Controlling for all of the aforementioned variables, this wage equation estimates the net differential in regional earnings at 4 percent, about two-fifths of the gross differential estimated initially. The coefficients of the variables in the same regression equation provide information in addition to estimates of the regional differential. The coefficient of the city-size variable, for example, indicates an 11-percent additional compensation to a worker living in a large SMSA, while the coefficient of the union variable estimates that wages of workers covered by union contracts are on average 22 percent above those of nonunion workers with similar characteristics. Regression coefficients also show the well-known wage disparities between blacks and whites and men and women. The results suggest that blacks, on average, receive a wage 5 percent less than whites, and that women receive 26 percent less than men, if other characteristics, including occupation and industry, are similar.

As previously indicated, economic conditions of employment and the ability of some of these proxy variables, especially the human capital variables, to represent what they are intended to represent may differ between blacks and whites. Past and current discrimination probably results in differences in the stock and rate of formation of human capital between the two races. As already mentioned, these conditions produce errors in measurement of the education and experience variables, as well as potential structural differences in the wage equation. To allow for these different conditions, the same regression equation was estimated separately for the black and white populations.

Bivariate regressions of the log of wage on the regional variable estimate the mean wage of blacks in the South at 71 percent of the level earned by other blacks, while mean earnings of whites in the South are 93 percent of those of whites elsewhere. After introduction of the other explanatory variables to the regression equation, the estimated net regional differential between the two black groups is 10 percent while for the white populations the estimate is 4 percent. Human capital, union status, and city size account for most of the regional differential in earnings within each racial group. Again, the industry and occupational variables add nominally to that differential.<sup>25</sup>

Both the South and the rest of the country can be divided into smaller, more homogeneous regions. With a wage regression, a range of regional wage levels can be estimated. Using Census divisions, dummy variables designating each division, with the exception of the East North Central division, were added to the final regression equation. The coefficients of these regional variables are estimates of the net wage differences between these divisions and the East North Central. Regression estimates indicate the following range for gross and net differentials.

<i>Division</i>	<i>Percent differential</i>	
	<i>Gross</i>	<i>Net</i>
Northeast:		
New England . . . . .	-10.9	-6.7
Mid-Atlantic . . . . .	2.5	-2.5
North Central:		
East North Central . . . . .	0.0	0.0
West North Central . . . . .	-14.8	-7.1
South:		
South Atlantic . . . . .	-11.2	-4.7
East South Central . . . . .	-14.9	-7.7
West South Central . . . . .	-13.7	-5.6
West:		
Mountain . . . . .	-8.3	-1.4
Pacific . . . . .	9.8	7.0

After adjustment for the explanatory factors in this analysis, wage levels in the South do not differ as much from the geographic majority of the country as do those in the West. New England and the West North Central area rank along with the East South Central as the divisions with the lowest adjusted wage levels. Workers in the South Atlantic States earned higher wages, but not as high as in the Mid-Atlantic, the East North Central division, or the West. Even after adjustment, mean earnings of workers in the Pacific States are 7 percent higher than in the East North Central area and well above those in all other divisions. The addition of these regional variables does little to the estimates of the other coefficients in the equation.

### Explaining the remaining differential

Estimates of the net differentials presented here are subject to the limitations of the method employed to produce them. Some of the possible errors in measurement of the variables have already been discussed. Some relevant variables may have been excluded from the equation. In addition, this method assumes that the structure of the wage equation is correct and the same in each region. An alternative approach would be to fit the wage equation to data for each region and compare the average wage a worker earns in his or her home region with the wage he or she could expect in another region.

Taking the method as a good approximation, compensating differentials, not considered in the regression standardization process, may partly explain the remaining 4 percent differential between the South and other regions. A major factor may be regional differences in price levels and living costs that go beyond those associated with the simple city-size variable. The worker makes most purchases locally and so his or her standard of living is directly affected by local price levels. There is no index for comparing price levels in the South overall with those elsewhere, nor is there any general index for comparison of living costs between these two regions. In any case, various pieces of evidence indicate that living costs, including price levels, are lower in the South.

To adjust earnings for differences in regional living costs and so to compare real wages, some economists have used the Bureau of Labor Statistics' hypothetical family budget for a family of four at an intermediate level of living in specific SMSA's. In an inter-industry regression analysis of data for five northern cities and five southern cities, Philip Coelho and Moheb Ghali found that when wages were deflated by an index of the family budgets, the regional wage differential vanished.<sup>26</sup> Comparing weighted averages after deflating wages by the index of family budgets, Donald Bellante also found no differential in regional real wages.<sup>27</sup> These economists believe that, although nominal earnings have not converged in recent years, real earnings have.

Between 1973 and 1977, the Consumer Price Index rose 38.6 percent in the South compared to 36.4 percent for the Nation.<sup>28</sup> The increase was especially large in three components—housing, food, and apparel. Apparently, over this brief period, the gap in price levels of the South and the United States narrowed. Still, results similar to those of Coelho and Ghali, and Bellante could be attained with the CPS usual hourly earnings data for 1978. The soundness of estimates of the regional differential in real earnings, however, rests in the reliability of the family budgets as a measure of regional cost of living. Other variables, such as fringe benefits or environmental factors, could also affect the level of the gross differential.

Even if regional differences in the cost of living play no role, and if all other compensating differentials have

been considered, the remaining differential between standardized nominal wages in the South and those elsewhere could persist because neither individuals nor firms find the difference in wages sufficient to warrant a move—that the differential is perceived as being equivalent to adjustment costs. A firm must not only compare labor costs with the cost of relocating, but must also take into account the proximity of any new location to the resources it needs for production. Similarly, individuals do not look only at the wage they could receive in another region, but also at the tangible costs of moving a household, job search (including travel expenses and a spell of unemployment), and the psychic cost of leaving family and friends. With returns of relocation to the average wage earner of only about \$500 a year, the mover would have to work many years just to break even.<sup>29</sup>

But people and businesses still move between regions, possibly because the differential in earnings varies by type of labor. The size of the differential each business confronts may depend upon the labor needs of that firm if, as we have estimated, the differential is larger for unskilled labor. Also, firms move to take advantage of things other than lower labor costs, such as State and local tax concessions. And finally, the individual worker may not even be aware of the magnitude of the regional wage differential. He or she probably migrates to take a different job, for career advancement, or to change from nonunion to union status. He or she is not moving to a higher paying region, but rather to a higher paying job. □

— FOOTNOTES —

<sup>1</sup> See Philip L. Rones, "Moving to the sun: regional job growth, 1968 to 1978," *Monthly Labor Review*, March 1980, pp. 12–19.

<sup>2</sup> The regions discussed in this paper are census regions. The South includes the South Atlantic (Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia), the East South Central (Alabama, Kentucky, Mississippi, and Tennessee), and the West South Central (Arkansas, Louisiana, Oklahoma, and Texas) divisions. The rest of the United States consists of the Northeast, the West, and the North Central regions. New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont) and the Mid-Atlantic division (New Jersey, New York, and Pennsylvania) make up the Northeast region. The West is composed of the Mountain States (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming) and the Pacific States (Alaska, California, Hawaii, Oregon, and Washington). And, the East North Central (Illinois, Indiana, Michigan, Ohio, and Wisconsin) and the West North Central (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota) divisions make up the North Central region.

<sup>3</sup> The Current Population Survey is a household survey conducted by the Bureau of the Census for the Bureau of Labor Statistics. Weekly earnings information was collected in each May between 1967 and 1978, with the exception of 1968. In May 1978 the sample size was about 56,000 households. Usual hourly earnings are usual weekly earnings divided by usual hours worked. Data refer only to the primary jobs of wage and salary workers. As with all sample data, these have sampling errors associated with them. In addition, nonsampling errors due to erroneous response and non-response may be present. For discussions of these data and their reliability, see *Weekly and Hourly Earnings Data from the Current Population Survey*, Special La-

bor Force Report 195 (Bureau of Labor Statistics, 1977); and, *Technical Description of the Quarterly Data on Weekly Earnings from the Current Population Survey*, Report 601 (Bureau of Labor Statistics, 1980).

<sup>4</sup> For an exposition of the neoclassical theory, see George H. Borts, "The Equalization of Returns and Regional Economic Growth," *The American Economic Review*, June 1960, pp. 319–47.

<sup>5</sup> An explanation of why southern wages lag behind those in the rest of the country has long interested American economists. Joseph Bloch, in one of the earliest studies, showed that in manufacturing industries the wage differential was no narrower in 1945 and 1946 than in 1919, although it was substantially less than during the Depression years 1931 and 1932.

Victor Fuchs and Richard Perlman, who detected a contraction of the earnings gap from 1929 to 1947, claim that from 1947 to 1954 the low position of the South relative to the rest of the Nation was stable or may even have deteriorated, after considering industry mix. Martin Segal presented conflicting evidence for the 1947–54 period, showing that after adjusting for institutional factors wage rates converged, at least for the majority of industries. See Joseph W. Bloch, "Regional Wage Differentials, 1907–1946," *Monthly Labor Review*, April 1948, pp. 371–77; Victor Fuchs and Richard Perlman, "Recent Trends in Southern Wage Differentials," *Review of Economic Statistics*, August 1960, pp. 292–300; and Martin Segal, "Regional Wage Differences in Manufacturing in the Postwar Period," *Review of Economic Statistics*, May 1961, pp. 248–55.

<sup>6</sup> Borts, "The Equalization of Returns," pp. 322–26.

<sup>7</sup> Fuchs and Perlman, "Recent Trends."

<sup>8</sup> Segal, "Regional Wage Differences."

<sup>9</sup> Harry M. Douy, "Wage differentials: forces and counterforces."

*Monthly Labor Review*, March 1968, pp. 74-81.

<sup>10</sup> Although the standard errors associated with all these earnings ratios are rather large, they are generally in agreement with those that can be calculated from a sample of social security records. See *Annual Earnings and Employment Patterns of Private Nonagricultural Employees, 1973-75*, Bulletin 2031 (Bureau of Labor Statistics, 1979), table C-8.

<sup>11</sup> Larry H. Long, *Interregional Migration of the Poor, Current Population Reports, Special Studies, Series P-23, No. 73* (Bureau of the Census, 1978).

<sup>12</sup> For a listing of reports from the Industry Wage Survey program, see *Directory of Occupational Wage Surveys, 1974-79*, Report 606 (Bureau of Labor Statistics, 1980).

<sup>13</sup> *Minimum Wage and Maximum Hours Standards Under the Fair Labor Standards Act* (U.S. Department of Labor, Employment Standards Administration, 1978), p. 12.

<sup>14</sup> For a survey of this literature, see Mark Blaug, "The Empirical Status of Human Capital Theory: A Slightly Jaundiced Survey," *Journal of Economic Literature*, September 1976, pp. 827-55.

<sup>15</sup> Barry R. Chiswick, *Income Inequality, Regional Analysis Within a Human Capital Framework* (New York, National Bureau of Economic Research, 1974), p. 132.

<sup>16</sup> James P. Smith and Finis Welch, "Race differences in earnings: a survey and new evidence," in Peter Mieszkowski and Mahlon Straszheim, eds., *Current Issues in Urban Economics* (Baltimore, Md., Johns Hopkins University Press, 1979), pp. 40-73.

<sup>17</sup> See John D. Owens, *School Inequality and the Welfare State* (Baltimore, Md., Johns Hopkins University Press, 1974), pp. 135-48; Finis Welch, "Black-White Differences in Returns to Schooling," *The American Economic Review*, December 1973, pp. 893-907; and Smith and Welch, "Race differences in earnings."

<sup>18</sup> Other errors in these variables, not necessarily related to race or sex, include vintage effects in education (changes in quality of education over time), and the greater incidence of on-the-job training during the early years of work experience which thus distorts the measure of work experience.

<sup>19</sup> On the agglomeration effect, see David Segal, "Are There Returns to Scale in City Size?" *Review of Economics and Statistics*, August 1976, pp. 339-50. John E. Buckley found evidence that wages are related to area living costs as measured by the Bureau of Labor Statistics Family Budgets. See "Do wages reflect area living costs?" *Monthly Labor Review*, November 1979, pp. 24-29.

<sup>20</sup> See *Current Population Reports, Series P-60, No. 123* (Bureau of the Census, 1980), table 44.

<sup>21</sup> Victor R. Fuchs, *Differentials in Hourly Earnings by Region and City Size, 1959*, Occasional Paper 101 (New York, National Bureau of Economic Research, 1967), pp. 32-35.

<sup>22</sup> This approximation is closer the smaller the impact. The estimated proportionate impact is actually 1 minus the exponentiated value of this coefficient. All variables in the analysis with the exception of education, experience, experience squared, and the log wage are dummy variables, with workers' records assigned a 1 if the attribute is present and a zero otherwise.

<sup>23</sup> This estimated reduction agrees with the estimates of Victor Fuchs for a sample of the 1960 Census and estimates by Don Bellante for a sample of the 1970 Census. See Donald Bellante, "The North-South Differential and the Migration of Heterogeneous Labor," *The American Economic Review*, March 1979, pp. 166-75; and Fuchs, *Differentials in Hourly Earnings*.

<sup>24</sup> Regressing log wage on the region variable and the less detailed list of occupations or industries results in an estimate larger than 11 percent, though not significantly so.

<sup>25</sup> The equation estimated for the black population is:  $\ln W = .3994 - .0958 \text{ SOUTH} - .1776 \text{ FEMALE} + .0466 \text{ ED} + .0139 \text{ EXP} - .0002 \text{ EXPSQ} + .0970 \text{ SMSA} + .2394 \text{ UNION} + .3502 \text{ PROF} + .3525 \text{ MANG} + .1408 \text{ SALES} + .1937 \text{ CRAFT} + .1031 \text{ OPER} + .0294 \text{ LABOR} + .1142 \text{ CONSTR} + .2853 \text{ MFGDUR} + .2286 \text{ MFGNON} + .3521 \text{ TRANS} + .1042 \text{ TRADE} + .1846 \text{ FIRE} + .1366 \text{ SERV} + .3422 \text{ PA}$ . With the exception of LABOR and TRADE, the coefficients of all variables are significantly different from zero with 99-percent confidence. Confidence in the estimated coefficient of TRADE is above the 95-percent level.

The white population included some persons who were neither white nor black. The estimated equation for this white population is:  $\ln W = .4628 - .0396 \text{ SOUTH} - .2680 \text{ FEMALE} + .0518 \text{ ED} + .0260 \text{ EXP} - .0004 \text{ EXPSQ} + .1140 \text{ SMSA} + .2137 \text{ UNION} + .3725 \text{ PROF} + .3751 \text{ MANG} + .1626 \text{ SALES} + .2426 \text{ CRAFT} + .0950 \text{ OPER} - .0004 \text{ LABOR} + .1160 \text{ CONSTR} + .1347 \text{ MFGDUR} + .0982 \text{ MFGNON} + .1972 \text{ TRANS} - .0433 \text{ TRADE} + .1068 \text{ FIRE} - .0588 \text{ SERV} + .1398 \text{ PA}$ . All coefficients are significantly different from zero with 99-percent confidence, with the exception of that for LABOR.

<sup>26</sup> Philip R. P. Coelho and Moheb A. Ghali, "The End of the North-South Wage Differential," *The American Economic Review*, December 1971, pp. 932-37.

<sup>27</sup> Bellante, "The North-South Differential."

<sup>28</sup> *Handbook of Labor Statistics 1978*, Bulletin 2000 (Bureau of Labor Statistics, 1979), tables 117 and 123.

<sup>29</sup> In the South, the average wage and salary worker who usually worked full time had mean usual hourly earnings of \$5.34. Assuming this worker would work 40 hours per week, 52 weeks per year regardless of regional location, and given that wages are 4 percent lower in the South, a worker's annual earnings would increase \$463 if he or she moved to a similar job in the non-South.

## APPENDIX: Elements of the regression analysis

The following tabulation presents the definitions, means, and standard deviations of the variables used in the regression analysis:

Variable	Definition	Mean	Standard deviation
lnW	The natural logarithm of usual hourly earnings.	1.547	.578
SOUTH	1 if residence is in the South; zero otherwise.	.292	.455
BLACK	1 if race is black; zero otherwise.	.083	.276
FEMALE	1 if sex is female; zero if male.	.443	.497
ED	Education as measured by highest grade completed.	13.249	2.885
EXP	Proxy for work experience; age less education less six.	16.443	14.469
EXPSQ	EXP × EXP, experience squared.	479.744	659.383
SMSA	1 if residence in one of the large SMSA's coded on Census public use tapes; zero otherwise.	.366	.482

UNION	1 if a member of a union or if job is covered by union contract; zero otherwise.	.266	.442
Occupation dummy variables (1 if true; zero otherwise):			
PROF	Professional or technical worker.	.155	.362
MANG	Managerial or administrative worker.	.087	.282
SALES	Sales or clerical worker.	.245	.430
CRAFT	Craftworker.	.127	.333
OPER	Operative.	.158	.365
LABOR	Laborer, either farm or nonfarm.	.071	.257
PHSV	Private household and other service workers.	.155	.362
Industry dummy variables (1 if true; zero otherwise):			
CONSTR	Construction.	.070	.255
MFGDUR	Durable goods manufacturing.	.193	.394
MFGNON	Nondurable goods manufacturing.	.095	.293
TRANS	Transportation and utilities.	.067	.250
TRADE	Wholesale and retail trade.	.204	.403
FIRE	Finance, insurance, or real estate.	.051	.219
SERV	Other services.	.298	.457
PA	Public administration.	.059	.236
AG	Agriculture, forestry, and fisheries.	.022	.146

Table A-1 details the results of the stepwise regression of the wage equation as sets of variables were added. As previously indicated, an entry may be interpreted as the approximate percentage effect on earnings of the

associated variable. For example, equation 8 predicts that workers in larger cities (SMSA's) might expect to average earnings 11.4 percent greater than workers with similar characteristics in less populous areas.

**Table A-1. Results of a stepwise regression of the natural log of usual hourly earnings on personal characteristics**

[Standard errors in parentheses]

Variable	Equation number							
	1	2	3	4	5	6	7	8
Intercept .....	1.5775 (.0033)	1.5836 (.0033)	1.7555 (.0039)	.4659 (.0123)	.4431 (.0123)	.3853 (.0120)	.4639 (.0140)	.4623 (.0182)
SOUTH .....	-.1059 (.0060)	-.0920 (.0061)	-.0976 (.0058)	-.0726 (.0050)	-.0534 (.0050)	-.0207 (.0049)	-.0369 (.0047)	-.0415 (.0046)
BLACK .....		-.1216 (.0101)	-.0899 (.0095)	-.0417 (.0082)	-.0687 (.0082)	-.0989 (.0080)	-.0526 (.0078)	-.0536 (.0076)
FEMALE .....			-.3905 (.0052)	-.3798 (.0045)	-.3785 (.0044)	-.3453 (.0044)	-.2967 (.0048)	-.2606 (.0048)
ED .....				.0742 (.0008)	.0723 (.0008)	.0722 (.0008)	.0504 (.0010)	.0515 (.0009)
EXP .....				.0355 (.0005)	.0353 (.0005)	.0317 (.0005)	.0271 (.0005)	.0250 (.0004)
EXPSQ .....				-.0006 (.00001)	-.0006 (.00001)	-.0005 (.00001)	-.0005 (.00001)	-.0004 (.00001)
SMSA .....					.1280 (.0047)	.1220 (.0045)	.1163 (.0044)	.1136 (.0043)
UNION .....						.2470 (.0050)	.2479 (.0050)	.2165 (.0050)
PROF .....							.3892 (.0086)	.3696 (.0085)
MANG .....							.4255 (.0095)	.3751 (.0095)
SALES .....							.2152 (.0069)	.1595 (.0071)
CRAFT .....							.3567 (.0085)	.2382 (.0090)
OPER .....							.1930 (.0077)	.0923 (.0085)
LABOR .....							.0592 (.0097)	-.0034 (.0102)
CONSTR .....								.1173 (.0095)
MFGDUR .....								.1445 (.0127)
MFGNON .....								.1061 (.0139)
TRANS .....								.2076 (.0146)
TRADE .....								-.0356 (.0131)
FIRE .....								.1118 (.0156)
SERV .....								-.0456 (.0132)
PA .....								.1539 (.0151)
Coefficient of determination (R <sup>2</sup> ) <sup>1</sup> .....	.007	.010	.123	.353	.364	.397	.441	.464

<sup>1</sup> An estimate of the proportion of the total variation in earnings which appears to be explained by the inclusion of the associated variables in the wage equation. For example, after all explanatory variables under consideration had been included, the R<sup>2</sup> value for equation 8 in-

dicates that only 46 percent of the overall earnings variation had been accounted for, or conversely, that 54 percent of the variation must be attributable to factors outside the scope of this analysis.



## Can the Current Population Survey be used to identify the disabled?

PHILIP RONES

In the September 1980 *Monthly Labor Review*, Barbara L. Wolfe compares the labor market experience of the disabled to that of the nondisabled, using data from the Current Population Survey (CPS).<sup>1</sup> Because of methodological problems, I believe that CPS data are of limited usefulness in analyzing disability.

The Wolfe study uses data from the March 1977 CPS to compare the labor force characteristics of the disabled and nondisabled. Because the CPS does not contain specific questions on health or disability status,<sup>2</sup> Wolfe employs a three-step approach to identify the disabled population. First, persons receiving income from at least one of a number of transfer programs were automatically included if they met certain program requirements that would identify them as disabled. These programs included social security disability, Supplemental Security Income, workers compensation, railroad disability benefits, and disabled veterans benefits. Second, persons whose work activity was limited during the year by reason of ill health or disability were included. Their responses to the household survey led to the following classifications:

- Did not work last year—ill or disabled
- Did not work last week—not in labor force—unable to work
- Worked less than 50 weeks last year—ill other weeks
- Worked less than 35 hours last week—usually work part time (due to ill health or disability)

Third, persons whose wage rates were less than \$1 an hour and who were in certain occupations were assumed to be participating in sheltered workshops and were thus counted as disabled.

These techniques do not provide an adequate distinction between the disabled and nondisabled. Such a large portion of these populations becomes misclassified be-

cause of data shortcomings that the analysis and results Wolfe presents must be questioned.

The two basic questions that must be answered to assess the effects of disability on job market performance are: how many people have physical handicaps (generally limited to chronic conditions); and how do these handicaps limit the kind or amount of work or the pay of those so identified? Wolfe's analysis seems to focus on the second question without adequately answering the first.

*Greatest problem.* The greatest problem in using CPS data is the survey's inability to identify persons who have handicaps. Hence, at best, only a portion of those with work-limiting handicaps can be identified. While this definition of disability is common and appropriate for many types of research, it seriously limits the usefulness of the intergroup comparisons that make up the core of Wolfe's findings. For example, under her second method of identifying the disabled, two persons with the same health or physical condition will likely be placed into opposite categories: disabled and nondisabled, depending on their work status. One person with a specific chronic health condition who has intermittent labor market experience will be classified as disabled. Another person with the identical condition, who, for reasons such as extent of education or training, appropriate job selection, or strong motivation, is able to have a "normal" (full-time, full-year) worklife, is classified as nondisabled. Thus, the comparisons between the disabled and nondisabled yield results that are, to some extent, predetermined. As a group, the disabled are found to have inferior job market experiences: lower participation rates; less full-time employment; and lower wages, largely because they are, by definition, identified by these poor experiences.

*Another weakness.* Another problem of data weakness arises from the need to separate acute illness from disability. Wolfe states that those who missed work because of short-term, acute illness would be excluded from the count of the disabled. But this cannot be done completely. For instance, someone who worked only 49 weeks, citing ill health or disability as the reason for not working full year, would automatically be classified as disabled, in accordance with Wolfe's third category

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of CPS respondents. Yet it is likely that such limited work loss could be due to an acute condition. So, although Wolfe is correct in saying that those with short-term, acute illnesses should be excluded from the disabled group, the data shortcomings and definitional problems make this difficult.

Wolfe indicates partial support for her method of identifying the disabled because her estimate of the disabled from the CPS—12.3 percent of the population age 20 to 64, is only “slightly below” that from the 1972 Survey of the Disabled—14.6 percent. (A similar estimate from the 1977 National Health Survey is about 15 percent.) But the real difference between the surveys may be even greater than this. About 1 in 8 of the disabled were included in the CPS count because they were thought to have participated in sheltered workshops. (These persons were identified by a combination of their very low earnings and occupation.) This translates to about 1.7 million persons; yet fewer than 250,000 persons actually work in such settings. Virtually all sheltered workshops must be granted an exclusion from the minimum wage requirements by the Employment Standards Administration of the U.S. Department of Labor and, thus, data on paid workshop employment are available from that agency. If this overcount of those identified, ostensibly by their participation in sheltered workshops, is removed from the estimated CPS disabled count, as is a small number of those who may be considered to have been only acutely ill, it is reasonable to estimate that the proportion of the population that can be identified from the CPS as disabled may be closer to 10 percent. Hence, fully a third of the disabled (or more accurately, the handicapped), quite likely many of those with the best job experience, cannot be identified from the CPS and are counted in the nondisabled group. The effect that this undercount of the disabled would have on intergroup comparisons is obvious; it would cause excessive discrepancy between the labor force status of the two groups.

THE AREA OF GREATEST CONCERN, clearly, is the inability of the CPS to identify a (probably) large group of people who are able to work full time, full year despite their physical or mental handicaps. These persons can only be classified from the CPS as nondisabled unless they also receive the transfer payments cited. Also, persons with physical limitations who work part time or part year for reasons other than ill health would be counted as nondisabled. Thus, when comparisons between the disabled and nondisabled are made in terms of their part-time and full-time work status, as was the case in Wolfe’s analysis, it is difficult to see how these results can be meaningful, because handicapped persons who are employed full time would generally end up classified as nondisabled. Moreover, income compari-

sons between the two groups are heavily influenced by the failure to include in the disabled group many of the most successful wage earners. While the labor market experience of disabled persons is undeniably inferior to that of the nondisabled, the method used to categorize workers into these groups may seriously overstate these differences.

Unfortunately, the entire analysis is presented as a comparison between the employment characteristics of the disabled and the nondisabled. But this cannot be done effectively using CPS data. Without the limitations discussed above, Wolfe’s work would have been an innovative approach to analyzing the relationship between disability and employment. In fact, had the study been more narrowly focused—on the characteristics of those persons whose disability prevented them from working full time full year—the results might have been very interesting. However, while the CPS does provide some useful data on the disabled, it is an inadequate data base for many of the intergroup comparisons presented in Wolfe’s analysis. The results could well lead to policy implications that are unwarranted. □

— FOOTNOTES —

<sup>1</sup> See Barbara L. Wolfe, “How the disabled fare in the labor market,” *Monthly Labor Review*, September 1980, pp. 48–52.

<sup>2</sup> Direct collection of data on disabilities within the current framework of the CPS would be quite difficult. First, the extensive battery of questions required to identify physical and mental conditions would compromise the quality of response to labor force questions and might increase nonresponse. Second, self-identification of disability would probably have to be restricted to “work-limiting” disability, a concept whose limitations are discussed in the text of this comment. The 1971–74 Health and Nutrition Examination Survey (HANES), conducted by the U.S. National Center for Health Statistics, provides data on 21,000 individuals from a household questionnaire, a general medical history questionnaire, and a series of extensive medical examinations. Because the household questionnaire includes a series of labor force status questions and because the actual determination of disability would be more objective than in a self-response methodology, the HANES data may be more appropriate for use in researching the relationship between labor force status and disability.

## The CPS, work, and disability: a reply

BARBARA L. WOLFE

There are several advantages in using the Current Population Survey to study disability and work: it is available annually without need for additional, expensive, special surveys; it is nationally weighted; and it is

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readily accessible, permitting updated analysis and comparison. Clearly then, CPS data can be effectively used in research of this kind, provided the definition of disability is clear.

Philip Rones questions my definition of disability. He draws attention to a difficult issue—how to appropriately define disability. Many definitions are used, from self-reported health, to capacity to work, to medical reports of conditions. All have problems. Thus, in a real sense, defining disability is an “open game.” Among the multitude of definitions, mine is yet another. For clarification, it may have been preferable to use an alternate term, say “individuals with work-limiting health conditions.” However, the group discussed is identifiable regardless of the term, and one for whom a number of public programs are targeted.

Given this definition, which is clearly laid out in the analysis, the intergroup comparisons are quite appropriate. Furthermore, because definitions of disabled persons differ, the counts among them will not be equal. Thus, not surprisingly, the number identified as disabled in my research is not the same as in a self-reported survey. And, as Rones suggests, the 1972 Survey of the Disabled and the 1977 National Health Survey differ. Indeed, as I pointed out, the number of persons identified by my approach was expected to be smaller than that estimated under other definitions (in part through lack of information on housewives), and it was.

In addition to this overriding issue, there are some others raised by Rones. First he suggests the need to identify people who have specific handicaps. In my view, this is not necessary in order to analyze work-limiting health conditions. Moreover, emotional and mental problems may also limit work.

Second, Rones argues that under my definition, two persons with the same health conditions may differ in terms of work effort. This is true. But, it is also true of other definitions of disability, such as self-reported disability or medical records.

Third, Rones states that the 1.7 million persons (1.5 percent of adults age 20–64) identified by low wages in combination with occupation is too large. Further tabulations reveal that 420,000 are also identified by one or

more of the other definitions of disability used in my analysis, leaving 1.3 million identified only by low wages and occupation. A more important point is that many of these individuals may work in jobs similar to those in sheltered workshops, such as informal work with unreported wage costs or employment by charitable groups. Thus, omission of individuals in such jobs would exclude a sizable group with work-limiting health conditions.

Fourth, Rones suggests that eliminating individuals who may be acutely ill, and the “overcount” of those in official sheltered workshops, would reduce the percentage I have defined as disabled to 10 percent. This is inaccurate. Excluding these two groups would leave 11.03 percent defined as disabled. Furthermore, according to Levitan and Taggart, there were 410,000 clients in sheltered workshops over the 1975 fiscal year, not 250,000 as Rones suggests.<sup>1</sup> This higher number would place the percentage at 11.2 percent.

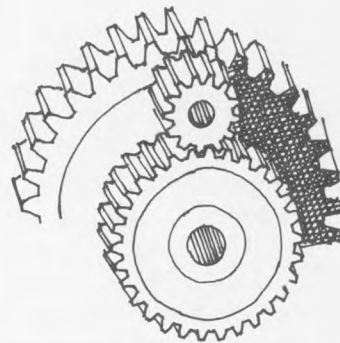
Fifth, Rones suggests throughout that the bias implied by my definition is “a finding of excessive discrepancy between the labor force status of the two groups.” However, if Rones is correct that some individuals with acute but not chronic illnesses are included, there is a bias that works in the opposite way—non-disabled working persons would be included in the definition, making the labor force status of the groups more alike. As a result, the difference would be underestimated, not overestimated.

In conclusion, let me reiterate that defining the disabled is a difficult task. There are two difficulties: agreeing on the appropriate definition and finding accurate ways to measure disability as defined. For many policy purposes, the focus has been on the inability to perform any substantial gainful activity. The definition in my study is based on work-limiting health conditions. As long as the definition is clearly defined and understood, research and findings based on it are valid and of potential policy relevance. □

— FOOTNOTE —

<sup>1</sup> See Sar Levitan and Robert Taggart, *Jobs for the Disabled* (Baltimore, Md., The Johns Hopkins Press, 1977), p. 29.

# Productivity Reports



## Productivity drops, output and hours rise during the fourth quarter

LAWRENCE J. FULCO

Productivity decreased at a 1.2 percent annual rate in the private business sector during the fourth quarter of 1980, marking the year's second quarter of decline. Among nonfarm businesses, the drop was less pronounced, agriculture posting a sharper decline.

In manufacturing, productivity advanced briskly in the fourth quarter, registering the largest gain since the third quarter of 1975. Large productivity movements are more common in the manufacturing sector than in the broader-based business measures. Manufacturing currently accounts for about 27 percent of the nonfarm business sector.

A summary of annualized fourth-quarter productivity, output, and hours changes appears in the following tabulation. Further details may be found in tables 31-34 of the Current Labor Statistics section of this *Review*.

Sector	Productivity	Output	Hours
Private business . . .	-1.2	6.9	8.3
Nonfarm business . . .	-0.4	7.1	7.5
Manufacturing . . . .	11.4	24.0	11.2
Durable . . . . .	13.6	29.6	14.1
Nondurable . . . .	8.6	16.2	7.0
Nonfinancial corporations . . . . .	-0.1	7.9	8.1

### Private business sector

Although productivity declined during both the second and fourth quarters of 1980, the underlying reasons were quite different. During the second quarter, output fell rapidly—the 11.5-percent decline marking the largest drop of its kind since the first quarter of 1975. At the same time, hours fell: employment dropped 5.4 percent and average weekly hours went

down 4.7 percent (to 36.6 hours per week). This was the largest decline in average weekly hours during the postwar period. Thus, hours of all persons engaged in the private business sector decreased 9.9 percent.

On the other hand, fourth-quarter output grew at a 6.9-percent annual rate, and hours of all persons increased 8.3 percent. The productivity drop in this quarter stemmed from an imbalance in the growth rates of output and hours, while the larger decline 6 months earlier occurred during a contraction of both.

Unit labor cost—compensation per unit of output—posted a double-digit increase during the second-quarter productivity decline. In the fourth quarter, the 9.7-percent increase in unit labor cost reflected an 8.4-percent rise in hourly compensation and a 1.2-percent drop in productivity. During the second quarter, unit labor cost increased 14.4 percent, as hourly compensation rose 12.2 percent (the largest advance since 1974), while productivity slipped 1.9 percent. Unit labor cost rose more moderately during the first and third quarters as productivity increased. The interaction of changes in productivity, hourly compensation, and unit labor cost is shown in chart 1.

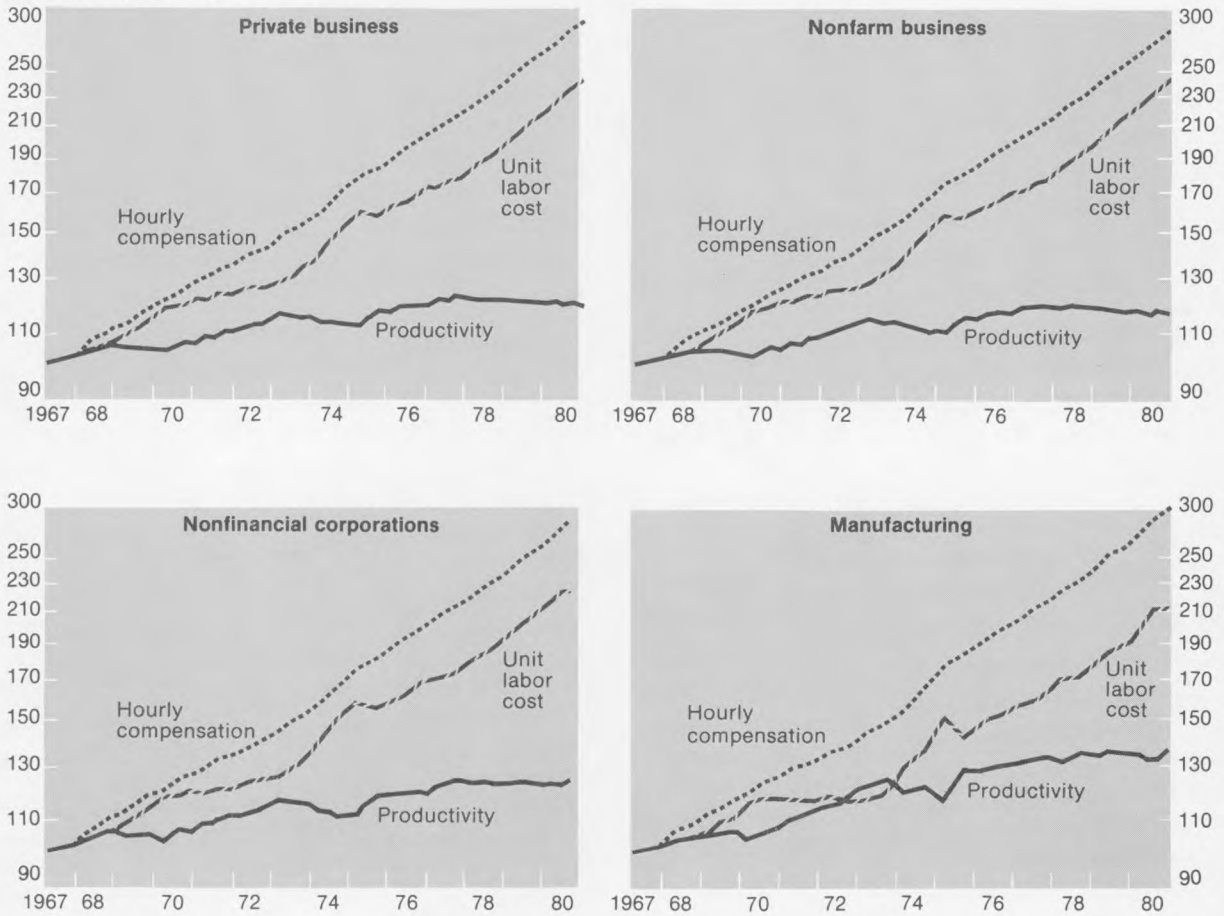
Real hourly compensation adjusts employer outlays for compensation expenses for increases in the Consumer Price Index for All Urban Consumers (CPI-U). During the fourth quarter, real hourly compensation declined 4.0 percent in the private business sector—the third quarterly decrease this year. Since the first quarter of 1978, real hourly compensation has gone up only twice. Hourly compensation includes employer payments for wages and salaries, shift differentials, payments in kind, social security, health and other fringe benefits, and employer taxes.

The implicit price deflator for the private business sector increased 9.9 percent in the fourth quarter. Just as the CPI-U is the deflator for the mix of goods and services which make up consumer spending, the implicit price deflator for the private business sector is a measure of price change for the components of the sector's output. Changes in this deflator reflect movements in unit labor cost and unit nonlabor payments—which include capital consumption allowances, depreciation, indirect business taxes, and profits.

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**Chart 1. Productivity and related measures in four major sectors in the economy, 1967-80**

Ratio scale (1967=100)



### Nonfarm business sector

Productivity also declined during the second and fourth quarters in the nonfarm business sector, which varies from the larger private business sector only by the farm sector, which currently is about 4 percent as large as nonfarm employment. However, because of the volatility of quarterly productivity and cost measures in the farm sector, the rates of change can differ in the private business and nonfarm business sectors. (See table 1.)

In the second quarter, a rapid increase in farm productivity was reflected in the slower rate of productivity decline in the private business sector than in the nonfarm sector. Conversely, in the fourth quarter, a decline in farm productivity was manifested in the bigger drop in the private business sector.

Similar factors were at work during the second and fourth quarter declines in nonfarm productivity as were discussed regarding the private business sector—a sharp contraction during the second quarter and expansion during the fourth quarter.

In the last 13 quarters, productivity has increased only twice in the nonfarm business sector.

### Manufacturing sector

Productivity in the manufacturing sector increased strongly in the fourth quarter, as output gains occurred with less than proportional increases in paid-for hours. Productivity declined during the second and third quarters of 1980 in manufacturing, and output fell 7.9 percent over the period. Hours dropped 6.3 percent at the same time, and employment fell 5.0 percent. In the

**Table 1. Quarterly changes in productivity by sector, 1977-80**

[Seasonally adjusted annual rate]

Sector	1977				1978				1979				1980			
Private business .....	5.8	-0.3	5.1	-1.7	-2.3	0.9	0.5	-0.4	-0.8	-0.2	-1.5	-1.1	1.3	1.9	1.5	-1.2
Farm .....	5.9	-33.3	88.0	-30.0	3.4	-18.3	18.9	3.0	-0.3	59.3	-4.7	-15.4	40.5	33.8	48.0	19.1
Nonfarm .....	5.7	1.2	2.8	-0.6	-2.4	1.2	0.0	-0.6	-0.9	-1.9	-1.4	-0.3	0.0	3.0	3.8	0.4
Nonmanufacturing .....	7.5	-0.4	3.1	-0.6	-1.6	-0.4	-2.1	-1.5	-0.3	-4.1	-1.2	-0.3	-0.2	-1.4	6.5	-5.5
Manufacturing .....	2.0	4.6	2.3	-0.5	-4.2	4.8	4.4	1.2	-2.2	3.3	-1.6	0.1	0.6	5.2	-1.5	11.4
Durable .....	0.3	6.7	1.8	0.6	-5.5	7.0	3.0	0.2	-4.4	3.2	-5.9	0.5	-1.4	-3.9	-4.1	13.6
Nondurable .....	4.5	1.8	3.1	-2.3	-2.1	1.4	6.5	2.9	1.5	3.3	5.6	-0.6	3.6	-7.6	2.3	8.6

fourth quarter, output rose at a 24.0-percent annual rate, its most rapid increase since the third quarter of 1975. Hours advanced 11.2 percent. Despite these rapid advances both output and hours remained below year-earlier levels in the fourth quarter, reflecting the severity of the declines which occurred during the first 3 quarters.

Although compensation grew 10.2 percent during the fourth quarter, unit labor cost declined in manufacturing, reflecting the cost-offsetting effect of productivity gains. This was the first drop in unit labor cost in manufacturing since the third quarter of 1975.

The gain in manufacturing productivity when the nonfarm sector as a whole was experiencing a productivity decline implies that the nonfarm nonmanufacturing sector showed a steep drop in productivity. This "residual" sector includes mining, construction, communications, transportation, public utilities, wholesale and retail trade, services, finance, insurance, and real estate; and State and local government enterprise. This sector employs approximately 57 million persons, whereas manufacturing employment stands at about 20.6 million. Productivity in the nonmanufacturing sector, by this definition, decreased 7.7 percent in the fourth quarter, reversing a 6.3-percent gain during 1980's third quarter.

The output measures compiled by the Bureau of Economic Analysis of the U.S. Department of Commerce as part of the quarterly estimation of the national income and product accounts (which form the basis for the BLS productivity measurement program) do not include quarterly estimates of manufacturing output. To overcome this problem, BLS uses the monthly index of industrial production for durable and nondurable manufacturing industries prepared by the Federal Reserve Board to compute quarterly productivity measurements for this sector. Differences in fluctuations of the manufacturing output and the Gross National Product series tend to be reflected in the implied productivity change in the "residual" sector. It is impossible to directly construct a quarterly productivity series for the "residual" to estimate the impact of these discrepancies.

## Real compensation and productivity

There has been a close relationship between real hourly compensation and productivity throughout the postwar period. Because both variables are expressed in terms of the same hours, their relationship hinges on the ratio of real compensation (deflated by the CPI-U) and real output (deflated by the implicit price deflator). Because the portion of current-dollar output remitted to labor in the form of compensation payments—known as labor share—has varied in an exceedingly narrow range over the postwar period, and because there is little difference between the CPI-U and the implicit price deflator for private business output, the close correlation between productivity and real hourly compensation is assured.

**Table 2. Trends in hours in the private business sector, fourth quarter-1980**

Worker category	Percent change in hours <sup>1</sup>	Category share of hours	Contribution to trend
Total .....	8.20	1.000	8.20
Manufacturing .....	10.77	0.271	2.91
Durable .....	13.58	0.163	2.22
Nondurable .....	6.59	0.107	0.71
Transportation, communication, and public utilities .....	2.23	0.070	0.16
Transportation .....	2.30	0.039	0.09
Communications .....	3.88	0.019	0.07
Public utilities .....	-0.51	0.012	-0.01
Finance, insurance, and real estate .....	5.69	0.064	0.37
Services .....	4.26	0.129	0.55
Mining .....	35.11	0.015	0.52
Construction .....	13.34	0.055	0.74
Wholesale trade .....	6.98	0.069	0.48
Retail trade .....	3.79	0.158	0.60
Farm employees .....	23.51	0.014	0.32
Farm unpaid family workers ..	131.49	0.004	0.53
Farm proprietors .....	14.05	0.025	0.35
Nonfarm proprietors .....	10.64	0.100	1.06
Nonfarm unpaid family workers	-7.27	0.005	-0.04
Government enterprises .....	-4.78	0.022	-0.11
Sum of interaction terms <sup>2</sup> .....	...	...	-0.25

<sup>1</sup> Percent changes in hours refer to preliminary fourth-quarter measures.

<sup>2</sup> A measure of how much of the total private business change results from the joint effect of individual worker category movements.

Compensation outlays account for about two-thirds of output; since 1947 the ratio in the nonfarm business sector has never been lower than 63.7 percent nor higher than 69.6 percent. Within this narrow range, some cyclical deviations in labor share have been observed. The downward rigidity of compensation payments is reflected during contractions by a rise in the portion of output devoted to compensation, and a reciprocal drop in the fraction available for all other payments—nonlabor payments—which include depreciation, capital consumption allowance, indirect business taxes, and profits. In each postwar business cycle, labor share has been higher at the trough than the corresponding peak. There has also been a fairly steady rise in the ratio over the period.

Labor share peaked in the second quarter of 1980—at 69.6 percent of output—and in the fourth quarter

stood at 69.1 percent. The ratio has increased each year since 1977.

### Employment and hours

Employment grew 5.0 percent in the private business sector, as gains occurred in nearly every subsector. The largest contribution to the rise in employment was in the manufacturing sector, where a 6.9-percent increase occurred. Manufacturing constitutes 27.1 percent of employment, so the effect of the increase in employment was to add 1.8 percentage points to the employment gain. The rise in employment and hours for the sectors which make up the private business sector are shown in table 2, together with their associated weights and contributions to the advances in employment and hours in the fourth quarter. □

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### The naked table

No one can use a statistical report honestly who does not take pains to read the text accompanying the tables. It is in many cases a mathematical and physical impossibility to put into a table just all that the table means, and the statistician who does not accompany his table with a sufficient explanation in the text of its defects and of the whole method of its construction and the manner in which it is to be used, has failed in performing his duty.

CARROLL D. WRIGHT  
"The Limitations and Difficulties  
of Statistics," *The Yale Review*,  
August 1894, p. 142.

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# Technical Note



## A new leading index of employment and unemployment

GEOFFREY H. MOORE

One of the composite leading economic indicators published by the Commerce Department is the "marginal employment adjustments" index. Its title derives from the fact that its components reflect employment adjustments typically made by employers and employees during the early stage of the business cycle. Three of the four components pertain to manufacturing: the average workweek, the accession rate, and the layoff rate. The fourth, initial claims for unemployment insurance, is broader in scope. The workweek reflects changes in the amount of overtime or in the number of workers employed part time; such adjustments can usually be made more promptly, and are easier to reverse when necessary, than decisions to hire and fire. The accession rate includes persons newly hired as well as those rehired after layoff, and the layoff rate includes both temporary and permanent layoffs. Initial claims represent the number of persons currently applying for unemployment compensation, rather than those who are already receiving it.

Each of the four series typically leads at business cycle peaks and leads or is roughly coincident at troughs. Thus, the composite of the four series has led at every one of the seven business cycle peaks and six troughs between 1948 and 1980. The leads at troughs, however, have been short; for 4 of the 6 troughs, the lead was only 1 month. At peaks, the leads averaged 12 months, and none was shorter than 8 months.

One reason the leads are long at peaks and short at troughs is that the index, as well as each of its components, displays virtually no long-term growth. At its earliest peak, in January 1948, the index was 102.5 (1967=100). At its latest peak, in December 1978, the index stood at 99.1. Because the marginal employment adjustments index does not reflect the substantial

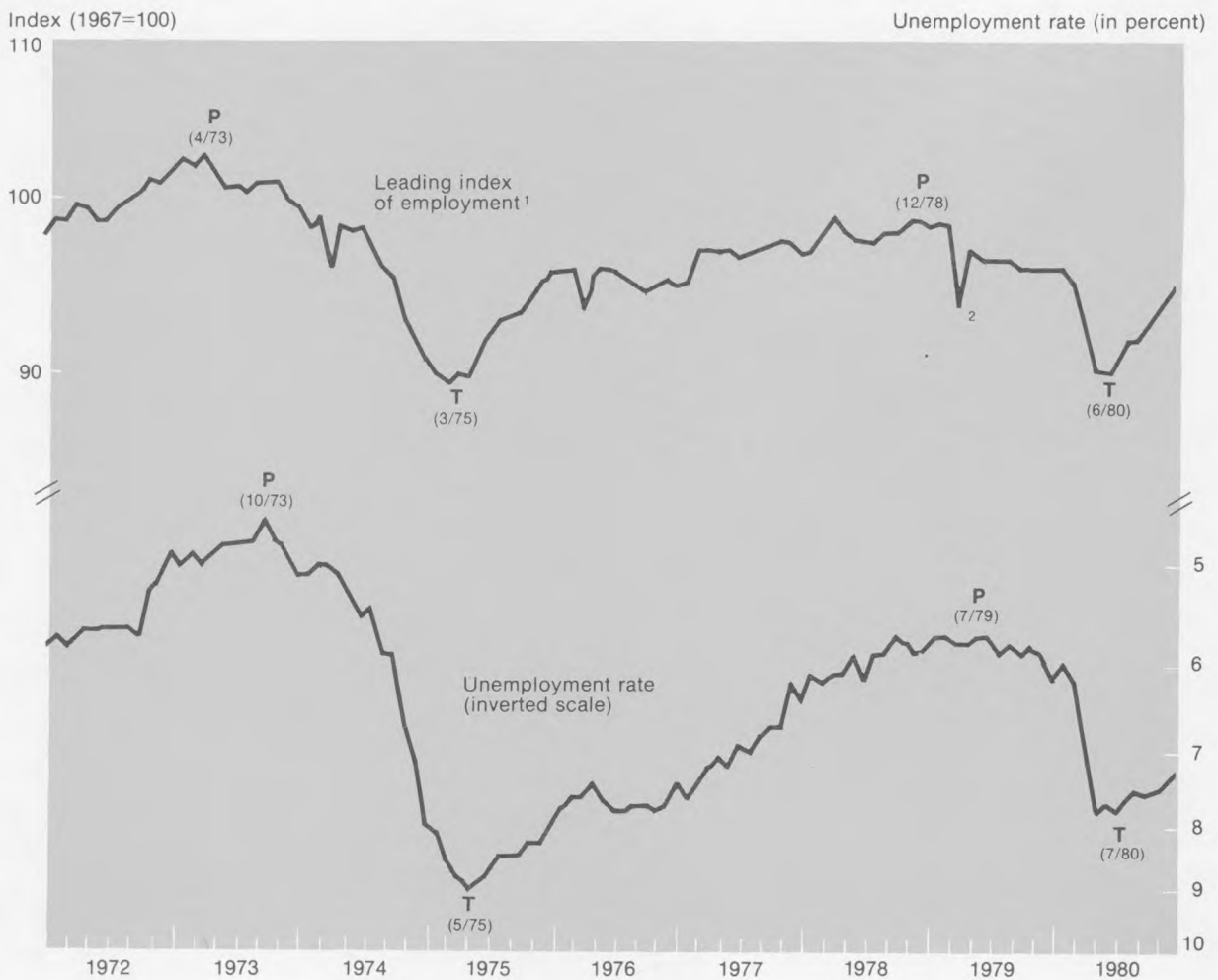
growth of the economy during the intervening 30 years, its flat trend tends to produce early peaks and late troughs when compared with aggregate economic activity. This characteristic is a disadvantage for some purposes and an advantage for others. Warnings of a recession a year or more ahead are apt to be discounted, in view of the inevitable uncertainties, while signs of recovery a month ahead of the event are of limited value. On the other hand, the marginal employment adjustments index can be expected to be symmetrical in its behavior with respect to the peaks and troughs of some important economic indicators, such as the unemployment rate, the employment ratio, or the capacity utilization rate, which are also largely trendless.

There is a need, therefore, for a leading index in two forms, one with a trend corresponding to the growth in the economy, the other without. The trend requirement can be met by the same procedure used in the Commerce Department's comprehensive leading index, namely, reverse trend adjustment. Here the long-term trend in the index is set equal to a "target trend" observed over a certain period, and the current figures are adjusted by the same monthly increment required to achieve the target trend in the given period. In addition, it would be desirable to take advantage of component series that are available promptly, and at the same time reduce the considerable weight given to manufacturing in the existing index (3 out of 4 series). Less emphasis on a single sector may reduce the size of subsequent revisions of the index and smooth out erratic fluctuations, especially if the expanded sector coverage is provided by series from different sources.

With these objectives in mind, the Rutgers Center for International Business Cycle Research has constructed a new index based upon four components. Two are included in the existing index: average workweek and initial claims. The third series is average weekly overtime hours in manufacturing. This is a component of the average workweek, but is included as well because it is smoother and less frequently affected by holidays. The fourth series is the ratio of voluntary to involuntary part-time employment. The cyclical movements in this ratio are attributable primarily to the denominator, which reflects employers' decisions to shorten work hours in response to current or anticipated adverse business conditions. It behaves as a leading indicator at

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**Chart 1. Relation of new leading index of employment to the unemployment rate, 1972-80**



<sup>1</sup> Excludes target trend.

<sup>2</sup> April 1979 data affected by trucking strike and holidays.

NOTE: P indicates series peaks; T indicates troughs.

peaks and is roughly coincident at troughs.<sup>1</sup> It is based on data from the Current Population Survey of households and hence is statistically independent of the other series in the index, which are based on the Bureau of Labor Statistics establishment survey (average workweek and overtime hours) or unemployment insurance records (initial claims). Also, it covers all sectors of the economy, not just manufacturing.

Hence the new index includes two series that are restricted to manufacturing (average workweek and overtime hours) and two that are broader in scope (initial claims and part-time employment ratio). Only two of the series are from the same data source. Moreover, all

the components are usually available by the end of the first or second week of the month following the month to which they refer. As a result, the new leading index is compiled by the Rutgers Center concurrently with other employment data, and about 3 weeks earlier than the existing index. In its original form the index has virtually no long-run trend, but it is also compiled with a growth trend equal to that used in the Commerce Department's leading, coincident, and lagging indexes, namely 3.3 percent annually, or 0.272 percent per month.<sup>2</sup>

The new index without the target trend factor yields results very similar to those from the present index.

Chart 2. Relation of new leading index of employment to nonfarm employment, 1972-80



<sup>1</sup> Includes target trend factor of 3.3 percent per year.  
<sup>2</sup> April 1979 data affected by trucking strike and holidays.

NOTE: P indicates series peaks; T indicates troughs.

Five of the turning points are in the same month in both indexes, one is 6 months earlier in the new index, six are a month later, and one is 2 months later. Thus, the new index is often not quite as prompt as the existing one in reaching its high and lows. However, the new index is somewhat smoother. Its relation to the unemployment rate is shown in table 1. It reaches its highs and lows prior to the corresponding turns in unemployment in every instance except the January 1948 peak, and the average lead is about 6 months. Hence the new index should prove to be a useful leading indicator of unemployment, especially if, as we expect, it is less subject to revision than the present index.

Not only does the new index lead, but the magnitude of its changes are rather closely correlated with subsequent changes in the unemployment rate. (See chart 1.) For example, a regression of the year-to-year change in unemployment on the change in the new index during the last 6 months of the preceding year yields a correlation coefficient of  $-.90$  during the period 1949-80 (31 observations). Thus, by this simple method, the unemployment rate was forecast for the year ahead with an average error of about half a percentage point.

The new index with the target trend bears a fairly close relationship to nonfarm employment. (See chart 2.) However, the trend is steeper because the trend rate



of growth in nonfarm employment is 2.2 percent annually, compared with the 3.3-percent target trend in the new index; the latter figure was selected to permit comparison with series other than nonfarm employment. The new index leads employment at 12 of the 13 peaks and troughs between 1948 and 1980, and is coincident once. The average lead is 3 months and the leads are about as long at troughs as at peaks (table 2).

COMPARED WITH THE existing index of this type, the new leading index of employment and unemployment has a broader economic coverage and is available more promptly. In its trendless form the new index is comparable with other series that are essentially trendless, such as the unemployment rate, employment ratio, or capacity utilization rate. It consistently leads the unemployment rate at both peaks and troughs by about 6 months on average. The index is also constructed with a trend, in which form it is comparable with series that grow with the economy, such as the employment level,

**Table 1. Relationship of the unemployment rate and the new leading index of employment (without target trend) to the business cycle, 1948-80**

[In months]

Business cycle	Lead (-) or lag (+) at business cycle turns		Lead (-) or lag (+) of new index at turns in unemployment rate
	Inverted unemployment rate	New leading index of employment without target trend	
Peak: November 1948 .....	<sup>1</sup> -10	<sup>1</sup> -10	<sup>1</sup> 0
Trough: October 1949 .....	0	-5	-5
Peak: July 1953 .....	-1	-8	-7
Trough: May 1954 .....	+4	-1	-5
Peak: August 1957 .....	-4	-21	-17
Trough: April 1958 .....	+3	0	-3
Peak: April 1960 .....	-2	-11	-9
Trough: February 1961 .....	+3	-2	-5
Peak: December 1969 .....	-7	-14	-7
Trough: November 1970 .....	+9	0	-9
Peak: November 1973 .....	-1	-7	-6
Trough: March 1975 .....	+2	0	-2
Peak: January 1980 .....	-6	-13	-7
Mean lead or lag:			
At peaks .....	-4	-12	-8
At troughs .....	+4	-1	-5
At both turns .....	-1	-7	-6

<sup>1</sup> Initial month of series. Hence, peak might have been earlier and index might have led the unemployment rate.

**Table 2. Relationship of nonfarm employment and the new leading index of employment (with target trend) to the business cycle, 1948-80**

[In months]

Business cycle	Lead (-) or lag (+) at business cycle turns		Lead (-) or lag (+) of new index at turns in employment rate
	Nonfarm employment	New leading index of employment, with target trend <sup>1</sup>	
Peak: November 1948 .....	-2	-4	-2
Trough: October 1949 .....	0	-6	-6
Peak: July 1953 .....	-1	-3	-2
Trough: May 1954 .....	+3	-2	-5
Peak: August 1957 .....	-5	-8	-3
Trough: April 1958 .....	+1	0	-1
Peak: April 1960 .....	0	-3	-3
Trough: February 1961 .....	0	-2	-2
Peak: December 1969 .....	+3	0	-3
Trough: November 1970 .....	0	0	0
Peak: November 1973 .....	+11	0	-11
Trough: March 1975 .....	+2	0	-1
Peak: January 1980 .....	+1	0	-1
Mean lead or lag:			
At peaks .....	+1	-2	-4
At troughs .....	+1	-2	-2
At both turns .....	+1	-2	-3

<sup>1</sup> Target trend is that used in *Business Conditions Digest* composite indexes, 0.272 percent per month.

which it leads by 2 or 3 months at both peaks and troughs. The new index, therefore, offers an early warning of cyclical shifts in employment and unemployment.

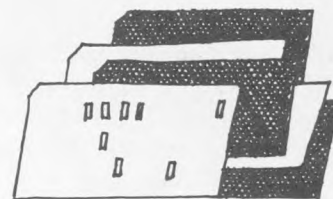
FOOTNOTES

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<sup>1</sup> See Geoffrey H. Moore, *Business Cycles, Inflation and Forecasting* (Cambridge, Mass., Ballinger Publishing Company, 1980), Ch. 18.

<sup>2</sup> The trend rates are compound monthly rates between average levels during the peak-to-peak specific cycles 1948-53 and 1974-79. The target trend is the average for the four components of the coincident index: nonfarm employment, real personal income less transfer payments, industrial production, and real manufacturing and trade sales. It is almost the same as the rate for real gross national product. See *Business Conditions Digest*, March 1979, p. 107, for more details.

# Research Summaries



## Work experience of the population in 1979

SYLVIA LAZOS TERRY

In any year, millions of Americans leave the labor force to enroll in school, take care of a home, raise a family, enjoy the fruits of retirement, or recover from an illness. Meanwhile, millions more enter the labor force to replace outgoing workers and to take the additional jobs the economy provides each year. Among the entrants are high school and college graduates seeking their first jobs, homemakers reentering the labor market, and veterans of the Armed Forces seeking civilian jobs. In addition, there are millions of workers who are in the labor market for the entire year but who change jobs or experience one period or more of unemployment.

The work experience data from the March Current Population Survey show many of these transitions<sup>1</sup> and provide a picture of labor market activities of the entire population during the course of a year. The total number of Americans who worked for at least 1 week in 1979 was 113 million, 16 percent larger than the average employment level for that year. That is, more persons work at some time during the year than at any given time of the year. Similarly, many more persons experience unemployment during the year than in any given month. Many workers become unemployed but quickly find other jobs while others remain unemployed for many weeks. Turnover of unemployed workers during 1979 amounted to 18 million persons. This figure is three times larger than the average number of persons who were unemployed during the year.

This report examines the extent to which Americans participated in the labor force, worked, or looked for work during 1979. It also takes a look at changes in work activity over the past decade as reflected in the work experience data.

### Employment highlights

The 113 million persons 16 years of age and over who were employed during all or part of 1979 repre-

sented an increase of 2.4 million over the 1978 total. (See table 1.) This gain was not as large as increases posted during the 1976-78 period, when, with the economy recovering from the 1975 recession, the number of persons with some employment during the year was growing by an average of 3 million annually.

Women continued to enter the labor market in record numbers during 1979. About 1.5 million more women worked at some time during the year than during 1978, and almost 700,000 more were working all year at full-time jobs. Women, ages 25 to 34, the "baby boom cohorts," continued to account for the bulk of the employment gains, which made up 1.0 of the 1.5-million increase in women with jobs. Higher levels of education, smaller families, changing social attitudes, and the rising cost of raising a family, help to account for the large increases in the employment of women in this age group.

Although men accounted for more than one-third of the employment gains in 1979, most of their employment increase was in full-time year-round jobs. This type of work accounted for about 80 percent of the increase in jobs among men. As in the case of women, the group of men with the largest employment gains were those 25 to 34 years old, a rapidly expanding population group.

As in 1978, white women were more likely to have worked during the year than either black or Hispanic women (58 vs. 56 and 54 percent). However, black and Hispanic women who do work have relatively more full-time employment than white women (75 and 76 vs. 67 percent). Hispanic women traditionally have been less likely to work outside the home but since 1976, the first year data were available on Hispanics, there has been a significant increase in the number of Hispanic women who worked during the year. In this 4-year period, the number of Hispanic women with jobs has increased by 24 percent compared with an 11-percent increase among white women, and a 13-percent increase among black women.

Hispanic men have always had high labor force par-

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ticipation rates even though their educational attainment levels are low, usually a strong indicator of a group's labor force activities. Hispanic and white men were more likely to have worked in 1979 than black men (84 and 82 vs. 72 percent). From 1978 to 1979, however, the proportion of black men who worked full time all year increased by 2 percentage points over the previous year. Nevertheless, both black and Hispanic men were still less likely to have worked all year at full-time jobs than white men (59 and 61 vs. 67 percent).

The number of persons experiencing unemployment at some time during the year rose slightly in 1979. (See table 2.) The number of persons with unemployment

dropped, reaching 17.7 million in 1978, compared with the 1975 recession high of 21.1 million. Between 1978 and 1979, unemployment increased by 230,000, and totaled 18.0 million. This was attributable to an increase of 380,000 in the number of persons who encountered some unemployment but also worked during the year and a decline of 150,000 in the number who looked for work but never held a job during the year. The number of unemployed persons in 1979 represented 15.7 percent of all those who worked or looked for work, not much different than the percentage in 1978, but well below the 20.2 percent in 1975.

Although the probability of women becoming unemployed during the course of a year is slightly higher than for men (16 vs. 15 percent), the average spell of unemployment is shorter for women than for men. About 66 percent of all women who encountered unemployment in 1979 searched for jobs for less than 15 weeks, compared with 59 percent of all men. Women are also less likely than men to experience two periods or more of joblessness during the year. In 1979, 28 percent of all women who worked during the year and were unemployed at some time had two periods or more of unemployment compared with 36 percent of all men.

Close to 1 million women who were unemployed in 1979 might be classified as "casual jobseekers," that is, they looked for employment for shorter periods, were unable to find the jobs they wanted, and then dropped out of the labor force. Women who did not work during the year and looked for employment for less than 15 weeks totaled 923,000 and made up 11 percent of all women who were unemployed at some time in 1979. By comparison, the number of men in this same category numbered 339,000 and made up only 3 percent of all men with unemployment in 1979.

Whites continued to experience less unemployment during 1979 than either blacks or Hispanics (15 vs. 24 and 22 percent). Blacks and Hispanics also were unemployed for longer periods. (See tables 2 and 3.) Close to half of all blacks with unemployment during 1979 looked for work unsuccessfully for 15 weeks or more, while less than one-third of all whites were unemployed for that long a period.

### The 1970's in perspective

One of the most significant developments of the 1970's was the continuing rapid entry of women into the labor force. Since 1969, the number of women who worked during the year has increased by 11.8 million, while the gain among men has only been 8.5 million. Since 1973, the year-to-year increase in employment has always been larger for women than for men.

Since 1969, the proportion of working-age women with jobs during the year has increased by 5 percentage

**Table 1. Work experience during the year of persons 16 years and over, by extent of employment, race, and sex, 1978 and 1979**

Extent of employment	Both sexes		Men		Women	
	1978	1979 <sup>1</sup>	1978	1979 <sup>1</sup>	1978	1979 <sup>1</sup>
Numbers in thousands						
<b>ALL PERSONS</b>						
Population	160,756	163,410	76,070	77,362	84,686	86,048
Worked during the year <sup>2</sup> :						
Number	110,290	112,721	61,917	62,843	48,373	49,879
Percent of population	68.6	69.0	81.4	81.2	57.1	58.0
Percent distribution						
Persons who worked during the year	100.0	100.0	100.0	100.0	100.0	100.0
Full time <sup>3</sup>	79.1	79.0	87.9	87.6	67.8	68.1
50 to 52 weeks	56.4	56.4	66.3	66.5	43.7	43.7
1 to 49 weeks	22.7	22.5	21.6	21.1	24.1	24.3
Part-time <sup>4</sup>	20.9	21.0	12.1	12.4	32.2	31.9
50 to 52 weeks	7.0	7.1	4.0	4.2	10.9	10.8
1 to 49 weeks	13.9	13.9	8.1	8.2	21.3	21.1
Numbers in thousands						
<b>WHITE</b>						
Population	140,999	143,114	67,187	68,241	73,812	74,873
Worked during the year <sup>2</sup> :						
Number	97,603	99,773	55,378	56,183	42,226	43,591
Percent of population	69.2	69.7	82.4	82.3	57.2	58.2
Percent distribution						
Persons who worked during the year	100.0	100.0	100.0	100.0	100.0	100.0
Full time <sup>3</sup>	78.9	78.8	88.1	87.8	66.8	67.1
50 to 52 weeks	56.8	56.8	67.2	67.3	43.0	43.3
1 to 49 weeks	22.1	22.0	20.9	20.5	23.7	23.8
Part-time <sup>4</sup>	21.1	21.2	11.9	12.2	33.2	32.9
50 to 52 weeks	7.2	7.3	4.1	4.3	11.2	11.2
1 to 49 weeks	13.9	13.9	7.8	7.9	22.0	21.7
Numbers in thousands						
<b>BLACK<sup>5</sup></b>						
Population	16,794	17,201	7,475	7,664	9,319	9,537
Worked during the year <sup>2</sup> :						
Number	10,655	10,844	5,426	5,525	5,229	5,320
Percent of population	63.4	63.0	72.6	72.1	56.1	55.8
Percent distribution						
Persons who worked during the year	100.0	100.0	100.0	100.0	100.0	100.0
Full time <sup>3</sup>	80.7	80.3	86.2	85.4	74.9	75.0
50 to 52 weeks	52.5	53.4	57.1	59.3	47.8	47.2
1 to 49 weeks	28.1	26.9	29.1	26.1	27.1	27.8
Part-time <sup>4</sup>	19.4	19.7	13.8	14.6	25.1	25.0
50 to 52 weeks	6.2	6.0	3.4	3.7	9.0	8.3
1 to 49 weeks	13.2	13.8	10.4	10.9	16.1	16.7

<sup>1</sup> Data for 1979 have been updated from what was previously issued in Press Release 80-575.

<sup>2</sup> Time worked includes paid vacation and sick leave.

<sup>3</sup> Usually worked 35 hours or more.

<sup>4</sup> Usually worked 1 to 34 hours per week.

<sup>5</sup> Blacks only.

points while the proportion of men with work declined by 4. By far, the age group that has contributed the most to these gains are women 25 to 34 years. In 1969, 56 percent of all women in this age group held jobs; in 1979, that figure had jumped to 74 percent, an increase of 18 percentage points. By contrast, the proportion of employed men in this same age group slipped slightly, from 98 to 96 percent over the same period. The expanded participation of women 25 to 34 years of age and the large increase in their numbers caused by the inflow of the baby boom cohorts have made this demo-

graphic group one of the major growth components of the employment picture in the 1970's. (See table 4.)<sup>2</sup>

As in past years, decreasing participation among older workers continued to be observed in 1979. Both men and women 55 years and older are less likely to work today than their counterparts of a decade ago. From 1969 to 1979, the proportion of men over age 55 with some employment during the year has declined from 64 to 52 percent and the proportion of women with jobs has dropped from 32 to 27 percent. In spite of legislation minimizing mandatory retirement, many

**Table 2. Persons 16 years and over who experienced some unemployment during the year, by race and sex, 1975, 1978, and 1979**

Extent of unemployment	Both sexes			Men		Women	
	1975	1978	1979 <sup>1</sup>	1978	1979 <sup>1</sup>	1978	1979 <sup>1</sup>
<b>ALL PERSONS</b>							
Numbers in thousands							
Persons who worked or looked for work during the year	104,442	112,362	114,648	62,680	63,490	49,683	51,158
Percent with unemployment	20.2	15.8	15.7	15.3	15.4	16.4	16.0
Persons with unemployment	21,104	17,738	17,971	9,572	9,764	8,166	8,207
Did not work but looked for work	3,202	2,072	1,927	763	647	1,310	1,280
1 to 14 weeks	1,692	1,235	1,262	368	339	867	923
15 weeks or more	1,510	837	664	394	308	442	356
With work experience	17,903	15,666	16,045	8,809	9,117	6,856	6,927
Percent distribution							
Unemployed persons with work experience	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Year-round workers <sup>2</sup> unemployed 1 or 2 weeks	4.7	4.3	5.2	5.0	6.4	3.4	3.6
Part-year workers <sup>3</sup> unemployed	95.3	95.7	94.8	95.0	93.6	96.6	96.4
1 to 4 weeks	21.1	25.9	25.8	20.8	21.2	32.4	32.0
5 to 14 weeks	31.2	35.7	35.7	37.7	37.3	33.1	33.5
15 weeks or more	42.9	34.1	33.2	36.5	35.0	31.1	30.9
With 2 spells or more of unemployment	31.3	32.5	32.2	35.0	35.7	29.3	27.6
<b>WHITE</b>							
Numbers in thousands							
Persons who worked or looked for work during the year	92,229	98,985	101,097	55,899	56,632	43,087	44,465
Percent with unemployment	19.1	14.7	14.7	14.2	14.5	15.3	14.9
Persons with unemployment	17,660	14,548	14,850	7,924	8,236	6,624	6,614
Did not work but looked for work	2,285	1,382	1,324	521	450	861	874
With work experience	15,375	13,166	13,526	7,403	7,786	5,763	5,740
Percent distribution							
Unemployed persons with work experience	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Year-round workers <sup>2</sup> unemployed 1 or 2 weeks	4.9	4.5	5.6	5.2	6.9	3.5	3.9
Part-year workers <sup>3</sup> unemployed	95.1	95.5	94.4	94.8	93.1	96.5	96.1
1 to 4 weeks	21.7	27.5	26.9	22.5	21.8	33.9	33.7
5 to 14 weeks	31.7	35.8	36.5	37.9	38.3	33.2	33.9
15 weeks or more	41.7	32.2	31.1	34.4	32.9	29.4	28.6
With 2 spells or more of unemployment	30.9	31.7	31.7	34.1	35.3	28.7	26.9
<b>BLACK<sup>4</sup></b>							
Numbers in thousands							
Persons who worked or looked for work during the year	10,496	11,304	11,405	5,658	5,710	5,646	5,695
Percent with unemployment	29.5	25.0	24.2	26.0	23.8	24.1	24.7
Persons with unemployment	3,100	2,831	2,764	1,471	1,357	1,360	1,407
Did not work but looked for work	866	649	560	232	185	417	375
With work experience	2,234	2,182	2,204	1,239	1,172	943	1,032
Percent distribution							
Unemployed persons with work experience	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Year-round workers <sup>2</sup> unemployed 1 or 2 weeks	3.8	3.2	3.3	3.9	4.2	2.2	2.4
Part-year workers <sup>3</sup> unemployed	96.2	96.8	96.7	96.1	95.8	97.8	97.6
1 to 4 weeks	16.6	16.2	19.1	10.9	16.3	23.2	22.4
5 to 14 weeks	28.8	35.3	30.8	37.2	30.6	32.7	30.9
15 weeks or more	50.9	45.3	46.7	48.2	48.9	41.6	44.4
With 2 spells or more of unemployment	33.9	37.3	35.5	40.9	38.7	32.3	31.8

<sup>1</sup> Data for 1979 have been updated from what was previously issued in Press Release 80-575.

<sup>2</sup> Worked 50 weeks or more.

<sup>3</sup> Worked less than 50 weeks.

<sup>4</sup> Black only.

**Table 3. Persons of Hispanic origin: work experience and unemployment during 1979**

Item	Both sexes	Men	Women
Population	8,268	4,074	4,194
Persons who worked during 1979			
Number (thousands)	5,683	3,410	2,272
Percent	68.7	83.7	54.2
Worked during the year	100.0	100.0	100.0
Full time	83.2	88.0	76.1
50 to 52 weeks	54.1	61.2	43.5
1 to 49 weeks	29.1	26.8	32.5
Part time	16.8	12.0	23.9
50 to 52 weeks	4.9	3.5	7.0
1 to 49 weeks	11.9	8.5	17.0
Persons who worked or looked for work during 1979	5,822	3,459	2,363
Percent with unemployment	22.0	21.5	22.7
Persons with unemployment	1,280	744	535
Did not work but looked for work	139	49	91
With work experience	1,140	695	445
Unemployed persons with work experience	100.0	100.0	100.0
Year-round workers unemployed			
1 or 2 weeks	3.9	4.5	2.8
Part-year workers unemployed	96.1	95.5	97.2
1 to 4 weeks	22.5	20.2	26.0
5 to 14 weeks	37.2	38.4	35.3
15 weeks or more	36.5	36.8	35.7
With 2 spells or more of unemployment	33.6	36.3	29.5

workers have chosen to retire at an earlier age because of liberal pension plans, improved disability provisions, and increased social security benefits. In addition, employers have increasingly instituted monetary incentives to encourage older workers to retire early, not only as cost saving measures but also to open up slots for younger workers.<sup>3</sup>

Another significant development of the 1970's is the widening of the gap in the proportion of black and white populations engaged in work. Previous to 1971, blacks<sup>4</sup> were more likely to work during the year than were whites. In 1979, not only were blacks less likely to work during the year, but that difference—63 versus 70 percent—was the largest since data were first collected in 1951.<sup>5</sup> (See table 5.)

Several factors have been responsible for this development. Black women have traditionally been very active in the labor force and their participation has remained high. However, over the last two decades, the attitudes of white women towards work outside the home have markedly changed and their labor market activities have increased considerably. The result is that whereas in 1969, black women were more likely to be working than white women (59 vs. 52 percent), in 1979, white women were more likely to work during the year than black women (58 vs. 56 percent).

While the difference in the proportion of black and white women working during the year was gradually converging throughout much of the decade, the gap between the employment experience of black and white men has greatly increased since 1969. The proportion of employed black men during the year declined by 11 percentage points from 1969 (from 83 to 72 percent)

which is more than three times greater than the decline experienced by white men (from 86 to 82 percent).

Black men were particularly affected by the 1973-75 recession. During this period, the proportion of black men with work during the year declined from 78 to 72 percent, and this ratio has not yet returned to prerecession levels. Two age groups show particularly sharp declines, especially when compared to the employment experience of white workers: teenagers (16 to 19 years old) and young adults (20 to 24 years old).

While the proportion of white teenagers holding jobs during the year has not changed substantially in the past decade (70 percent in 1969 and 71 percent in 1979), the proportion of black teenagers with jobs declined from 56 percent in 1969 to 42 percent in 1979. Most of this decline is attributable to the sharp drop in the employment of black men (from 67 to 45 percent) as compared with young black women (from 40 to 39 percent). Many reasons have been cited for the low employment of black teenagers, among them the lack of jobs in the inner city areas where most black youths reside, the minimum wage which makes it too costly for businesses to hire inexperienced black youths, and high dropout rates.<sup>6</sup>

Much of the controversy that surrounds policy discussions dealing with the status of black teenagers has been fueled by the sharp rise in their unemployment rates. In 1979, the average monthly unemployment rate of black teens was about 2.3 times greater than that of white teens (32 vs. 14 percent).<sup>7</sup> When viewed from a "work experience" standpoint, this difference persists, but not to the same extent. Table 6 shows that close to 38 percent of the black teens with labor force experience during 1979 encountered some unemployment compared to 25 percent of the white teenagers. Thus, over a year, a black teenage worker is 1.5 times as likely as a white teenage worker to experience unemployment. The reason the monthly unemployment ratio between the two groups is much higher is that black teenage unemployment lasts longer. In 1979, 44 percent of all unemployed black youths looked for work for 15 weeks or more, while the proportion of white teens in this category was only 29 percent.

The proportion of black teenagers encountering un-

**Table 4. Proportion of all persons 16 years and older who worked during the year, by age and sex, 1969 and 1979**

Age	Men			Women		
	1969	1979	Change	1969	1979	Change
All persons	85.2	81.2	-4.0	52.6	58.0	+5.4
16 to 19 years	74.4	70.6	-3.8	58.3	62.3	+4.0
20 to 24 years	89.8	91.7	+1.9	73.5	78.5	+5.0
25 to 34 years	97.8	96.0	-1.8	55.5	73.6	+18.1
35 to 54 years	97.0	94.5	-2.5	59.6	67.7	+8.1
55 and older	63.7	52.2	-11.5	32.3	27.3	-5.0

**Table 5. Proportion of all persons 16 years and older who worked during the year, by race, age, and sex, 1969 and 1979**

Race and age	Both sexes			Men			Women		
	1969	1979	Change	1969	1979	Change	1969	1979	Change
<b>WHITES</b>									
Percent who worked or looked for work during year	68.4	70.6	+2.2	86.0	83.0	-3.0	52.7	59.4	+6.7
Percent who worked during year	67.7	69.7	+2.0	85.5	82.3	-3.2	51.9	58.2	+6.3
16 to 19	70.2	70.8	+0.6	75.5	75.1	-0.4	61.3	66.5	+5.2
20 to 24	81.2	87.5	+6.3	90.2	93.5	+3.3	74.1	81.6	+7.5
25 to 34	75.0	85.1	+10.1	98.0	96.9	-1.1	53.4	73.7	+20.3
35 to 54	77.3	81.2	+3.9	97.3	95.3	-2.0	58.5	67.8	+9.3
55 and older	46.1	38.4	-7.7	63.9	52.8	-11.1	31.7	27.0	-4.7
<b>BLACKS</b>									
Percent who worked or looked for work during year	72.1	66.3	-5.8	84.0	74.5	-9.5	62.2	59.7	-2.5
Percent who worked during year	70.0	63.0	-7.0	82.7	72.1	-10.6	58.7	55.8	-2.9
16 to 19	56.3	41.9	-14.4	67.3	45.0	-22.3	40.0	39.0	-1.0
20 to 24	77.5	69.0	-8.5	87.2	80.3	-6.9	69.7	60.1	-9.6
25 to 34	82.3	80.7	-1.6	96.3	89.8	-6.5	70.8	73.8	+3.0
35 to 54	79.3	76.6	-2.7	93.5	88.1	-5.4	67.6	67.3	-0.3
55 and older	49.0	36.7	-12.3	61.7	45.6	-16.3	38.3	29.9	-8.4

employment during the course of a year has not varied significantly from 1969 levels (from 36 to 38 percent). However, the composition of black teenage unemployment has undergone a major change over the last 10 years. Specifically, black teenagers who never worked in the year but nevertheless searched for jobs made up 40 percent of all black teens with unemployment in 1979—a sharp increase from the 26 percent in 1969. By comparison, the proportion of white teenagers who never worked but searched for jobs showed little change over the decade. (See table 6.)

The employment situation of young black adults, 20 to 24, to some extent parallels the experience of black teenagers. The proportion of blacks in this age group who worked during the year has declined (from 78 percent in 1969 to 69 percent in 1979). During the same period, the proportion of whites in this age group who worked during the year has increased (from 81 percent

in 1969 to 88 percent in 1979).

Part of the decline in the annual employment experience of young black adults is reflected in rising unemployment levels. In 1969, 31 percent of blacks 20 to 24 with labor force experience during the year encountered some unemployment; in 1979, this proportion had increased to 38 percent. Whites in this age group have also experienced a rise in the incidence of unemployment, although not to the same extent as blacks. In 1969, 19 percent of all young white adults experienced some unemployment; in 1979, it was 24 percent. □

— FOOTNOTES —

<sup>1</sup> The data for this report are based on responses to special "work experience" questions included in the March 1980 Current Population Survey (CPS), conducted for the Bureau of Labor Statistics by the Bureau of the Census. The work experience questions refer retroactively to the civilian work experience of persons during the entire preceding year. Because many persons enter and leave the labor force during the course of the year, the number of persons with employment and with unemployment as determined through the work experience questions is much greater than the annual average for the same year based on the monthly survey conducted during the year. Persons who reached age 16 during January, February, or March 1980 are included. However, the work experience of persons who were in the civilian labor force during 1979 but were not in the civilian noninstitutional population in March 1980 is not included. Similarly, data on persons who died in 1979 or 1980, before the survey date, are not reflected.

This is the latest in a series of reports on this subject. Data from the March 1979 survey were published in the *Monthly Labor Review*, March 1980, pp. 43-47, and issued with additional tabular data and explanatory notes as Special Labor Force Report 236. This report will be reprinted with additional data from the March 1980 survey as a Special Labor Force Report later this year.

<sup>2</sup> Increased participation of women in the labor force has been thoroughly documented in other BLS publications. See, for example, Janet L. Norwood and Elizabeth Waldman, "Women in the Labor Force: Some New Data Series," Report 575 (Bureau of Labor Statistics, 1979).

<sup>3</sup> *The Wall Street Journal* reported early retirement inducements were recently being promoted by such companies as General Motors,

**Table 6. Incidence of unemployment and nonworkers as percent of unemployed, by race and age, 1969 and 1979**

Item	Whites			Blacks		
	1969	1979	Change	1969	1979	Change
Percent of the labor force with unemployment during the year						
All persons	11.6	14.7	+3.1	19.7	24.2	+4.5
16 to 19 years	21.4	25.1	+3.7	36.3	37.6	+1.3
20 to 24 years	18.9	23.9	+5.0	30.6	38.4	+7.8
25 to 54 years	9.7	12.6	+2.9	15.9	21.1	+5.2
55 and older	7.2	7.1	-0.1	10.8	11.4	+0.6
Nonworkers who looked for work as percent of the unemployed						
All persons	8.9	8.9	0	14.7	20.3	+5.6
16 to 19 years	16.2	13.5	-2.7	25.7	40.2	+14.5
20 to 24 years	6.4	6.7	+0.3	18.3	19.2	+0.9
25 to 54 years	6.8	7.9	+1.1	8.2	16.5	+8.3
55 and older	9.8	12.4	+2.6	13.5	9.2	-4.3

Sears, Eaton Corp., Caterpillar, United Airlines, American Airlines, and B. F. Goodrich. For further details see, Joann S. Lublin and Michael L. King, "More Employers Offer an Early Retirement," *The Wall Street Journal*, Nov. 12, 1980. Also, for a discussion of the labor force impact of legislation dealing with mandatory retirement, see Philip L. Rones, "The retirement decision: a question of opportunity?" *Monthly Labor Review*, November 1980, pp. 14-17.

<sup>4</sup> Previous to 1976, data for all persons other than white were used to represent data for blacks. In 1969, blacks represented 92 percent of all persons who were not white.

<sup>5</sup> The monthly CPS employment-population ratios show similar trends.

<sup>6</sup> For an in-depth analysis of the discouragement of black youth, see Norman Bowers, "Young and marginal: an overview of youth employment" and Morris J. Newman, "The labor market experience of black youth, 1954-78," *Monthly Labor Review*, October 1979, pp. 4-16 and 17-27.

<sup>7</sup> *Employment and Earnings*, January 1980, pp. 158-59.

## Wages in meatpacking and prepared meat products plants, May 1979

Straight-time hourly earnings of production workers in meatpacking plants averaged \$6.97 an hour in May 1979, and \$6.52 an hour for workers in prepared meat products plants, where slaughtering is not performed. Earnings averaged about 50 percent higher than in March 1974, when the Bureau of Labor Statistics conducted a similar survey of wages and related benefits.<sup>1</sup> During the same period, earnings rose 54 percent in all manufacturing industries, according to the Bureau's Hourly Earnings Index.

Earnings in meat products manufacturing ranged widely from the May 1979 Federal minimum of \$2.90 an hour to more than \$10. Contributing to this relatively high degree of dispersion were broad differences in skill levels for various manufacturing processes. The middle 50 percent of workers in meatpacking earned between \$5.64 and \$8.06 an hour. In prepared meat products, the corresponding range was \$4.84 to \$8.01 an hour.

Regionally, average earnings were highest in the Pacific States (\$8.10 an hour in meatpacking and \$8.37 in prepared meat products) and lowest in the Southeast (\$4.69 in meatpacking and \$4.73 in prepared meat products). Meatpacking workers in the Middle West, slightly more than one-third of the 104,000 production workers studied, averaged \$7.84 an hour. In prepared meat products, the Great Lakes region had the largest employment, with three-tenths of the industry's nearly 49,000 production workers. These workers averaged \$7.03 an hour.

The occupations studied separately represent various pay levels and skills in meatpacking and prepared meat products plants. Hourly averages in meatpacking plants

ranged from \$4.52 for beef stunners who use devices other than pneumatic hammers or captive-bolt pistols<sup>2</sup> to \$9.63 for millwrights. Hourly earnings for the most numerous jobs (1,500 or more incumbents) averaged \$6.71 for night cleaners; \$6.41 for shipping packers; \$6.12 for truckdrivers other than semi-or trailer; \$7.38 for general utility maintenance workers; and \$7.09 for boxers of entire beef carcasses.

In prepared meat products plants, averages ranged from \$5.26 for baggers of boxed beef to \$8.77 an hour for stationary engineers. Shipping packers, the most numerous job studied, averaged \$6.29 an hour. Other numerically important jobs included: night cleaners, \$6.42, and general utility maintenance workers, \$7.77.

Workers in the meatpacking industry were about equally divided between plants employing fewer than 500 workers and those with 500 or more; however, less than one-tenth of the prepared meat products employees worked in plants with 500 workers or more. In both industries, establishments within the scope of the survey employed a minimum of 20 workers, and were, for the most part, located in metropolitan areas. Four-fifths of the meatpacking workers and seven-tenths of the prepared meat products employees were covered by labor-management agreements. The Amalgamated Meat Cutters and Butcher Workmen of North America (AFL-CIO) was the major union. In June 1979, this union merged with the Retail Clerks International Union to form the United Food and Commercial Workers International Union.

Wages tended to be higher in metropolitan areas or union establishments than in smaller communities or nonunion plants. Similarly, employees in large establishments (those with at least 500 workers in meatpacking, and at least 100 workers in prepared meats) and in multiplant establishments averaged higher earnings than employees performing comparable tasks in smaller or single-plant establishments. Pay advantages recorded for such comparisons were typically 20 percent or more above the lower averages.

Nearly every plant surveyed provided paid holidays, paid vacations, and at least part of the cost of life and various health insurance plans. Eight to 10 holidays annually were typical, as were 1 to 5 weeks of vacation pay, depending on years of service.

A comprehensive report (*Industry Wage Survey: Meat Products, May 1979*, Bulletin 2082) is available from the Bureau of Labor Statistics, Washington, D.C. 20212, or its regional offices. □

### FOOTNOTES

<sup>1</sup> For an account of the earlier study, see Harry B. Williams, "Meat industry wages in March 1974," *Monthly Labor Review*, pp. 53-55, December 1975.

<sup>2</sup> These workers stun beef preparatory for slaughtering.

## Cost of living indexes for Americans living abroad

The U.S. Department of State has prepared new indexes of living costs abroad for 19 major foreign cities. The changes in the indexes range from a 15-percent decline for Tokyo and Buenos Aires to a 25-percent increase for Mexico City and Johannesburg. The periods between price survey dates were 2½ to 3 years for Mexico City and Johannesburg, and 5 to 18 months for the other cities.

The indexes of living costs abroad are used to compute post allowances for Americans assigned to foreign posts where living costs, based on an American pattern of living, are significantly higher than in Washington, D.C. The indexes compare the cost in dollars of representative goods and services, excluding housing and education, purchased at foreign posts and in Washington, D.C. Table 1 shows indexes of living costs abroad for 30 major foreign cities.

For Americans in Tokyo, living costs in dollars de-

clined 15 percent, as average prices rose less than in Washington, D.C., and the foreign exchange cost of the yen declined 6 percent. In eight other foreign cities, average prices paid by Americans also rose less than in the United States. In Frankfurt, The Hague, Geneva, and Abu Dhabi, these relative price trends were offset in part by increases in foreign exchange costs. Living costs in dollars, as measured by the local index, declined 8 percent in Abu Dhabi, 6 percent in Frankfurt, 4 percent in Geneva, and 2 percent in The Hague. For Americans in Al Khobar and Stockholm, the relative price trends were fully reflected in lower living costs in dollars (down 6 percent for Al Khobar and 3 percent for Stockholm), because the exchange rates were unchanged. In Brussels and Paris, on the other hand, the relative price trends were almost exactly offset by increased exchange rate costs, and living costs in dollars were unchanged.

For Americans in Caracas, living costs in dollars were unchanged, as prices rose at the same rate as in Washington, D.C., and the exchange rate for the Bolivar was also unchanged relative to the dollar.

In the remaining foreign cities, average prices paid by Americans rose more than in the United States. In Buenos Aires, Canberra, and Mexico City, lower exchange rates offset part of the steeper price trends, while in Hong Kong, Johannesburg, and London, higher exchange rate costs added to living costs in dollars. For Americans in Rome, the exchange rate was unchanged. New local indexes were up 5 percent for Hong Kong, 8–10 percent for Buenos Aires, Canberra, and Rome, 18 percent for London, and about 25 percent for Mexico City and Johannesburg.

For Mexico City, as well as Sao Paulo, living costs in dollars were nevertheless still lower than in Washington, D.C. On the other hand, for Tokyo and the European cities (except Rome), living costs for Americans were 50 to 75 percent higher. It is advisable to check the prevailing exchange rates whenever using the indexes of living costs abroad because the rates are subject to sudden shifts, and different rates would substantially affect living costs in dollars.

The indexes for 165 foreign cities are published in quarterly reports entitled *U.S. Department of State Indexes of Living Costs Abroad and Quarters Allowances*. Data for all cities are published in April, and subsequent revisions are published in July, October, and January. The methods of compiling and using the indexes are explained in *U.S. Department of State Indexes of Living Costs Abroad and Quarters Allowances: A Technical Description*, Report 568 (Bureau of Labor Statistics, 1980). The reports are available on request from the Office of Publications, Bureau of Labor Statistics, Washington, D.C. 20212. □

**Table 1. Indexes of living costs abroad, excluding housing and education, January 1981**

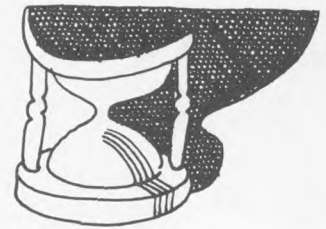
[Washington, D.C. = 100]

Country and city	Survey date	Monetary unit	Rate of exchange per U.S. dollar	Local index
Argentina: Buenos Aires	June 1980	Peso	1836	155
Australia: Canberra	May 1980	Dollar	0.8547	127
Austria: Vienna	Feb. 1980	Shilling	13.3	154
Bahrain: Manama	Nov. 1979	Dinar	0.3800	142
Belgium: Brussels	Mar. 1980	Franc	28.0	157
Brazil: Sao Paulo	Oct. 1980	Cruzeiro	58.3	96
Canada: Ottawa	Nov. 1979	Dollar	1.18	100
China: Beijing	July 1980	Yuan	1.46	96
France: Paris	Mar. 1980	Franc	4.00	168
Germany: Frankfurt	May 1980	Mark	1.76	155
Hong Kong: Hong Kong	June 1980	Dollar	4.95	117
India: New Delhi	July 1979	Rupee	8.11	93
Israel: Tel Aviv	Dec. 1979	Shekel	3.30	123
Italy: Rome	Feb. 1980	Lira	832	125
Japan: Tokyo	Feb. 1980	Yen	226	156
Korea: Seoul	June 1980	Won	587	135
Mexico: Mexico, D.F.	Apr. 1980	Peso	22.7	99
Netherlands: The Hague	Feb. 1980	Guilder	1.98	151
Nigeria: Lagos	Mar. 1980	Naira	0.5774	173
Philippines: Manila	Jan. 1979	Peso	7.38	89
Saudi Arabia: Al Khobar (Dhahran)	May 1980	Riyal	3.33	139
Singapore: Singapore	May 1979	Dollar	2.15	115
South Africa: Johannesburg	June 1980	Rand	0.7634	112
Spain: Madrid	Dec. 1979	Peseta	66.0	124
Sweden: Stockholm	June 1980	Krona	4.18	168
Switzerland: Geneva	May 1980	Franc	1.58	176
United Arab Emirates: Abu Dhabi	Aug. 1980	Dirham	3.66	135
United Kingdom: London	Apr. 1980	Pound	0.4169	154
U.S.S.R.: Moscow	Jan. 1980	Ruble	0.6575	135
Venezuela: Caracas	Oct. 1980	Bolivar	4.28	137

SOURCE: U.S. Department of State, Allowances Staff.



# Major Agreements Expiring Next Month



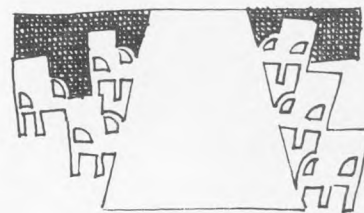
This list of collective bargaining agreements expiring in July is based on contracts on file in the Bureau's Office of Wages and Industrial Relations. The list includes agreements covering 1,000 workers or more.

Employer and location	Industry	Union <sup>1</sup>	Number of workers
Amalgamated Sugar Co. (Idaho & Oregon) . . . . .	Food products . . . . .	Grain Millers . . . . .	1,800
Associated General Contractors of America, Inc., Georgia Branch and 2 others (Georgia)	Construction . . . . .	Carpenters . . . . .	3,000
Bay Area Soft Drink Bottlers Association (California) . . . . .	Food products . . . . .	Teamsters (Ind.) . . . . .	1,200
Braniff Airways, Clerical (Interstate) <sup>2</sup> . . . . .	Air transportation . . . . .	Teamsters (Ind.) . . . . .	3,600
Carborundum Co., 7 Divisions (Niagara Falls, N.Y.) . . . . .	Stone, clay, and glass products . . . . .	Oil, Chemical, and Atomic Workers . . . . .	2,300
Century Brass Products, Inc., Waterbury Division (Connecticut) . . . . .	Primary metals . . . . .	Auto Workers (Ind.) . . . . .	1,650
Delta Airlines, Inc. (Interstate) <sup>2</sup> . . . . .	Air transportation . . . . .	Air Line Pilots . . . . .	3,000
Food Employers Council, Inc., Retail Food, Bakery, Candy, and General Merchandise Agreement (California)	Retail trade . . . . .	Food and Commercial Workers . . . . .	60,150
General Telephone Co. of Ohio . . . . .	Communication . . . . .	Communications Workers . . . . .	2,700
Greater St. Louis Automotive Association and 1 other (Missouri and Illinois)	Retail trade . . . . .	Machinists . . . . .	1,950
International Harvester Co., Solar Group (San Diego, Calif.) . . . . .	Transportation equipment . . . . .	Machinists . . . . .	1,400
Lear Siegler, Inc., Instrument Division (Grand Rapids, Mich.) . . . . .	Instruments . . . . .	Auto Workers (Ind.) . . . . .	1,400
Meijer, Inc. and Subsidiaries (Michigan) . . . . .	Retail trade . . . . .	Food and Commercial Workers . . . . .	8,500
Pacific Maritime Association (California, Oregon, and Washington) . . . . .	Water Transportation . . . . .	Longshoremen and Warehousemen (Ind.) . . . . .	8,400
Southern Illinois Contractors Association . . . . .	Construction . . . . .	Laborers . . . . .	2,000
Trans World Airlines, Flight Attendants (Interstate) <sup>2</sup> . . . . .	Air transportation . . . . .	Independent Airline Union . . . . .	3,200
Union Carbide Corp., Nuclear Division (Paducah, Ky.) . . . . .	Chemicals . . . . .	Oil, Chemical, and Atomic Workers . . . . .	1,400
Union Electric Co. (Interstate) . . . . .	Utilities . . . . .	Operating Engineers . . . . .	1,450
	<b>Government activity</b>	<b>Employee organization<sup>1</sup></b>	
Iowa: Des Moines Independent Community School District, Professional Employees	Education . . . . .	National Education Association (Ind.)	2,300
Michigan: Lansing School District, Board of Education, Teachers . . . . .	Education . . . . .	National Education Association (Ind.)	1,550

<sup>1</sup> Affiliated with AFL-CIO except where noted as independent (Ind.)

<sup>2</sup> Information is from newspaper reports.

# Developments in Industrial Relations



## Union members rebuff negotiators, accept accord

Members of the Association of Western Pulp and Paper Workers approved a contract with six companies in Oregon, Washington, and California, even though the union's negotiators had rejected the proposed terms. Union president Farris Bryson said the 3-year accord fell short of inflationary trends and that the employers had capitalized on the lingering effects of long strikes in 1978 and 1979.

The contract for the 6,700 pulp and paper workers provided for wage increases of 9 percent effective immediately, 90 cents an hour on the first anniversary, and 85 cents on the second. The swing shift differential was increased to 44 cents (from 34 cents) and the graveyard shift differential was increased to 66 cents (from 56 cents) in stages over the contract term.

Other provisions included a 14th paid holiday; 5 weeks of paid vacation after 15 years of service (formerly 16) and 6 weeks after 20 years (formerly 21); and employer payment of all premium cost increases needed to maintain hospital, medical, surgical, dental, and vision care benefits.

Bryson would not speculate on the extent to which the agreement might influence coming settlements with individual companies for 11,000 employees. The unified bargaining by the six companies was a departure from their practice of negotiating individually with the union. The companies are Boise Cascade Corp., Crown Zellerbach Corp., G-P Corp., ITT-Rayonier Inc., Menasha Corp., and Weyerhaeuser Corp.

## Mesta workers give up part of escalator increase

Employees of the Mesta Machine Co.'s West Homestead, Pa., plant approved a new 3-year contract, ending a 45-day walkout. However, Mesta indicated that it was still considering closing the facility, which produces rolling mill equipment for the steel industry, citing a very low volume of orders. The company has a smaller operation in New Castle, Pa.; Mesta lost \$12.1 million

in 1980 and \$4.8 million in 1979.

The settlement with United Steelworkers Local 7174 did not provide for an immediate wage increase. In the second contract year, the workers will receive a 10-cent general increase and a 1-cent increase in the increment between job grades. All employees will receive a flat 30-cent increase in the third year. The existing formula for cost-of-living adjustments was continued, but part of each resulting quarterly increase will be withheld—9 cents in the first contract year, 6 cents in the second, and 3 cents in the third.

There were a number of improvements in insurance benefits, all of which were effective in the second and third years, except for first-year improvements in sickness and accident benefits. There were no changes in retirement benefits, but the contract is subject to reopening on this issue if Mesta shows a profit for three consecutive quarters.

## Pattern-setting contract in cement industry

Lone Star Industries, Inc., and the Cement, Lime and Gypsum Workers negotiated a 3-year contract that set a pattern for 16,000 employees of other cement companies. The Lone Star accord, which covered 1,300 workers, provided for a 65-cent-an-hour wage increase on May 1, 1981, a 20-cent increase on November 1, 1981, 55 cents on May 1, 1982, and 50 cents on May 1, 1983. New employees assigned to the lowest pay grade will start at \$1 an hour below the standard rate for the grade and receive a 25-cent-an-hour increase every 3 months until they attain the standard rate. Lone Star officials said the provision "recognizes the value of the worker's on-the-job experience." Previously, new grade 1 employees started at the standard rate, the approach that still applies to new employees in all other grades.

The cost-of-living calculation rate remained at 1 cent an hour for each 0.3-point movement in the Bureau of Labor Statistics Consumer Price Index for Urban Wage Earners and Clerical Workers, but the clause specifies that the quarterly pay adjustments, which start in the second year, are payable only if the calculated total increase exceeds 50 cents in the second year and 45 cents in the third year. In addition, a new "corridor" concept specified that only that portion of the CPI rise up to 12 percent and that portion in excess of 14 percent will be

"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.

used in calculating adjustments.

Pension improvements included a \$1-increase in the normal rate in each contract year, bringing it to \$20.50 a month for each year of credited service. There also was a \$15.75-a-month increase in the pensions of workers who retired prior to May 1, 1978. Other improvements were in Supplemental Unemployment Benefits and hospital, medical, surgical, and dental benefits.

The other companies that agreed to terms similar to Lone Star included General Portland Inc., Martin Marietta Corp., and Lehigh Stone Co. Overall, the round of bargaining involved 142 facilities throughout the Nation.

### **Apparel workers get pay increase**

More than 200,000 members of the Ladies Garment Workers' union were expected to receive wage increases, a result of cost-of-living wage reopening clauses of contracts negotiated in 1979. The negotiations, which centered in the outerwear industry, began last November when dress workers in the New York City area asked for a wage increase to help offset a 20-percent rise in prices since the inception of their contract. After unsuccessful bargaining, the issue was resolved through binding arbitration.

Arbitrator Milton Ruben decided that a 7-percent wage increase already scheduled for June 1, 1981, should be advanced to March 15, 1981, and increased to 11 percent. This wage improvement was then extended to the other types of apparel production in the New York City area and at various other locations. In a few cases, where the 7-percent increase had been scheduled for July 1981, the 11-percent total increase was made effective in April 1981.

### **Philadelphia-area transit workers end strike**

A 19-day strike affecting 400,000 Philadelphia-area commuters ended when the Southeastern Pennsylvania Transportation Authority and the Transport Workers union negotiated a 2-year contract. Two major issues in the dispute were resolved by retaining provisions barring layoffs and the use of part-time employees. The Transportation Authority wanted to fill about 5 percent of the 5,000 jobs in the bargaining unit with part-time employees who would work during either the morning or the evening rush hours at lower pay and benefit levels than full-time employees. This would have resulted in the layoff of some full-time workers. Currently, about 60 percent of the 4,900 employees are on split shifts, working both rush hour periods.

In exchange for retention of these provisions, the union agreed to somewhat smaller wage increases than it had been seeking. The contract calls for a 2-percent increase effective March 15, 1981, 4 percent on July 5,

1981, and 6.5 percent on March 14, 1982. The existing cost-of-living clause was retained: it provides for increases of up to 12 cents an hour in December of 1981 and 1982, calculated at 1 cent an hour for each 0.4-percent rise in the Bureau of Labor Statistics Consumer Price Index for Urban Wage Earners and Clerical Workers from July to November of the respective years.

The pension for employees retiring under the "30 years and out" provision was increased to \$300 a month plus \$15 (formerly \$12) for each year of service in excess of 30 accrued prior to age 62 and \$20 (formerly \$12) for each subsequent year. Future retirees and their dependents benefit from a new company-financed plan that covers all but \$2 of each prescription drug purchase. The spouse of an employee who had been eligible for retirement at the time of death will now receive a survivor benefit of half the monthly amount the employee would have received if retired, payable for 12 months.

A change in insurance financing provided that the Transportation Authority pays 80 percent of premium costs for the first 24 months after an employee is hired and the full cost thereafter. Previously, this occurred after 30 months of service. Improvements in insurance benefits included a \$1,000-increase in life insurance for employees and \$500 for retirees, bringing the coverages to \$7,000 and \$3,000; a \$10,000-increase in the \$60,000 assault coverage; and coverage of additional hospital treatment procedures. The Transportation Authority's financing of dental benefits was increased to 9 cents an hour, from 5 cents.

### **Debarment procedures against Firestone revoked**

A Department of Labor order barring Firestone Tire & Rubber Co. from doing business with the Federal Government because of alleged employment discrimination has been revoked. A judge in the Federal district court in Beaumont, Tex., held that the Department had erroneously relied on an internal memorandum that "is unreasonable, inconsistent with the regulation it interprets and past agency practice and, thus, entitled to no weight by the court." The judge ruled that the Department would have to repeat the entire contract debarment procedure if it still wanted to prevent Firestone from obtaining government business.

The controversy started in February 1980 when the Department contended that Firestone had failed to develop an acceptable equal employment opportunity plan for its Orange, Tex., facility. After unsuccessful negotiations, the Department issued the debarment order in July 1980. (See *Monthly Labor Review*, September 1980, pp. 60-61.) However, implementation of the order was delayed pending a judicial decision, allowing Firestone to continue to conduct business with the Federal Government.

## High court further defines job bias

The Supreme Court unanimously held that an employer found guilty of job bias does not have the right to force a union to pay part of the damages, even though the discrimination results from provisions of a collective bargaining agreement. The proceedings that led to this decision began in 1970, when Northwest Airlines lost a suit in which it was charged with paying female stewards less than their male counterparts for more than 20 years. In its defense, Northwest said the pay difference resulted from provisions of its contracts with the Transport Workers union (which represented flight attendants for part of the period) and with the Air Line Pilots Association (which represented them during the balance of the period). In accord with this assertion, the airline then sued the unions, claiming that they, as parties to the contracts, should pay part of the damages.

In rejecting Northwest's position, the Supreme court held that neither the Equal Pay Act of 1963 nor the Civil Rights Act of 1964 specifically provides that a party guilty of job bias can seek to have the cost of claims shared with other responsible parties.

The Equal Employment Opportunity Commission, which filed a friend-of-the-court brief, contended that forcing unions to share the burden of damages would reduce the incentive for employers to avoid pay discrimination and that the present policy of separate liability for employers and unions encourages vigorous collective bargaining and efforts to end discrimination.

In another case, the Supreme Court ruled that employers charged with discrimination do not have to prove that a person hired or promoted was better qualified than the person passed over. Instead, the employer need only provide adequate evidence that race or sex was not a factor in the decision.

The case originated when Joyce Burdine, an employee of the Public Service Commission, Texas Department of Community Service, in Austin, charged her employer with sex discrimination. Burdine had been a field services coordinator and had assumed additional duties when the commission's director resigned. Concerned about the commission's alleged inefficiencies, the U.S. Department of Labor threatened to cut off funding unless certain conditions were met. Among these conditions were the appointment of a permanent project director and a complete reorganization. Subsequently, a male employee from another division of the agency was selected to head the commission and, in the reorganiza-

tion process, Burdine and two other employees were fired, while another male employee was retained.

The U.S. District Court for the Western District of Texas found no evidence of sex discrimination. However, the Court of Appeals for the Fifth Circuit reversed the District Court's decision, saying that, although Burdine was not discriminated against when she was not selected as project director, the decision to terminate her employment was discriminatory.

A crucial issue in the case was the degree of proof required of employers in responding to charges initiated under the Civil Rights Act of 1964. A Texas Department of Community Affairs official testified that Burdine was fired because she did not work well with fellow employees.

The unanimous opinion of the Supreme Court, written by Justice Lewis F. Powell Jr., said that although Federal law prohibits discrimination, it does not demand that an employer give preferential treatment to minorities or women; that an employer does not have to prove that its action is lawful, rather the employer need only produce evidence which would allow a judge to conclude that the decision had not been motivated by discriminatory animus.

## Bargaining rights of State employees reaffirmed

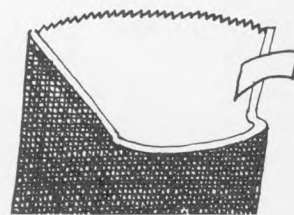
The California Supreme Court has upheld a 1977 law that gave collective bargaining rights to 130,000 State employees whose unions previously had only the right to "meet and confer" with their agencies on salaries and other issues. Implementation of the State Employer-Employee Relations Act had been blocked by the Pacific Legal Foundation, which contended that the Act violated civil service provisions of the State constitution, a position that had been upheld by an appellate court.

In reversing the lower court finding, the State Supreme Court said the Act extended logically from earlier acts that established collective bargaining procedures for teachers and other employees of State-supported schools.

Prior to the 1977 law, the governor and the legislature decided on overall lump-sum amounts for salary increases, which were then allocated among the various job classifications by a personnel board, after discussions with the unions involved.

Although the 1977 law permits collective bargaining, any resulting salary increases are still contingent on appropriation of the required funds by the legislature. The law forbids strikes by covered employees. □

# Book Reviews



## Getting America recharged

*The Zero-Sum Society.* By Lester Thurow. New York, Basic Books, 1980. 230 pp. \$12.95.

What ails America? Why can't we recognize, analyze, and solve our urgent economic problems? Are the obstacles inadequate knowledge or an insufficient will?

Lester Thurow believes that the U.S. economy has gotten flabby. If we cannot quickly spur investment to get back on a fast growth track, the United States is condemned to fall further behind fast growing European nations and the OPEC oil inheritors. The "heart of the problem [is] deciding whose income should fall to make room for more investment" (p. 10). Thurow advocates a reindustrialization fund to channel investment into "sunrise" industries, deregulated energy prices, and the formation of conglomerates. Corporate taxes should be abolished and all taxes indexed for inflation.

America's problems have multiple roots but a single solution. We shifted focus "from international cold war problems to domestic problems" without first adapting our political system "to impose large economic losses explicitly" (p. 9). Domestic problems are contentious because solutions produce American gainers and American losers. Our political system has become more sensitive to all kinds of minority interests. Minority interests have learned that "to be able to delay a program is often to be able to kill it" (p. 13). The fine art of delay continues the economic status quo, because "destructive" economic progress undermines the economic security of some individuals and groups. The result is political and economic paralysis.

How did we lose the ability to get things done? Conservatives argue that high taxes and excessive regulation stifle personal initiative. Simply "returning to the virtues of hard work and free enterprise" will restore rapid economic growth. But government's share of the gross national product (GNP) and the extent of regulation do not universally produce economic stagnation; what happened in Britain did not happen in Germany. The conservative push for simple solutions to complex problems obscures the fact that there are few universal truths in political economy.

Renewing economic growth will require changes. Every change divides the population into gainers, losers, and those unaffected. Thurow believes that zero-sum changes are required to get America moving; in the

short run, economic gains will be offset by economic losses, even though most people will benefit in the long run. Until we recognize that the "heart of the problem [is] a consensus on whose income ought to go down . . . we are paralyzed" (p. 24).

Energy provides a classic illustration of "our fundamental dilemma. "The basic current problem . . . is not scarcity but a cartel that controls the marginal source [and price] of energy" (p. 36). To immediately adopt a free market solution by deregulating prices is to transfer \$150 billion from oil consumers to producers, most of it (\$120 billion) to the *domestic* producers who supply 80 percent of our oil. The gains accrue largely to the richest 10 percent of the population owning 90 percent of all corporate stock; the losses are felt most by the poorest 10 percent spending one-third of their pretax income on energy. Free-market deregulation lost out to regulation which forced domestic oil producers to subsidize imports. The result? Subsidized oil did not encourage Americans to save energy but subsidies made oil importing as profitable as production, discouraging the search for new oil and energy substitutes. The search for substitutes is complicated by the fact that the true cost of pumping a barrel of Saudi Arabian oil is 40 cents, making private investors wary of expensive investments in oil substitutes which can easily be undercut by OPEC. The free market will not automatically produce energy independence but will redistribute income within America, ensuring political paralysis.

Energy paralysis compounds to inflation conundrum. Thurow traces our current inflation back to the excess demand resulting from President Johnson's failure to seek tax increases in 1965-67 to pay for the Vietnam war. Johnson's error was exacerbated by President Nixon's bad judgment (slapping on wage-price controls when restraint policies *were* slowly working) and bad luck (food price inflation and OPEC's tripling of oil prices). From 1973 to 1978, prices rose 46.3 percent.

Is this deeply rooted inflation the source of our economic malaise? Thurow thinks not. Real per capita disposable income rose 17 percent in the boom period, 1966-1972, and 16 percent between 1972 and 1978. Thurow traces the malaise in the latter period to money illusion—the rapid rise in *money* income but the much slower rise in real income. Thurow also observes that inflation can obscure the real source of ever-present income redistributions, for example, did the relative in-

come of college professors slide because of inflation or because too many Ph.D.'s sought to teach too few students? Thurow finds the distribution of money income virtually unchanged *despite* inflation.

Endemic inflation is rooted in the price and wage rigidities of modern economies. Prices fall only after massive excess capacity appears, that is, depression. Thurow traces wage rigidity to his view that the labor market allocates training slots. The "job queue" ranks applicants by the cost of job training. This training can be accomplished only on the job, meaning that workers in place must have seniority protection before they will train newly hired workers who could replace them. Wages are "set in a social process" (p. 58) sensitive to wage differentials and the team nature of work. The result is (money) wage rigidity in an inflexible wage structure, a rigidity reinforced by the spread of indexed wage and price agreements.

Inflation cures are zero-sum games, producing gainers and losers. Tolerating inflation leaves the unprotected further behind. Attacking inflation with restrictive economic policies produces recessions with their unequal impacts. Wage-price controls lock existing wage-price structures in place and require a complex administrative apparatus. Government can attempt to "balance upward price shocks with downward price shocks" (p. 68), for example, deregulation to offset oil price boosts, but there is producer resistance to *massive* downward price movements. The Carter Administration's policy of gradualism—moderately restrictive economics, voluntary wage-price guidelines, and some deregulation—was doomed to fail. Our "fundamental dilemma" is our demand for an inflation cure with no costs.

Rapid economic growth is often hailed as the remedy for a wide range of economic problems. Thurow argues that productivity—output per man-hour—governs our ability to produce and consume. Reducing inflation slows productivity growth because it results in idle capacity. The roots of the productivity dilemma are familiar—"to increase investment someone's share of national income must decline" (p. 77). In addition, we must move capital and labor from dying to expanding industries, or practice "disinvestment." Despite capitalism's "doctrine of failure," the efficient minority do not drive the inefficient majority out of business because the inefficient obtain government protection from efficient competitors.

Salvation resides in government intervention. Government should duplicate agricultural experiment station-type research in other sectors, for the need for better "processes" to make *existing* products (rather than making new ones) is one route to higher productivity that private firms cannot follow for competitive marketing reasons. "Accelerating disinvestment" by using a "national investment committee" to direct funds into

"sunrise industries" will produce a better mix of high productivity firms and industries. Finally, abolition of the corporate income tax and simply taxing all income at progressive rates will increase investment while promoting equity. The problem with these three solutions is straightforward. "Someone's income will have to go down and these losses are going to be substantial. For those that lose, the existence of even larger social gains are irrelevant" (p. 102).

Environmental and regulatory problems are "special interest" distributional issues. Thurow argues that zero economic growth is demanded by the upper middle class in a Maslow-type preference ordering. The distribution issue is central because collective action is necessary to achieve largely unmeasurable benefits. Thurow believes that markets, however imperfect, are the best devices to collect effluent taxes from polluters and price nonrenewable natural resources. Zero economic growth is rejected because "it does not make much sense" (p. 120). Indeed, zero economic growth would change the structure of work and the economy in a way which would leave many poor persons worse off.

"Whatever the overt objective, the implicit objective [of regulations] is always to alter the distribution of income, [thus] no one can say that a regulation is good or bad without a vision of what distribution of income should exist" (p. 123). The United States, still has fewer regulations than most industrialized countries, but our legal-administrative system for enacting and interpreting regulations results in more regulatory conflict. More importantly, we are still absorbing the late 1960's-early 1970's wave of regulations meant to cope with externalities and income security. Thurow provides eight convenient "rules of regulation"—for example, all economies are sets of rules, deregulation redistributes income, regulations arise from real problems—and concludes that our best policy is to abandon most antitrust efforts and concentrate on taxes and subsidies (p-regulations) which influence the production of goods and services.

Government now redistributes 10 percent of the gross national product from one individual to another. Thurow believes that U.S. earnings inequalities tend to increase over time. Since 1960, this trend to inequality was curbed by massive new income transfers (social security, welfare, CETA) and the rise of working wives with low-wage husbands, many employed directly or indirectly by government. In the 1980's, an influx of high-income wives and threatened cutbacks in relatively high-wage government jobs may further increase income inequality.

One way to reverse this drift toward inequality is to revise the tax system. But "taxation requires explicit equity decisions" (p. 167), the type the political system is least capable of making. Thurow believes that real tax reform is stifled by the middle class, fearful that *it* will

lose more from closing loopholes than can be gained from a general tax cut. These middle-class fears arise from the fact that the rich have "so little taxable income, as it is officially defined, that it is impossible to promise substantial income tax reductions for the rest of the population by raising the tax rates of the rich" (p. 169). A more equitable system would tax wealth, which Thurow holds to be generated in a "random walk" lottery process which can neither predict nor repeat winners.

The redistributive mechanisms of the postwar era— income transfers for the poor, direct and indirect government jobs for the middle class, and little or no taxation for wealthy capitalists—are threatened by 1980's inflation, antigovernment sentiments, and tax-cut fever to spur investment. Complicating our remedial efforts is the rise of group demands "not for more but parity" (p. 190). Our individualistic economic and political philosophies are not accustomed to dealing with black, Hispanic, or female group demands for the same income and employment *results* enjoyed by white men. Thurow is pessimistic about our ability to resolve these demands for group justice. Remedial efforts are closing economic gaps slowly while resistance to affirmative action mounts. Group competition for income shares is society's "paradigm zero-sum game" (p. 189).

What is to be done? Thurow advocates deregulation to induce offsetting upward (energy) and downward (transportation) price shocks. He envisions a U.S.A., Inc. composed of conglomerates sensitive to the environment and willing to shift resources *internally* to "sunrise" industries and products. Government would play a series of new roles. A budget surplus would generate funds for public investment, guaranteed jobs, and a system to compensate the losers from economic change. To minimize inequality, the tax system must be reformed, transfer payments increased, and taxes cut for the middle class.

The *Zero-Sum Society* is a call for a changed government role in the economy. Thurow wants government to provide individual safety nets and work for a more "equitable" income distribution but reduce its antitrust and regulatory efforts. The book concludes on a pessimistic note when it argues that our political process cannot make decisions which result in economic losses.

This book deserves much of the attention it receives. Our sociopolitical system does appear paralyzed when it confronts today's economic problems. This paralysis is bad only if we assume that problems will get worse (instead of solving themselves) and that solutions are at hand. Paralysis is easier to understand if one remembers that the few people trying to work on comprehensive reform are likely to slight at least some important areas while the mass of special interest groups willingly abandons the forest for specific trees. Like other comprehen-

sive reformers, Thurow is somewhat uneven, often relying on very casual empiricism to justify a proposal. His proposals may still be valid but the "losers" can be expected to demand more convincing arguments.

Lester Thurow is one of today's most provocative economists. *The Zero-Sum Society* is a well written attempt to sketch our economic problems and solutions. It is well worth reading.

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### The baby boom generation: assessing its impact

*Great Expectations: America and the Baby Boom Generation.* By Landon Y. Jones. New York, Coward, McCann and Geoghegan, 1980. 380 pp. \$15.95.

Demography has become a popular subject of late, along with articles forecasting (1) empty beds (and full ones) in maternity wards (2) job openings (and layoffs) for teachers, and (3) bankruptcy (and glut) in the Social Security Trust Fund. The American public has become acutely aware that a change in the number of births has substantial impact for many years after the fact.

One indication of the recent interest in demographic information is reflected in the new periodical, "American Demographics." "Born" in January 1979, the young magazine now has circulation of about 7,000, primarily corporate managers, market research specialists, and government planners. It takes its place along with the several academic journals in the field. Also, articles on demographic subject now are published regularly in general periodicals and newspapers.

It is against this backdrop that this book by Landon Y. Jones appears. Written in a snappy style, with attention paid both to detail and to the larger picture, the book is at one level a popular history of the United States during 1950–80. In that context, the book can be seen as a nostalgia trip for those who want to recall the music, films, and other developments of the time. And, it is as a social history that the book is at its best; the author has woven together many fascinating strands as it "looks at history through the window of a single generation as it ages."

What is weaker is the central proposition of the book: "No single generation has had more impact on us than the baby boom, and no single person has been untouched. The baby boom is, and will continue to be, the decisive generation of our history."

The author seems to know the weakness of his case; the introduction contains four warnings which effectively dilute his argument at least in its most extreme form. He is aware that: the baby boom is not monolithic; the

baby boom is not the sole cause of all recent change; demography is not necessarily destiny; and the baby boom is not the only generation to register social change today. Yet, after administering these "warnings," he largely ignores them in order to tell a dramatic story.

The story he tells is, indeed, dramatic. It is also comprehensive, covering the rise of the suburbs, trends in child rearing, the educational establishment, the impact of the Vietnam war, the drug culture, and the decline in SAT scores. Unquestionably these developments occurred—what is questionable is how much different they would have been without the baby boom. That question is not easily answered, but Jones has provided his view with conviction and a capacity to entertain.

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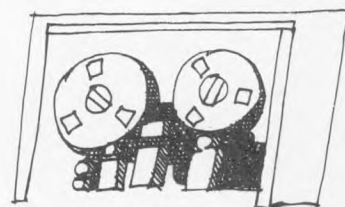
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# Current Labor Statistics



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## 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.

Seasonally adjusted labor force data in tables 2-7 were revised in the February 1981 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, February 1980). 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 ( $\$3/150 \times 100 = \$2$ ). 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 *BLS Handbook of Labor Statistics*, Bulletin 2070, 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 .....	June 5	May	July 2	June	1-11
Producer Price Index .....	June 5	May	July 7	June	26-30
Consumer Price Index .....	June 23	May	July 23	June	22-25
Real earnings .....	June 23	May	July 23	June	14-20
Labor turnover in manufacturing .....	June 30	May	July 29	June	12-13
Work stoppages .....	June 30	May	July 29	June	37
Productivity and costs:					
Nonfarm business and manufacturing .....	.....	.....	July ?	2d quarter	31-34
Major collective bargaining settlements .....	.....	.....	July ?	2d quarter	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 long-term 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 1980.

Year	Total non-institutional 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	57,578
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
1980	166,246	106,821	64.3	104,719	97,270	3,310	93,960	7,448	7.1	59,425

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

[Numbers in thousands]

Employment status	Annual average		1980										1981			
	1979	1980	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	
<b>TOTAL</b>																
Total noninstitutional population <sup>1</sup>	163,620	166,246	165,693	165,886	166,105	166,391	166,578	166,789	167,005	167,201	167,396	167,585	167,747	167,902	168,071	
Total labor force	104,996	106,821	106,519	107,148	106,683	107,119	107,059	107,101	107,288	107,404	107,191	107,668	107,802	108,305	108,851	
Civilian noninstitutional population <sup>1</sup>	161,532	164,143	163,601	163,799	164,013	164,293	164,464	164,667	164,884	165,082	165,272	165,460	165,627	165,774	165,941	
Civilian labor force	102,908	104,719	104,427	105,060	104,591	105,020	104,945	104,980	105,167	105,285	105,067	105,543	105,681	106,177	106,722	
Employed	96,945	97,270	97,225	97,116	96,780	96,999	97,003	97,180	97,206	97,339	97,282	97,696	97,927	98,412	98,976	
Agriculture	3,297	3,310	3,262	3,352	3,232	3,267	3,210	3,399	3,319	3,340	3,394	3,403	3,281	3,276	3,463	
Nonagricultural industries	93,648	93,960	93,963	93,764	93,548	93,732	93,793	93,781	93,887	93,999	93,888	94,294	94,646	95,136	95,513	
Unemployed	5,963	7,448	7,202	7,944	7,811	8,021	7,942	7,800	7,961	7,946	7,785	7,847	7,754	7,764	7,746	
Unemployment rate	5.8	7.1	6.9	7.6	7.5	7.6	7.6	7.4	7.6	7.5	7.4	7.4	7.3	7.3	7.3	
Not in labor force	58,623	59,425	59,174	58,739	59,422	59,273	59,519	59,687	59,717	59,797	60,205	59,917	59,946	59,598	59,219	
<b>Men, 20 years and over</b>																
Civilian noninstitutional population <sup>1</sup>	68,293	69,607	69,329	69,428	69,532	69,664	69,756	69,864	69,987	70,095	70,198	70,320	70,413	70,481	70,574	
Civilian labor force	54,486	55,234	55,127	55,440	55,182	55,344	55,403	55,475	55,495	55,539	55,470	55,443	55,445	55,816	56,013	
Employed	52,264	51,972	51,935	51,871	51,624	51,714	51,791	51,823	51,963	52,007	52,045	52,091	52,134	52,511	52,750	
Agriculture	2,350	2,355	2,334	2,337	2,301	2,306	2,301	2,389	2,351	2,372	2,331	2,378	2,289	2,296	2,409	
Nonagricultural industries	49,913	49,617	49,601	49,494	49,323	49,408	49,490	49,434	49,612	49,635	49,714	49,713	49,844	50,215	50,342	
Unemployed	2,223	3,261	3,192	3,569	3,558	3,630	3,612	3,652	3,532	3,532	3,425	3,352	3,312	3,305	3,262	
Unemployment rate	4.1	5.9	5.8	6.4	6.4	6.6	6.5	6.6	6.4	6.4	6.2	6.0	6.0	5.9	5.8	
Not in labor force	13,807	14,373	14,202	13,988	14,350	14,320	14,353	14,389	14,492	14,556	14,728	14,877	14,968	14,665	14,561	
<b>Women, 20 years and over</b>																
Civilian noninstitutional population <sup>1</sup>	76,860	78,295	77,981	78,090	78,211	78,360	78,473	78,598	78,723	78,842	78,959	79,071	79,175	79,271	79,377	
Civilian labor force	38,910	40,243	40,098	40,193	40,182	40,383	40,523	40,317	40,486	40,629	40,570	40,942	41,090	41,293	41,481	
Employed	36,698	37,696	37,597	37,600	37,613	37,728	37,890	37,804	37,754	37,909	37,820	38,191	38,410	38,567	38,760	
Agriculture	591	575	560	598	550	564	555	592	576	574	665	621	615	606	603	
Nonagricultural industries	36,107	37,120	37,037	37,002	37,063	37,164	37,335	37,212	37,178	37,335	37,155	37,570	37,794	37,961	38,157	
Unemployed	2,213	2,547	2,501	2,593	2,569	2,655	2,633	2,513	2,732	2,720	2,750	2,750	2,680	2,725	2,721	
Unemployment rate	5.7	6.3	6.2	6.5	6.4	6.6	6.5	6.2	6.7	6.7	6.8	6.7	6.5	6.6	6.6	
Not in labor force	37,949	38,052	37,883	37,897	38,029	37,977	37,950	38,281	38,237	38,213	38,389	38,129	38,085	37,978	37,896	
<b>Both sexes, 16-19 years</b>																
Civilian noninstitutional population <sup>1</sup>	16,379	16,242	16,291	16,281	16,271	16,268	16,235	16,205	16,174	16,145	16,114	16,069	16,039	16,022	15,991	
Civilian labor force	9,512	9,242	9,202	9,427	9,227	9,293	9,019	9,188	9,186	9,117	9,027	9,158	9,146	9,068	9,228	
Employed	7,984	7,603	7,693	7,645	7,543	7,557	7,322	7,553	7,489	7,423	7,417	7,414	7,384	7,334	7,465	
Agriculture	356	380	368	377	381	397	354	418	392	394	398	404	376	374	451	
Nonagricultural industries	7,628	7,223	7,325	7,268	7,162	7,160	6,968	7,135	7,097	7,029	7,019	7,010	7,008	6,960	7,014	
Unemployed	1,528	1,640	1,509	1,782	1,684	1,736	1,697	1,635	1,697	1,694	1,610	1,744	1,762	1,734	1,763	
Unemployment rate	16.1	17.7	16.4	18.9	18.3	18.7	18.8	18.5	18.5	18.6	17.8	19.0	19.3	19.1	19.1	
Not in labor force	6,867	7,000	7,089	6,854	7,044	6,975	7,216	7,017	6,988	7,028	7,087	6,911	6,893	6,954	6,763	
<b>White</b>																
Civilian noninstitutional population <sup>1</sup>	141,614	143,657	143,254	143,403	143,565	143,770	143,900	144,051	144,211	144,359	144,500	144,651	144,774	144,882	145,006	
Civilian labor force	90,602	92,171	92,044	92,501	92,134	92,335	92,288	92,317	92,516	92,562	92,383	92,832	93,035	93,313	93,860	
Employed	86,025	86,380	86,389	86,251	86,007	86,075	86,067	86,307	86,371	86,409	86,377	86,620	86,940	87,291	87,791	
Unemployed	4,577	5,790	5,655	6,250	6,127	6,260	6,221	6,010	6,145	6,153	6,006	6,213	6,095	6,022	6,069	
Unemployment rate	5.1	6.3	6.1	6.8	6.7	6.8	6.7	6.5	6.6	6.6	6.5	6.7	6.6	6.5	6.5	
Not in labor force	51,011	51,486	51,210	50,902	51,431	51,435	51,612	51,734	51,695	51,797	52,117	51,819	51,739	51,569	51,146	
<b>Black and other</b>																
Civilian noninstitutional population <sup>1</sup>	19,918	20,486	20,346	20,395	20,448	20,523	20,564	20,617	20,673	20,723	20,771	20,809	20,853	20,892	20,936	
Civilian labor force	12,306	12,548	12,401	12,546	12,491	12,661	12,630	12,677	12,686	12,706	12,668	12,684	12,598	12,765	12,899	
Employed	10,920	10,890	10,838	10,842	10,809	10,902	10,902	10,894	10,884	10,922	10,895	11,051	10,942	11,020	11,193	
Unemployed	1,386	1,658	1,563	1,704	1,682	1,759	1,728	1,783	1,802	1,784	1,773	1,634	1,655	1,745	1,706	
Unemployment rate	11.3	13.2	12.6	13.6	13.5	13.9	13.7	14.1	14.2	14.0	14.0	12.9	13.1	13.7	13.2	
Not in labor force	7,612	7,938	7,945	7,849	7,957	7,862	7,934	7,940	7,987	8,017	8,103	8,125	8,255	8,127	8,037	

<sup>1</sup>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 1980.

### 3. Selected employment indicators, seasonally adjusted

[Number in thousands]

Selected categories	Annual average		1980									1981			
	1979	1980	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
<b>CHARACTERISTIC</b>															
Total employed, 16 years and over	96,945	97,270	97,225	97,116	96,780	96,999	97,003	97,180	97,206	97,339	97,282	97,696	97,927	98,412	98,976
Men	56,499	55,988	56,054	55,914	55,597	55,678	55,589	55,754	55,881	55,897	55,920	56,012	56,045	56,383	56,688
Women	40,446	41,283	41,171	41,202	41,183	41,321	41,414	41,426	41,325	41,442	41,362	41,684	41,882	42,029	42,288
Married men, spouse present	39,090	38,302	38,373	38,197	38,220	38,049	37,987	38,027	38,142	38,167	38,231	38,182	38,113	38,365	38,510
Married women, spouse present	22,724	23,097	23,094	23,145	23,131	23,118	23,126	23,027	22,993	23,065	23,063	23,352	23,356	23,513	23,529
<b>OCCUPATION</b>															
White-collar workers	49,342	50,809	50,465	50,627	50,836	51,023	51,307	51,074	51,101	51,148	51,065	51,594	51,698	51,746	51,801
Professional and technical	15,050	15,613	15,528	15,540	15,682	15,717	15,751	15,540	15,780	15,863	15,810	15,965	15,813	15,827	15,754
Managers and administrators, except farm	10,516	10,919	10,773	10,877	10,901	10,999	11,109	11,007	10,979	11,016	11,009	11,363	11,488	11,565	11,444
Salesworkers	6,163	6,172	6,048	6,072	6,046	6,130	6,140	6,316	6,277	6,155	6,175	6,265	6,271	6,220	6,145
Clerical workers	17,613	18,105	18,116	18,138	18,207	18,177	18,307	18,211	18,065	18,114	18,071	18,001	18,125	18,135	18,457
Blue-collar workers	32,066	30,800	31,120	30,800	30,443	30,276	30,232	30,436	30,521	30,550	30,373	30,338	30,446	30,594	31,156
Craft and kindred workers	12,880	12,529	12,713	12,551	12,357	12,403	12,346	12,490	12,485	12,424	12,337	12,306	12,386	12,605	12,624
Operatives, except transport	10,909	10,346	10,450	10,379	10,233	10,189	10,147	10,202	10,210	10,247	10,194	10,331	10,390	10,189	10,524
Transport equipment operatives	3,612	3,468	3,495	3,458	3,429	3,354	3,478	3,434	3,443	3,429	3,402	3,322	3,361	3,363	3,411
Nonfarm laborers	4,665	4,456	4,462	4,412	4,424	4,330	4,261	4,310	4,383	4,450	4,440	4,380	4,309	4,437	4,596
Service workers	12,834	12,958	13,009	12,947	12,941	13,017	12,928	12,943	12,891	12,888	12,982	12,946	13,070	13,279	13,255
Farmworkers	2,703	2,704	2,682	2,730	2,625	2,694	2,620	2,757	2,735	2,729	2,804	2,737	2,662	2,679	2,834
<b>MAJOR INDUSTRY AND CLASS OF WORKER</b>															
<b>Agriculture:</b>															
Wage-and-salary workers	1,413	1,384	1,377	1,396	1,369	1,360	1,282	1,417	1,363	1,417	1,411	1,465	1,336	1,338	1,524
Self-employed workers	1,580	1,628	1,602	1,642	1,606	1,631	1,640	1,688	1,640	1,612	1,655	1,615	1,610	1,615	1,648
Unpaid family workers	304	297	287	292	278	295	280	309	325	324	305	284	325	312	290
<b>Nonagricultural industries:</b>															
Wage-and-salary workers	86,540	86,706	86,789	86,722	86,370	86,432	86,490	86,395	86,587	86,643	86,513	87,125	87,236	87,870	88,195
Government	15,369	15,624	15,635	15,720	15,817	15,718	15,531	15,575	15,597	15,651	15,653	15,738	15,589	15,685	15,628
Private industries	71,171	71,081	71,154	71,002	70,553	70,714	70,959	70,820	70,990	70,992	70,860	71,387	71,647	72,185	72,567
Private households	1,240	1,166	1,151	1,197	1,204	1,230	1,196	1,125	1,144	1,148	1,110	1,197	1,176	1,235	1,241
Other industries	69,931	69,915	70,003	69,805	69,349	69,484	69,763	69,695	69,846	69,844	69,750	70,190	70,471	70,949	71,327
Self-employed workers	6,652	6,850	6,804	6,698	6,728	6,801	6,881	6,977	7,005	6,943	6,973	6,839	6,923	6,896	7,021
Unpaid family workers	455	404	363	406	445	426	403	416	417	405	396	422	371	354	306
<b>PERSONS AT WORK<sup>1</sup></b>															
Nonagricultural industries	88,133	88,325	88,041	87,974	87,994	87,431	88,195	88,246	88,488	88,694	88,468	89,499	89,441	89,583	89,202
Full-time schedules	72,647	72,022	71,986	71,501	71,454	70,825	71,526	71,929	72,071	72,265	72,131	72,807	72,945	72,875	72,761
Part time for economic reasons	3,281	3,965	3,803	4,276	3,969	4,086	4,143	4,183	4,220	4,176	4,218	4,474	4,145	4,227	4,044
Usually work full time	1,325	1,669	1,680	1,998	1,734	1,794	1,709	1,701	1,685	1,620	1,647	1,698	1,622	1,638	1,517
Usually work part time	1,956	2,296	2,123	2,278	2,235	2,292	2,434	2,482	2,535	2,556	2,571	2,776	2,523	2,589	2,527
Part time for noneconomic reasons	12,205	12,338	12,252	12,197	12,571	12,520	12,526	12,134	12,197	12,253	12,119	12,218	12,351	12,481	12,397

<sup>1</sup>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 1980.

**4. Selected unemployment indicators, seasonally adjusted**

[Unemployment rates]

Selected categories	Annual average		1980									1981			
	1979	1980	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
<b>CHARACTERISTIC</b>															
Total, 16 years and over	5.8	7.1	6.9	7.6	7.5	7.6	7.6	7.4	7.6	7.5	7.4	7.4	7.3	7.3	7.3
Men, 20 years and over	4.1	5.9	5.8	6.4	6.4	6.6	6.5	6.6	6.4	6.4	6.2	6.0	6.0	5.9	5.8
Women, 20 years and over	5.7	6.3	6.2	6.5	6.4	6.6	6.5	6.2	6.7	6.7	6.8	6.7	6.5	6.6	6.6
Both sexes, 16-19 years	16.1	17.7	16.4	18.9	18.3	18.7	18.8	17.8	18.5	18.6	17.8	19.0	19.3	19.1	19.1
White, total	5.1	6.3	6.1	6.8	6.7	6.8	6.7	6.5	6.6	6.6	6.5	6.7	6.6	6.5	6.5
Men, 20 years and over	3.6	5.2	5.2	5.8	5.7	5.8	5.8	5.8	5.7	5.7	5.5	5.5	5.4	5.4	5.2
Women, 20 years and over	5.0	5.6	5.5	5.7	5.7	5.8	5.8	5.5	5.8	5.8	5.9	6.0	5.7	5.6	5.7
Both sexes, 16-19 years	13.9	14.8	14.8	17.1	16.1	16.5	16.6	15.1	16.0	16.4	15.4	16.8	17.4	16.9	17.2
Black and other, total	11.3	13.2	12.6	13.6	13.5	13.9	13.7	14.1	14.2	14.0	14.0	12.9	13.1	13.7	13.2
Men, 20 years and over	8.4	11.4	10.8	11.7	12.2	12.5	12.5	13.2	12.1	12.0	11.6	10.5	10.8	10.8	10.6
Women, 20 years and over	10.1	11.1	11.1	11.6	10.9	11.3	10.9	10.6	12.3	12.2	12.3	11.0	11.9	12.6	11.8
Both sexes, 16-19 years	33.5	35.8	31.8	35.3	34.8	35.9	37.6	37.8	37.4	36.6	37.5	36.5	35.4	37.3	36.1
Married men, spouse present	2.7	4.2	4.0	4.6	4.6	4.9	4.8	4.7	4.6	4.4	4.3	4.2	4.1	4.1	3.8
Married women, spouse present	5.1	5.8	5.7	6.1	6.0	6.1	6.0	5.7	6.0	5.9	5.8	6.2	5.8	6.0	5.9
Women who head families	8.3	9.1	9.0	8.3	8.5	8.8	9.0	9.0	10.2	9.9	10.4	10.5	9.6	9.4	9.8
Full-time workers	5.3	6.8	6.5	7.3	7.2	7.4	7.3	7.3	7.3	7.4	7.3	7.1	7.1	7.1	6.9
Part-time workers	8.7	8.7	8.8	9.0	8.8	8.8	8.7	8.7	9.1	8.6	8.2	9.2	9.1	9.0	9.0
Unemployed 15 weeks and over	1.2	1.7	1.5	1.6	1.7	1.8	2.0	2.2	2.2	2.2	2.3	2.2	2.1	2.1	2.0
Labor force time lost <sup>1</sup>	6.3	7.9	7.6	8.6	8.1	8.4	8.3	8.2	8.4	8.3	8.2	8.2	8.1	8.1	8.2
<b>OCCUPATION</b>															
White-collar workers	3.3	3.7	3.7	3.8	3.7	3.7	3.7	3.8	3.9	3.9	4.0	3.9	3.7	3.9	4.0
Professional and technical	2.4	2.5	2.4	2.6	2.5	2.4	2.4	2.5	2.6	2.5	2.6	2.8	2.6	2.7	3.2
Managers and administrators, except farm	1.9	2.4	2.6	2.6	2.5	2.6	2.5	2.4	2.5	2.4	2.5	2.4	2.4	2.6	2.4
Salesworkers	3.9	4.4	4.5	4.4	4.4	4.2	4.2	4.3	4.6	4.8	4.7	4.4	4.0	3.8	4.0
Clerical workers	4.6	5.3	5.1	5.3	5.2	5.4	5.4	5.4	5.6	5.6	5.8	5.7	5.3	5.9	5.6
Blue-collar workers	6.9	10.0	9.6	10.9	11.1	11.3	11.1	10.8	10.8	10.7	10.5	10.2	10.1	9.8	9.6
Craft and kindred workers	4.5	6.6	6.5	7.5	7.5	7.2	7.6	7.4	7.1	7.1	7.1	6.8	7.2	7.1	6.8
Operatives, except transport	8.4	12.2	11.6	13.7	13.4	14.4	13.3	13.0	13.2	13.0	12.9	12.1	11.9	11.3	11.5
Transport equipment operatives	5.4	8.8	8.4	8.7	10.0	10.0	9.8	10.4	10.6	10.6	8.8	9.1	8.3	9.3	8.1
Nonfarm laborers	10.8	14.6	14.1	14.9	15.7	15.8	16.1	15.2	15.3	15.0	14.8	15.0	14.9	14.1	13.8
Service workers	7.1	7.9	7.8	8.2	8.1	8.3	8.5	8.1	8.3	8.3	7.8	8.0	8.7	8.1	8.5
Farmworkers	3.8	4.4	4.8	4.7	4.5	4.6	5.5	4.3	4.4	4.0	4.0	5.0	4.7	5.1	3.7
<b>INDUSTRY</b>															
Nonagricultural private wage-and-salary workers <sup>2</sup>	5.7	7.4	7.0	8.0	8.0	8.0	8.0	7.8	7.8	7.8	7.7	7.5	7.5	7.3	7.2
Construction	10.2	14.2	14.5	16.6	15.6	15.8	17.3	15.9	14.6	14.8	13.8	13.3	13.2	14.7	14.4
Manufacturing	5.5	8.5	7.9	9.7	9.7	9.8	9.3	9.2	9.2	8.9	8.8	8.4	8.4	8.0	7.4
Durable goods	5.0	8.9	8.3	10.4	10.9	10.7	10.1	10.0	9.5	9.0	9.0	8.3	8.5	7.9	7.3
Nondurable goods	6.4	7.9	7.3	8.6	7.9	8.5	8.0	7.9	8.9	8.6	8.5	8.5	8.2	8.3	7.6
Transportation and public utilities	3.7	4.9	4.7	5.0	5.1	5.6	5.6	5.3	5.3	4.9	4.9	5.8	5.5	6.4	5.7
Wholesale and retail trade	6.5	7.4	7.0	7.5	7.7	7.6	7.7	7.7	7.8	8.2	8.3	7.6	7.6	7.3	7.3
Finance and service industries	4.9	5.3	5.1	5.6	5.6	5.6	5.5	5.4	5.6	5.5	5.5	5.8	6.0	5.6	5.9
Government workers	3.7	4.1	4.3	4.2	3.5	4.1	4.0	4.1	4.4	4.2	4.1	4.4	4.3	4.6	4.9
Agricultural wage-and-salary workers	9.1	10.8	11.7	11.4	10.4	10.8	13.2	10.7	11.1	10.1	10.6	11.5	12.1	11.9	9.1

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

<sup>2</sup> Includes mining, not shown separately.

NOTE: The monthly data in this table have been revised to reflect seasonal experience through 1980.



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

Sex and age	Annual average		1980									1981			
	1979	1980	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Total, 16 years and over	5.8	7.1	6.9	7.6	7.5	7.6	7.6	7.4	7.6	7.5	7.4	7.4	7.3	7.3	7.3
16 to 19 years	16.1	17.7	16.4	18.9	18.3	18.7	18.8	17.8	18.5	18.6	17.8	19.0	19.3	19.1	19.1
16 to 17 years	18.1	20.0	19.0	21.2	20.0	20.5	22.1	20.1	20.9	21.4	19.9	21.0	21.4	21.3	22.0
18 to 19 years	14.6	16.1	14.5	17.4	17.6	17.4	16.5	16.0	16.7	16.5	16.4	17.5	17.9	17.7	17.2
20 to 24 years	9.0	11.5	11.3	12.5	12.1	12.1	12.0	12.3	12.1	11.7	11.9	11.9	11.8	11.7	12.1
25 years and over	3.9	5.0	5.0	5.3	5.4	5.5	5.4	5.4	5.4	5.4	5.3	5.3	5.1	5.2	5.0
25 to 54 years	4.1	5.4	5.3	5.6	5.8	5.9	5.9	5.9	5.9	5.9	5.8	5.7	5.5	5.5	5.4
55 years and over	3.0	3.3	3.3	3.4	3.3	3.4	3.4	3.4	3.4	3.3	3.5	3.5	3.6	3.7	3.3
Men, 16 years and over	5.1	6.9	6.7	7.5	7.5	7.6	7.6	7.6	7.4	7.4	7.2	7.2	7.1	7.0	6.9
16 to 19 years	15.8	18.2	16.3	19.4	19.1	19.5	19.9	18.9	19.8	19.8	19.0	20.3	20.1	19.5	19.3
16 to 17 years	17.9	20.4	18.8	21.5	21.5	20.9	23.7	21.2	21.8	22.3	20.5	23.0	22.1	21.1	22.7
18 to 19 years	14.2	16.7	14.4	17.6	18.8	18.4	17.1	16.9	18.1	17.8	17.8	18.5	18.7	18.6	17.0
20 to 24 years	8.6	12.5	12.3	13.5	13.4	13.2	13.6	13.5	13.8	13.2	12.5	12.8	12.7	13.0	13.2
25 years and over	3.3	4.7	4.7	5.1	5.2	5.4	5.3	5.4	5.1	5.1	4.9	4.9	4.8	4.7	4.6
25 to 54 years	3.4	5.1	4.9	5.4	5.6	5.8	5.7	6.0	5.6	5.6	5.4	5.2	5.2	5.1	4.9
55 years and over	2.9	3.3	3.3	3.4	3.6	3.6	3.6	3.5	3.3	3.3	3.3	3.4	3.4	3.2	3.1
Women, 16 years and over	6.8	7.4	7.2	7.6	7.4	7.7	7.6	7.2	7.7	7.7	7.7	7.7	7.6	7.7	7.7
16 to 19 years	16.4	17.2	16.5	18.3	17.3	17.7	17.6	16.6	17.0	17.2	16.5	17.5	18.4	18.7	18.9
16 to 17 years	18.3	19.5	19.3	20.9	18.3	20.1	20.2	18.8	19.8	20.3	19.3	18.7	20.5	21.6	21.1
18 to 19 years	15.0	15.6	14.8	17.2	16.3	16.2	15.9	15.1	15.1	15.1	14.8	16.4	17.0	16.5	17.4
20 to 24 years	9.6	10.3	10.1	11.3	10.6	10.9	10.2	10.2	10.6	10.8	10.8	10.8	10.8	10.1	10.9
25 years and over	4.8	5.5	5.4	5.5	5.5	5.7	5.7	5.4	5.9	5.8	5.9	5.8	5.6	5.9	5.6
25 to 54 years	5.2	5.9	5.8	6.0	6.0	6.1	6.2	5.9	6.4	6.2	6.3	6.3	5.9	6.2	6.0
55 years and over	3.2	3.2	3.3	3.3	2.9	3.1	3.1	3.3	3.4	3.4	3.9	3.6	3.9	4.5	3.7

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

[Numbers in thousands]

Reason for unemployment	1980									1981			
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
<b>NUMBER OF UNEMPLOYED</b>													
Lost last job	3,581	4,164	4,468	4,364	4,319	4,387	4,240	4,229	4,226	3,847	3,896	3,846	3,819
On layoff	1,422	1,771	1,954	1,832	1,699	1,744	1,692	1,453	1,470	1,258	1,267	1,299	1,280
Other job losers	2,159	2,393	2,514	2,532	2,620	2,643	2,548	2,776	2,756	2,590	2,629	2,547	2,539
Left last job	905	930	887	866	890	855	870	897	813	907	884	863	854
Reentered labor force	1,909	1,975	1,834	1,868	1,883	1,844	2,013	1,896	1,869	2,039	1,970	2,040	2,017
Seeking first job	752	871	872	893	870	862	880	890	868	1,000	928	986	987
<b>PERCENT DISTRIBUTION</b>													
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	50.1	52.4	55.4	54.6	54.2	55.2	53.0	53.5	54.3	49.4	50.7	49.7	49.7
On layoff	19.9	22.3	24.2	22.9	21.3	21.9	21.1	18.4	18.9	16.1	16.5	16.8	16.7
Other job losers	30.2	30.1	31.2	31.7	32.9	33.3	31.8	35.1	35.4	33.2	34.2	32.9	33.1
Job leavers	12.7	11.7	11.0	10.8	11.2	10.8	10.9	11.3	10.5	11.6	11.5	11.2	11.1
Reentrants	26.7	24.9	22.8	23.4	23.6	23.2	25.2	24.0	24.0	26.2	25.7	26.4	26.3
New entrants	10.5	11.0	10.8	11.2	10.9	10.8	11.0	11.2	11.2	12.8	12.1	12.7	12.9
<b>UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE</b>													
Job losers	3.4	4.0	4.3	4.2	4.1	4.2	4.0	4.0	4.0	3.6	3.7	3.6	3.6
Job leavers	.9	.9	.8	.8	.8	.8	.8	.9	.8	.9	.8	.8	.8
Reentrants	1.8	1.9	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9
New entrants	.7	.8	.8	.9	.8	.8	.8	.8	.8	.9	.9	.9	.9

### 7. Duration of unemployment, seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		1980									1981			
	1979	1980	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Less than 5 weeks	2,869	3,208	3,258	3,714	3,281	3,317	3,255	3,042	3,186	3,108	3,115	3,259	3,203	3,209	3,074
5 to 14 weeks	1,892	2,411	2,373	2,589	2,812	2,649	2,533	2,586	2,500	2,524	2,217	2,264	2,324	2,356	2,462
15 weeks and over	1,202	1,829	1,599	1,686	1,777	1,935	2,150	2,295	2,292	2,329	2,378	2,358	2,250	2,192	2,105
15 to 26 weeks	684	1,028	931	980	1,024	1,093	1,239	1,366	1,256	1,231	1,231	1,079	992	1,013	1,001
27 weeks and over	518	802	668	706	753	842	911	929	1,036	1,116	1,147	1,279	1,257	1,179	1,104
Average (mean) duration, in weeks	10.9	11.9	11.2	10.6	11.7	11.8	12.5	13.0	13.3	13.6	13.5	14.4	14.4	14.0	13.7

NOTE: The monthly data in these tables have been revised to reflect seasonal experience through 1980.

## 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, 1950-80

[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
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 <sup>1</sup>	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
1980	90,657	1,025	4,469	20,361	5,156	20,573	5,281	15,292	5,162	17,741	16,170	2,866	13,304

<sup>1</sup>Data include Alaska and Hawaii beginning in 1959.

## 9. Employment by State

[Nonagricultural payroll data, in thousands]

State	Mar. 1980	Feb. 1981	Mar. 1981 <sup>P</sup>	State	Mar. 1980	Feb. 1981	Mar. 1981 <sup>P</sup>
Alabama	1,361.9	1,353.3	1,349.9	Montana	274.6	275.2	276.4
Alaska	159.3	162.8	164.9	Nebraska	629.5	618.9	621.0
Arizona	1,017.4	1,018.4	1,020.8	Nevada	394.7	402.8	407.9
Arkansas	746.7	740.6	745.5	New Hampshire	378.9	383.0	384.0
California	9,853.3	9,825.2	9,870.6	New Jersey	3,022.1	3,015.1	3,034.5
Colorado	1,240.8	1,256.6	1,260.5	New Mexico	463.5	458.6	461.2
Connecticut	1,418.1	1,420.6	1,428.6	New York	7,155.7	7,116.3	7,160.9
Delaware	255.5	250.2	254.5	North Carolina	2,381.4	2,378.1	2,385.7
District of Columbia	610.0	609.9	611.7	North Dakota	240.5	240.9	241.9
Florida	3,574.0	3,734.9	3,750.5	Ohio	4,413.3	4,297.0	4,331.5
Georgia	2,146.4	2,150.7	2,162.9	Oklahoma	1,121.3	1,153.2	1,165.3
Hawaii	407.9	404.6	406.4	Oregon	1,055.1	994.8	1,005.7
Idaho	329.0	325.8	325.5	Pennsylvania	4,753.5	4,661.6	4,688.7
Illinois	4,884.9	4,762.4	4,786.4	Rhode Island	393.1	391.7	392.9
Indiana	2,143.4	2,110.9	2,110.9	South Carolina	1,190.7	1,180.5	1,184.6
Iowa	1,116.1	1,069.9	1,076.2	South Dakota	235.6	229.0	229.8
Kansas	952.3	942.6	950.2	Tennessee	1,789.7	1,705.2	1,715.4
Kentucky	1,198.7	1,194.0	1,195.6	Texas	5,761.5	6,014.7	6,048.6
Louisiana	1,550.0	1,610.5	1,616.7	Utah	549.9	552.6	556.1
Maine	406.2	409.1	408.7	Vermont	198.6	204.6	204.2
Maryland	1,685.8	1,665.2	1,686.0	Virginia	2,097.5	2,106.7	2,117.5
Massachusetts <sup>1</sup>	2,633.2	2,629.1	2,633.2	Washington	1,602.4	1,582.0	1,589.9
Michigan	3,491.2	3,420.9	3,440.7	West Virginia	639.9	634.1	637.4
Minnesota	1,753.2	1,723.2	1,733.5	Wisconsin	1,932.4	1,910.1	1,909.6
Mississippi	834.1	825.6	826.0	Wyoming	200.8	200.7	200.8
Missouri	1,974.0	1,920.7	1,943.9	Virgin Islands	37.8	36.6	36.9

<sup>1</sup> Revised series, not strictly comparable with previously published data.

**10. Employment by industry division and major manufacturing group**

[Nonagricultural payroll data, in thousands]

Industry division and group	Annual average		1980										1981			
	1979	1980	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar. <sup>P</sup>	Apr. <sup>P</sup>	
<b>TOTAL</b> .....	89,886	90,657	90,761	90,849	91,049	89,820	90,072	90,729	91,332	91,693	91,846	90,082	90,245	90,828	91,365	
<b>MINING</b> .....	960	1,025	1,006	1,024	1,049	1,030	1,029	1,035	1,039	1,055	1,064	1,069	1,073	1,088	944	
<b>CONSTRUCTION</b> .....	4,483	4,469	4,311	4,471	4,611	4,633	4,712	4,690	4,700	4,618	4,431	4,080	3,985	4,129	4,271	
<b>MANUFACTURING</b> .....	21,062	20,361	20,533	20,250	20,201	19,754	20,044	20,269	20,302	20,368	20,316	20,155	20,149	20,254	20,345	
Production workers .....	15,085	14,277	14,466	14,172	14,093	13,657	13,947	14,182	14,204	14,260	14,199	14,047	14,046	14,138	14,228	
<b>Durable goods</b> .....	12,772	12,215	12,414	12,150	12,065	11,774	11,827	12,028	12,100	12,195	12,186	12,110	12,082	12,165	12,234	
Production workers .....	9,120	8,468	8,672	8,450	8,307	8,025	8,075	8,281	8,343	8,430	8,413	8,340	8,317	8,389	8,461	
Lumber and wood products .....	766.1	686.9	678.4	654.8	668.0	666.8	683.0	689.2	686.9	682.8	679.8	668.1	667.8	670.2	676.2	
Furniture and fixtures .....	499.3	473.7	488.7	469.1	460.8	438.1	454.6	466.6	470.3	473.8	475.8	475.0	476.9	477.4	481.2	
Stone, clay, and glass products .....	709.7	667.9	675.5	668.1	666.2	656.0	663.2	667.4	665.5	667.2	654.3	637.4	632.9	642.2	654.6	
Primary metal industries .....	1,250.2	1,133.3	1,193.8	1,149.8	1,112.9	1,055.5	1,059.6	1,081.8	1,093.1	1,111.9	1,124.6	1,125.5	1,125.7	1,129.5	1,133.7	
Fabricated metal products .....	1,723.7	1,627.1	1,671.4	1,619.8	1,598.6	1,538.4	1,567.6	1,594.5	1,604.6	1,615.6	1,614.6	1,598.6	1,598.8	1,605.2	1,614.1	
Machinery, except electrical .....	2,481.6	2,488.8	2,523.5	2,509.3	2,486.1	2,440.2	2,417.8	2,449.6	2,456.7	2,475.2	2,492.5	2,491.3	2,498.2	2,505.1	2,506.1	
Electric and electronic equipment .....	2,124.3	2,126.3	2,156.2	2,120.2	2,102.2	2,066.5	2,080.7	2,103.5	2,119.3	2,134.9	2,143.9	2,140.1	2,138.5	2,148.1	2,160.3	
Transportation equipment .....	2,082.8	1,889.8	1,891.1	1,835.1	1,847.0	1,810.2	1,785.4	1,857.9	1,885.7	1,912.2	1,888.4	1,872.0	1,840.8	1,878.5	1,897.4	
Instruments and related products .....	688.9	699.7	702.2	699.4	702.9	698.3	697.8	695.5	695.9	700.6	702.2	700.6	697.9	699.6	698.3	
Miscellaneous manufacturing .....	445.6	422.0	433.0	424.6	420.1	404.0	417.6	422.2	422.1	421.2	410.1	401.5	406.3	409.1	412.5	
<b>Nondurable goods</b> .....	8,290	8,146	8,119	8,100	8,136	7,980	8,217	8,241	8,202	8,173	8,130	8,045	8,067	8,089	8,111	
Production workers .....	5,965	5,809	5,794	5,763	5,786	5,632	5,872	5,901	5,861	5,830	5,786	5,707	5,729	5,749	5,767	
Food and kindred products .....	1,728.1	1,690.4	1,626.2	1,638.5	1,676.8	1,709.5	1,795.3	1,790.5	1,738.8	1,686.6	1,667.2	1,625.0	1,617.3	1,609.0	1,605.7	
Tobacco manufactures .....	69.9	69.0	62.9	62.7	64.6	63.9	71.3	75.5	76.4	75.6	74.7	72.0	70.4	68.0	66.3	
Textile mill products .....	888.5	863.8	882.1	870.6	853.2	820.6	854.1	854.7	856.8	859.4	858.3	852.5	853.0	853.5	856.0	
Apparel and other textile products .....	1,312.5	1,296.5	1,304.2	1,299.0	1,310.5	1,236.9	1,299.9	1,309.2	1,307.5	1,302.3	1,281.7	1,266.2	1,284.6	1,299.6	1,306.9	
Paper and allied products .....	706.7	693.9	698.8	692.4	695.0	682.3	688.7	688.6	690.7	691.6	691.7	687.9	687.9	689.0	690.7	
Printing and publishing .....	1,239.5	1,271.7	1,270.4	1,267.8	1,271.3	1,264.5	1,264.3	1,267.9	1,272.2	1,281.0	1,291.6	1,281.7	1,286.8	1,291.9	1,292.5	
Chemicals and allied products .....	1,110.7	1,112.6	1,120.6	1,119.5	1,122.2	1,112.0	1,108.4	1,106.3	1,104.9	1,106.1	1,107.6	1,106.3	1,108.8	1,113.1	1,114.9	
Petroleum and coal products .....	210.0	197.3	173.6	203.4	209.1	212.0	212.4	210.9	210.4	210.2	207.8	207.6	206.6	208.5	209.9	
Rubber and miscellaneous plastics products .....	775.6	710.7	737.2	702.4	688.5	659.3	680.4	695.8	703.4	708.3	710.3	708.9	711.2	714.5	722.8	
Leather and leather products .....	248.0	240.1	243.3	243.2	244.7	218.9	242.6	241.1	240.6	241.5	238.8	237.1	239.9	241.4	244.9	
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	5,141	5,156	5,147	5,167	5,185	5,145	5,144	5,170	5,178	5,158	5,163	5,075	5,089	5,101	5,114	
<b>WHOLESALE AND RETAIL TRADE</b> .....	20,269	20,573	20,373	20,497	20,562	20,506	20,579	20,692	20,708	20,937	21,313	20,555	20,396	20,494	20,710	
<b>WHOLESALE TRADE</b> .....	5,204	5,281	5,265	5,263	5,287	5,278	5,284	5,291	5,313	5,313	5,318	5,278	5,275	5,295	5,321	
<b>RETAIL TRADE</b> .....	15,066	15,292	15,108	15,234	15,275	15,228	15,295	15,401	15,395	15,624	15,995	15,277	15,121	15,199	15,389	
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	4,974	5,162	5,104	5,137	5,201	5,229	5,232	5,194	5,204	5,215	5,229	5,226	5,235	5,253	5,284	
<b>SERVICES</b> .....	17,078	17,741	17,636	17,747	17,846	17,973	17,966	17,915	17,949	17,951	17,978	17,788	17,945	18,107	18,296	
<b>GOVERNMENT</b> .....	15,920	16,170	16,651	16,556	16,394	15,550	15,366	15,764	16,252	16,391	16,352	16,134	16,373	16,402	16,401	
Federal .....	2,773	2,866	3,103	2,963	2,995	2,949	2,862	2,754	2,774	2,776	2,782	2,773	2,774	2,772	2,776	
State and local .....	13,147	13,304	13,548	13,593	13,399	12,601	12,504	13,010	13,478	13,615	13,570	13,361	13,599	13,630	13,625	

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

[Nonagricultural payroll data, in thousands]

Industry division and group	1980									1981			
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar. <sup>P</sup>	Apr. <sup>P</sup>
<b>TOTAL</b> .....	90,951	90,468	90,047	89,867	90,142	90,384	90,710	90,961	91,125	91,481	91,652	91,714	91,494
<b>MINING</b> .....	1,012	1,023	1,029	1,013	1,013	1,028	1,037	1,054	1,072	1,086	1,095	1,102	950
<b>CONSTRUCTION</b> .....	4,467	4,436	4,379	4,322	4,359	4,404	4,442	4,475	4,508	4,610	4,518	4,508	4,426
<b>MANUFACTURING</b> .....	20,642	20,286	20,014	19,828	19,940	20,044	20,157	20,282	20,312	20,345	20,374	20,400	20,455
Production workers .....	14,550	14,186	13,931	13,759	13,872	13,972	14,065	14,179	14,195	14,219	14,240	14,266	14,311
<b>Durable goods</b> .....	12,442	12,140	11,947	11,819	11,860	11,955	12,043	12,146	12,160	12,188	12,196	12,226	12,264
Production workers .....	8,686	8,386	8,205	8,084	8,123	8,212	8,288	8,381	8,386	8,408	8,411	8,441	8,476
Lumber and wood products .....	689	654	648	650	662	674	677	683	688	693	692	690	687
Furniture and fixtures .....	491	472	461	449	456	464	466	469	472	475	477	477	483
Stone, clay, and glass products .....	680	663	647	641	648	655	656	661	660	663	661	663	659
Primary metal industries .....	1,193	1,144	1,096	1,049	1,059	1,074	1,096	1,119	1,133	1,133	1,134	1,135	1,133
Fabricated metal products .....	1,678	1,620	1,584	1,551	1,569	1,587	1,595	1,606	1,608	1,608	1,610	1,612	1,621
Machinery, except electrical .....	2,518	2,517	2,476	2,448	2,437	2,452	2,469	2,475	2,480	2,484	2,491	2,495	2,501
Electric and electronic equipment .....	2,167	2,127	2,094	2,079	2,083	2,091	2,107	2,120	2,135	2,147	2,149	2,157	2,171
Transportation equipment .....	1,885	1,819	1,831	1,839	1,840	1,851	1,873	1,901	1,868	1,866	1,865	1,880	1,892
Instruments and related products .....	703	700	696	698	697	697	697	701	701	702	700	702	699
Miscellaneous manufacturing .....	438	424	414	415	409	410	407	411	415	417	417	415	418
<b>Nondurable goods</b> .....	8,200	8,146	8,067	8,009	8,080	8,089	8,114	8,136	8,152	8,157	8,178	8,174	8,191
Production workers .....	5,864	5,800	5,726	5,675	5,749	5,760	5,777	5,798	5,809	5,811	5,829	5,825	5,835
Food and kindred products .....	1,690	1,691	1,677	1,683	1,690	1,672	1,682	1,686	1,684	1,680	1,685	1,671	1,669
Tobacco manufactures .....	69	70	71	69	67	68	69	71	70	70	71	72	73
Textile mill products .....	884	869	843	833	851	851	856	856	857	858	856	855	858
Apparel and other textile products .....	1,302	1,291	1,287	1,276	1,296	1,299	1,292	1,291	1,291	1,289	1,292	1,297	1,304
Paper and allied products .....	702	692	685	680	682	686	690	692	693	694	696	695	694
Printing and publishing .....	1,272	1,268	1,269	1,266	1,266	1,269	1,272	1,278	1,284	1,284	1,289	1,294	1,294
Chemicals and allied products .....	1,123	1,120	1,112	1,103	1,100	1,104	1,105	1,108	1,112	1,115	1,118	1,118	1,117
Petroleum and coal products .....	175	203	205	207	208	208	209	209	210	213	213	213	212
Rubber and miscellaneous plastics products .....	740	703	681	663	680	692	699	705	711	713	716	717	726
Leather and leather products .....	243	239	237	229	240	240	240	240	240	241	242	242	244
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	5,178	5,167	5,134	5,114	5,129	5,124	5,147	5,132	5,137	5,142	5,156	5,158	5,145
<b>WHOLESALE AND RETAIL TRADE</b> .....	20,531	20,487	20,459	20,506	20,589	20,620	20,641	20,660	20,638	20,762	20,885	20,932	20,808
<b>WHOLESALE TRADE</b> .....	5,286	5,268	5,245	5,247	5,263	5,280	5,292	5,297	5,302	5,315	5,328	5,327	5,342
<b>RETAIL TRADE</b> .....	15,245	15,219	15,214	15,259	15,326	15,340	15,349	15,363	15,336	15,447	15,557	15,605	15,466
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	5,119	5,137	5,150	5,167	5,180	5,194	5,214	5,225	5,245	5,268	5,277	5,285	5,300
<b>SERVICES</b> .....	17,618	17,659	17,652	17,760	17,788	17,861	17,913	17,969	18,068	18,133	18,181	18,216	18,278
<b>GOVERNMENT</b> .....	16,384	16,273	16,230	16,157	16,144	16,109	16,159	16,164	16,145	16,135	16,166	16,113	16,132
Federal .....	3,115	2,960	2,951	2,893	2,828	2,765	2,788	2,790	2,789	2,801	2,794	2,789	2,787
State and local .....	13,269	13,313	13,279	13,264	13,316	13,344	13,371	13,374	13,356	13,334	13,372	13,324	13,345

**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.
<b>Total accessions</b>													
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	3.5	3.8	3.3	3.5	3.1	3.4	3.9	3.8	4.5	4.3	3.6	2.7	2.2
1981	...	3.4	3.0	P3.4	...	...	...	...	...	...	...	...	...
<b>New hires</b>													
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	2.1	2.4	2.2	2.3	2.1	2.1	2.4	2.1	2.5	2.6	2.2	1.6	1.2
1981	...	1.8	1.8	P2.0	...	...	...	...	...	...	...	...	...
<b>Recalls</b>													
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	.8	.7	.5	.5	.5
1980	1.1	1.1	.9	.9	.8	1.0	1.2	1.4	1.7	1.4	1.1	.9	.8
1981	...	1.3	1.0	P1.1	...	...	...	...	...	...	...	...	...
<b>Total separations</b>													
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	4.0	4.1	3.5	3.7	4.7	4.8	4.4	4.2	4.8	4.1	3.7	3.0	3.1
1981	...	3.6	3.1	P3.2	...	...	...	...	...	...	...	...	...
<b>Quits</b>													
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	1.5	1.6	1.5	1.6	1.5	1.5	1.4	1.4	2.2	1.9	1.4	1.1	.9
1981	...	1.2	1.1	P1.2	...	...	...	...	...	...	...	...	...
<b>Layoffs</b>													
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	1.7	1.6	1.2	1.3	2.3	2.5	2.2	2.0	1.7	1.4	1.5	1.3	1.6
1981	...	1.6	1.2	P1.2	...	...	...	...	...	...	...	...	...

**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		
	Mar. 1980	Feb. 1981	Mar. 1981 P	Mar. 1980	Feb. 1981	Mar. 1981 P	Mar. 1980	Feb. 1981	Mar. 1981 P	Mar. 1980	Feb. 1981	Mar. 1981 P	Mar. 1980	Feb. 1981	Mar. 1981 P	Mar. 1980	Feb. 1981	Mar. 1981 P
<b>MANUFACTURING</b>	3.5	3.0	3.4	2.3	1.8	2.0	0.9	1.0	1.1	3.7	3.1	3.2	1.6	1.1	1.2	1.3	1.2	1.2
Seasonally adjusted	3.6	3.6	3.5	2.5	2.3	2.2	...	...	...	4.3	3.8	3.6	1.9	1.5	1.4	1.5	1.4	1.4
<b>Durable goods</b>	3.1	2.8	3.2	2.0	1.6	1.8	.8	1.0	1.1	3.5	2.9	2.9	1.3	.9	1.0	1.4	1.2	1.1
Lumber and wood products	4.4	4.5	5.4	2.9	2.7	3.0	1.3	1.7	2.1	6.4	4.8	4.9	2.3	1.8	2.0	3.2	2.3	2.0
Furniture and fixtures	4.0	3.4	4.0	3.2	2.5	2.9	.7	.7	.9	4.5	3.5	4.0	2.5	1.6	2.0	.9	1.0	1.0
Stone, clay, and glass products	3.9	3.2	4.4	2.0	1.5	1.7	1.7	1.5	2.5	3.8	3.5	3.3	1.3	.9	1.0	1.6	1.9	1.6
Primary metal industries	2.7	2.5	2.6	1.1	.8	1.0	1.2	1.5	1.4	2.7	2.6	2.3	.7	.5	.5	1.2	1.3	1.1
Fabricated metal products	3.6	3.2	3.9	2.3	1.7	2.0	1.0	1.2	1.5	4.0	3.2	3.2	1.5	1.0	1.1	1.6	1.4	1.3
Machinery, except electrical	2.5	2.4	2.4	1.8	1.5	1.6	.4	.7	.6	2.6	2.2	2.1	1.1	.8	.8	.8	.8	.7
Electric and electronic equipment	2.9	2.4	2.7	2.1	1.4	1.8	.4	.6	.6	2.9	2.7	2.4	1.3	.9	1.0	1.6	.9	.6
Transportation equipment	3.1	3.0	...	1.4	1.2	...	1.2	1.4	...	4.1	3.3	...	.9	.8	...	2.3	1.6	...
Instruments and related products	2.8	3.1	2.4	2.4	1.6	1.9	.2	.3	.3	2.3	2.1	2.3	1.2	.9	1.1	.4	.5	.5
Miscellaneous manufacturing	4.6	4.1	4.5	3.0	2.3	2.5	1.4	1.6	1.8	4.8	3.7	3.7	2.0	1.2	1.3	1.8	1.6	1.4
<b>Nondurable goods</b>	4.0	3.2	3.6	2.8	2.1	2.3	1.0	1.0	1.1	4.0	3.3	3.5	2.0	1.4	1.5	1.2	1.3	1.3
Food and kindred products	5.2	3.9	4.5	3.1	2.1	2.4	1.8	1.6	1.8	5.2	4.6	5.0	2.2	1.6	1.6	2.1	2.3	2.5
Tobacco manufacturers	1.9	2.3	...	.7	1.0	...	.5	.8	...	5.4	4.7	...	.4	.6	...	3.7	3.1	...
Textile mill products	4.3	3.0	3.4	3.4	2.1	2.4	.6	.6	.7	4.0	3.0	3.4	2.5	1.5	1.8	.5	.7	.7
Apparel and other products	5.4	4.8	5.3	3.9	2.9	3.3	1.3	1.8	1.8	5.2	4.4	4.9	3.0	2.0	2.2	1.4	1.7	1.9
Paper and allied products	2.4	2.1	2.1	1.6	1.3	1.3	.7	.7	.7	2.8	2.4	2.5	1.0	.7	.8	1.0	1.0	1.0
Printing and publishing	3.1	2.9	3.1	2.7	2.3	2.5	.4	.5	.5	3.1	2.6	2.8	1.8	1.4	1.6	.6	.7	.6
Chemicals and allied products	1.7	1.5	1.7	1.3	1.1	1.2	.3	.3	.3	1.5	1.4	1.5	.7	.5	.6	.3	.4	.3
Petroleum and coal products	2.2	1.7	2.1	1.5	1.4	1.7	.5	.3	.3	2.1	1.7	1.8	.8	.5	.5	.7	.5	.7
Rubber and miscellaneous plastics products	4.1	3.6	4.1	2.9	2.3	2.5	.9	1.1	1.2	4.8	3.6	3.3	2.2	1.3	1.4	1.6	1.4	1.0
Leather and leather products	7.1	4.9	5.5	4.6	3.2	4.0	2.1	1.5	1.3	6.5	4.9	5.1	3.3	2.3	2.7	2.1	1.8	1.5

### 14. Hours and earnings, by industry division, 1950-80

[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		
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 <sup>1</sup>	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
1980	235.10	35.3	6.66	396.58	43.2	9.18	367.78	37.0	9.94	288.62	39.7	7.27
	Transportation and public utilities			Wholesale and retail trade			Finance, insurance, and real estate			Services		
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 <sup>1</sup>				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
1980	352.04	39.6	8.89	175.91	32.1	5.48	209.24	36.2	5.78	190.71	32.6	5.85

<sup>1</sup> Data include Alaska and Hawaii beginning in 1959.

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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		1980									1981			
	1979	1980	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar. <sup>P</sup>	Apr. <sup>P</sup>
<b>TOTAL PRIVATE</b> .....	35.6	35.3	35.0	35.0	35.3	35.3	35.5	35.3	35.3	35.3	35.6	35.1	34.9	35.2	35.1
<b>MINING</b> .....	43.0	43.2	42.8	42.7	43.2	41.9	43.1	43.5	43.5	43.5	44.1	43.5	42.8	42.1	43.0
<b>CONSTRUCTION</b> .....	37.0	37.0	36.7	36.9	37.9	37.7	37.3	37.9	37.9	36.8	37.1	36.4	35.0	37.2	36.8
<b>MANUFACTURING</b> .....	40.2	39.7	39.4	39.3	39.4	38.8	39.3	39.7	39.8	40.2	40.8	39.9	39.5	39.9	39.7
Overtime hours .....	3.3	2.8	2.7	2.5	2.5	2.4	2.7	3.0	2.9	3.1	3.3	2.9	2.8	2.8	2.6
<b>Durable goods</b> .....	40.8	40.2	39.9	39.7	39.8	39.1	39.7	40.2	40.3	40.7	41.5	40.4	39.9	40.5	40.2
Overtime hours .....	3.5	2.8	2.7	2.5	2.4	2.3	2.6	2.9	2.9	3.1	3.4	2.9	2.8	2.8	2.7
Lumber and wood products .....	39.4	38.6	37.1	37.6	38.4	38.2	39.2	39.3	39.2	39.2	39.6	38.8	38.4	39.1	39.1
Furniture and fixtures .....	38.7	38.1	37.9	37.3	37.3	36.2	37.6	38.3	38.5	38.4	39.6	38.1	38.2	38.8	38.1
Stone, clay, and glass products .....	41.5	40.8	40.4	40.6	41.0	40.3	40.7	41.1	41.3	41.4	41.6	40.4	39.6	40.7	40.7
Primary metal industries .....	41.4	40.1	40.6	39.3	39.1	38.6	39.0	39.9	39.9	40.8	41.6	41.1	40.7	41.1	40.9
Fabricated metal products .....	40.7	40.4	40.2	39.9	40.1	39.2	40.0	40.5	40.5	40.9	41.6	40.4	40.0	40.5	40.2
Machinery except electrical .....	41.8	41.1	41.1	40.8	40.8	40.0	40.4	41.0	40.7	41.3	42.2	41.2	40.8	41.2	40.8
Electric and electronic equipment .....	40.3	39.8	39.6	39.3	39.4	38.5	39.2	39.7	39.9	40.4	41.0	40.1	39.6	40.2	39.9
Transportation equipment .....	41.1	40.6	39.8	39.9	39.9	39.5	40.0	40.7	41.1	41.7	43.1	40.9	40.1	41.1	41.1
Instruments and related products .....	40.8	40.5	40.4	40.3	40.5	39.6	39.9	40.1	40.3	40.9	41.2	40.6	40.5	40.6	39.9
Miscellaneous manufacturing .....	38.8	38.7	38.4	38.2	38.3	37.8	38.5	39.1	38.9	39.1	39.5	38.6	38.4	38.9	38.3
<b>Nondurable goods</b> .....	39.3	39.0	38.7	38.7	38.8	38.5	38.9	39.1	39.1	39.3	39.8	39.1	38.8	39.0	38.8
Overtime hours .....	3.1	2.8	2.7	2.5	2.5	2.6	2.9	3.0	2.9	3.0	3.1	2.9	2.8	2.7	2.6
Food and kindred products .....	39.9	39.7	38.9	39.7	39.6	39.9	40.3	40.3	39.7	40.1	40.3	40.0	39.3	39.2	39.4
Tobacco manufactures .....	38.0	38.1	38.2	38.7	38.3	36.5	36.8	38.2	40.1	40.0	38.1	38.5	38.4	37.2	37.0
Textile mill products .....	40.4	40.0	39.9	39.8	39.6	38.5	39.2	39.8	39.9	40.3	40.8	39.9	39.8	40.0	39.5
Apparel and other textile products .....	35.3	35.4	35.3	35.3	35.6	35.3	35.4	35.2	35.4	35.4	35.9	35.2	35.3	35.8	35.0
Paper and allied products .....	42.6	42.3	42.2	41.6	41.7	41.4	41.8	42.4	42.2	42.8	43.7	42.8	42.3	42.4	42.4
Printing and publishing .....	37.5	37.1	36.8	36.9	36.7	36.8	37.2	37.3	37.2	37.2	38.1	37.1	36.8	37.0	36.8
Chemicals and allied products .....	41.9	41.5	41.6	41.3	41.2	40.7	40.9	41.3	41.4	42.0	42.1	41.5	41.5	41.5	41.4
Petroleum and coal products .....	43.8	41.8	41.1	42.3	42.3	42.7	42.2	43.4	43.7	43.6	43.3	42.6	42.5	42.5	43.1
Rubber and miscellaneous plastics products .....	40.5	40.1	39.7	39.0	39.3	38.6	40.0	40.3	40.7	41.1	41.6	40.9	40.1	40.7	40.4
Leather and leather products .....	36.5	36.7	36.7	37.0	37.4	36.4	36.6	36.2	36.5	36.3	36.9	36.6	36.6	37.0	36.5
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	39.9	39.6	39.5	39.3	39.6	39.9	39.7	39.7	39.8	39.7	40.0	39.4	39.5	39.4	39.3
<b>WHOLESALE AND RETAIL TRADE</b> .....	32.6	32.1	31.8	31.9	32.3	32.5	32.7	32.1	32.1	32.0	32.4	31.7	31.7	31.8	32.0
<b>WHOLESALE TRADE</b> .....	38.8	38.5	38.4	38.5	38.2	38.2	38.4	38.5	38.7	38.6	38.9	38.5	38.3	38.5	38.5
<b>RETAIL TRADE</b> .....	30.6	30.1	29.7	29.9	30.4	30.7	30.9	30.1	30.0	30.0	30.5	29.5	29.6	29.7	29.9
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	36.2	36.2	36.2	36.1	36.4	36.2	36.3	36.1	36.3	36.3	36.3	36.3	36.4	36.3	36.1
<b>SERVICES</b> .....	32.7	32.6	32.4	32.3	32.8	33.1	33.1	32.5	32.6	32.6	32.6	32.5	32.6	32.6	32.6



### 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	1980									1981			
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar. <sup>P</sup>	Apr. <sup>P</sup>
<b>TOTAL PRIVATE</b> .....	35.3	35.1	35.0	34.9	35.1	35.2	35.3	35.4	35.4	35.5	35.3	35.3	35.3
<b>MINING</b> .....	42.8	42.7	43.2	41.9	43.1	43.5	43.5	43.5	44.1	43.5	42.8	42.1	43.0
<b>CONSTRUCTION</b> .....	36.7	36.8	37.1	36.8	36.5	37.4	37.0	37.2	37.1	38.5	36.3	37.6	36.8
<b>MANUFACTURING</b> .....	39.8	39.3	39.1	39.0	39.4	39.6	39.7	39.9	40.1	40.4	39.8	40.0	40.1
Overtime hours .....	3.0	2.6	2.4	2.5	2.7	2.7	2.8	2.9	3.1	3.1	2.9	2.8	2.9
<b>Durable goods</b> .....	40.3	39.7	39.5	39.4	39.9	40.1	40.1	40.5	40.6	40.9	40.2	40.5	40.7
Overtime hours .....	3.0	2.5	2.4	2.4	2.6	2.7	2.8	3.0	3.2	3.1	2.9	2.9	3.0
Lumber and wood products .....	37.3	37.5	37.6	38.1	38.9	38.8	38.7	39.3	39.4	40.1	38.9	39.5	39.3
Furniture and fixtures .....	38.5	37.6	37.0	36.6	37.4	38.0	38.0	38.0	38.6	38.9	38.8	38.8	38.7
Stone, clay, and glass products .....	40.6	40.3	40.4	40.2	40.3	40.9	40.9	41.1	41.3	41.6	40.6	40.9	40.9
Primary metal industries .....	40.6	39.2	38.8	38.6	39.2	39.7	40.1	40.9	41.4	41.2	40.8	41.1	40.9
Fabricated metal products .....	40.8	39.9	39.7	39.6	40.1	40.4	40.4	40.6	40.6	40.7	40.4	40.6	40.8
Machinery, except electrical .....	41.5	41.0	40.7	40.6	40.8	40.9	40.7	41.0	41.0	41.3	40.8	41.0	41.3
Electric and electronic equipment .....	39.9	39.5	39.2	39.0	39.4	39.5	39.9	40.0	40.2	40.4	39.7	40.2	40.2
Transportation equipment .....	40.5	39.7	39.5	39.6	40.9	40.6	40.8	41.4	41.3	41.9	40.5	41.1	41.9
Instruments and related products .....	40.7	40.3	40.4	40.1	40.1	40.1	40.2	40.5	40.5	41.0	40.6	40.4	40.2
Miscellaneous manufacturing .....	38.5	38.3	38.2	38.3	38.6	38.9	38.7	38.6	39.0	39.0	38.8	38.7	38.4
<b>Nondurable goods</b> .....	39.1	38.9	38.6	38.5	38.7	38.8	39.0	39.0	39.3	39.7	39.3	39.1	39.2
Overtime hours .....	3.0	2.6	2.5	2.6	2.8	2.7	2.8	2.9	3.0	3.1	3.0	2.8	2.9
Food and kindred products .....	39.6	39.9	39.6	39.7	39.8	39.7	39.6	39.8	39.8	40.3	39.9	39.6	40.1
Tobacco manufactures .....	38.2	38.2	37.3	38.5	37.3	37.5	39.5	38.9	37.2	39.7	39.4	37.2	37.0
Textile mill products .....	40.3	39.7	39.1	38.8	39.2	39.7	39.9	40.0	40.3	40.5	40.1	39.9	39.9
Apparel and other textile products .....	35.8	35.3	35.2	35.1	35.1	35.1	35.3	35.0	35.6	36.0	35.8	35.7	35.5
Paper and allied products .....	42.5	41.7	41.4	41.4	41.8	42.2	42.2	42.6	43.0	43.1	42.8	42.7	42.7
Printing and publishing .....	37.2	37.1	36.8	36.9	37.1	36.9	37.1	36.8	37.4	37.7	37.2	37.0	37.2
Chemicals and allied products .....	41.5	41.3	41.1	40.8	41.0	41.3	41.4	41.7	41.7	41.8	41.8	41.5	41.3
Petroleum and coal products .....	41.1	42.5	42.3	42.2	42.2	42.7	43.1	43.2	43.2	43.4	43.5	42.8	43.1
Rubber and miscellaneous plastics products .....	40.1	39.3	39.2	39.0	40.2	40.1	40.4	40.8	40.9	41.3	40.1	40.6	40.8
Leather and leather products .....	37.3	36.7	36.7	36.1	36.5	36.2	36.5	36.2	36.6	37.1	37.0	37.5	37.1
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	39.5	39.3	39.6	39.9	39.7	39.7	39.8	39.7	40.0	39.4	39.5	39.4	39.3
<b>WHOLESALE AND RETAIL TRADE</b> .....	32.0	32.1	31.9	31.8	32.0	32.1	32.2	32.2	32.1	32.3	32.2	32.1	32.2
<b>WHOLESALE TRADE</b> .....	38.5	38.6	38.0	38.0	38.2	38.5	38.5	38.6	38.7	38.8	38.7	38.6	38.6
<b>RETAIL TRADE</b> .....	30.0	30.1	30.0	29.8	30.1	30.1	30.2	30.2	30.0	30.2	30.2	30.1	30.2
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	36.2	36.1	36.4	36.2	36.3	36.1	36.3	36.3	36.3	36.3	36.4	36.3	36.1
<b>SERVICES</b> .....	32.6	32.5	32.6	32.6	32.6	32.5	32.6	32.7	32.6	32.7	32.8	32.8	32.8

**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		1980									1981			
	1979	1980	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar. <sup>P</sup>	Apr. <sup>P</sup>
<b>TOTAL PRIVATE</b> .....	\$6.16	\$6.66	\$6.53	\$6.57	\$6.61	\$6.64	\$6.68	\$6.80	\$6.86	\$6.93	\$6.94	\$7.03	\$7.07	\$7.10	\$7.11
<b>MINING</b> .....	8.50	9.18	9.10	9.08	9.16	9.08	9.18	9.32	9.37	9.51	9.58	9.78	9.87	9.86	9.71
<b>CONSTRUCTION</b> .....	9.27	9.94	9.69	9.77	9.81	9.91	10.05	10.19	10.25	10.35	10.43	10.42	10.43	10.44	
<b>MANUFACTURING</b> .....	6.69	7.27	7.09	7.13	7.20	7.29	7.30	7.42	7.49	7.59	7.69	7.73	7.74	7.79	7.86
<b>Durable goods</b> .....	7.13	7.76	7.56	7.60	7.69	7.77	7.78	7.93	8.02	8.13	8.24	8.25	8.27	8.33	8.39
Lumber and wood products .....	6.08	6.56	6.28	6.40	6.56	6.72	6.76	6.80	6.76	6.79	6.77	6.82	6.84	6.81	6.86
Furniture and fixtures .....	5.06	5.48	5.39	5.42	5.49	5.52	5.54	5.58	5.59	5.62	5.69	5.70	5.73	5.76	5.81
Stone, clay, and glass products .....	6.85	7.51	7.34	7.45	7.53	7.60	7.64	7.69	7.74	7.82	7.83	7.87	7.89	7.92	8.03
Primary metal industries .....	8.97	9.76	9.53	9.61	9.65	9.82	9.84	9.95	10.09	10.28	10.35	10.36	10.56	10.55	10.68
Fabricated metal products .....	6.84	7.44	7.27	7.32	7.42	7.42	7.48	7.62	7.68	7.75	7.86	7.87	7.90	7.98	8.03
<b>Machinery, except electrical</b> .....	7.32	8.04	7.81	7.91	7.97	8.05	8.07	8.28	8.36	8.44	8.57	8.59	8.63	8.66	8.71
<b>Electric and electronic equipment</b> .....	6.32	6.96	6.79	6.78	6.87	6.96	7.02	7.14	7.20	7.29	7.39	7.42	7.45	7.49	7.53
<b>Transportation equipment</b> .....	8.54	9.34	9.04	9.06	9.24	9.34	9.35	9.56	9.77	9.89	10.11	9.98	9.94	10.09	10.14
<b>Instruments and related products</b> .....	6.17	6.81	6.63	6.72	6.80	6.86	6.86	6.92	6.95	7.02	7.14	7.19	7.20	7.24	7.28
<b>Miscellaneous manufacturing</b> .....	5.03	5.45	5.37	5.40	5.42	5.46	5.46	5.51	5.55	5.60	5.72	5.81	5.81	5.84	5.89
<b>Nondurable goods</b> .....	6.00	6.54	6.36	6.42	6.48	6.60	6.62	6.69	6.72	6.80	6.86	6.94	6.95	6.98	7.04
Food and kindred products .....	6.27	6.86	6.75	6.82	6.84	6.89	6.90	6.93	6.95	7.09	7.13	7.21	7.25	7.30	7.37
Tobacco manufactures .....	6.65	7.66	7.79	7.64	7.97	8.06	7.74	7.42	7.56	7.74	8.00	8.42	8.47	8.54	8.76
Textile mill products .....	4.66	5.07	4.91	4.90	4.93	5.06	5.19	5.24	5.26	5.30	5.33	5.34	5.34	5.35	5.34
Apparel and other textile products .....	4.23	4.57	4.46	4.45	4.51	4.50	4.60	4.70	4.73	4.75	4.81	4.89	4.87	4.94	4.97
Paper and allied products .....	7.13	7.85	7.63	7.65	7.79	7.97	7.99	8.06	8.09	8.18	8.28	8.27	8.28	8.29	8.37
Printing and publishing .....	6.95	7.54	7.34	7.44	7.46	7.53	7.63	7.73	7.75	7.79	7.88	7.92	7.96	8.02	8.02
Chemicals and allied products .....	7.60	8.29	8.12	8.17	8.24	8.35	8.39	8.46	8.52	8.59	8.68	8.73	8.79	8.81	8.90
Petroleum and coal products .....	9.36	10.09	9.83	10.07	10.22	10.25	10.22	10.33	10.39	10.52	10.37	11.06	11.32	11.20	11.28
Rubber and miscellaneous plastics products .....	5.96	6.49	6.30	6.34	6.39	6.48	6.57	6.63	6.70	6.79	6.89	6.96	6.95	6.98	7.07
Leather and leather products .....	4.22	4.57	4.52	4.53	4.54	4.54	4.59	4.61	4.64	4.68	4.73	4.85	4.87	4.89	4.90
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	8.17	8.89	8.71	8.72	8.75	8.90	8.95	9.04	9.20	9.28	9.31	9.35	9.46	9.42	9.52
<b>WHOLESALE AND RETAIL TRADE</b> .....	5.06	5.48	5.40	5.42	5.43	5.48	5.48	5.56	5.59	5.64	5.61	5.80	5.84	5.85	5.86
<b>WHOLESALE TRADE</b> .....	6.39	6.97	6.87	6.89	6.95	6.99	7.01	7.08	7.10	7.20	7.24	7.33	7.39	7.43	7.44
<b>RETAIL TRADE</b> .....	4.53	4.88	4.80	4.82	4.83	4.88	4.89	4.95	4.98	5.02	4.99	5.18	5.20	5.20	5.22
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	5.27	5.78	5.68	5.70	5.77	5.77	5.82	5.87	5.91	6.01	6.00	6.10	6.21	6.18	6.12
<b>SERVICES</b> .....	5.36	5.85	5.75	5.79	5.81	5.79	5.81	5.93	6.00	6.10	6.12	6.22	6.28	6.29	6.29

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

[Seasonally adjusted data: 1967=100]

Industry	1980										1981				Mar. 1981 to Apr. 1981	Apr. 1980 to Apr. 1981
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar. <sup>P</sup>	Apr. <sup>P</sup>			
<b>TOTAL PRIVATE (in current dollars)</b> ..	246.2	248.3	250.9	252.1	254.0	255.4	257.9	260.9	261.9	264.4	266.6	268.5	269.2	0.3	9.3	
Mining .....	283.7	284.2	286.3	285.3	288.9	290.4	294.4	298.7	302.3	306.6	309.2	311.0	309.1	-.6	8.9	
Construction .....	233.0	234.2	235.3	236.7	239.0	239.3	241.6	243.0	245.3	247.8	248.1	249.8	250.2	.2	7.4	
Manufacturing .....	252.4	255.0	258.3	260.6	262.4	264.5	266.6	268.9	270.4	272.6	274.6	276.7	279.2	.9	10.6	
Transportation and public utilities .....	267.2	268.7	270.6	272.8	273.2	274.0	280.2	283.4	284.1	285.9	289.6	291.1	292.7	.5	9.6	
Wholesale and retail trade .....	238.0	239.8	241.8	243.5	245.3	246.5	247.7	250.9	250.9	254.6	256.7	258.6	258.4	-.1	8.6	
Finance, insurance, and real estate .....	224.9	226.3	230.2	229.0	232.7	233.1	234.8	239.3	238.0	240.2	244.1	245.2	241.9	-1.4	7.5	
Services .....	243.0	245.7	248.4	247.6	249.8	251.7	254.2	258.5	259.4	261.3	263.9	265.7	265.6	.....	9.3	
<b>TOTAL PRIVATE (in constant dollars)</b> ..	101.5	101.5	101.6	102.1	102.0	101.5	101.4	101.5	100.8	101.0	100.9	101.0	.....	.....	.....	

### 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		1980										1981			
	1979	1980	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar. <sup>P</sup>	Apr. <sup>P</sup>	
<b>TOTAL PRIVATE</b> .....	\$219.30	\$235.10	\$228.55	\$229.95	\$233.33	\$234.39	\$237.14	\$240.04	\$242.16	\$244.63	\$247.06	\$246.75	\$246.74	\$249.92	\$249.56	
<b>MINING</b> .....	365.50	396.58	389.48	387.72	395.71	380.45	395.66	405.42	407.60	413.69	422.48	425.43	422.44	415.11	417.53	
<b>CONSTRUCTION</b> .....	342.99	367.78	355.62	360.51	371.80	373.61	374.87	386.20	388.48	377.20	383.99	379.65	364.70	388.00	384.19	
<b>MANUFACTURING</b> .....	268.94	288.62	279.35	280.21	283.68	282.85	286.89	294.57	298.10	305.12	313.75	308.43	305.73	310.82	312.04	
<b>Durable goods</b> .....	290.90	311.95	301.64	301.72	306.06	303.81	308.87	318.79	323.21	330.89	341.96	333.30	329.97	337.37	337.28	
Lumber and wood products .....	239.55	253.22	232.99	240.64	251.90	256.70	264.99	267.24	264.99	266.17	268.09	264.62	262.66	266.27	268.23	
Furniture and fixtures .....	195.82	208.79	204.28	202.17	204.78	199.82	208.30	213.71	215.22	215.81	225.32	217.17	218.89	223.49	221.36	
Stone, clay, and glass products .....	284.28	306.41	296.54	302.47	308.73	306.28	310.95	316.06	319.66	323.75	325.73	317.95	312.44	322.34	326.82	
Primary metal industries .....	371.36	391.38	386.92	377.67	377.32	379.05	383.76	397.01	402.59	419.42	430.56	425.80	429.79	433.61	436.81	
Fabricated metal products .....	278.39	300.58	292.25	292.07	297.54	290.86	299.20	308.61	311.04	316.98	326.98	317.95	316.00	323.19	322.81	
<b>Machinery except electrical</b> .....	305.98	330.44	320.21	322.73	325.18	322.00	326.03	339.48	340.25	348.57	361.65	353.91	352.10	356.79	355.37	
<b>Electric and electronic equipment</b> .....	254.70	277.01	268.88	266.45	270.68	267.96	275.18	283.46	287.28	294.52	302.99	297.54	295.02	301.10	300.45	
<b>Transportation equipment</b> .....	350.99	379.20	359.79	361.49	368.68	368.93	374.00	389.09	401.55	412.41	435.74	408.18	398.59	414.70	416.75	
<b>Instruments and related products</b> .....	251.74	275.81	267.85	270.82	275.40	271.66	273.71	277.49	280.09	287.12	294.17	291.91	291.60	293.94	290.47	
<b>Miscellaneous manufacturing</b> .....	195.16	210.92	206.21	206.28	207.59	206.39	210.21	215.44	215.90	218.96	225.94	224.27	223.10	227.18	225.59	
<b>Nondurable goods</b> .....	235.80	255.06	246.13	248.45	251.42	254.10	257.52	261.58	262.75	267.24	273.03	271.35	269.66	272.22	273.15	
Food and kindred products .....	250.17	272.34	262.58	270.75	270.86	274.91	278.07	279.28	275.92	284.31	287.34	288.40	284.93	286.16	290.38	
Tobacco manufactures .....	252.70	291.85	297.58	295.67	305.25	294.19	284.83	283.44	303.16	309.60	304.80	324.17	325.25	317.69	324.12	
Textile mill products .....	188.26	202.80	195.91	195.02	195.23	194.81	203.45	208.55	209.87	213.59	217.46	213.07	212.53	214.00	210.93	
Apparel and other textile products .....	149.32	161.78	157.44	157.09	160.56	158.85	162.84	165.44	167.44	168.15	172.68	172.13	171.91	176.85	173.95	
Paper and allied products .....	303.74	332.06	321.99	318.24	324.84	329.96	333.98	341.74	341.40	350.10	361.84	353.96	350.24	351.50	354.89	
<b>Printing and publishing</b> .....	260.63	279.73	270.11	274.54	273.78	277.10	283.84	288.33	288.30	289.79	300.23	293.83	292.93	296.74	295.14	
<b>Chemicals and allied products</b> .....	318.44	344.04	337.79	337.42	339.49	339.85	343.15	349.40	352.73	360.78	365.43	362.30	364.79	365.62	368.46	
<b>Petroleum and coal products</b> .....	409.97	421.76	404.01	425.96	432.31	437.68	431.28	448.32	454.04	458.67	449.02	471.16	481.10	476.00	486.17	
<b>Rubber and miscellaneous plastics products</b> .....	241.38	260.25	250.11	247.26	251.13	250.13	262.80	267.19	272.69	279.07	286.62	284.66	278.70	284.09	285.63	
<b>Leather and leather products</b> .....	154.03	167.72	165.88	167.61	169.80	165.26	167.99	166.88	169.36	169.88	174.54	177.51	178.24	180.93	178.85	
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	325.98	352.04	344.05	342.70	346.50	355.11	355.32	358.89	366.16	368.42	372.40	368.39	373.67	371.15	374.14	
<b>WHOLESALE AND RETAIL TRADE</b> .....	164.96	175.91	171.72	172.90	175.39	178.10	179.20	178.48	179.44	180.48	181.76	183.86	185.13	186.03	187.52	
<b>WHOLESALE TRADE</b> .....	247.93	268.35	263.81	265.27	265.49	267.02	269.18	272.58	274.77	277.92	281.64	282.21	283.04	286.06	286.44	
<b>RETAIL TRADE</b> .....	138.62	146.89	142.56	144.12	146.83	149.82	151.10	149.00	149.40	150.80	152.20	152.81	153.92	154.44	156.08	
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	190.77	209.24	205.62	205.77	210.03	208.87	211.27	211.91	214.53	218.16	217.80	221.43	226.04	224.33	220.93	
<b>SERVICES</b> .....	175.27	190.71	186.30	187.02	190.57	191.65	192.31	192.73	195.60	198.86	199.51	202.15	204.73	205.05	205.05	

**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
1980	235.10	95.18	188.82	76.45	206.40	83.56	288.62	116.85	225.79	91.41	247.01	100.00
1980: 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	245.89	98.43
September	240.04	95.29	192.28	76.33	210.15	83.43	294.57	116.94	229.82	91.23	251.52	99.85
October	242.16	95.30	193.76	76.25	211.76	83.34	298.10	117.32	232.22	91.39	254.20	100.04
November	244.63	95.41	195.48	76.24	213.63	83.32	305.12	119.00	236.98	92.43	259.52	101.22
December	247.06	95.50	197.18	76.22	215.47	83.29	313.75	121.28	242.60	93.78	265.84	102.76
1981: January	246.75	94.65	195.68	75.06	213.96	82.07	308.43	118.31	237.60	91.14	260.36	99.87
February	246.74	93.64	195.67	74.26	213.95	81.20	305.73	116.03	235.81	89.49	258.40	98.06
March <sup>P</sup>	249.92	94.24	197.88	74.62	216.34	81.58	310.82	117.20	239.11	90.16	262.09	98.83
April <sup>P</sup>	249.56	( <sup>1</sup> )	197.63	( <sup>1</sup> )	216.07	( <sup>1</sup> )	312.04	( <sup>1</sup> )	239.89	( <sup>1</sup> )	262.97	( <sup>1</sup> )

<sup>1</sup>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 Cal-

ulation," **Employment and Earnings and Monthly Report on the Labor Force**, February 1969, pp. 6-13. See also "Spendable Earnings Formulas, 1979-81," **Employment and Earnings**, March 1981, 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 unem-

ployed. 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	1980										1981		
	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
<b>All programs:</b>													
Insured unemployment .....	3,652	3,629	3,680	3,790	4,140	3,911	3,961	3,661	3,726	4,085	4,621	4,264	3,948
<b>State unemployment insurance program:<sup>1</sup></b>													
Initial claims <sup>2</sup> .....	1,705	2,190	2,248	2,319	2,737	1,829	1,702	1,808	1,673	2,544	2,653	1,806	....
Insured unemployment (average weekly volume) .....	3,356	3,278	3,343	3,455	3,692	3,408	3,087	2,903	2,983	3,321	3,844	3,669	3,382
Rate of insured unemployment .....	3.9	3.8	3.9	4.0	4.3	3.9	3.6	3.3	3.4	3.8	4.4	4.2	3.9
Weeks of unemployment compensated .....	13,170	12,689	12,302	12,441	14,398	12,786	11,689	11,443	9,524	12,603	14,228	12,882	....
Average weekly benefit amount for total unemployment .....	\$99.15	\$99.52	\$99.55	\$99.88	\$98.75	\$99.68	\$99.86	\$92.32	\$101.96	\$101.43	\$102.34	\$101.89	....
Total benefits paid .....	\$1,218,231	\$1,232,173	\$1,196,836	\$1,213,595	\$1,397,508	\$1,249,782	\$1,144,885	\$1,125,416	\$1,055,065	\$1,242,957	\$1,416,513	\$1,313,507	....
<b>Unemployment compensation for ex-servicemen:<sup>3</sup></b>													
Initial claims <sup>1</sup> .....	21	21	20	23	27	23	25	23	17	21	19	17	....
Insured unemployment (average weekly volume) .....	63	52	50	45	58	55	56	56	54	55	57	54	51
Weeks of unemployment compensated .....	249	246	220	122	331	244	245	255	216	261	257	221	....
Total benefits paid .....	\$24,928	\$24,518	\$22,025	\$11,761	\$33,342	\$24,560	\$24,804	\$25,880	\$21,024	\$27,015	\$26,646	\$22,517	....
<b>Unemployment compensation for Federal civilian employees:<sup>4</sup></b>													
Initial claims .....	12	11	12	14	17	15	19	21	14	18	22	13	....
Insured unemployment (average weekly volume) .....	30	25	22	20	26	25	29	32	35	37	41	40	36
Weeks of unemployment compensated .....	123	108	88	50	124	93	105	130	118	150	160	148	....
Total benefits paid .....	\$11,901	\$10,323	\$8,280	\$4,665	\$11,296	\$8,707	\$9,699	\$11,917	\$11,365	\$14,184	\$15,432	\$14,573	....
<b>Railroad unemployment insurance:</b>													
Applications .....	5	4	6	24	44	13	10	9	7	11	13	5	5
Insured unemployment (average weekly volume) .....	30	27	23	27	44	39	40	38	38	39	53	50	44
Number of payments .....	68	62	54	55	66	86	89	84	70	83	118	104	115
Average amount of benefit payment .....	\$210.79	\$201.87	\$193.44	\$199.06	\$207.08	\$211.87	\$211.99	\$208.49	\$209.00	\$212.27	\$209.38	\$214.56	\$214.93
Total benefits paid .....	\$13,884	\$13,002	\$9,953	\$10,140	\$13,320	\$17,336	\$18,809	\$17,789	\$14,269	\$18,046	\$20,303	\$22,049	\$23,233
<b>Employment service:<sup>5</sup></b>													
New applications and renewals .....	8,708	10,021	11,446	12,864	14,249	15,431	16,632	....	....	4,476	....	....	....
Nonfarm placements .....	1,853	2,143	2,413	2,730	3,105	3,445	3,827	....	....	871	....	....	....

<sup>1</sup> Initial claims and State insured unemployment include data under the program for Puerto Rican sugarcane workers.

<sup>2</sup> Includes interstate claims for the Virgin Islands. Excludes transition claims under State programs.

<sup>3</sup> Excludes data on claims and payments made jointly with other programs.

<sup>4</sup> Includes the Virgin Islands. Excludes data on claims and payments made jointly with State programs.

<sup>5</sup> Cumulative total for fiscal year (October 1-September 30). Data computed quarterly.

NOTE: Data 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, 1967-80**

[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
1980	247.0	13.5	248.7	8.7	263.2	15.7	177.4	6.6	250.5	17.7	267.2	11.3	203.7	8.5	213.6	8.8

**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)							
	1980				1981		1980				1981			
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
All items	239.8	253.9	256.2	258.4	260.5	263.2	265.1	239.9	254.1	256.4	258.7	260.7	263.5	265.2
Food and beverages	241.0	255.5	257.4	259.3	261.4	263.7	265.0	241.2	256.6	258.7	260.5	262.1	264.3	265.5
Housing	254.5	271.1	273.8	279.9	279.1	280.9	282.6	254.4	271.0	273.7	277.1	279.1	280.7	282.2
Apparel and upkeep	176.0	183.9	184.8	183.9	181.1	182.0	185.1	175.1	182.8	183.3	182.9	180.8	181.8	184.3
Transportation	243.7	256.1	259.0	261.1	264.7	270.9	273.5	244.3	256.6	259.7	261.9	265.7	272.1	274.4
Medical care	260.2	272.8	274.5	275.8	279.5	282.6	284.7	260.9	274.3	276.3	277.6	281.4	284.4	287.0
Entertainment	200.6	210.9	211.2	212.0	214.4	216.7	218.2	199.5	209.2	209.9	210.1	212.2	215.0	216.1
Other goods and services	208.9	221.5	222.8	224.6	226.2	227.4	228.7	208.3	219.9	221.0	223.0	224.4	225.6	226.8
Commodities	228.0	240.7	242.5	243.8	245.4	248.3	249.8	228.1	240.8	242.9	244.3	245.8	248.8	250.2
Commodities less food and beverages	218.4	230.2	232.0	232.9	234.3	237.4	239.0	218.7	230.0	232.0	233.1	234.7	237.9	239.4
Nondurables less food and beverages	237.5	244.4	245.3	246.8	250.2	258.6	263.1	239.8	246.1	247.1	248.8	252.6	261.4	265.7
Durables	203.0	218.1	220.6	221.1	221.0	220.3	219.8	201.2	216.3	218.9	219.7	219.5	218.6	217.8
Services	261.3	277.9	280.9	284.7	287.7	290.1	292.5	261.7	278.6	281.5	285.5	288.4	290.8	293.1
Rent, residential	186.6	197.1	198.3	199.6	200.9	201.9	203.0	186.4	196.8	198.0	199.4	200.6	201.6	202.7
Household services less rent	307.3	327.4	331.9	338.4	342.3	345.4	348.8	309.6	330.3	334.8	341.9	345.5	348.5	351.8
Transportation services	233.4	250.8	253.3	255.8	258.7	260.5	262.5	232.7	249.6	252.2	254.7	257.7	259.7	261.3
Medical care services	281.5	294.8	296.6	297.9	302.1	305.2	307.5	282.2	296.6	298.7	300.0	304.3	307.4	310.2
Other services	212.9	226.7	227.2	228.1	230.4	232.3	233.2	213.5	227.4	227.9	228.4	230.2	232.1	233.0
Special indexes:														
All items less food	237.1	250.9	253.2	255.5	257.6	260.4	262.3	237.3	251.0	253.4	255.7	257.9	260.8	262.6
All items less mortgage interest costs	229.8	243.0	244.5	245.9	247.8	250.6	252.3	230.2	243.5	245.1	246.7	248.5	251.4	252.9
Commodities less food	216.7	228.3	230.0	231.0	232.4	235.4	237.0	216.9	228.2	230.1	231.2	232.7	236.0	237.4
Nondurables less food	232.6	239.6	240.5	242.0	245.3	253.2	257.5	234.8	241.3	242.2	243.9	247.5	255.9	259.9
Nondurables less food and apparel	264.1	271.1	272.1	274.7	281.1	292.4	297.3	266.3	272.8	273.9	276.6	283.0	294.7	299.5
Nondurables	240.3	251.0	252.4	254.1	256.9	262.3	265.2	241.4	252.3	253.8	255.6	258.3	263.8	266.6
Services less rent	275.4	293.2	296.4	300.7	304.2	306.9	309.5	275.9	294.2	297.4	302.0	305.2	307.9	310.4
Services less medical care	257.4	274.2	277.2	281.2	284.2	286.5	288.9	257.7	274.7	277.7	281.9	284.7	287.0	289.2
Domestically produced farm foods	231.2	247.3	249.2	251.1	252.4	254.0	255.4	231.0	247.0	249.1	251.1	252.1	253.9	254.9
Selected beef cuts	270.2	276.8	278.9	276.2	276.2	273.0	270.9	272.3	279.0	280.7	278.4	277.9	275.1	273.9
Energy	355.0	368.0	366.1	370.4	381.7	401.1	409.3	359.6	371.1	369.5	373.7	385.2	405.4	413.7
All items less energy	230.8	245.1	247.7	249.7	251.2	252.5	253.8	230.0	244.5	247.2	249.3	250.6	251.8	252.9
All items less food and energy	225.7	239.7	242.4	244.5	245.7	246.8	248.1	224.6	238.7	241.5	243.6	244.8	245.8	246.9
Commodities less food and energy	196.5	209.4	211.2	211.7	211.5	211.7	212.2	195.1	207.8	209.9	210.6	210.4	210.5	210.7
Energy commodities	398.5	399.1	400.2	404.9	420.4	449.0	460.0	400.3	400.3	401.3	405.9	421.3	450.1	460.9
Services less energy	259.6	274.9	278.6	282.4	285.4	287.6	289.9	260.0	275.6	279.3	283.4	286.2	288.4	290.6
Purchasing power of the consumer dollar, 1967 = \$1	\$0.417	\$0.394	\$0.390	\$0.387	\$0.384	\$0.380	\$0.377	\$0.417	\$0.394	\$0.390	\$0.387	\$0.384	\$0.380	\$0.377

**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)						
	1980				1981			1980				1981		
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
<b>FOOD AND BEVERAGES</b>	241.0	255.5	257.4	259.3	261.4	263.7	265.0	241.2	256.6	258.7	260.5	262.1	264.3	265.5
<b>Food</b>	247.3	262.4	264.5	266.4	268.6	270.8	272.2	247.5	263.4	265.7	267.6	269.2	271.4	272.6
Food at home	243.6	260.0	262.1	263.9	265.6	267.3	268.6	243.1	259.7	262.0	263.9	265.1	267.0	268.1
Cereals and bakery products	238.6	253.7	255.8	258.5	262.9	265.3	266.7	239.3	254.3	256.8	259.5	263.0	265.0	266.5
Cereals and cereal products (12/77 = 100)	126.6	137.5	138.7	140.8	143.2	144.5	145.2	127.7	138.5	139.7	142.3	144.5	145.5	146.5
Flour and prepared flour mixes (12/77 = 100)	126.6	133.2	132.9	133.5	135.9	137.5	138.5	127.5	133.8	133.6	134.4	136.8	137.9	139.4
Cereal (12/77 = 100)	126.0	139.3	141.1	143.8	145.8	146.5	146.9	126.6	139.3	141.5	145.0	147.2	148.0	148.5
Rice, pasta, and cornmeal (12/77 = 100)	127.6	138.9	140.5	143.1	146.0	147.9	148.9	129.4	141.6	142.7	145.8	147.8	149.3	150.5
Bakery products (12/77 = 100)	126.1	133.1	134.3	135.4	137.7	139.0	139.7	126.2	133.3	134.7	135.7	137.5	138.5	139.2
White bread	212.0	222.7	224.9	226.3	229.5	231.4	232.9	212.1	222.6	225.2	226.6	229.4	230.9	231.2
Other breads (12/77 = 100)	125.6	132.5	133.1	134.1	137.1	137.3	137.9	129.3	135.8	137.0	137.9	139.4	140.1	140.3
Fresh biscuits, rolls, and muffins (12/77 = 100)	127.0	133.4	134.6	135.4	137.6	138.9	140.1	124.9	132.1	134.1	135.1	136.4	136.9	138.4
Fresh cakes and cupcakes (12/77 = 100)	124.4	132.5	133.4	135.3	138.5	139.5	140.0	123.2	132.6	133.1	134.2	136.8	138.1	139.5
Cookies (12/77 = 100)	124.4	131.0	133.1	134.9	138.0	139.0	139.7	125.6	132.5	134.5	136.1	139.0	139.8	140.6
Crackers and bread and cracker products (12/77 = 100)	120.2	126.4	125.6	126.9	127.0	128.6	129.1	121.8	126.5	127.7	128.5	128.8	128.6	129.6
Fresh sweetrolls, coffee cake, and donuts (12/77 = 100)	125.0	133.4	135.3	135.9	138.0	140.4	141.1	126.2	134.1	136.1	136.4	138.5	140.0	140.7
Frozen and refrigerated bakery products and fresh pies, tarts, and turnovers (12/77 = 100)	127.9	135.3	136.2	137.5	139.7	141.4	141.9	124.0	130.9	132.4	134.0	135.2	136.3	137.6
Meats, poultry, fish, and eggs	237.8	252.6	254.9	255.7	255.1	252.5	250.5	237.1	251.8	254.2	255.0	254.1	251.6	249.9
Meats, poultry, and fish	243.8	259.0	260.7	259.9	260.6	257.9	256.2	243.0	258.1	259.9	259.2	258.4	257.0	255.7
Meats	245.7	258.7	261.1	260.0	259.7	256.4	254.4	245.0	258.1	260.3	259.3	259.2	256.0	254.2
Beef and veal	269.1	275.8	277.9	275.3	275.3	272.3	270.3	270.8	277.4	279.1	276.8	276.4	273.8	272.9
Ground beef other than canned	275.3	275.8	277.1	276.1	276.3	272.8	269.7	278.7	279.8	280.4	281.0	279.3	275.7	272.9
Chuck roast	286.2	284.4	291.7	288.5	285.3	288.1	284.1	293.4	294.0	301.9	296.0	295.2	298.6	295.6
Round roast	244.2	250.6	251.2	245.7	250.0	248.0	243.9	244.5	251.1	249.9	246.6	249.6	247.5	248.8
Round steak	254.2	258.9	263.8	260.2	262.4	259.0	256.1	251.1	257.9	261.8	257.6	255.5	254.7	253.3
Sirloin steak	254.3	270.7	271.8	267.6	264.9	262.0	259.8	256.0	272.8	274.9	269.7	266.3	263.5	264.5
Other beef and veal (12/77 = 100)	153.8	161.0	161.8	160.4	160.3	157.7	157.8	153.7	160.3	160.3	159.2	159.5	156.9	156.7
Pork	202.6	225.8	228.6	229.1	228.2	223.6	221.6	203.0	225.8	228.5	228.8	228.5	223.2	221.3
Bacon	187.6	224.7	229.5	231.9	228.1	221.7	218.5	189.4	226.0	232.3	234.1	232.5	225.7	221.6
Chops	190.7	207.8	208.5	208.7	211.6	210.3	209.3	190.5	207.3	204.8	206.8	210.2	207.6	206.9
Ham other than canned (12/77 = 100)	95.8	105.5	107.9	107.8	104.1	100.0	98.7	94.7	103.5	106.0	105.7	102.2	98.2	96.3
Sausage	257.6	282.4	283.5	285.6	287.8	282.3	281.0	259.8	283.2	285.9	287.2	288.5	282.0	282.7
Canned ham	219.3	232.5	237.7	238.4	241.1	238.0	236.6	217.4	235.2	242.2	242.6	243.3	240.6	237.9
Other pork (12/77 = 100)	113.6	127.6	128.4	127.6	127.4	125.4	124.2	113.7	127.9	128.8	127.4	127.9	125.0	124.3
Other meats	245.8	259.4	261.8	262.8	262.9	260.8	258.5	241.5	255.8	259.0	259.4	260.4	259.1	256.0
Frankfurters	244.6	260.9	262.6	264.0	262.5	259.4	257.8	242.8	260.3	262.6	263.4	262.6	261.0	257.2
Bologna, liverwurst, and salami (12/77 = 100)	135.5	146.5	148.4	149.1	151.2	149.4	147.0	132.2	143.6	145.7	145.2	148.0	146.0	144.7
Other lunchmeats (12/77 = 100)	121.8	127.8	129.7	129.9	130.3	129.8	128.1	118.8	125.5	127.5	127.7	128.1	128.6	126.4
Lamb and organ meats (12/77 = 100)	142.3	146.1	146.1	146.6	145.0	144.1	144.7	144.3	146.5	147.7	148.5	147.8	146.5	146.0
Poultry	180.7	209.1	204.1	202.7	202.4	203.7	201.6	177.4	205.4	201.4	201.1	199.2	201.3	200.6
Fresh whole chicken	179.5	216.7	208.7	206.9	202.5	207.0	203.1	172.5	210.5	203.5	202.2	197.2	201.7	200.9
Fresh and frozen chicken parts (12/77 = 100)	116.8	134.7	131.8	131.6	132.7	131.9	131.6	116.3	133.5	131.6	132.2	131.3	131.9	130.1
Other poultry (12/77 = 100)	118.2	128.7	128.0	126.6	128.7	128.5	127.6	117.7	127.1	126.5	126.2	127.9	127.8	128.9
Fish and seafood	322.6	336.6	343.0	346.9	358.0	355.0	358.8	320.2	333.8	340.0	343.1	350.0	349.5	351.5
Canned fish and seafood (12/77 = 100)	120.4	133.9	136.0	136.4	137.4	138.0	138.9	119.5	131.2	133.5	133.7	135.3	135.9	136.2
Fresh and frozen fish and seafood (12/77 = 100)	124.3	124.8	127.5	129.6	135.7	133.5	135.3	123.5	124.6	127.0	128.8	130.2	131.4	132.5
Eggs	164.5	175.3	185.2	206.6	190.2	188.2	180.5	164.3	174.4	185.7	206.6	192.0	187.0	180.5
Dairy products	220.3	232.7	235.4	238.0	240.1	242.1	242.6	221.1	233.1	235.9	238.8	240.7	242.5	242.7
Fresh milk and cream (12/77 = 100)	124.1	129.1	130.4	131.9	133.0	134.0	134.3	124.2	129.1	130.4	132.2	133.4	134.1	134.1
Fresh whole milk	204.0	211.3	213.3	216.2	218.2	219.3	219.9	203.8	211.0	213.0	216.5	218.5	219.3	219.4
Other fresh milk and cream (12/77 = 100)	122.7	129.1	130.5	131.4	132.1	134.2	134.4	123.1	129.5	131.0	131.9	132.9	134.4	134.5
Processed dairy products (12/77 = 100)	125.1	134.9	136.9	138.2	139.6	140.8	141.1	126.2	135.8	137.9	139.2	140.1	141.6	141.8
Butter	218.3	238.9	241.5	241.0	242.7	242.2	243.0	220.9	242.5	244.4	244.1	246.5	246.0	246.4
Cheese (12/77 = 100)	124.9	133.4	135.9	137.0	138.2	139.2	139.8	125.5	133.8	136.2	137.4	138.3	139.6	140.0
Ice cream and related products (12/77 = 100)	125.1	138.0	139.1	141.4	143.6	145.9	145.3	127.2	139.1	140.9	143.2	144.3	146.8	146.1
Other dairy products (12/77 = 100)	121.6	129.0	130.6	132.4	133.3	134.5	135.1	121.9	129.4	131.9	133.1	132.9	135.0	136.1
Fruits and vegetables	232.4	254.2	253.3	255.6	257.6	267.3	278.2	230.1	252.3	251.4	253.9	255.1	266.5	275.0
Fresh fruits and vegetables	229.9	262.3	258.3	262.0	263.9	278.1	293.9	227.4	259.6	255.7	260.2	260.3	277.6	289.4
Fresh fruits	245.4	272.9	258.6	251.8	245.6	256.8	265.2	245.4	270.4	255.5	248.6	241.1	254.4	259.0
Apples	250.2	242.2	213.5	218.8	220.8	217.1	227.9	249.0	243.7	213.0	216.9	216.8	218.2	225.7
Bananas	243.9	233.4	235.7	244.1	237.8	256.9	264.1	240.8	230.2	232.0	239.2	229.9	249.4	258.8
Oranges	238.1	312.9	316.6	299.3	272.9	284.9	287.4	240.9	301.5	300.4	287.0	258.9	269.4	268.4
Other fresh fruits (12/77 = 100)	127.4	145.4	134.9	128.6	127.8	135.9	141.1	126.9	145.6	136.4	129.2	128.4	137.9	139.9
Fresh vegetables	215.5	252.4	258.0	271.5	281.1	298.0	320.8	211.3	249.9	256.0	270.9	278.7	298.7	316.9
Potatoes	203.3	295.6	293.0	297.7	326.1	350.2	363.9	200.3	292.0	289.9	298.0	322.9	347.1	359.6
Lettuce	208.3	249.1	273.5	255.3	234.2	220.4	225.2	203.8	241.3	267.2	253.8	229.9	225.6	219.3
Tomatoes	201.4	237.3	192.2	206.1	247.2	312.8	367.8	197.2	235.6	188.9	204.5	239.8	308.6	354.0
Other fresh vegetables (12/77 = 100)	125.4	129.7	139.6	156.3	157.8	163.5	177.0	123.0	129.6	140.0	156.2	156.9	164.8	177.1
Processed fruits and vegetables	237.2	247												



### 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)							
	1980				1981		1980				1981			
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
<b>FOOD AND BEVERAGES — Continued</b>														
<b>Food — Continued</b>														
Food at home — Continued														
Fruits and vegetables — Continued														
Cut corn and canned beans except lima (12/77=100)	116.0	122.5	124.1	124.5	126.0	128.2	128.4	115.4	120.9	121.8	122.8	124.5	126.5	126.3
Other canned and dried vegetables (12/77=100)	114.8	120.3	121.5	122.9	123.4	124.7	126.4	112.3	118.5	120.3	121.0	122.1	123.5	125.3
Other foods at home	292.0	311.5	314.8	317.1	320.5	323.0	324.1	290.9	311.7	315.7	317.8	320.8	323.6	325.2
Sugar and sweets	313.5	369.0	381.3	386.3	385.4	385.4	383.2	314.1	369.8	383.9	388.9	387.3	387.7	384.6
Candy and chewing gum (12/77=100)	123.8	134.7	135.7	136.9	138.6	141.1	142.8	123.9	135.4	136.8	137.4	139.4	142.0	143.6
Sugar and artificial sweeteners (12/77=100)	153.0	209.4	225.9	230.3	222.8	217.7	209.7	153.8	209.5	225.9	231.4	223.4	217.9	209.6
Other sweets (12/77=100)	120.4	131.5	132.5	133.7	137.1	137.7	139.3	119.3	129.2	131.9	133.1	135.5	137.3	138.2
Fats and oils (12/77=100)	236.8	246.0	247.4	251.9	260.4	267.3	268.9	236.8	247.0	248.2	252.6	261.8	268.9	270.5
Margarine	248.8	254.2	254.9	253.6	256.9	256.8	255.7	248.3	256.6	256.9	254.6	257.4	258.3	257.7
Nondairy substitutes and peanut butter (12/77=100)	117.9	125.6	127.4	139.6	156.0	171.8	179.3	118.5	125.5	128.0	139.9	156.4	172.7	180.0
Other fats, oils, and salad dressings (12/77=100)	123.7	128.5	129.0	129.1	130.3	131.0	129.9	123.4	128.7	128.8	129.1	131.0	131.4	130.3
Nonalcoholic beverages	387.1	404.9	405.5	405.2	409.7	411.9	412.2	384.4	405.8	407.8	407.4	410.7	413.6	415.4
Cola drinks, excluding diet cola	259.3	280.4	284.0	285.2	290.8	295.3	295.9	255.4	279.6	283.6	284.0	288.2	293.4	295.4
Carbonated drinks, including diet cola (12/77=100)	123.5	133.9	133.8	134.8	137.5	140.1	140.5	121.1	131.8	133.2	133.5	135.0	137.8	138.7
Roasted coffee	437.6	411.8	399.2	389.7	380.7	364.9	359.4	432.3	409.3	395.5	386.2	376.4	360.3	355.0
Freeze dried and instant coffee	381.7	368.1	364.9	356.5	354.6	345.3	340.8	380.3	366.3	364.0	358.1	355.8	347.0	343.9
Other noncarbonated drinks (12/77=100)	118.6	125.8	126.7	127.5	129.1	130.8	132.4	118.1	125.3	126.2	127.7	129.6	130.9	132.7
Other prepared foods	224.1	236.6	239.9	242.4	244.9	246.9	249.4	224.0	236.9	240.4	242.8	245.1	247.1	250.0
Canned and packaged soup (12/77=100)	118.0	124.1	125.1	127.2	128.1	128.7	128.1	117.6	124.9	125.6	128.0	127.9	129.3	129.2
Frozen prepared foods (12/77=100)	128.2	133.9	136.6	137.6	138.6	140.0	142.3	127.1	131.9	133.5	134.8	136.9	137.8	139.6
Snacks (12/77=100)	124.1	130.6	135.2	138.6	141.1	142.3	143.9	125.3	131.0	136.1	140.1	141.7	143.5	145.5
Seasonings, olives, pickles, and relish (12/77=100)	124.9	131.9	133.5	134.2	135.2	137.2	139.1	124.0	132.2	132.8	133.4	134.5	136.3	137.9
Other condiments (12/77=100)	126.0	133.4	133.3	133.5	134.4	135.8	138.1	126.6	135.3	136.5	136.3	136.3	137.3	140.0
Miscellaneous prepared foods (12/77=100)	122.2	132.0	133.5	133.8	135.4	135.8	135.9	122.2	131.7	133.8	133.5	135.2	136.0	136.2
Other canned and packaged prepared foods (12/77=100)	122.2	127.9	128.6	130.3	131.6	132.4	134.1	122.0	128.2	128.9	130.2	132.1	132.4	134.4
Food away from home	260.9	273.1	275.3	277.7	280.9	284.7	286.1	262.7	277.4	279.5	281.8	284.2	287.3	288.6
Lunch (12/77=100)	127.0	132.9	134.3	135.7	137.2	138.6	139.2	127.6	134.4	135.7	137.3	138.5	139.8	140.3
Dinner (12/77=100)	127.0	132.4	133.4	134.4	136.2	138.2	138.8	128.1	135.1	136.1	136.7	138.2	139.4	140.1
Other meals and snacks (12/77=100)	124.9	131.8	132.5	133.7	134.7	137.0	137.9	126.2	133.9	134.5	135.6	136.4	138.5	139.3
<b>Alcoholic beverages</b>	181.7	190.4	190.9	191.6	193.7	195.9	197.1	182.8	192.5	192.8	193.7	195.5	197.6	198.7
Alcoholic beverages at home (12/77=100)	118.2	124.0	124.4	124.9	126.1	127.4	128.1	119.3	125.6	125.9	126.5	127.6	128.8	129.6
Beer and ale	182.0	191.7	192.0	192.9	194.5	197.6	198.2	181.7	192.0	192.2	192.9	194.5	197.2	198.5
Whiskey	132.8	137.7	138.9	138.9	140.0	140.0	141.6	134.4	139.0	139.8	140.2	141.5	142.0	142.3
Wine	204.1	215.4	215.2	217.6	221.7	224.0	224.3	208.4	224.2	224.0	227.2	229.4	231.6	233.6
Other alcoholic beverages (12/77=100)	107.4	112.5	112.9	112.7	113.7	113.9	115.0	107.2	111.6	112.0	112.1	113.2	113.3	114.0
Alcoholic beverages away from home (12/77=100)	120.0	125.1	125.3	125.8	127.6	129.7	131.1	119.1	125.3	125.5	126.2	127.4	129.4	129.9
<b>HOUSING</b>	254.5	271.1	273.8	276.9	279.1	280.9	282.6	254.4	271.0	273.7	277.1	279.1	280.7	282.2
<b>Shelter</b>	271.6	290.4	294.7	298.5	300.1	300.5	301.6	272.7	292.0	296.4	300.4	301.7	301.7	302.6
Rent, residential	186.6	197.1	198.3	199.6	200.9	201.9	203.0	186.4	196.8	198.0	199.4	200.6	201.6	202.7
Other rental costs	258.6	268.8	268.3	267.7	273.9	278.5	283.6	258.6	268.8	268.4	267.3	273.6	278.3	283.5
Lodging while out of town	276.8	286.0	284.2	282.6	291.5	297.4	304.8	275.7	284.9	283.3	281.0	289.9	296.0	303.2
Tenants' insurance (12/77=100)	118.6	125.4	126.5	126.9	127.6	129.3	130.1	119.3	126.0	126.8	127.2	128.0	129.9	130.8
Homeownership	302.0	323.8	329.4	334.2	335.8	335.8	336.8	304.0	326.7	332.3	337.5	338.6	338.2	338.3
Home purchase	244.0	265.5	267.3	267.2	266.2	263.0	261.1	243.8	266.4	268.2	268.0	266.4	262.7	260.2
Financing, taxes, and insurance	379.9	404.7	416.9	429.4	435.2	437.1	441.1	384.1	410.8	423.1	436.0	441.3	442.6	446.4
Property insurance	335.7	362.0	364.5	365.8	369.8	373.1	375.6	337.4	365.3	367.8	369.0	373.2	376.6	379.9
Property taxes	188.2	192.0	192.8	194.5	196.0	198.5	199.0	189.9	193.8	194.7	196.4	197.9	200.6	201.0
Contracted mortgage interest cost	483.0	518.1	536.7	555.5	563.5	565.0	570.9	484.1	521.2	539.7	558.7	565.9	566.5	572.0
Mortgage interest rates	194.4	192.6	198.0	205.1	209.0	211.9	216.0	194.8	193.0	198.4	205.5	209.4	212.3	216.7
Maintenance and repairs	278.8	292.8	294.2	296.8	296.8	302.8	306.1	278.2	290.4	291.1	294.2	294.1	299.9	302.7
Maintenance and repair services	303.2	317.0	318.6	321.5	321.3	328.7	332.6	303.5	315.1	315.9	320.3	319.8	327.7	331.3
Maintenance and repair commodities	221.4	236.3	237.1	239.1	239.7	242.4	243.9	222.3	235.0	235.6	236.2	236.7	238.6	239.9
Paint and wallpaper, supplies, tools, and equipment (12/77=100)	125.0	136.9	137.4	139.2	139.5	141.6	143.7	123.6	133.1	134.7	134.9	135.1	136.9	138.5
Lumber, awnings, glass, and masonry (12/77=100)	117.6	122.4	122.3	123.2	123.4	124.0	123.3	119.9	122.5	122.0	122.9	122.7	123.3	122.4
Plumbing, electrical, heating, and cooling supplies (12/77=100)	116.4	123.8	124.2	124.8	125.2	127.3	127.6	119.3	126.6	124.6	124.9	124.5	127.0	127.8
Miscellaneous supplies and equipment (12/77=100)	117.0	123.3	123.7	124.2	124.7	125.2	125.9	118.2	125.9	126.4	126.3	127.9	127.8	128.8
<b>Fuel and other utilities</b>	268.0	287.6	285.7	289.9	296.7	304.5	308.4	268.7	288.0	286.3	290.7	297.5	305.6	309.4
Fuels	333.9	362.8	358.7	364.7	375.4	387.4	393.7	333.9	362.1	358.2	364.5	375.0	387.3	393.4
Fuel oil, coal, and bottled gas	553.4	558.7	567.0	585.3	625.9	675.6	693.4	554.1	559.9	568.3	587.0	627.9	678.5	696.3
Fuel oil	577.9	581.5	589.8	610.0	650.0	712.0	730.9	577.9	581.8	590.3	610.9	657.1	714.2	732.2
Other fuels (6/78=100)	138.3	143.1	145.7	148.4	152.3	157.5	161.5	139.5	144.8	147.3	150.1	154.1	159.4	162.9
Gas (piped) and electricity	284.0	317.1	310.5	313.9	318.5	322.9	326.7	283.9	316.0	309.8	313.4	317.7	322.1	325.9
Electricity	237.9	265.3	258.7	262.3	266.9	271.3	273.9	238.1	265.3	262.4	262.1	266.5	271.1	273.5
Utility (piped) gas	343.9	384.6	379.0	381.5	385.3	389.0	395.2	342.6	380.9	376.7	379.7	383.3	386.8	392.8

**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)						
	1980				1981			1980				1981		
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
<b>HOUSING—Continued</b>														
<b>Fuel and other utilities—Continued</b>														
Other utilities and public services	161.9	167.8	169.0	170.6	171.9	173.6	174.2	161.9	167.8	169.1	170.7	172.0	173.9	174.4
Telephone services	133.2	137.5	138.7	140.3	141.1	142.4	142.5	133.1	137.4	138.7	140.3	141.1	142.5	142.6
Local charges (12/77 = 100)	103.3	106.6	108.3	110.5	111.6	113.5	113.6	103.2	106.5	108.3	110.6	111.7	113.6	113.7
Interstate toll calls (12/77 = 100)	97.4	102.1	101.7	101.8	101.8	101.8	101.8	97.5	102.1	101.8	101.8	101.9	101.9	101.9
Intrastate toll calls (12/77 = 100)	98.7	100.1	100.6	100.9	101.0	101.2	101.2	98.6	99.9	100.5	100.7	100.8	101.0	101.0
Water and sewerage maintenance	253.9	266.2	267.0	267.8	271.4	274.7	277.1	254.7	267.3	268.0	268.7	272.5	276.3	279.0
<b>Household furnishings and operations</b>	201.3	210.1	211.0	211.6	212.6	214.9	216.9	199.2	206.8	208.1	209.0	209.7	211.7	213.7
Housefurnishings	171.5	177.9	178.1	178.3	178.7	180.8	182.6	170.4	175.6	176.4	176.9	176.9	178.5	180.2
Textile housefurnishings	187.2	195.9	192.4	193.2	191.9	195.1	199.8	185.3	195.1	195.7	196.6	193.4	196.9	201.4
Household linens (12/77 = 100)	113.9	119.5	117.3	117.2	114.6	118.6	123.1	113.2	119.5	122.6	122.7	117.0	121.4	124.1
Curtains, drapes, slipcovers, and sewing materials (12/77 = 100)	119.7	124.9	122.7	123.8	124.9	124.8	126.1	118.2	124.1	121.2	122.4	124.6	124.4	127.2
Furniture and bedding	189.2	195.2	196.5	197.0	196.6	199.3	201.6	187.9	192.5	193.9	194.4	193.6	195.6	198.0
Bedroom furniture (12/77 = 100)	122.5	127.4	128.6	129.2	128.3	131.3	133.2	119.2	124.6	125.5	125.7	125.1	127.7	129.4
Sofas (12/77 = 100)	110.9	113.8	114.2	115.3	114.2	114.5	115.8	112.7	113.0	113.6	114.7	113.2	113.2	114.1
Living room chairs and tables (12/77 = 100)	110.8	113.0	113.3	113.1	113.1	115.9	116.5	111.9	114.4	115.6	115.2	114.3	115.2	116.7
Other furniture (12/77 = 100)	122.6	127.0	127.9	127.8	128.7	129.1	130.8	121.3	123.6	124.6	124.7	125.6	126.6	128.3
Appliances including TV and sound equipment	138.8	142.3	142.6	142.4	143.1	143.9	144.2	139.0	141.2	141.4	142.0	142.7	142.9	143.4
Television and sound equipment (12/77 = 100)	105.7	107.1	107.4	107.2	107.4	107.9	108.0	105.5	105.6	106.1	106.1	106.5	106.6	106.4
Television	104.0	104.7	105.1	105.2	105.6	105.7	105.6	102.9	103.2	103.8	103.7	104.2	104.2	104.3
Sound equipment (12/77 = 100)	108.3	110.3	110.6	110.1	110.2	111.0	111.2	108.7	108.7	109.1	109.2	109.4	109.6	109.3
Household appliances	160.2	166.0	166.2	165.9	167.2	168.2	168.9	160.7	165.3	165.2	166.3	167.6	167.8	169.0
Refrigerators and home freezers	157.9	165.8	166.1	166.5	168.0	168.4	168.5	161.4	169.4	169.2	170.9	171.7	172.3	172.7
Laundry equipment (12/77 = 100)	116.8	121.5	122.0	123.4	123.6	123.7	124.5	116.6	120.2	120.2	121.4	121.9	122.8	124.3
Other household appliances (12/77 = 100)	111.2	114.2	114.2	113.1	114.2	115.4	115.9	110.7	112.5	112.4	112.8	114.0	113.7	114.5
Stoves, dishwashers, vacuums, and sewing machines (12/77 = 100)	110.9	112.4	113.0	112.0	114.8	115.1	115.1	111.1	112.1	112.6	113.9	115.7	114.2	115.2
Office machines, small electric appliances, and air conditioners (12/77 = 100)	111.6	116.2	115.5	114.3	113.6	115.7	116.9	110.2	113.0	112.1	111.5	112.0	113.1	113.7
Other household equipment (12/77 = 100)	117.3	124.1	124.6	124.8	125.6	127.9	129.1	116.0	122.2	123.2	123.1	123.8	125.6	126.9
Floor and window coverings, infants', laundry, cleaning, and outdoor equipment (12/77 = 100)	116.4	123.3	124.3	124.6	125.7	128.7	130.7	110.8	118.2	119.0	118.4	118.9	120.8	123.2
Clocks, lamps, and decor items (12/77 = 100)	114.9	121.6	121.4	121.7	122.3	124.1	125.7	112.3	119.4	119.2	118.8	119.2	121.7	121.7
Tableware, serving pieces, and nonelectric kitchenware (12/77 = 100)	122.6	130.0	130.6	130.8	131.9	134.8	135.6	120.8	126.3	127.4	127.6	128.0	131.0	132.1
Lawn equipment, power tools, and other hardware (12/77 = 100)	112.2	117.9	118.4	118.7	118.7	119.9	120.8	115.0	120.9	122.3	122.3	123.8	123.8	125.1
Housekeeping supplies	238.0	253.6	256.0	257.7	259.5	262.8	264.2	235.5	251.2	253.5	256.0	257.5	260.1	261.2
Soaps and detergents	232.1	248.7	252.4	254.0	255.6	256.2	255.3	230.0	245.6	248.2	252.3	253.4	254.3	253.8
Other laundry and cleaning products (12/77 = 100)	117.0	125.7	126.7	127.6	128.8	129.3	129.7	116.9	125.1	126.2	127.6	129.0	129.6	130.3
Cleansing and toilet tissue, paper towels and napkins (12/77 = 100)	123.9	134.2	135.6	136.1	137.3	138.4	137.9	125.8	136.2	136.6	137.6	139.2	139.2	138.1
Stationery, stationery supplies, and gift wrap (12/77 = 100)	113.8	118.6	118.3	119.5	119.9	121.4	122.3	113.6	118.2	118.8	120.0	120.7	122.4	123.7
Miscellaneous household products (12/77 = 100)	120.9	129.5	131.1	132.5	132.6	135.9	137.3	118.3	126.7	128.4	129.5	129.3	132.2	133.2
Lawn and garden supplies (12/77 = 100)	121.4	126.9	128.0	128.4	130.0	134.0	136.6	114.0	121.0	122.5	122.5	122.7	126.1	128.5
Housekeeping services	263.6	274.5	276.1	277.1	279.6	281.6	284.8	262.7	271.0	272.5	273.8	276.4	279.4	283.3
Postage	257.3	257.3	257.3	257.3	257.3	257.3	274.3	257.2	257.3	257.3	257.3	257.3	257.3	274.2
Moving, storage, freight, household laundry, and drycleaning services (12/77 = 100)	125.4	133.3	134.6	134.4	137.0	138.2	139.0	126.1	130.2	131.4	131.8	134.3	137.8	139.0
Appliance and furniture repair (12/77 = 100)	115.8	120.3	120.7	121.4	122.4	123.6	124.5	116.0	119.2	119.7	120.6	121.5	122.4	123.8
<b>APPAREL AND UPKEEP</b>	176.0	183.9	184.8	183.9	181.1	182.0	185.1	175.1	182.8	183.3	182.9	180.8	181.8	184.3
<b>Apparel commodities</b>	169.2	176.4	177.2	176.0	172.6	173.2	176.3	168.7	175.6	176.0	175.3	172.6	173.3	175.8
Apparel commodities less footwear	166.2	173.1	173.9	172.5	168.9	169.6	172.7	165.7	172.2	172.5	171.6	168.7	169.6	172.3
Men's and boys'	165.6	173.9	174.8	174.3	171.1	171.6	175.0	166.0	173.8	174.8	174.4	171.7	172.2	174.9
Men's (12/77 = 100)	104.3	109.5	110.1	109.8	107.5	107.8	110.2	104.4	109.5	110.2	109.9	107.9	108.2	110.1
Suits, sport coats, and jackets (12/77 = 100)	99.9	104.3	104.7	103.5	99.9	100.5	103.2	96.4	99.7	99.4	98.2	95.1	96.1	98.5
Coats and jackets (12/77 = 100)	96.9	100.4	100.5	99.7	95.2	95.6	97.9	96.9	101.3	101.9	101.9	97.4	96.0	98.9
Furnishings and special clothing (12/77 = 100)	115.0	122.9	123.3	123.9	123.9	125.3	127.2	113.2	118.8	119.7	120.0	119.9	120.2	121.5
Shirts (12/77 = 100)	111.9	118.3	119.6	119.7	115.4	114.8	118.0	112.0	118.5	120.4	120.7	116.7	116.8	119.2
Dungarees, jeans, and trousers (12/77 = 100)	98.7	102.6	103.5	103.4	103.4	102.7	104.7	102.7	108.3	108.7	108.1	108.2	108.7	110.0
Boys' (12/77 = 100)	107.5	113.0	113.3	113.1	112.0	112.6	113.7	107.5	112.0	112.7	112.6	111.6	111.9	112.9
Coats, jackets, sweaters, and shirts (12/77 = 100)	102.5	109.2	109.4	108.6	104.8	104.3	106.5	105.0	111.2	112.5	111.8	107.9	107.0	105.5
Furnishings (12/77 = 100)	112.0	118.1	118.4	118.7	119.1	119.1	121.2	110.7	115.1	115.2	116.2	115.8	116.1	117.4
Suits, trousers, sport coats, and jackets (12/77 = 100)	109.8	113.9	114.3	114.3	114.8	116.6	116.5	108.2	111.5	111.9	112.0	112.9	114.2	113.9
Women's and girls'	155.5	159.7	159.9	157.4	152.1	153.4	157.5	154.9	160.3	159.9	158.2	153.9	155.4	158.9
Women's (12/77 = 100)	103.8	106.1	106.3	104.4	100.8	101.9	104.4	103.7	107.0	106.6	105.3	102.3	103.5	105.5
Coats and jackets	167.6	167.0	164.7	161.4	150.4	160.7	157.9	167.0	176.5	175.5	172.2	162.1	159.1	156.9
Dresses	169.3	170.0	168.1	163.8	155.5	156.9	166.4	157.5	157.5	157.7	154.3	147.3	150.5	154.3
Separates and sportswear (12/77 = 100)	99.8	101.6	102.9	101.4	98.2	97.1	99.3	101.0	103.6	102.8	102.4	100.1	99.7	101.6
Underwear, nightwear, and hosiery (12/77 = 100)	111.0	114.9	116.7	116.8	116.0	116.4	117.8	111.5	115.3	116.4	116.6	115.6	116.0	117.7
Suits (12/77 = 100)	91.6	98.2	97.4	91.9	87.8	90.0	93.0	100.2	106.8	102.8	98.2	95.5	103.6	109.5
Girls (12/77 = 100)	101.8	107.0	106.5	106.1	102.9	102.8	106.4	100.1	105.1	105.3	104.9	102.5	102.7	106.4
Coats, jackets, dresses, and suits (12/77 = 100)	98.9	103.2	102.7	101.3	96.0	94.4	101.2	95.7	99.0	99.1	98.6	94.4	93.5	98.4
Separates and sportswear (12/77 = 100)	100.8	106.7	105.9	106.1	103.6	104.2	106.2	99.8	106.3	106.8	106.6	104.4	105.8	109.1
Underwear, nightwear, hosiery, and accessories (12/77 = 100)	108.4	113.8	114.0	113.8	113.1	113.9	115.6	107.8	112.8	112.6	112.2	112.2	112.5	114.6

**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)							
	1980				1981		1980				1981			
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
<b>APPAREL AND UPKEEP — Continued</b>														
<b>Apparel commodities — Continued</b>														
Apparel commodities less footwear — Continued														
Infants' and toddlers'	231.4	244.1	248.9	250.1	249.7	254.3	255.3	237.3	249.2	254.0	255.4	256.9	264.0	266.4
Other apparel commodities	199.9	211.8	213.7	213.3	214.2	212.3	212.2	197.8	204.1	204.0	204.4	205.3	204.4	204.5
Sewing materials and notions (12/77 = 100)	107.1	111.9	110.3	110.6	111.9	112.2	113.3	107.2	112.0	110.2	110.0	110.8	112.2	113.3
Jewelry and luggage (12/77 = 100)	138.6	147.5	149.9	149.5	149.7	147.9	147.3	137.3	141.1	141.8	142.3	142.8	141.3	140.9
Footwear	187.0	196.1	196.5	196.6	194.9	194.9	197.4	186.3	195.6	196.4	196.7	195.5	194.9	195.9
Men's (12/77 = 100)	119.0	124.7	125.4	124.6	124.4	125.0	125.2	120.9	125.8	126.7	126.0	126.1	125.7	125.4
Boys' and girls' (12/77 = 100)	119.5	125.8	126.2	126.6	125.7	125.3	127.6	119.5	126.9	127.4	127.8	127.0	126.2	127.3
Womens' (12/77 = 100)	114.2	119.6	119.4	120.0	118.1	117.9	120.0	110.9	116.3	116.5	117.5	115.9	115.9	117.0
Apparel services	225.9	240.0	241.9	243.4	246.3	249.9	252.4	223.5	238.1	239.9	242.2	245.5	248.7	251.5
Laundry and drycleaning other than coin operated (12/77 = 100)	132.5	141.1	142.4	143.5	145.3	147.6	149.6	132.3	140.9	141.6	143.2	145.5	147.3	149.3
Other apparel services (12/77 = 100)	122.1	129.2	130.0	130.5	131.7	133.3	133.7	119.6	127.4	129.1	129.9	131.1	132.9	133.9
<b>TRANSPORTATION</b>	243.7	256.1	259.0	261.1	264.7	270.9	273.5	244.3	256.6	259.7	261.9	265.7	272.1	274.4
<b>Private</b>	244.0	254.5	257.4	259.4	262.9	269.4	271.7	244.6	255.5	258.6	260.8	264.4	271.0	273.2
New cars	175.0	181.9	184.3	184.5	185.3	184.8	182.9	175.4	182.0	184.5	184.6	185.7	185.0	182.7
Used cars	195.2	222.7	230.8	234.4	234.0	234.3	235.4	195.2	222.7	230.8	234.4	234.0	234.4	235.4
Gasoline	370.9	370.5	370.5	373.3	385.2	410.8	420.7	372.7	371.7	371.7	374.4	386.6	412.5	422.4
Automobile maintenance and repair	260.9	276.0	278.4	280.1	282.7	285.4	287.7	261.7	276.6	278.9	280.6	283.2	285.4	288.2
Body work (12/77 = 100)	127.3	135.0	136.1	136.8	137.3	139.2	140.3	127.2	134.6	135.9	136.7	137.3	139.2	140.2
Automobile drive train, brake, and miscellaneous mechanical repair (12/77 = 100)	124.1	132.7	133.6	134.0	135.8	136.8	137.7	126.1	133.9	135.0	135.6	137.5	138.3	140.2
Maintenance and servicing (12/77 = 100)	123.1	130.0	131.0	131.6	132.5	133.7	134.8	122.8	130.2	131.1	131.7	132.7	133.5	134.7
Power plant repair (12/77 = 100)	123.5	129.8	131.3	132.7	134.4	135.5	137.0	124.0	129.6	130.8	132.2	133.5	134.7	135.9
Other private transportation	216.5	226.5	228.8	231.0	232.4	234.2	234.7	217.1	228.0	230.6	233.2	235.0	236.9	237.3
Other private transportation commodities	192.7	200.9	203.1	203.6	203.7	205.8	206.2	193.2	201.4	203.4	205.7	206.2	207.5	208.0
Motor oil, coolant, and other products (12/77 = 100)	126.4	136.5	137.8	138.8	139.1	141.6	141.6	126.1	135.4	137.3	139.0	139.2	139.0	139.8
Automobile parts and equipment (12/77 = 100)	124.3	128.9	130.3	130.6	130.6	131.8	132.1	124.7	129.4	130.6	132.0	132.4	133.4	133.7
Tires	170.1	179.2	181.7	182.1	181.5	183.5	184.1	172.5	180.8	182.5	184.7	184.8	186.6	186.9
Other parts and equipment (12/77 = 100)	127.2	126.9	127.3	127.6	128.6	129.3	129.2	124.4	125.7	126.9	127.8	128.9	129.3	129.5
Other private transportation services	225.0	235.6	237.9	240.6	242.4	244.0	244.6	225.7	237.3	240.1	242.9	244.9	247.0	247.4
Automobile insurance	244.0	251.5	251.9	252.5	252.3	253.7	254.4	243.8	251.2	251.5	252.0	251.8	253.2	253.9
Automobile finance charges (12/77 = 100)	137.4	149.9	154.4	159.4	163.4	165.1	164.3	135.2	148.3	153.2	157.9	161.7	163.9	163.4
Automobile rental, registration, and other fees (12/77 = 100)	110.8	114.6	115.0	115.8	116.2	116.7	118.2	111.6	116.3	116.7	117.5	118.2	119.3	119.9
State registration	145.3	146.5	146.6	146.9	146.9	146.9	146.9	145.5	146.5	146.6	147.0	146.9	147.0	147.0
Drivers' licenses (12/77 = 100)	104.7	104.9	105.0	105.3	105.3	105.4	105.4	104.4	104.7	104.7	105.1	105.1	105.1	105.1
Vehicle inspection (12/77 = 100)	119.7	122.9	123.2	124.3	124.8	125.8	126.1	120.2	123.6	123.9	125.1	125.6	126.6	126.7
Other vehicle related fees (12/77 = 100)	122.0	130.0	130.7	132.7	133.7	134.7	138.4	127.0	139.1	140.0	142.0	144.1	147.2	148.9
<b>Public</b>	232.1	273.6	277.0	280.1	286.4	288.1	293.9	226.1	266.5	269.2	271.8	279.0	280.6	285.1
Airline fare	259.9	315.0	321.8	327.4	331.9	334.1	343.7	259.3	313.0	319.8	325.7	330.2	332.7	342.3
Inter-city bus fare	290.7	307.1	308.0	310.1	310.7	312.8	323.2	290.2	306.9	308.0	309.8	310.6	312.2	323.9
Intracity mass transit	200.8	235.6	236.1	237.1	247.1	248.4	250.8	198.6	235.2	235.6	236.5	246.5	247.8	249.1
Taxi fare	245.6	267.9	269.2	269.7	271.0	271.4	273.8	251.2	274.7	275.6	275.9	277.5	277.7	280.5
Inter-city train fare	237.2	255.6	255.6	270.1	276.4	276.5	276.7	237.1	255.7	255.7	270.3	276.8	276.9	277.1
<b>MEDICAL CARE</b>	260.2	272.8	274.5	275.8	279.5	282.6	284.7	260.9	274.3	276.3	277.6	281.4	284.4	287.0
<b>Medical care commodities</b>	163.5	172.5	173.8	175.1	176.7	179.2	180.7	164.4	173.0	174.1	175.6	177.5	179.6	181.2
Prescription drugs	150.9	158.5	159.6	160.7	162.7	165.0	166.5	152.0	159.5	160.2	161.5	163.4	165.3	166.8
Anti-infective drugs (12/77 = 100)	117.9	124.1	124.6	124.7	127.7	129.2	130.5	120.1	125.1	125.6	126.4	128.6	129.5	131.0
Tranquilizers and sedatives (12/77 = 100)	122.2	127.1	128.9	130.2	130.7	131.9	132.8	122.2	126.2	127.7	128.6	129.4	130.7	131.5
Circulatories and diuretics (12/77 = 100)	113.3	117.3	118.3	119.1	120.6	121.9	122.2	114.7	119.3	119.9	120.2	121.3	122.9	123.7
Hormones, diabetic drugs, biologicals, and prescription and supplies (12/77 = 100)	130.0	139.6	140.4	142.3	143.9	147.4	148.2	129.6	138.8	139.6	141.7	143.8	146.5	147.8
Pain and symptom control drugs (12/77 = 100)	120.5	126.3	126.7	126.9	128.7	130.9	132.7	121.3	128.7	128.3	129.6	131.4	133.3	134.1
Supplements, cough and cold preparations, and respiratory agents (12/77 = 100)	115.5	120.4	121.2	122.4	123.2	124.5	126.3	116.5	122.1	122.3	123.1	123.8	125.2	126.5
Nonprescription drugs and medical supplies (12/77 = 100)	117.3	124.4	125.3	126.2	127.1	128.9	129.9	118.0	124.4	125.5	126.5	127.9	129.4	130.5
Eyeglasses (12/77 = 100)	114.1	121.0	121.2	120.8	121.5	123.1	124.6	114.5	119.6	120.2	120.4	121.1	122.3	122.6
Internal and respiratory over-the-counter drugs	182.2	193.5	195.8	198.1	199.3	202.7	204.2	183.0	194.0	195.8	198.0	200.4	203.0	205.5
Nonprescription medical equipment and supplies (12/77 = 100)	115.1	121.3	121.5	122.5	123.6	124.5	125.0	116.1	121.8	123.0	123.7	125.1	126.5	127.1
<b>Medical care services</b>	281.5	294.8	296.6	297.9	302.1	305.2	307.5	282.2	296.6	298.7	300.0	304.3	307.4	310.2
Professional services	245.3	259.0	260.4	261.7	264.7	267.2	269.6	247.8	261.9	263.8	265.0	268.7	271.6	274.2
Physicians' services	262.3	276.0	278.0	280.3	283.9	287.7	290.3	266.2	281.8	283.8	285.7	290.0	293.9	296.3
Dental services	234.1	247.5	248.0	248.6	251.4	252.8	254.9	235.7	249.0	250.4	251.3	254.9	257.0	259.8
Other professional services (12/77 = 100)	119.5	127.6	128.5	128.5	129.3	130.0	131.5	119.3	125.1	126.7	126.6	127.6	128.5	129.9
Other medical care services	325.3	338.0	340.5	341.6	347.3	351.1	353.4	324.4	339.2	341.6	342.9	347.8	351.3	354.4
Hospital and other medical services (12/77 = 100)	128.8	139.3	141.1	141.7	144.5	146.1	147.1	127.7	138.9	140.5	141.3	143.7	145.2	146.7
Hospital room	405.8	435.8	441.0	443.7	453.8	458.2	460.9	401.2	435.3	439.8	443.1	451.9	455.9	459.2
Other hospital and medical care services (12/77 = 100)	127.8	139.0	140.9	141.4	143.7	145.5	146.7	126.9	138.4	140.2	140.6	142.7	144.4	146.3

**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)							
	1980				1981		1980				1981			
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
<b>ENTERTAINMENT</b> .....	200.6	210.9	211.2	212.0	214.4	216.7	218.2	199.5	209.2	209.9	210.1	212.2	215.0	216.1
<b>Entertainment commodities</b> .....	203.4	213.7	214.5	215.3	217.1	219.7	222.1	200.3	209.0	210.2	210.9	213.0	216.2	218.0
Reading materials (12/77 = 100) .....	119.4	127.0	127.6	128.2	130.0	130.9	133.2	119.1	126.6	127.1	127.6	129.6	130.7	133.0
Newspapers .....	232.4	245.3	245.6	246.2	249.7	253.8	256.6	232.0	244.6	244.9	245.5	249.4	254.0	256.7
Magazines, periodicals, and books (12/77 = 100) .....	120.8	129.6	130.7	131.5	133.4	132.9	136.2	120.7	129.6	130.8	131.5	133.5	132.9	136.3
Sporting goods and equipment (12/77 = 100) .....	117.2	121.8	122.8	122.9	123.5	124.7	126.1	112.4	116.3	117.0	117.8	118.5	119.3	120.3
Sport vehicles (12/77 = 100) .....	118.7	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	126.5	128.5	110.8	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	118.1	119.5
Indoor and warm weather sport equipment (12/77 = 100) .....	109.5	114.5	114.7	116.2	115.7	115.9	116.2	109.3	112.5	112.2	113.4	114.5	115.3	115.2
Bicycles .....	177.2	185.3	185.7	184.7	185.9	187.2	188.4	177.8	185.4	185.8	184.9	186.7	188.3	189.4
Other sporting goods and equipment (12/77 = 100) .....	112.9	118.2	119.9	120.4	120.9	120.6	121.2	113.4	117.8	119.1	119.3	119.2	119.2	119.3
Toys, hobbies, and other entertainment (12/77 = 100) .....	116.9	122.8	122.8	123.5	124.4	126.3	127.2	116.4	120.9	121.6	121.8	122.9	125.8	126.3
Toys, hobbies, and music equipment (12/77 = 100) .....	115.7	120.9	120.7	121.3	122.4	124.7	125.6	114.9	117.4	118.4	118.5	119.4	123.0	123.1
Photographic supplies and equipment (12/77 = 100) .....	118.2	123.1	121.8	122.0	121.5	122.6	124.0	116.9	122.3	122.7	122.4	122.3	124.4	125.5
Pet supplies and expense (12/77 = 100) .....	118.2	125.8	127.3	128.4	130.1	132.0	132.3	119.0	126.4	126.8	127.6	129.7	131.9	132.8
<b>Entertainment services</b> .....	197.0	207.2	206.9	207.8	210.9	213.0	213.0	199.1	210.6	210.5	209.7	212.0	213.9	213.8
Fees for participant sports (12/77 = 100) .....	117.5	125.5	125.2	125.7	128.1	129.4	129.8	118.8	127.0	126.7	125.9	127.8	129.0	129.6
Admissions (12/77 = 100) .....	119.1	122.7	122.6	123.1	124.7	125.3	125.3	120.0	124.2	124.3	124.0	125.2	126.2	125.9
Other entertainment services (12/77 = 100) .....	113.2	119.0	118.7	119.4	120.1	122.0	121.0	113.9	121.6	121.6	121.8	122.0	123.0	121.7
<b>OTHER GOODS AND SERVICES</b> .....	208.9	221.5	222.8	224.6	226.2	227.4	228.7	208.3	219.9	221.0	223.0	224.4	225.6	226.8
<b>Tobacco products</b> .....	198.4	204.5	207.3	210.8	211.9	212.3	212.5	198.6	204.3	206.8	210.4	211.7	211.9	212.4
Cigarettes .....	201.2	206.8	209.6	213.5	214.6	214.8	214.8	201.6	206.7	209.3	213.2	214.5	214.5	214.9
Other tobacco products and smoking accessories (12/77 = 100) .....	116.3	123.2	124.3	124.9	125.4	126.5	128.0	115.7	123.1	123.9	124.5	125.4	126.4	128.1
<b>Personal care</b> .....	208.1	217.8	219.0	220.9	222.5	224.6	226.9	207.7	218.0	218.5	220.0	221.1	223.2	225.1
Toilet goods and personal care appliances .....	200.2	211.8	212.4	215.2	216.9	219.5	222.4	199.6	212.1	212.7	214.3	216.1	218.5	220.9
Products for the hair, hairpieces, and wigs (12/77 = 100) .....	116.6	124.5	124.5	125.2	126.3	128.3	131.4	114.9	123.6	123.2	125.3	126.2	126.7	128.4
Dental and shaving products (12/77 = 100) .....	119.2	126.0	127.2	128.4	130.8	132.9	135.3	118.4	125.3	125.9	125.4	128.3	131.2	133.3
Cosmetics, bath and nail preparations, manicure and eye makeup implements (12/77 = 100) .....	115.1	121.3	120.8	122.6	122.9	123.2	123.9	114.8	121.1	121.0	121.4	122.2	122.8	123.4
Other toilet goods and small personal care appliances (12/77 = 100) .....	114.7	120.8	122.2	124.8	125.5	127.5	128.3	116.6	123.6	125.3	126.8	126.6	129.0	130.7
Personal care services .....	215.7	223.8	225.5	226.8	228.3	230.0	231.7	215.8	224.0	224.4	225.8	226.3	228.1	229.4
Beauty parlor services for women .....	217.9	225.2	227.5	228.7	230.1	231.7	233.6	217.8	225.6	226.1	227.5	227.6	229.4	230.8
Haircuts and other barber shop services for men (12/77 = 100) .....	119.7	125.3	125.6	126.4	127.3	128.5	129.2	120.1	125.0	125.2	126.0	126.7	127.6	128.4
<b>Personal and educational expenses</b> .....	228.3	251.1	251.3	251.5	253.6	254.4	255.2	228.2	251.2	251.4	251.7	254.0	255.0	256.0
Schoolbooks and supplies .....	206.9	221.9	221.9	222.1	228.6	229.8	230.5	210.7	225.6	225.6	225.8	232.4	233.6	234.4
Personal and educational services .....	233.6	257.8	258.1	258.2	259.7	260.4	261.2	232.9	257.5	257.8	258.1	259.6	260.6	261.6
Tuition and other school fees .....	118.6	132.2	132.2	132.2	132.6	132.7	132.8	118.7	132.4	132.4	132.4	132.8	132.9	133.0
College tuition (12/77 = 100) .....	117.9	131.5	131.5	131.5	132.0	132.1	132.3	117.9	131.5	131.5	131.5	132.0	132.1	132.3
Elementary and high school tuition (12/77 = 100) .....	120.9	134.4	134.4	134.4	134.4	134.4	134.4	120.7	134.3	134.3	134.3	134.3	134.3	134.4
Personal expenses (12/77 = 100) .....	125.0	132.4	133.0	133.4	135.7	137.1	138.7	122.1	131.0	131.6	132.2	134.4	136.3	138.1
<b>Special indexes:</b>														
Gasoline, motor oil, coolant, and other products .....	365.5	365.5	365.5	368.3	379.9	404.8	414.5	367.2	366.6	366.7	369.4	381.2	406.3	415.9
Insurance and finance .....	326.3	346.4	355.3	364.5	368.9	370.7	373.6	325.6	346.7	355.6	364.7	368.8	370.4	373.0
Utilities and public transportation .....	230.9	254.9	253.1	255.8	259.4	262.3	265.2	230.2	253.5	251.6	254.4	258.0	261.0	263.6
Housekeeping and home maintenance services .....	292.0	304.7	306.4	308.4	309.5	314.6	318.3	292.0	302.4	303.5	306.6	307.4	313.4	317.2

<sup>1</sup> Not available.

**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		1981	1980		1981	1980		1981	1980		1981
	Oct.	Dec.	Feb.	Oct.	Dec.	Feb.	Oct.	Dec.	Feb.	Oct.	Dec.	Feb.
<b>Northeast</b>												
<b>EXPENDITURE CATEGORY</b>												
All items .....	130.5	132.8	135.7	137.2	139.8	143.2	141.2	143.8	146.6	135.6	137.8	141.6
Food and beverages .....	131.0	132.8	135.2	133.7	135.8	137.6	134.7	137.7	139.8	131.5	132.8	134.8
Housing .....	131.8	135.2	138.0	141.9	144.6	149.0	151.0	153.7	156.3	139.9	142.0	147.5
Apparel and upkeep .....	116.2	114.8	114.9	116.2	116.8	114.0	124.6	124.8	119.5	118.6	120.3	119.1
Transportation .....	139.4	141.9	147.3	145.3	149.4	155.0	142.8	146.5	153.0	143.1	146.5	151.0
Medical care .....	126.3	128.0	130.5	127.2	129.3	131.2	129.1	130.1	132.1	126.9	130.7	134.4
Entertainment .....	120.0	120.7	124.6	122.7	123.2	127.5	120.1	120.4	124.2	125.2	126.7	126.7
Other goods and services .....	121.2	122.7	123.7	124.0	127.5	128.5	127.8	130.3	131.1	122.0	124.4	126.5
<b>COMMODITY AND SERVICE GROUP</b>												
Commodities .....	131.8	133.7	137.0	138.3	140.8	144.3	139.9	142.1	144.6	136.6	138.1	141.7
Commodities less food and beverages .....	132.3	134.3	138.2	140.5	143.2	147.6	142.3	144.1	148.8	139.1	140.7	145.0
Services .....	128.8	131.6	134.0	135.4	138.3	141.5	143.4	146.7	149.8	134.0	137.3	141.4
<b>North Central</b>												
<b>EXPENDITURE CATEGORY</b>												
All items .....	140.8	143.3	144.0	137.6	140.0	142.8	135.1	136.6	139.7	134.6	136.2	139.6
Food and beverages .....	133.1	135.0	137.1	130.8	132.9	136.4	133.7	135.1	137.0	135.8	139.1	139.6
Housing .....	151.9	155.3	152.7	143.7	146.0	147.7	137.9	139.1	141.5	135.3	135.9	140.5
Apparel and upkeep .....	112.1	110.8	109.4	118.2	118.8	116.9	115.3	114.8	114.5	115.5	116.2	114.1
Transportation .....	143.2	146.4	151.8	143.0	146.8	152.3	142.9	146.2	153.1	142.2	145.4	150.3
Medical care .....	129.1	130.5	134.6	129.6	131.4	136.2	130.6	132.4	136.7	133.3	134.6	140.1
Entertainment .....	124.5	125.1	127.5	121.1	121.3	124.2	124.3	124.0	126.8	121.1	120.8	124.8
Other goods and services .....	122.6	124.2	126.3	128.4	130.3	132.7	122.5	123.9	126.4	128.4	129.8	131.1
<b>COMMODITY AND SERVICE GROUP</b>												
Commodities .....	138.1	139.9	140.3	135.0	136.5	139.5	133.9	135.2	138.2	132.6	133.4	136.0
Commodities less food and beverages .....	140.4	142.3	141.8	136.8	138.0	140.9	134.0	135.3	138.7	131.2	130.9	134.5
Services .....	144.9	148.4	149.4	141.8	145.6	148.1	137.1	138.9	142.2	137.7	140.6	145.3
<b>South</b>												
<b>EXPENDITURE CATEGORY</b>												
All items .....	136.7	139.0	142.1	138.1	140.9	144.9	136.1	138.6	142.1	134.1	136.5	138.8
Food and beverages .....	134.6	136.8	138.8	133.0	135.4	138.6	134.8	137.2	138.4	134.5	136.9	140.2
Housing .....	139.8	143.1	146.1	143.5	146.7	151.5	139.7	142.5	146.6	133.7	137.5	138.4
Apparel and upkeep .....	119.9	120.0	119.3	116.4	117.3	117.1	111.8	114.1	113.0	110.5	108.9	105.6
Transportation .....	145.0	146.8	152.9	144.5	147.9	153.4	143.0	145.7	152.2	142.2	144.8	151.4
Medical care .....	126.8	127.9	130.4	130.9	132.1	135.1	132.7	133.7	136.8	140.2	140.7	144.0
Entertainment .....	120.2	120.4	123.5	125.3	127.9	129.0	125.0	127.5	129.0	132.4	130.7	131.0
Other goods and services .....	126.4	128.1	129.4	126.8	128.8	131.0	124.7	126.7	128.6	128.2	129.9	130.5
<b>COMMODITY AND SERVICE GROUP</b>												
Commodities .....	135.4	137.2	140.1	135.2	137.5	140.8	134.1	136.3	139.1	133.4	135.6	138.4
Commodities less food and beverages .....	135.8	137.3	140.7	136.1	138.3	141.7	133.8	135.9	139.5	133.0	135.0	137.6
Services .....	138.4	141.5	144.8	142.6	146.1	151.2	139.2	142.3	146.6	135.0	138.0	139.3
<b>West</b>												
<b>EXPENDITURE CATEGORY</b>												
All items .....	137.7	140.7	142.6	139.5	141.4	144.0	136.3	138.4	141.2	136.9	139.8	141.0
Food and beverages .....	132.7	134.3	136.8	135.0	136.5	139.4	131.7	132.7	134.8	135.6	137.3	140.8
Housing .....	141.6	146.0	147.2	144.7	146.7	148.7	139.4	142.1	145.2	136.2	140.6	138.3
Apparel and upkeep .....	117.9	117.9	116.4	121.5	123.8	122.3	111.2	112.0	112.1	129.1	129.0	129.8
Transportation .....	144.9	146.7	150.8	144.3	146.6	151.9	145.9	148.5	152.6	145.9	148.0	154.1
Medical care .....	133.0	134.3	137.5	130.7	133.1	136.0	133.3	134.5	137.5	134.9	136.6	139.6
Entertainment .....	122.3	123.8	127.0	125.7	125.0	126.6	126.9	126.3	126.6	131.2	133.5	140.5
Other goods and services .....	126.2	127.7	129.1	128.1	129.0	131.4	122.3	125.2	126.8	128.1	130.4	131.5
<b>COMMODITY AND SERVICE GROUP</b>												
Commodities .....	134.2	135.3	137.3	136.3	137.5	140.0	134.1	135.2	137.1	135.7	137.2	139.7
Commodities less food and beverage .....	134.8	135.7	137.6	136.8	138.0	140.3	135.1	136.2	138.0	135.7	137.1	139.3
Services .....	142.5	147.8	149.6	144.0	146.7	149.4	139.5	142.9	146.9	138.7	143.8	142.9

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

[1967=100 unless otherwise specified]

Area <sup>1</sup>	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1980				1981			1980				1981		
	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
U.S. city average <sup>2</sup>	239.8	253.9	256.2	258.4	260.5	263.2	265.1	239.9	254.1	256.4	258.7	260.7	263.5	265.2
Anchorage, Alaska (10/67=100)	223.5	...	236.5	...	240.1	...	241.1	220.2	...	232.0	...	235.0	...	236.2
Atlanta, Ga.	...	250.2	...	258.3	...	263.0	...	...	252.4	...	260.3	...	266.4	...
Baltimore, Md.	245.0	...	258.4	...	264.3	...	270.3	243.9	...	257.4	...	262.6	...	269.3
Boston, Mass.	234.2	...	248.8	...	256.4	...	262.3	234.2	...	249.2	...	255.7	...	261.8
Buffalo, N.Y.	...	239.6	...	246.5	...	251.4	...	...	238.2	...	245.2	...	249.7	...
Chicago, Ill.-Northwestern Ind.	235.5	253.7	259.9	260.3	258.9	259.6	259.7	235.2	252.8	258.9	258.9	258.1	258.8	258.9
Cincinnati, Ohio-Ky.-Ind.	247.8	...	262.1	...	264.5	...	266.1	249.7	...	236.5	...	266.3	...	267.7
Cleveland, Ohio	...	264.6	...	266.5	...	273.5	...	...	264.2	...	266.7	...	273.9	...
Dallas-Ft. Worth, Tex.	...	264.9	...	269.5	...	274.4	...	...	262.9	...	268.2	...	272.9	...
Denver-Boulder, Colo.	255.2	...	271.9	...	277.3	...	281.4	259.4	...	276.7	...	282.2	...	285.8
Detroit, Mich.	242.9	264.3	266.4	269.7	268.5	270.2	268.2	242.4	261.4	263.6	265.5	264.4	265.5	263.6
Honolulu, Hawaii	...	234.6	...	236.1	...	243.3	...	...	233.5	...	237.0	...	243.5	...
Houston, Tex.	...	272.3	...	274.8	...	281.5	...	...	269.4	...	272.1	...	277.7	...
Kansas City, Mo.-Kansas	...	254.8	...	259.1	...	261.9	...	...	253.0	...	257.2	...	260.1	...
Los Angeles-Long Beach, Anaheim, Calif.	241.3	252.6	255.5	258.7	259.4	261.6	263.3	243.9	254.9	258.4	262.2	262.7	265.0	266.5
Miami, Fla. (11/77=100)	127.7	...	133.9	...	137.3	...	140.0	128.8	...	135.6	...	138.8	...	141.7
Milwaukee, Wis.	242.7	...	262.1	...	266.2	...	269.9	247.8	...	267.5	...	271.9	...	274.6
Minneapolis-St. Paul, Minn.-Wis.	...	255.5	...	259.0	...	260.6	...	...	256.6	...	260.6	...	262.4	...
New York, N.Y.-Northeastern N.J.	231.2	243.1	244.7	247.3	249.4	252.7	253.9	230.8	242.6	244.2	247.2	249.1	252.7	253.7
Northeast, Pa. (Scranton)	229.0	...	247.0	...	252.4	...	257.6	231.3	...	249.5	...	255.1	...	260.6
Philadelphia, Pa.-N.J.	234.6	247.9	249.2	250.5	253.2	255.9	258.3	235.1	249.5	251.1	252.3	255.5	258.1	259.5
Pittsburgh, Pa.	...	256.3	...	262.0	...	265.5	...	...	257.6	...	262.9	...	266.4	...
Portland, Oreg.-Wash.	253.6	...	261.9	...	266.4	...	268.1	251.7	...	260.7	...	265.0	...	267.0
St. Louis, Mo.-Ill.	238.1	...	253.8	...	255.7	...	259.3	238.5	...	254.2	...	255.9	...	259.4
San Diego, Calif.	258.3	...	279.1	...	287.7	...	293.1	255.6	...	275.1	...	282.9	...	288.0
San Francisco-Oakland, Calif.	...	251.9	...	254.9	...	260.5	...	...	252.6	...	255.7	...	261.6	...
Seattle-Everett, Wash.	243.8	...	262.6	...	264.9	...	271.1	241.3	...	259.4	...	262.3	...	267.9
Washington, D.C.-Md.-Va.	238.8	...	253.6	...	257.2	...	262.3	239.2	...	255.7	...	259.4	...	264.2

<sup>1</sup>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.  
<sup>2</sup> Average of 85 cities.

## 26. Producer Price Indexes, by stage of processing

[1967 = 100]

Commodity grouping	Annual average 1980	1980									1981			
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. <sup>1</sup>	Jan.	Feb.	Mar.	Apr.
<b>FINISHED GOODS</b>														
Finished goods .....	246.8	242.1	243.4	244.9	249.3	251.4	251.4	255.4	256.2	†257.2	259.8	262.4	265.3	267.7
Finished consumer goods .....	248.8	243.7	245.2	246.8	251.7	254.1	254.1	257.0	257.9	†258.9	261.4	264.0	267.3	269.6
Finished consumer foods .....	239.4	230.1	231.9	233.0	241.6	246.5	247.4	248.0	248.9	†249.3	250.6	250.9	251.8	251.5
Crude .....	237.1	224.1	229.1	224.5	240.9	247.0	259.8	237.8	250.5	†254.8	257.3	265.0	279.1	278.8
Processed .....	237.7	228.8	230.3	231.8	239.7	244.4	244.3	246.9	246.7	†246.7	247.9	247.6	247.3	247.0
Nondurable goods less foods .....	283.9	281.5	284.2	285.9	288.4	290.0	290.9	291.7	293.9	†296.2	301.1	307.1	314.7	318.8
Durable goods .....	205.9	202.3	201.9	204.1	207.5	208.1	206.2	214.0	213.1	†213.5	213.8	213.9	213.7	216.2
Consumer nondurable goods less food and energy .....	192.1	188.5	189.6	191.1	192.8	193.9	194.6	195.6	196.9	†197.6	200.5	203.0	204.5	206.5
Capital equipment .....	239.5	236.2	236.7	237.8	240.6	241.9	241.8	249.2	250.2	†250.9	253.9	256.3	257.8	260.5
<b>INTERMEDIATE MATERIALS</b>														
Intermediate materials, supplies, and components .....	280.1	275.7	277.0	278.8	281.6	284.3	285.3	287.7	289.1	†291.9	295.5	297.8	301.4	305.4
Materials and components for manufacturing .....	265.5	260.6	262.5	264.3	265.6	268.9	269.5	273.3	273.9	†275.7	278.7	279.7	281.0	283.9
Materials for food manufacturing .....	263.7	241.5	255.3	259.7	264.4	277.9	275.8	295.1	299.0	†279.6	277.9	273.8	267.9	264.0
Materials for nondurable manufacturing .....	259.5	258.1	260.4	261.0	261.7	263.4	263.2	265.0	266.7	†268.5	273.4	275.8	278.7	283.8
Materials for durable manufacturing .....	301.0	296.1	294.1	297.0	297.3	299.2	300.5	304.7	303.8	†304.3	306.9	305.5	306.5	310.2
Components for manufacturing .....	231.4	227.6	229.0	230.3	232.4	235.6	237.0	238.4	238.3	†246.3	249.0	251.7	253.5	255.2
Materials and components for construction .....	268.2	265.5	265.2	266.9	269.6	271.4	271.7	272.4	274.0	†276.6	279.2	280.2	282.6	287.7
Processed fuels and lubricants .....	502.7	496.6	498.2	502.0	514.2	517.4	519.5	516.2	521.3	†539.4	551.4	568.3	595.8	607.0
Manufacturing industries .....	425.3	415.2	420.9	425.4	431.0	436.0	440.8	440.6	445.2	†457.9	468.8	481.5	501.6	506.9
Nonmanufacturing industries .....	570.7	566.7	565.9	569.6	586.1	588.4	588.9	583.7	589.3	†611.4	624.2	644.8	678.7	695.2
Containers .....	254.5	253.2	254.4	256.2	257.0	257.4	257.9	260.1	259.5	†260.6	264.7	268.0	270.6	274.2
Supplies .....	244.5	239.7	240.0	241.2	245.3	247.7	250.3	252.3	255.2	†255.0	257.3	257.5	258.6	262.1
Manufacturing industries .....	231.8	229.0	230.5	232.8	234.2	235.4	236.1	237.5	238.7	†239.5	242.2	244.6	246.7	250.3
Nonmanufacturing industries .....	251.1	245.4	245.0	245.7	251.1	254.1	257.6	259.9	263.8	†263.0	265.1	264.3	265.0	268.4
Feeds .....	229.2	205.2	207.5	205.1	225.2	234.7	246.8	250.3	259.2	†251.5	252.2	238.1	232.2	239.5
Other supplies .....	253.5	253.0	251.9	253.4	254.7	255.8	256.9	258.8	261.3	†262.4	264.9	267.6	270.1	272.4
<b>CRUDE MATERIALS</b>														
Crude materials for further processing .....	304.2	286.2	289.3	288.4	304.3	317.0	319.3	322.8	324.6	†323.5	321.3	335.5	333.0	335.2
Foodstuffs and feedstuffs .....	259.1	235.8	243.0	243.0	263.4	276.8	276.6	279.1	277.3	271.6	270.6	267.1	262.0	263.4
Nonfood materials .....	399.9	393.4	387.5	384.6	390.8	401.9	409.8	415.4	424.9	†433.8	428.7	481.7	484.8	488.8
Nonfood materials except fuel .....	344.5	342.0	333.3	328.9	333.9	344.8	351.4	355.6	363.9	†373.3	365.8	428.1	430.6	432.7
Manufacturing industries .....	355.8	353.5	343.8	338.9	343.9	355.4	362.6	367.1	376.1	†386.5	377.5	445.7	448.2	450.4
Construction .....	237.2	232.4	232.8	234.1	239.1	243.7	244.8	245.3	246.5	†247.4	254.3	257.9	260.2	262.3
Crude fuel .....	614.9	591.4	600.0	604.0	615.1	626.3	639.1	650.9	664.9	†670.2	677.6	679.0	685.2	697.2
Manufacturing industries .....	690.2	659.0	670.3	675.7	690.5	705.4	722.0	738.1	755.8	†762.9	772.2	773.1	781.4	795.9
Nonmanufacturing industries .....	566.9	549.3	555.9	558.8	567.1	575.5	585.4	593.8	605.2	†608.9	614.9	616.8	621.5	631.6
<b>SPECIAL GROUPINGS</b>														
Finished goods excluding foods .....	247.7	244.5	245.6	247.3	250.2	251.4	251.1	256.2	257.0	†258.2	261.2	264.4	268.0	271.2
Finished consumer goods excluding foods .....	248.5	247.7	249.0	250.9	253.9	255.0	254.6	258.7	259.5	†260.9	263.8	267.3	271.7	275.1
Finished consumer goods less energy .....	216.9	212.5	213.4	214.9	219.7	221.9	221.9	225.0	225.5	†226.0	227.7	228.9	229.8	231.3
Intermediate materials less foods and feeds .....	281.3	279.1	279.6	281.5	283.8	285.8	286.6	288.2	289.3	†293.5	297.4	300.4	304.7	309.0
Intermediate materials less energy .....	265.8	260.7	261.9	263.5	265.5	268.3	269.2	272.2	273.3	†274.9	277.7	278.6	280.0	283.4
Intermediate foods and feeds .....	252.2	229.5	239.7	242.0	251.4	263.7	265.9	280.3	285.7	†270.0	269.0	261.9	256.0	255.6
Crude materials less agricultural products .....	480.3	437.7	430.2	428.6	434.6	447.1	454.1	463.2	473.8	†482.8	478.0	543.7	547.5	551.9
Crude materials less energy .....	256.7	238.7	241.0	239.0	256.1	268.5	269.9	272.4	271.7	†267.5	265.9	262.6	259.4	261.1

<sup>1</sup> Data for December 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.

<sup>2</sup> Not available.

† = revised.

NOTE: Figures in this table may differ from those previously reported because stage-of-processing indexes from January 1976 through December 1980 have been revised to reflect 1972 input-output relationships.

**27. Producer Price Indexes, by commodity groupings**

[1967 = 100 unless otherwise specified]

Code	Commodity group and subgroup	Annual average 1980	1980								1981				
			Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. 1	Jan.	Feb.	Mar.	Apr.
	<b>All commodities</b>	268.6	262.8	264.2	265.6	270.4	273.8	274.6	277.8	279.1	280.8	283.5	286.9	289.6	292.8
	<b>All commodities (1957-59 = 100)</b>	285.0	278.8	280.3	281.8	286.9	290.5	291.4	294.7	296.1	297.9	300.8	304.4	307.3	310.7
	<b>Farm products and processed foods and feeds</b>	244.6	229.3	233.8	234.3	246.6	255.1	256.5	259.4	260.5	257.0	257.3	254.9	253.1	253.6
	<b>Industrial commodities</b>	274.5	271.3	271.9	273.5	276.2	278.2	278.8	282.0	283.4	286.6	289.9	294.8	298.9	302.8
	<b>FARM PRODUCTS AND PROCESSED FOODS AND FEEDS</b>														
01	Farm products	249.3	228.9	233.5	233.4	254.3	263.8	267.0	263.6	264.9	265.3	264.4	262.3	260.6	263.2
01-1	Fresh and dried fruits and vegetables	238.5	223.2	244.0	233.5	252.0	254.0	266.2	240.9	246.6	245.1	257.7	270.4	291.6	285.2
01-2	Grains	239.0	210.8	219.0	215.3	244.8	256.5	260.6	269.2	270.9	265.2	277.7	267.5	261.8	264.7
01-3	Livestock	252.7	230.5	233.3	240.0	260.5	275.7	266.8	263.0	254.8	251.4	244.3	244.6	239.3	246.6
01-4	Live poultry	202.1	171.9	171.3	166.6	227.2	224.5	241.0	222.9	221.0	218.9	213.1	220.8	213.5	195.4
01-5	Plant and animal fibers	271.1	266.9	272.7	247.0	267.0	280.8	295.2	287.2	294.1	284.1	268.4	270.1	274.2	
01-6	Fluid milk	271.2	265.4	265.4	265.5	265.8	271.6	275.5	280.9	284.7	290.5	288.4	289.5	289.5	287.2
01-7	Eggs	171.0	153.3	140.5	146.8	159.3	176.9	188.4	175.2	194.0	217.5	185.7	184.8	180.4	196.2
01-8	Hay, hayseeds, and oilseeds	247.1	205.1	206.9	207.4	251.4	261.5	280.7	284.4	298.3	310.2	311.8	295.0	289.5	296.3
01-9	Other farm products	298.1	304.8	311.0	309.4	292.4	282.7	292.0	285.8	296.6	296.0	296.1	295.1	295.9	295.9
02	Processed foods and feeds	241.0	228.6	233.1	233.9	241.5	249.4	249.8	256.1	257.2	251.5	252.4	250.0	248.1	247.4
02-1	Cereal and bakery products	235.9	232.4	234.7	233.2	234.7	235.8	238.3	241.5	245.3	248.7	250.8	251.7	251.9	253.5
02-2	Meats, poultry, and fish	243.0	226.0	224.5	226.6	248.5	259.9	257.8	256.0	250.9	248.1	248.8	243.9	242.0	239.2
02-3	Dairy products	230.7	227.5	228.5	229.5	230.1	232.6	233.7	238.0	240.2	242.3	245.2	245.5	245.5	245.8
02-4	Processed fruits and vegetables	228.9	224.6	225.4	227.2	229.8	230.7	231.3	233.8	234.7	236.6	237.4	244.1	251.8	258.7
02-5	Sugar and confectionery	321.2	275.0	327.8	325.4	313.5	347.1	341.4	404.7	409.0	339.8	338.6	324.7	302.6	286.0
02-6	Beverages and beverage materials	232.4	227.9	231.2	234.3	234.6	237.1	236.1	239.5	240.6	240.5	240.4	242.2	242.8	243.4
02-7	Fats and oils	226.8	214.5	212.0	212.8	226.9	240.2	238.3	231.0	238.0	234.1	230.4	228.3	230.0	232.6
02-8	Miscellaneous processed foods	227.2	225.1	223.7	223.4	223.5	224.0	226.8	230.6	235.0	240.5	244.2	248.0	249.2	249.9
02-9	Manufactured animal feeds	226.9	205.0	207.2	205.0	223.9	232.4	243.4	246.9	254.5	247.1	247.9	235.3	231.5	237.8
	<b>INDUSTRIAL COMMODITIES</b>														
03	Textile products and apparel	183.4	181.2	182.0	183.0	184.7	185.6	186.6	188.1	189.6	190.4	192.4	193.1	194.5	196.5
03-1	Synthetic fibers (12/75 = 100)	134.8	130.4	133.2	134.5	136.0	137.5	139.5	140.2	140.7	140.8	147.3	147.8	149.6	151.6
03-2	Processed yarns and threads (12/75 = 100)	122.2	122.1	124.2	122.8	122.4	123.2	124.3	125.1	125.8	128.2	129.2	129.6	133.9	134.6
03-3	Gray fabrics (12/75 = 100)	137.7	137.0	136.5	134.8	135.7	137.5	141.0	143.5	145.0	144.0	142.8	143.1	144.0	145.7
03-4	Finished fabrics (12/75 = 100)	115.7	114.5	115.3	115.8	116.6	116.8	117.0	118.3	119.1	120.1	121.5	122.2	122.5	124.1
03-81	Apparel	172.2	170.0	170.2	172.7	174.4	175.1	175.0	176.2	176.8	177.5	178.6	179.3	180.1	182.1
03-82	Textile housefurnishings	208.3	201.6	202.6	202.7	210.7	211.0	212.9	213.8	213.8	214.3	223.9	225.4	225.4	226.3
04	Hides, skins, leather, and related products	248.6	243.5	240.7	240.9	245.1	251.3	247.8	251.2	255.4	256.9	258.5	257.4	262.4	264.9
04-1	Hides and skins	370.9	328.6	289.7	315.7	356.6	398.4	356.1	381.5	409.1	392.8	377.8	367.3	(2)	(2)
04-2	Leather	311.6	297.6	290.4	284.4	292.2	314.2	298.1	301.9	317.3	332.4	332.6	310.0	322.5	337.8
04-3	Footwear	233.2	231.9	231.9	231.9	232.7	233.7	235.5	236.6	237.5	236.9	238.6	240.8	240.5	241.1
04-4	Other leather and related products	218.1	216.2	217.4	215.9	217.5	218.7	218.8	221.8	222.6	225.3	230.7	235.8	243.4	243.5
05	Fuels and related products and power	573.4	566.6	572.1	576.5	585.5	590.6	593.5	592.9	600.2	615.7	625.9	663.8	692.2	703.8
05-1	Coal	467.5	465.2	466.5	466.6	467.5	468.7	471.3	470.7	475.4	475.3	477.5	480.8	481.3	486.4
05-2	Coke	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.1	430.6	430.6	430.6	430.6
05-3	Gas fuels <sup>3</sup>	160.4	730.1	745.1	749.2	762.1	772.6	786.2	802.2	825.5	844.3	857.9	858.8	867.6	884.5
05-4	Electric power	321.6	310.1	316.5	326.0	331.1	333.6	338.3	337.4	333.8	337.6	341.7	345.4	350.4	355.8
05-61	Crude petroleum <sup>4</sup>	551.7	533.9	540.1	549.0	551.4	566.8	571.3	579.6	600.6	632.8	615.2	842.9	843.0	842.6
05-7	Petroleum products, refined <sup>5</sup>	674.4	678.0	680.9	681.7	693.9	697.6	696.4	690.4	697.6	717.0	736.0	767.8	822.4	839.1
06	Chemicals and allied products	260.2	259.8	262.5	262.8	263.3	264.4	263.4	264.8	266.7	268.1	273.6	277.2	279.4	285.8
06-1	Industrial chemicals <sup>6</sup>	323.8	322.1	328.5	329.5	328.7	330.0	327.5	330.0	332.7	334.6	342.8	349.4	352.5	360.8
06-21	Prepared paint	235.4	231.5	238.8	238.8	238.8	238.8	239.3	239.3	241.4	241.4	243.3	246.9	246.9	248.5
06-22	Paint materials	273.8	272.1	273.9	275.0	277.2	278.4	278.9	279.6	279.8	281.0	283.1	286.4	288.3	295.2
06-3	Drugs and pharmaceuticals	174.4	172.6	172.8	174.4	175.7	176.1	176.8	178.4	181.1	182.6	184.7	187.4	189.1	190.9
06-4	Fats and oils, inedible	297.9	298.2	294.7	255.8	260.0	307.6	304.5	302.0	308.2	317.1	310.6	289.7	295.7	312.7
06-5	Agricultural chemicals and chemical products	256.9	258.5	258.5	257.6	258.7	260.0	260.6	260.6	261.1	263.3	265.8	271.3	274.8	277.3
06-6	Plastic resins and materials	279.4	287.6	288.4	287.6	285.7	281.5	276.5	276.1	276.2	274.1	275.2	276.1	278.3	285.4
06-7	Other chemicals and allied products	224.6	223.1	224.8	226.9	228.5	229.0	229.1	230.9	232.4	234.1	244.1	246.7	247.8	256.4
07	Rubber and plastic products	217.3	214.1	215.0	217.3	218.8	220.5	222.0	222.8	223.4	223.3	224.9	226.5	228.8	230.9
07-1	Rubber and rubber products	237.7	233.4	234.7	236.8	239.0	240.2	242.6	244.6	245.0	244.9	246.9	249.2	253.0	253.9
07-11	Crude rubber	263.9	264.7	263.9	264.1	263.4	264.3	267.3	271.7	271.0	268.5	270.0	280.8	280.6	279.1
07-12	Tires and tubes	236.6	231.8	233.2	235.6	238.0	238.0	242.1	245.2	245.2	245.2	240.5	243.1	248.2	250.3
07-13	Miscellaneous rubber products	227.6	222.1	224.0	226.4	229.3	232.0	232.0	232.0	233.3	234.0	241.1	241.0	246.5	246.8
07-2	Plastic products (6/78 = 100)	120.9	119.7	119.9	121.4	122.0	123.2	123.7	123.6	124.0	123.9	124.7	125.3	125.9	127.8
08	Lumber and wood products	288.8	275.6	272.1	279.8	289.2	296.1	292.2	289.0	293.4	299.4	296.6	294.5	293.6	298.1
08-1	Lumber	325.6	310.1	301.4	313.0	327.2	333.7	328.0	320.6	324.9	333.0	331.6	327.8	324.7	331.3
08-2	Millwork	260.5	257.5	251.8	253.0	255.9	260.3	264.5	264.5	270.0	273.3	273.6	278.8	275.7	276.5
08-3	Plywood	246.6	219.8	230.6	241.7	252.8	266.0	252.6	252.9	256.6	263.5	251.1	248.6	246.7	254.4
08-4	Other wood products	239.1	241.7	240.7	238.7	236.9	236.2	236.8	236.7	236.6	236.2	238.5	238.1	239.3	238.2

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 1980	1980									1981			
			Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. <sup>1</sup>	Jan.	Feb.	Mar.	Apr.
<b>INDUSTRIAL COMMODITIES — Continued</b>															
09	Pulp, paper, and allied products .....	249.3	247.8	249.2	251.1	251.7	252.4	252.8	254.3	255.0	'256.7	262.0	266.2	268.4	270.6
09-1	Pulp, paper, and products, excluding building paper and board .....	250.7	249.4	250.6	252.4	252.9	253.8	254.1	255.6	256.2	'257.9	261.0	264.6	266.9	269.1
09-11	Woodpulp .....	381.1	385.6	385.6	387.7	388.3	388.3	388.2	389.6	390.2	'390.2	392.6	392.6	392.6	396.6
09-12	Wastepaper .....	208.5	242.5	226.1	206.6	194.0	193.8	192.5	193.5	192.3	'191.5	191.5	186.1	185.1	184.2
09-13	Paper .....	256.9	253.5	256.1	257.9	258.2	258.6	258.7	262.1	264.1	'269.4	271.0	273.1	274.0	275.5
09-14	Paperboard .....	235.0	232.1	235.5	238.9	237.1	238.4	239.5	239.9	241.7	'239.6	251.0	253.2	255.9	257.8
09-15	Converted paper and paperboard products .....	238.6	236.7	237.6	239.8	241.2	242.3	242.7	243.7	243.5	'244.7	247.0	252.0	255.1	257.4
09-2	Building paper and board .....	206.0	201.3	206.8	208.9	211.8	210.3	210.2	212.7	216.5	'219.7	219.1	225.2	227.3	231.9
10	Metals and metal products .....	286.2	284.4	281.8	281.9	282.5	285.1	287.3	291.9	291.1	'290.6	293.6	293.7	296.1	298.7
10-1	Iron and steel .....	305.1	307.2	304.8	303.4	300.6	302.6	304.5	310.5	312.7	'316.4	322.8	323.0	328.0	330.9
10-13	Steel mill products .....	302.7	304.1	305.5	305.8	301.0	301.0	301.0	307.5	309.4	'313.7	322.7	322.9	328.7	331.8
10-2	Nonferrous metals .....	304.2	298.3	289.7	288.8	292.6	298.4	302.2	309.4	302.1	'293.4	290.6	286.2	285.5	288.0
10-3	Metal containers .....	298.6	304.1	302.7	302.7	303.0	303.2	303.2	304.4	303.3	'303.3	311.4	313.8	314.1	314.1
10-4	Hardware .....	240.1	237.3	238.4	240.5	242.6	243.3	245.9	246.6	249.6	'251.7	252.5	256.0	256.5	256.4
10-5	Plumbing fixtures and brass fittings .....	246.6	243.8	247.5	248.6	249.7	250.4	250.6	250.6	252.3	'254.9	255.5	259.0	259.2	265.2
10-6	Heating equipment .....	206.2	204.2	204.0	205.0	296.2	208.0	208.8	210.6	212.0	'214.0	215.4	216.1	217.6	218.8
10-7	Fabricated structural metal products .....	270.4	269.1	269.9	270.1	272.2	273.0	274.1	276.9	278.0	'279.3	283.0	285.6	289.4	293.5
10-8	Miscellaneous metal products .....	250.2	246.1	246.7	250.4	251.1	253.2	254.0	255.3	256.9	'257.6	261.3	264.0	265.7	268.1
11	Machinery and equipment .....	239.6	236.4	237.6	239.2	241.5	242.6	244.7	246.8	248.3	'249.8	252.7	254.8	256.9	259.2
11-1	Agricultural machinery and equipment .....	258.1	254.4	256.4	257.1	258.6	259.9	263.9	265.4	271.6	'272.9	273.5	277.2	278.7	281.2
11-2	Construction machinery and equipment .....	289.2	284.2	285.9	287.6	291.5	293.4	295.7	299.1	300.1	'301.4	304.9	308.4	311.3	314.7
11-3	Metalworking machinery and equipment .....	274.3	270.2	272.9	275.4	278.0	278.8	280.2	282.5	283.9	'285.7	289.3	291.2	294.7	298.1
11-4	General purpose machinery and equipment .....	264.3	261.1	262.8	264.8	266.1	267.0	270.0	272.5	274.3	'275.6	278.2	279.9	281.3	283.1
11-6	Special industry machinery and equipment .....	275.9	271.9	273.0	274.3	276.7	277.1	283.0	286.0	287.7	'290.9	295.3	299.3	300.9	303.8
11-7	Electrical machinery and equipment .....	201.7	198.9	199.9	201.6	203.7	205.0	206.0	207.0	207.5	'208.9	211.9	213.6	215.9	217.8
11-9	Miscellaneous machinery .....	229.8	227.2	227.3	228.2	231.1	232.1	233.6	236.5	238.5	'239.6	241.8	243.7	245.4	248.1
12	Furniture and household durables .....	187.3	184.4	185.4	186.5	188.0	188.9	189.5	190.9	191.5	'193.1	193.2	194.6	195.4	196.4
12-1	Household furniture .....	204.2	200.3	203.0	204.0	206.5	208.0	208.5	209.8	210.9	'212.1	211.3	212.1	214.4	216.9
12-2	Commercial furniture .....	235.9	233.6	233.9	235.5	237.2	237.3	237.8	241.4	242.2	'242.4	246.1	251.2	253.2	254.3
12-3	Floor coverings .....	163.0	162.2	161.9	162.1	163.2	163.8	163.9	164.4	165.5	'170.7	172.3	172.4	174.0	176.2
12-4	Household appliances .....	173.8	171.1	173.2	175.5	175.8	176.3	177.2	177.5	178.5	'179.5	181.0	182.3	183.0	183.8
12-5	Home electronic equipment .....	91.0	91.4	92.0	91.8	91.7	91.3	91.6	91.5	91.2	'91.0	91.0	91.7	91.3	91.3
12-6	Other household durable goods .....	277.7	267.3	265.6	266.5	271.5	275.9	276.2	281.8	281.2	'285.7	278.3	280.2	277.6	276.2
13	Nonmetallic mineral products .....	282.8	283.7	284.0	283.4	284.8	286.0	286.8	288.6	288.7	'291.2	296.3	297.7	301.2	310.2
13-11	Flat glass .....	196.5	195.3	195.3	193.6	194.3	199.5	199.7	200.7	203.1	'203.0	203.9	204.3	204.8	208.1
13-2	Concrete ingredients .....	273.4	271.7	272.4	273.2	275.9	278.6	278.9	279.0	279.1	'279.7	287.5	289.6	291.9	296.4
13-3	Concrete products .....	273.9	272.9	275.2	275.8	275.9	276.0	277.3	277.5	277.7	'277.6	285.6	286.6	286.9	289.5
13-4	Structural clay products excluding refractories .....	231.5	235.0	230.0	230.1	230.1	229.7	230.1	233.3	233.5	'233.6	240.0	240.4	245.2	245.6
13-5	Refractories .....	264.9	261.7	264.4	265.8	268.7	270.6	270.6	273.2	273.2	'273.2	283.5	294.4	297.1	297.3
13-6	Asphalt roofing .....	396.7	408.9	401.1	400.9	413.8	411.2	407.9	408.5	397.1	'394.6	404.1	389.3	400.7	416.3
13-7	Gypsum products .....	256.3	264.0	256.5	257.1	253.1	251.8	251.8	249.5	253.3	'252.7	259.6	257.3	257.6	256.8
13-8	Glass containers .....	292.7	294.3	294.3	294.3	294.3	294.3	294.6	306.2	306.2	'311.4	311.5	311.5	311.5	326.0
13-9	Other nonmetallic minerals .....	394.0	399.6	400.7	394.8	396.9	397.1	400.7	402.7	403.3	'418.9	417.9	424.7	441.7	479.9
14	Transportation equipment (12/68 = 100) .....	206.6	203.2	202.5	203.1	206.2	208.8	204.4	217.4	217.8	'224.3	226.4	228.5	228.5	231.5
14-1	Motor vehicles and equipment .....	208.7	205.4	204.5	205.2	208.6	211.7	205.6	218.2	218.6	'226.2	228.5	230.2	229.9	233.2
14-4	Railroad equipment .....	313.0	309.9	310.5	312.2	316.4	318.0	320.0	323.3	323.6	'323.9	327.8	334.4	335.8	341.8
15	Miscellaneous products .....	258.7	252.8	251.7	258.0	261.7	260.1	265.1	266.0	263.6	'265.3	263.0	263.2	262.4	265.5
15-1	Toys, sporting goods, small arms, ammunition .....	198.4	195.4	196.0	197.5	200.2	201.3	202.3	202.7	202.8	'205.7	207.8	209.5	210.4	211.7
15-2	Tobacco products .....	245.5	238.1	247.7	248.1	248.2	248.2	249.4	254.4	'254.8	254.3	255.3	255.4	268.4	
15-3	Notions .....	217.2	216.8	217.0	217.0	221.7	223.8	223.9	224.0	224.1	'225.0	227.0	247.3	247.3	248.4
15-4	Photographic equipment and supplies .....	203.0	212.3	199.6	201.7	201.6	200.9	200.9	200.8	206.7	'206.6	207.3	209.6	211.1	211.6
15-51	Mobile homes (12/74 = 100) .....	149.9	149.4	150.4	150.6	151.2	151.4	151.7	153.2	152.7	'153.0	152.3	152.5	154.4	155.2
15-9	Other miscellaneous products .....	363.3	340.9	340.2	360.2	370.9	364.6	381.9	383.4	367.0	'370.5	359.5	353.2	346.7	347.8

<sup>1</sup> Data for December 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.

<sup>2</sup> Not available.

<sup>3</sup> Prices for natural gas are lagged 1 month.

<sup>4</sup> Includes only domestic production.

<sup>5</sup> Most prices for refined petroleum products are lagged 1 month.

<sup>6</sup> 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 1980	1980										1981			
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. <sup>1</sup>	Jan.	Feb.	Mar.	Apr.	
All commodities — less farm products	269.4	264.8	265.9	267.5	270.9	273.8	274.3	278.1	279.4	'281.2	284.2	288.0	291.1	294.3	
All foods	244.5	231.9	237.3	237.7	245.9	254.1	254.3	258.8	259.7	'254.3	255.1	253.9	253.2	251.6	
Processed foods	246.6	234.1	239.0	239.9	247.3	255.7	254.9	261.7	261.9	'255.5	256.4	254.2	252.2	250.5	
Industrial commodities less fuels	243.4	240.5	240.6	242.0	243.9	245.6	246.0	249.6	250.3	'252.3	255.0	256.6	258.2	261.4	
Selected textile mill products (Dec. 1975 = 100)	124.4	122.2	122.9	123.7	125.5	126.0	126.6	127.5	128.1	'129.3	131.8	132.7	133.1	134.6	
Hosiery	123.3	121.1	121.5	122.2	123.5	125.9	126.4	126.2	126.7	'126.4	129.2	130.1	130.5	134.1	
Underwear and nightwear	185.5	182.4	182.8	187.1	188.3	189.3	189.5	189.7	190.3	'190.6	199.5	201.2	201.6	202.1	
Chemicals and allied products, including synthetic rubber and manmade fibers and yarns	250.7	250.0	252.8	253.8	254.2	254.7	254.0	255.4	257.0	258.2	264.2	268.0	270.2	276.0	
Pharmaceutical preparations	167.1	165.6	165.9	167.6	168.1	168.4	168.8	170.8	173.7	174.6	177.1	179.7	181.8	184.0	
Lumber and wood products, excluding millwork and other wood products	303.8	284.7	282.0	293.5	306.9	315.5	307.4	302.3	306.5	314.2	309.2	305.7	303.0	310.1	
Special metals and metal products	258.3	255.8	254.0	254.4	256.2	259.0	257.8	265.7	265.7	'268.6	271.3	272.2	273.5	276.4	
Fabricated metal products	258.2	255.9	256.8	258.6	259.9	261.2	262.6	264.3	265.2	266.3	270.0	272.6	274.7	277.3	
Copper and copper products	222.1	222.0	212.2	208.5	214.5	220.4	214.1	216.5	215.7	'210.8	207.8	205.9	205.2	207.5	
Machinery and motive products	230.1	226.7	227.1	228.3	231.0	232.9	232.1	239.2	240.2	'244.1	246.7	248.8	250.0	252.6	
Machinery and equipment, except electrical	261.8	258.2	259.6	261.2	263.7	264.6	270.2	273.0	275.1	'276.7	276.6	278.9	280.9	283.5	
Agricultural machinery, including tractors	266.2	261.9	263.9	264.7	266.3	268.1	272.9	274.8	280.9	'281.4	283.3	285.8	286.7	287.8	
Metalworking machinery	299.5	293.6	296.8	299.7	303.3	304.5	306.5	309.6	311.2	'314.1	318.9	320.0	323.3	325.7	
Numerically controlled machine tools (Dec. 1971 = 100)	225.6	223.8	226.9	228.5	228.7	229.3	230.0	231.7	232.1	'230.6	235.0	235.4	236.1	236.1	
Total tractors	286.5	280.8	282.9	284.0	288.3	291.1	295.8	298.3	299.9	'301.2	304.8	310.2	310.9	315.6	
Agricultural machinery and equipment less parts	260.2	256.2	258.0	257.8	260.8	262.2	266.5	268.3	273.7	'274.3	276.3	279.0	280.2	281.7	
Farm and garden tractors less parts	268.0	263.7	264.7	264.8	267.2	270.3	277.3	278.0	282.4	'282.4	283.6	286.4	286.8	288.5	
Agricultural machinery excluding tractors less parts	265.0	260.7	263.6	265.0	265.9	266.6	269.7	272.5	279.9	'280.9	283.3	285.5	286.9	287.5	
Industrial valves	287.1	287.8	288.4	290.1	291.1	291.3	292.4	294.6	296.0	'297.8	297.9	302.7	306.8	310.4	
Industrial fittings	291.8	289.9	291.5	295.9	296.1	296.1	298.6	298.6	298.6	298.6	298.6	296.0	298.8	302.7	
Abrasive grinding wheels	( <sup>2</sup> )	261.4	261.3	261.3	261.5	261.5	261.3	263.4	273.0	273.8	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	
Construction materials	266.3	262.3	261.8	264.2	267.0	269.6	269.3	269.9	271.9	'274.1	276.7	277.1	279.0	283.4	

<sup>1</sup> Data for December 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.

<sup>2</sup> Not available.

**29. Producer Price Indexes, by durability of product**

[1967=100]

Commodity grouping	Annual average 1980	1980										1981			
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. <sup>1</sup>	Jan.	Feb.	Mar.	Apr.	
Total durable goods	251.2	247.7	247.1	248.7	251.2	253.1	253.7	258.4	258.6	'261.0	261.9	263.1	264.5	267.4	
Total nondurable goods	282.3	274.4	277.6	278.8	285.6	290.3	291.2	293.0	295.2	'296.3	300.7	306.0	310.0	313.3	
Total manufactures	261.4	257.0	258.3	259.8	263.0	265.7	265.8	269.6	270.5	'272.0	276.4	278.7	281.8	284.8	
Durable	250.5	246.7	246.7	248.5	251.0	252.7	253.1	257.8	257.9	'260.4	261.5	262.7	264.0	266.9	
Nondurable	272.9	267.9	270.7	271.7	275.9	279.5	279.5	282.1	284.0	'284.3	292.5	295.9	301.0	304.3	
Total raw or slightly processed goods	305.4	290.4	292.7	293.8	307.7	315.7	319.9	319.6	322.9	'326.2	318.6	328.9	329.7	333.3	
Durable	278.0	286.0	262.2	249.9	255.2	265.8	274.9	282.7	285.6	'284.0	275.7	275.7	280.8	286.2	
Nondurable	306.4	289.8	294.0	296.1	310.6	318.4	322.2	321.3	324.6	'328.2	320.7	331.7	332.2	335.6	

<sup>1</sup> Data for December 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 1980	1980										1981			
			Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. <sup>1</sup>	Jan.	Feb.	Mar.	Apr.	
<b>MINING</b>																
1011	Iron ores (12/75 = 100)	152.9	152.6	152.6	152.6	155.8	155.8	155.8	155.8	155.8	155.8	155.8	168.1	168.1	168.1	
1092	Mercury ores (12/75 = 100)	331.2	337.5	337.5	322.9	331.2	329.1	335.4	338.7	343.7	325.0	297.9	324.5	335.4	354.1	
1211	Bituminous coal and lignite	466.8	464.6	466.0	466.0	466.9	467.9	470.3	469.7	474.2	'473.9	475.8	478.3	478.8	483.9	
1311	Crude petroleum and natural gas	640.2	612.5	619.6	631.5	638.0	656.7	667.6	681.8	704.6	'731.7	722.9	885.6	889.6	895.9	
1442	Construction sand and gravel	252.0	248.6	249.3	250.0	254.8	255.8	258.5	261.8	263.2	'264.3	269.0	271.7	274.9	277.3	
1455	Kaolin and ball clay (6/76 = 100)	136.0	136.6	136.6	136.6	136.6	136.6	136.6	137.2	132.1	133.7	137.1	137.1	137.1	137.1	
<b>MANUFACTURING</b>																
2011	Meatpacking plants	244.3	225.6	227.2	230.0	249.1	265.3	257.1	258.0	251.4	'249.0	245.8	237.3	236.1	237.7	
2013	Sausages and other prepared meats	219.9	197.9	193.3	190.9	213.7	233.0	240.0	247.0	249.5	'247.4	235.3	232.7	229.9	227.1	
2016	Poultry dressing plants	191.9	164.5	164.7	164.2	214.2	212.1	226.0	211.3	205.9	201.8	201.9	208.3	203.9	186.7	
2021	Creamery butter	258.5	252.7	253.7	255.7	256.3	268.5	265.8	273.2	273.3	274.8	273.7	273.5	273.6	273.4	

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 1980	1980									1981			
			Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. 1	Jan.	Feb.	Mar.	Apr.
<b>MANUFACTURING — Continued</b>															
2022	Cheese natural and processed (12/72 = 100)	205.0	201.9	201.9	202.5	203.4	206.8	208.0	213.7	214.9	'216.1	217.8	217.4	217.5	218.1
2024	Ice cream and frozen desserts (12/72 = 100)	193.3	191.3	192.1	195.2	195.2	195.5	196.1	199.5	199.8	'207.5	210.1	210.6	210.6	211.4
2033	Canned fruits and vegetables	221.7	216.3	217.3	219.9	222.9	223.4	224.3	227.6	231.1	'232.0	233.7	238.3	241.7	245.0
2034	Dehydrated food products (12/73 = 100)	160.2	157.5	156.4	156.3	157.7	159.6	159.9	162.6	168.6	'170.4	172.9	170.1	172.9	174.5
2041	Flour mills (12/71 = 100)	189.1	175.0	182.3	180.8	188.6	193.1	196.1	201.5	205.1	199.5	203.4	198.0	195.1	201.5
2044	Rice milling	243.4	260.4	254.5	236.0	225.3	219.9	225.9	237.2	265.8	287.2	289.6	289.6	298.0	300.9
2048	Prepared foods, n.e.c. (12/75 = 100)	124.3	116.5	116.9	116.2	122.2	126.6	129.6	129.2	133.3	'133.9	132.9	129.7	127.0	128.8
2061	Raw cane sugar	414.1	320.2	456.1	402.4	381.8	484.0	458.9	588.2	563.8	402.9	418.0	367.1	318.8	275.7
2063	Beet sugar	349.6	296.6	339.9	348.0	342.3	365.5	384.5	460.1	512.2	'423.3	375.6	403.1	375.0	360.7
2067	Chewing gum	290.7	282.0	282.0	282.0	282.4	282.4	302.4	322.4	322.9	322.9	323.0	323.0	323.1	323.1
2074	Cottonseed oil mills	192.9	154.7	150.4	155.1	191.3	215.1	232.9	218.7	231.8	228.0	221.2	193.7	204.4	218.3
2075	Soybean oil mills	244.2	211.9	212.9	208.6	37.4	256.9	275.2	279.2	290.5	'270.5	272.0	253.0	253.0	257.7
2077	Animal and marine fats and oils	290.1	274.0	262.9	238.9	274.5	297.4	307.0	311.0	317.2	'311.8	310.8	287.2	284.2	301.7
2083	Malt	249.9	244.1	244.1	244.1	244.1	244.1	244.1	267.4	267.4	267.4	286.1	286.1	286.1	286.1
2085	Distilled liquor, except brandy (12/75 = 100)	123.0	118.7	118.9	120.5	121.0	127.7	127.7	127.9	128.5	129.2	129.2	133.9	133.9	133.9
2091	Canned and cured seafoods (12/73 = 100)	174.0	170.2	173.1	175.3	175.9	177.5	178.6	180.0	183.1	183.4	187.0	186.8	187.6	187.8
2092	Fresh or frozen packaged fish	367.1	370.5	360.0	361.2	363.7	365.2	355.0	353.8	353.3	'353.9	375.4	367.2	385.7	394.9
2095	Roasted coffee (12/72 = 100)	269.3	273.9	273.9	283.1	274.5	274.7	263.9	257.0	252.5	248.5	238.2	238.3	238.3	238.5
2098	Macaroni and spaghetti	233.8	230.5	230.5	230.5	230.5	230.5	239.3	243.6	243.6	243.6	243.6	243.6	243.6	243.6
2111	Cigarettes	254.6	246.3	257.3	257.4	257.4	257.4	257.4	257.8	263.5	'263.6	263.5	263.9	263.9	278.3
2121	Cigars	157.7	155.3	155.3	159.8	159.9	159.9	159.9	163.7	164.0	'165.1	163.6	162.6	164.2	165.6
2131	Chewing and smoking tobacco	278.2	279.2	278.6	278.6	279.5	279.7	279.7	295.0	295.0	'298.8	294.2	310.4	310.4	320.4
2211	Weaving mills, cotton (12/72 = 100)	215.6	211.3	212.9	212.9	217.7	219.0	221.9	223.4	224.2	'225.0	227.2	230.2	232.3	235.2
2221	Weaving mills, synthetic (12/77 = 100)	124.5	123.0	122.4	121.2	123.0	124.9	127.7	130.7	133.0	'132.5	131.5	131.8	132.9	134.2
2251	Women's hosiery, except socks (12/75 = 100)	106.4	105.0	105.4	105.4	105.4	108.8	108.8	108.7	109.0	'108.6	109.1	109.2	109.0	114.2
2254	Knit underwear mills	190.0	186.8	187.1	190.4	192.6	192.9	194.1	194.2	194.7	195.0	205.5	208.6	209.4	209.7
2257	Circular knit fabric mills (6/76 = 100)	104.5	104.0	104.4	105.0	105.4	105.7	105.8	106.7	107.1	'107.5	107.9	108.2	107.8	109.3
2261	Finishing plants, cotton (6/76 = 100)	135.1	132.4	134.5	134.6	137.2	137.3	136.9	139.1	139.3	'140.2	142.4	144.5	144.6	146.8
2262	Finishing plants, synthetics, silk (6/76 = 100)	113.6	110.7	111.8	112.1	113.8	114.1	115.3	117.3	117.9	'120.5	121.6	123.0	124.2	124.8
2272	Tufted carpets and rugs	138.1	137.3	137.1	137.4	137.7	138.3	138.3	138.8	140.0	'145.7	148.1	148.2	150.2	152.5
2281	Yarn mills, except wool (12/71 = 100)	203.5	203.7	204.5	202.8	202.9	204.3	206.2	207.9	209.9	'215.1	217.0	218.1	220.6	221.0
2282	Throwing and winding mills (6/76 = 100)	114.8	114.8	118.1	115.8	115.0	115.8	117.2	118.2	118.4	'120.1	121.5	121.6	129.5	130.6
2284	Thread mills (6/76 = 100)	139.1	134.6	143.0	142.9	143.0	143.1	143.1	143.8	143.9	143.9	144.1	144.3	148.4	150.8
2298	Cordage and twine (12/77 = 100)	123.6	123.6	123.8	125.0	125.0	125.0	125.0	127.1	129.2	129.3	129.3	129.3	130.9	132.7
2311	Men's and boys' suits and coats	212.5	209.7	210.9	211.6	214.9	214.9	214.9	216.2	216.3	216.1	218.1	219.7	220.4	220.5
2321	Men's and boys' shirts and nightwear	204.1	204.0	203.7	205.1	206.5	206.7	207.7	208.0	208.6	'209.5	203.1	203.9	205.0	205.3
2322	Men's and boys' underwear	208.0	204.2	204.3	208.5	211.1	211.2	212.8	212.8	212.8	'212.9	224.8	229.0	230.9	230.9
2323	Men's and boys' neckwear (12/75 = 100)	112.6	112.4	112.4	112.4	112.4	112.4	112.4	112.4	112.4	115.4	115.4	115.4	115.4	115.4
2327	Men's and boys' separate trousers	174.5	174.9	174.9	175.1	175.3	175.3	175.3	180.2	180.2	180.3	180.4	180.4	180.4	185.7
2328	Men's and boys' work clothing	240.4	241.2	241.8	242.6	244.8	244.1	243.9	244.3	244.3	'244.4	241.6	241.7	241.9	246.2
2331	Women's and misses' blouses and waists (6/78 = 100)	110.0	107.6	107.6	107.8	111.4	112.6	112.6	114.0	114.0	'115.4	114.8	114.8	115.1	115.2
2335	Women's and misses' dresses (12/77 = 100)	114.7	113.9	113.9	114.0	114.0	115.4	115.4	116.3	116.3	116.3	116.4	116.7	117.9	118.2
2341	Women's and children's underwear (12/72 = 100)	154.5	153.1	153.2	155.0	155.4	156.9	155.4	156.0	157.1	'158.1	166.1	168.0	168.0	169.5
2342	Brassieres and allied garments (12/75 = 100)	126.6	125.4	125.4	126.6	127.8	129.0	129.0	129.0	129.1	'129.1	132.1	133.2	134.5	134.5
2361	Children's dresses and blouses (12/77 = 100)	109.8	106.3	105.6	108.0	112.7	112.7	112.2	112.7	115.1	'117.4	117.1	117.7	118.0	119.2
2381	Fabric dress and work gloves	268.6	267.5	271.1	271.1	271.1	271.1	271.1	271.1	272.1	272.1	284.9	289.1	289.1	289.1
2394	Canvas and related products (12/77 = 100)	124.0	123.4	123.4	123.4	123.4	123.4	123.9	125.1	125.1	126.1	127.4	127.4	128.4	129.9
2396	Automotive and apparel trimmings (12/77 = 100)	122.4	122.3	122.3	122.3	122.3	122.3	122.3	122.3	131.0	131.0	131.0	131.0	131.0	131.0
2421	Sawmills and planing mills (12/71 = 100)	227.5	215.8	209.4	218.1	228.9	234.2	229.0	223.2	226.8	233.5	232.4	230.0	228.1	231.9
2436	Softwood veneer and plywood (12/75 = 100)	144.6	121.9	130.3	140.5	150.4	160.7	149.6	149.1	152.3	158.2	149.8	147.0	145.3	151.2
2439	Structural wood members, n.e.c. (12/75 = 100)	155.8	158.2	152.1	152.1	152.1	152.2	155.5	156.2	157.0	157.1	157.1	157.0	157.1	158.3
2448	Wood pallets and skids (12/75 = 100)	160.1	164.6	162.8	159.7	157.1	156.0	154.9	154.6	154.7	154.1	153.8	152.8	152.7	153.0
2451	Mobile homes (12/74 = 100)	150.0	149.5	150.5	150.7	151.3	151.4	151.8	153.2	152.7	'153.1	152.4	152.5	154.5	155.3
2492	Particleboard (12/75 = 100)	161.1	161.9	167.3	171.7	168.7	169.4	163.7	159.8	163.6	'165.9	162.7	169.1	171.0	179.6
2511	Wood household furniture (12/71 = 100)	183.6	180.0	182.2	183.5	185.1	186.4	187.7	188.1	189.1	'190.0	191.2	191.7	193.4	195.3
2512	Upholstered household furniture (12/71 = 100)	162.6	160.9	161.1	162.5	166.1	166.2	166.2	167.7	168.6	'170.5	166.9	167.2	170.0	173.4
2515	Mattresses and bedsprings	179.0	172.8	176.0	176.0	180.8	186.4	186.4	186.5	186.5	'186.5	186.2	188.2	192.1	194.5
2521	Wood office furniture	235.3	233.9	233.9	234.0	235.5	235.5	235.5	239.7	239.7	'240.9	244.0	250.3	253.5	254.6
2611	Pulp mills (12/73 = 100)	240.8	243.8	243.9	243.9	244.5	244.5	244.4	246.1	246.8	'246.8	249.1	249.1	249.1	253.4
2621	Paper mills, except building (12/74 = 100)	145.6	145.0	145.8	146.2	146.4	146.7	146.7	148.2	149.2	'150.7	152.0	152.8	153.5	154.3
2631	Paperboard mills (12/74 = 100)	139.1	137.9	139.5	141.2	140.3	141.1	141.7	142.3	143.2	'142.4	148.3	149.4	151.0	152.0
2647	Sanitary paper products	322.3	316.7	319.3	321.2	327.4	331.1	331.1	332.6	334.7	'338.2	339.2	343.6	344.1	344.2
2654	Sanitary food containers	216.4	212.9	215.5	217.2	218.2	220.3	222.3	222.3	222.3	'223.3	223.3	236.5	239.1	240.4
2655	Fiber cans, drums, and similar products (12/75 = 100)	151.0	146.6	148.7	150.6	155.2	155.2	155.2	155.5	155.5	'155.0	157.7	159		

30. Continued — Producer Price Indexes for the output of selected SIC industries

[1967=100 unless otherwise specified]

1972 SIC code	Industry description	Annual average 1980	1980									1981			
			Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. <sup>1</sup>	Jan.	Feb.	Mar.	Apr.
3021	Rubber and plastic footwear (12/71 = 100)	178.0	173.7	173.7	173.8	181.8	181.9	182.0	182.0	182.4	182.3	183.2	183.7	184.4	183.7
3031	Reclaimed rubber (12/73 = 100)	184.0	185.9	186.5	186.5	186.5	185.9	185.9	184.0	184.1	186.7	188.3	192.1	195.1	195.2
3079	Miscellaneous plastic products (6/78 = 100)	121.5	120.3	120.5	122.2	122.7	123.9	124.4	124.2	124.6	124.5	125.1	125.6	126.2	128.4
3111	Leather tanning and finishing (12/77 = 100)	147.1	140.8	137.9	134.6	137.7	147.9	140.0	( <sup>2</sup> )	149.3	156.6	157.0	145.5	151.4	158.6
3142	House slippers (12/75 = 100)	149.6	145.4	145.4	145.4	151.1	151.1	151.1	153.5	158.2	154.9	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
3143	Men's footwear, except athletic (12/75 = 100)	159.9	158.5	158.5	158.5	158.5	159.5	161.5	161.6	162.4	162.4	164.7	166.4	167.4	168.4
3144	Women's footwear, except athletic	213.5	213.8	213.8	213.8	214.2	214.3	215.2	217.1	217.1	217.1	217.9	220.0	218.8	218.7
3171	Women's handbags and purses (12/75 = 100)	137.9	132.1	140.8	140.9	140.9	140.0	140.9	140.9	140.9	140.9	149.5	149.5	149.7	149.7
3211	Flat glass (12/71 = 100)	161.3	160.8	160.8	158.9	159.5	162.6	162.8	163.8	166.4	166.3	167.1	167.5	168.1	171.7
3221	Glass containers	292.6	294.2	294.2	294.2	294.2	294.2	294.2	306.1	306.1	311.4	311.4	311.4	311.4	325.9
3241	Cement, hydraulic	309.8	312.6	313.8	313.8	313.3	313.1	312.3	311.8	310.5	310.5	319.2	319.1	321.3	329.0
3251	Brick and structural clay tile	277.3	276.4	278.5	278.5	278.5	277.6	278.5	282.6	282.9	282.9	287.5	287.0	296.2	297.0
3253	Ceramic wall and floor tile (12/75 = 100)	122.5	130.4	117.6	117.6	117.6	117.6	117.6	120.1	120.1	127.1	127.1	127.1	127.2	127.2
3255	Clay refractories	274.1	273.9	275.6	275.9	279.2	279.5	279.7	280.2	280.7	280.7	293.1	306.9	309.9	310.3
3259	Structural clay products, n.e.c.	202.8	203.1	204.1	204.4	204.7	205.0	204.8	204.9	205.0	205.1	209.9	213.3	213.5	213.1
3261	Vitreous plumbing fixtures	234.8	227.6	236.1	235.8	237.2	240.4	241.1	241.5	242.6	245.0	244.7	248.9	249.4	252.0
3262	Vitreous china food utensils	317.3	313.4	313.4	318.6	318.3	318.3	318.3	327.4	327.4	327.4	327.4	327.4	328.0	328.2
3263	Fine earthenware food utensils	295.4	295.1	293.9	294.7	294.6	294.6	296.4	297.9	297.9	297.9	298.3	298.3	307.6	307.6
3269	Pottery products, n.e.c. (12/75 = 100)	152.6	151.4	151.5	152.7	152.7	152.7	153.3	155.4	155.5	155.5	155.4	155.4	158.4	158.5
3271	Concrete block and brick	257.3	259.3	259.4	259.4	259.5	259.5	260.5	259.4	259.4	259.4	264.1	264.9	263.2	267.3
3273	Ready-mixed concrete	279.9	278.8	281.5	282.5	282.6	282.6	283.6	282.7	282.8	282.9	294.0	295.4	296.1	298.6
3274	Lime (12/75 = 100)	157.8	157.1	157.3	157.7	159.6	160.2	158.8	160.8	160.8	161.8	165.8	171.9	172.8	172.4
3275	Gypsum products	256.7	264.6	257.0	257.5	253.5	252.3	252.2	250.0	253.6	253.1	259.9	257.6	257.9	257.1
3291	Abrasive products (12/71 = 100)	212.6	212.0	211.8	213.5	215.2	215.7	217.1	218.8	220.2	220.6	222.7	226.9	229.7	232.0
3297	Nonclay refractories (12/74 = 100)	161.2	157.4	159.7	161.2	162.8	164.9	164.8	167.8	167.5	167.6	172.4	177.5	179.0	178.9
3312	Blast furnaces and steel mills	310.4	312.0	313.3	313.5	308.6	308.6	308.6	314.8	316.6	320.7	328.9	328.9	334.0	336.6
3313	Electrometallurgical products (12/75 = 100)	117.7	118.7	118.6	118.7	117.1	117.1	117.2	117.3	117.3	119.9	119.9	120.0	120.8	120.8
3316	Cold finishing of steel shapes	283.9	285.9	288.1	288.2	282.2	288.2	288.2	288.1	288.8	293.3	302.8	303.1	306.1	308.3
3317	Steel pipes and tubes	291.0	286.8	286.9	290.4	292.4	292.6	292.6	294.2	302.4	308.4	315.0	315.7	326.2	333.1
3321	Gray iron foundries (12/68 = 100)	282.0	279.8	280.5	282.5	283.0	283.2	283.3	289.7	290.1	290.7	291.9	293.0	293.0	296.9
3333	Primary zinc	269.9	274.3	268.2	268.6	255.9	255.9	264.0	269.9	282.0	288.7	289.4	296.3	296.0	308.0
3334	Primary aluminum	298.3	276.0	287.0	290.1	312.1	312.2	313.0	325.6	328.5	328.0	333.9	334.9	334.8	334.6
3351	Copper rolling and drawing	227.6	227.4	222.8	220.2	222.8	226.2	220.2	222.0	222.9	222.8	221.9	215.4	212.0	212.1
3353	Aluminum sheet plate and foil (12/75 = 100)	158.2	157.8	157.6	157.8	158.2	157.6	161.5	163.3	165.1	169.3	170.7	172.1	173.9	173.9
3354	Aluminum extruded products (12/75 = 100)	167.7	167.7	167.7	167.7	168.3	168.4	168.2	173.2	176.3	176.4	176.8	177.1	177.3	180.6
3355	Aluminum rolling, drawing, n.e.c. (12/75 = 100)	146.2	143.8	145.2	146.7	147.4	147.6	147.5	150.7	151.2	151.1	155.5	157.5	157.5	157.5
3411	Metal cans	291.6	295.1	295.2	294.9	295.6	295.9	296.1	297.9	297.2	297.3	302.1	303.0	304.7	304.7
3425	Hand saws and saw blades (12/72 = 100)	182.0	178.0	181.5	181.9	183.5	185.4	185.8	186.8	187.2	190.5	195.0	195.1	197.6	197.8
3431	Metal sanitary ware	248.3	245.5	249.7	249.9	250.9	251.4	251.4	251.5	252.2	253.8	255.9	256.3	256.6	262.9
3465	Automotive stampings (12/75 = 100)	137.0	133.5	133.8	137.8	137.8	139.8	140.1	140.2	140.9	141.2	143.3	144.1	144.5	145.2
3482	Small arms ammunition (12/75 = 100)	146.8	141.7	141.4	144.6	145.1	147.3	145.3	145.8	146.3	160.9	158.2	163.2	163.2	163.2
3493	Steel springs, except wire	230.2	229.2	229.2	230.3	230.3	230.8	231.9	233.0	233.3	234.3	238.2	239.0	239.0	240.6
3494	Valves and pipe fittings (12/71 = 100)	229.7	229.4	229.9	231.8	232.5	232.7	233.3	235.8	236.9	238.3	239.0	240.8	243.4	245.9
3498	Fabricated pipe and fittings	315.5	313.0	313.1	313.8	317.2	317.2	319.9	325.0	329.9	329.9	335.7	335.7	338.5	358.8
3519	Internal combustion engines, n.e.c.	274.9	270.6	271.6	271.7	276.8	276.6	283.2	285.2	289.1	289.9	293.0	294.2	298.5	304.2
3531	Construction machinery (12/76 = 100)	140.9	138.6	139.5	140.3	141.8	142.7	143.8	146.0	146.6	147.5	148.9	150.4	151.5	154.3
3532	Mining machinery (12/72 = 100)	258.3	256.0	257.3	258.2	259.4	262.0	264.1	266.0	268.0	270.0	271.9	273.5	275.7	279.1
3533	Oilfield machinery and equipment	337.7	329.8	333.1	337.4	342.6	345.7	347.3	352.9	358.4	360.9	366.5	373.7	375.8	380.7
3534	Elevators and moving stairways	239.2	232.6	234.1	242.8	244.2	243.8	246.4	248.3	248.8	249.5	250.3	250.3	250.3	251.1
3542	Machine tools, metal forming types (12/71 = 100)	279.6	274.3	275.1	279.2	284.3	285.3	285.6	286.8	287.4	292.0	298.1	298.5	301.8	302.9
3546	Power driven hand tools (12/76 = 100)	132.0	129.0	131.2	131.1	133.5	134.5	135.3	136.6	136.7	137.9	141.7	143.9	144.8	146.4
3552	Textile machinery (12/69 = 100)	216.6	213.4	213.6	217.0	221.7	222.1	222.3	223.8	224.5	226.0	231.1	233.7	236.6	241.0
3553	Woodworking machinery (12/72 = 100)	212.6	212.3	212.1	213.7	215.9	216.0	216.0	217.0	217.7	221.5	221.9	223.1	225.0	225.8
3576	Scales and balances, excluding laboratory	212.7	207.5	208.2	208.6	215.4	226.2	226.2	226.3	226.9	217.9	219.8	221.1	224.2	225.9
3592	Carburetors, pistons, rings, valves (6/76 = 100)	156.5	152.6	153.0	153.5	158.6	159.3	160.1	164.9	165.2	167.6	168.7	170.6	170.8	171.9
3612	Transformers	185.0	180.5	181.5	182.9	186.0	190.6	190.7	193.9	193.0	193.3	195.2	197.0	204.4	206.2
3623	Welding apparatus, electric (12/72 = 100)	209.7	207.0	209.2	211.0	212.1	212.1	211.7	214.4	214.9	215.8	218.3	220.0	221.1	223.8
3631	Household cooking equipment (12/75 = 100)	133.0	129.7	133.1	134.7	134.9	134.4	134.7	134.8	135.8	137.5	140.1	140.8	140.9	140.3
3632	Household refrigerators, freezers (6/76 = 100)	120.9	119.3	119.4	122.0	122.2	122.2	123.3	124.1	125.1	125.1	126.2	126.1	126.2	128.1
3633	Household laundry equipment (12/73 = 100)	162.0	160.3	161.7	162.3	161.2	163.6	165.5	166.1	166.6	167.4	169.7	170.1	170.9	171.1
3635	Household vacuum cleaners	152.2	148.6	149.3	155.8	158.4	158.5	158.6	158.8	158.8	159.1	152.6	149.9	151.8	151.8
3636	Sewing machines (12/75 = 100)	128.9	129.2	129.2	129.2	130.0	130.0	130.0	130.3	130.3	130.3	129.7	129.7	131.3	131.2
3641	Electric lamps	260.1	252.3	251.3	258.1	266.3	268.1	269.2	268.7	270.2	266.2	265.9	271.2	272.6	275.5
3644	Noncurrent-carrying wiring devices (12/72 = 100)	220.3	217.4	218.2	220.4	220.3	220.7	220.9	221.8	223.7	229.2	235.3	238.5	242.9	244.9
3646	Commercial lighting fixtures (12/75 = 100)	139.3	138.0	138.5	139.2	139.2	140.4	142.3	142.8	143.1	144.7	145.6	148.5	151.9	156.6
3648	Lighting equipment, n.e.c. (12/75 = 100)	139.9	139.4	140.2	140.7	140.7	140.9	143.2	143.3	144.7	145.0	146.3	146.8	152.7	153.2
3671	Electron tubes receiving type	251.8	254.0	254.7	255.2	255.5	255.6	255.7	264.6	264.8	272.7	284.3	284.5	285.1	285.1
3674	Semiconductors and related devices	90.6	90.4	91.2	92.0	92.1	91.8	92.0	91.8	91.2	91.6	90.6	90.8	91.7	91.7
3675	Electronic capacitors (12/75 = 100)	162.6	157.0	160.7	160.5	168.6	172.6	174.0	170.1	170.2	170.3	170.3	170.6	172.5	171.4
3676	Electronic resistors (12/75 = 100)	134.1	131.9	133.0	135.2	135.3	136.3	136.9	137.7	137.8	137.8	138.1	138.8	139.5	139.7
3678	Electronic connectors (12/75 = 100)	148.2	146.5	146.8	148.7	148.9	149.1	149.6	149.7	149.7	149.				

## 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, selected years, 1950-80**

[1977=100]

Item	1950	1955	1960	1965	1970	1973	1974	1975	1976	1977	1978	1979	1980
<b>Private business sector:</b>													
Output per hour of all persons	50.3	58.2	65.1	78.2	86.1	94.8	92.7	94.8	97.9	100.0	99.8	99.4	99.1
Compensation per hour	20.0	26.3	33.9	41.7	58.2	71.3	78.0	85.5	92.9	100.0	108.4	119.2	131.1
Real compensation per hour	50.4	59.6	69.4	80.0	90.8	97.3	95.9	96.3	98.8	100.0	100.7	99.5	96.4
Unit labor cost	39.8	45.2	52.1	53.3	67.6	75.2	84.2	90.2	94.8	100.0	108.6	119.9	132.3
Unit nonlabor payments	43.5	47.8	50.8	57.8	63.4	75.6	78.9	90.7	94.4	100.0	105.1	110.9	118.4
Implicit price deflator	41.0	46.1	51.7	54.8	66.2	75.3	82.4	90.4	94.7	100.0	107.4	116.9	127.6
<b>Nonfarm business sector:</b>													
Output per hour of all persons	56.2	62.7	68.2	80.4	86.7	95.3	93.1	95.0	98.1	100.0	99.8	99.0	98.6
Compensation per hour	21.8	28.3	35.6	42.8	58.6	71.7	78.4	86.0	93.0	100.0	108.5	118.8	130.5
Real compensation per hour	55.0	63.9	73.0	82.2	91.5	97.7	96.4	96.8	99.0	100.0	100.7	99.2	96.0
Unit labor cost	38.8	45.1	52.3	53.2	67.6	75.2	84.3	90.5	94.8	100.0	108.7	120.0	132.4
Unit nonlabor payments	42.8	47.9	50.5	58.2	64.0	71.9	76.1	88.9	94.0	100.0	103.6	108.5	117.6
Implicit price deflator	40.2	46.0	51.7	54.9	66.4	74.1	81.6	89.9	94.5	100.0	107.0	116.2	127.4
<b>Nonfinancial corporations:</b>													
Output per hour of all employees	( <sup>1</sup> )	( <sup>1</sup> )	66.3	79.9	85.4	94.5	91.3	94.4	97.4	100.0	100.4	100.3	100.8
Compensation per hour	( <sup>1</sup> )	( <sup>1</sup> )	36.3	43.0	58.3	70.8	77.6	85.5	92.5	100.0	108.2	118.6	130.4
Real compensation per hour	( <sup>1</sup> )	( <sup>1</sup> )	74.2	82.6	91.0	96.5	95.4	96.3	98.5	100.0	100.5	99.0	95.9
Unit labor cost	( <sup>1</sup> )	( <sup>1</sup> )	54.7	53.8	68.3	74.9	85.1	90.6	95.0	100.0	107.8	118.2	129.4
Unit nonlabor payments	( <sup>1</sup> )	( <sup>1</sup> )	54.6	60.8	63.1	70.7	75.7	90.9	95.0	100.0	103.8	108.3	117.3
Implicit price deflator	( <sup>1</sup> )	( <sup>1</sup> )	54.7	56.2	66.5	73.4	81.8	90.7	95.0	100.0	106.4	114.8	125.2
<b>Manufacturing:</b>													
Output per hour of all persons	49.5	56.5	60.1	74.6	79.2	93.1	90.9	93.5	97.7	100.0	100.9	101.9	101.4
Compensation per hour	21.5	28.8	36.7	42.9	57.6	69.1	76.4	85.5	92.4	100.0	108.2	118.7	131.2
Real compensation per hour	54.1	65.2	75.1	82.3	89.9	94.2	93.9	96.3	98.3	100.0	100.5	99.1	96.5
Unit labor cost	43.4	51.0	61.1	57.4	72.7	74.2	84.1	91.4	94.6	100.0	107.3	116.5	129.4
Unit nonlabor payments	55.1	59.4	62.0	70.3	66.0	71.6	70.4	88.5	95.1	100.0	104.7	105.7	( <sup>1</sup> )
Implicit price deflator	46.8	53.4	61.3	61.2	70.7	73.4	80.1	90.6	94.7	100.0	106.5	113.4	( <sup>1</sup> )

<sup>1</sup> Not available.

r = revised.

**32. Annual changes in productivity, hourly compensation, unit costs, and prices, 1970-80**

Item	Year											Annual rate of change	
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1950-80	1960-80
<b>Private business sector:</b>													
Output per hour of all persons	0.9	3.6	3.5	2.7	-2.3	2.3	3.3	2.1	-0.2	-0.4	r -0.3	2.5	2.2
Compensation per hour	7.4	6.6	6.5	8.0	9.4	9.6	8.6	7.7	8.4	9.9	r 10.0	6.0	7.1
Real compensation per hour	1.4	2.2	3.1	1.7	-1.4	0.4	2.7	1.2	0.7	-1.2	r -3.1	2.4	1.9
Unit labor cost	6.4	2.9	2.9	5.2	11.9	7.2	5.1	5.5	8.6	10.4	r 10.3	3.5	4.8
Unit nonlabor payments	0.7	7.6	4.5	5.9	4.4	15.0	4.1	5.9	5.1	5.5	r 6.8	3.2	4.4
Implicit price deflator	4.5	4.4	3.4	5.4	9.4	9.7	4.7	5.6	7.4	8.8	r 9.2	3.4	4.7
<b>Nonfarm business sector:</b>													
Output per hour of all persons	0.3	3.3	3.7	2.5	-2.4	2.1	3.2	2.0	-0.2	-0.8	r -0.4	2.1	1.9
Compensation per hour	7.0	6.6	6.7	7.6	9.4	9.6	8.1	7.6	8.5	9.6	r 9.8	5.7	6.8
Real compensation per hour	1.0	2.2	3.3	1.3	-1.4	0.4	2.2	1.0	0.7	-1.5	r -3.3	2.1	1.6
Unit labor cost	6.6	3.1	2.8	4.9	12.1	7.4	4.7	5.5	8.7	10.4	r 10.3	3.5	4.8
Unit nonlabor payments	1.1	7.4	3.2	1.3	5.9	16.7	5.7	6.4	3.6	4.8	r 8.3	3.1	4.2
Implicit price deflator	4.8	4.5	3.0	3.7	10.1	10.3	5.1	5.8	7.0	8.6	r 9.7	3.4	4.6
<b>Nonfinancial corporations:</b>													
Output per hour of all employees	0.4	4.8	3.0	2.6	-3.4	3.4	3.2	2.7	0.4	-0.1	r 0.5	( <sup>1</sup> )	2.0
Compensation per hour	6.8	6.5	5.8	7.7	9.7	10.1	8.2	8.1	8.2	9.6	r 10.0	( <sup>1</sup> )	6.7
Real compensation per hour	0.8	2.1	2.5	1.4	-1.1	0.9	2.3	1.5	0.5	-1.5	r -3.1	( <sup>1</sup> )	1.5
Unit labor cost	6.3	1.6	2.8	4.9	13.6	6.5	4.9	5.3	7.8	9.7	r 9.5	( <sup>1</sup> )	4.6
Unit nonlabor payments	0.5	7.4	2.7	1.5	7.1	20.1	4.6	5.2	3.8	4.4	r 8.3	( <sup>1</sup> )	3.8
Implicit price deflator	4.4	3.5	2.8	3.8	11.4	10.9	4.8	5.2	6.4	7.9	r 9.1	( <sup>1</sup> )	4.3
<b>Manufacturing:</b>													
Output per hour of all persons	-0.2	6.1	5.0	5.4	-2.4	2.9	4.4	2.4	0.9	1.0	0.5	r 2.4	2.4
Compensation per hour	6.8	6.1	5.4	7.2	10.6	11.9	8.0	8.3	8.2	9.7	10.5	5.6	6.7
Real compensation per hour	0.8	1.8	2.0	0.9	-0.3	2.5	2.1	1.7	0.5	-1.4	-2.7	2.0	1.5
Unit labor cost	7.0	0.0	0.3	1.7	13.3	8.8	3.4	5.7	7.3	8.6	11.0	3.1	4.2
Unit nonlabor payments	-2.5	11.2	0.8	-3.3	-1.8	25.9	7.4	5.2	4.7	0.9	( <sup>1</sup> )	4.6	8.3
Implicit price deflator	4.3	3.1	0.5	0.3	9.0	13.1	4.6	5.6	6.5	6.4	( <sup>1</sup> )	4.5	7.6

<sup>1</sup> Not available.

r = revised.

**33. Quarterly indexes of productivity, hourly compensation, unit costs, and prices, seasonally adjusted**

[1977 = 100]

Item	Annual average		Quarterly indexes											
			1978		1979				1980				1981	
	1979	1980	III	IV	I	II	III	IV	I	II	III	IV	I	
<b>Private business sector:</b>														
Output per hour of all persons	99.4	r 99.1	100.0	99.9	99.7	99.6	99.2	99.0	99.3	98.8	99.2	98.9	r 98.9	p 99.8
Compensation per hour	119.2	131.1	109.4	111.9	115.0	118.0	120.5	123.0	126.0	129.7	132.8	135.5	p 139.2	
Real compensation per hour	99.5	96.4	100.5	r 100.3	r 100.6	r 100.3	99.0	r 97.8	96.5	r 96.3	96.7	r 95.7	p 95.7	
Unit labor cost	119.9	r 132.3	109.4	112.1	115.4	118.5	121.4	124.2	127.0	131.3	133.9	r 137.0	p 139.5	
Unit nonlabor payments	110.9	r 118.4	106.7	109.1	109.6	110.4	111.5	112.3	115.3	116.0	119.8	r 122.8	p 125.2	
Implicit price deflator	116.9	127.6	108.5	111.1	113.4	115.8	118.1	120.2	123.0	126.1	129.1	132.2	p 134.7	
<b>Nonfarm business sector:</b>														
Output per hour of all persons	99.0	r 98.6	99.9	99.8	99.5	99.1	98.7	98.6	98.6	97.9	98.8	r 98.7	p 99.6	
Compensation per hour	118.8	r 130.5	109.4	111.9	114.9	117.6	119.9	122.7	125.6	129.0	131.9	135.0	p 138.6	
Real compensation per hour	99.2	r 96.0	100.5	r 100.3	100.4	r 99.9	98.6	r 97.6	96.2	95.7	96.1	r 95.4	p 95.3	
Unit labor cost	120.0	132.4	109.5	112.2	115.4	118.7	121.5	124.4	127.4	131.8	133.5	r 136.8	p 139.2	
Unit nonlabor payments	108.5	r 117.6	105.1	107.0	107.1	107.7	109.3	110.2	114.0	115.2	119.2	r 122.1	p 125.2	
Implicit price deflator	116.2	127.4	108.0	110.5	112.6	115.1	117.4	119.7	122.9	126.3	128.8	131.9	p 134.5	
<b>Nonfinancial corporations:</b>														
Output per hour of all employees	100.3	r 100.8	100.4	100.5	100.6	100.6	100.3	99.7	100.0	99.8	101.5	p 101.5	( <sup>1</sup> )	
Compensation per hour	118.6	130.4	109.2	111.5	114.5	117.5	119.8	122.4	125.3	128.9	132.1	p 135.1	( <sup>1</sup> )	
Real compensation per hour	99.0	95.9	100.2	r 99.9	100.1	r 99.8	98.5	r 97.3	95.9	r 95.7	r 96.2	p 95.4	( <sup>1</sup> )	
Total unit costs	116.8	r 129.7	107.6	109.6	112.2	115.3	118.2	121.3	124.2	129.2	131.1	p 134.1	( <sup>1</sup> )	
Unit labor cost	118.2	r 129.4	108.7	111.0	113.8	116.8	119.5	122.8	125.4	129.1	r 130.2	p 133.1	( <sup>1</sup> )	
Unit nonlabor costs	112.7	r 130.2	104.4	106.0	107.8	111.2	114.6	117.2	120.9	129.3	133.8	p 136.9	( <sup>1</sup> )	
Unit profits	99.0	r 90.2	105.9	108.9	105.6	100.7	97.5	92.2	95.5	83.4	89.1	p 92.4	( <sup>1</sup> )	
Implicit price deflator	114.8	125.2	107.4	109.6	111.5	113.7	115.9	118.1	121.0	124.1	126.4	p 129.5	( <sup>1</sup> )	
<b>Manufacturing:</b>														
Output per hour of all persons	101.9	101.4	101.7	102.0	101.4	102.3	101.9	101.9	r 102.0	r 100.7	r 100.3	103.0	p 103.5	
Compensation per hour	118.7	131.2	109.1	111.5	114.5	118.5	119.7	122.0	125.0	129.6	133.5	p 140.3		
Real compensation per hour	99.1	96.5	100.2	r 100.0	r 100.2	r 100.7	98.4	r 97.0	95.7	r 96.2	r 97.2	r 96.7	p 96.5	
Unit labor cost	116.5	r 129.4	107.3	109.3	112.9	115.9	117.5	119.8	r 122.5	r 128.7	r 133.1	132.8	p 135.6	

<sup>1</sup> 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**

[1977=100]

Item	Quarterly percent change at annual rate						Percent change from same quarter a year ago					
	III 1979 to IV 1979	IV 1979 to I 1980	I 1980 to II 1980	II 1980 to III 1980	III 1980 to IV 1980	IV 1980 to I 1981	IV 1978 to IV 1979	I 1979 to I 1980	II 1979 to II 1980	III 1979 to III 1980	IV 1979 to IV 1980	IV 1980 to I 1981
	Private business sector:											
Output per hour of all persons	-1.1	1.3	-1.9	1.5	r -1.2	r 3.9	-0.9	-0.4	-0.8	0.0	r -0.1	p 0.5
Compensation per hour	8.6	10.4	12.2	9.7	8.4	r 11.5	9.9	9.6	9.9	10.2	10.2	p 10.5
Real compensation per hour	r -4.9	r -5.2	r -0.8	r 1.8	-4.0	r 0.1	-2.5	r -4.1	r -4.0	-2.3	r -2.1	p -0.7
Unit labor cost	9.8	9.0	14.4	8.1	r 9.7	r 7.4	10.9	10.0	10.8	10.3	r 10.3	p 9.9
Unit nonlabor payments	2.6	11.3	2.6	13.6	r 10.3	r 8.2	2.9	5.2	5.1	7.4	r 9.4	p 8.6
Implicit price deflator	7.4	9.7	10.5	9.8	9.9	r 7.6	8.2	8.4	9.0	9.4	10.0	p 9.5
Nonfarm business sector:												
Output per hour of all persons	-0.3	0.0	-3.0	3.8	r -0.4	r 3.6	-1.1	-0.9	-1.2	0.1	r -0.1	p 1.0
Compensation per hour	9.6	9.9	11.2	9.3	9.6	r 11.3	9.6	9.4	9.7	10.0	10.0	p 10.3
Real compensation per hour	-4.0	r -5.7	r -1.7	r 1.4	r -2.9	r -0.1	-2.7	r -4.3	r -4.2	r -2.5	r -2.3	p -0.8
Unit labor cost	9.9	9.9	14.6	5.3	r 10.1	r 7.5	10.9	10.4	11.0	9.9	r 9.9	p 9.3
Unit nonlabor payments	3.3	14.6	4.2	14.9	r 10.0	r 10.5	3.0	6.4	6.9	9.1	r 10.8	p 9.8
Implicit price deflator	7.8	11.3	11.3	8.2	10.0	r 8.4	8.3	9.1	9.7	9.6	10.2	p 9.5
Nonfinancial corporations:												
Output per hour of all employees	-2.4	1.2	-0.5	6.9	p -0.1	( <sup>1</sup> )	-0.8	-0.6	-0.7	1.2	p 1.8	( <sup>1</sup> )
Compensation per hour	8.9	9.8	12.0	10.3	p 9.2	( <sup>1</sup> )	9.8	9.5	9.7	10.3	p 10.3	( <sup>1</sup> )
Real compensation per hour	r -4.6	r -5.7	r -1.0	r 2.3	p -3.2	( <sup>1</sup> )	-2.6	r -4.2	-4.1	r -2.3	p -2.0	( <sup>1</sup> )
Total unit costs	11.0	9.8	17.0	6.2	p 9.4	( <sup>1</sup> )	10.7	10.6	12.0	11.0	p 10.5	( <sup>1</sup> )
Unit labor costs	11.6	8.6	12.6	3.2	p 9.4	( <sup>1</sup> )	10.7	10.1	10.5	8.9	p 8.4	( <sup>1</sup> )
Unit nonlabor costs	9.3	13.5	30.6	14.7	p 9.5	( <sup>1</sup> )	10.6	12.2	16.3	16.8	p 16.8	( <sup>1</sup> )
Unit profits	-20.2	15.3	-41.9	30.3	p 15.7	( <sup>1</sup> )	-15.4	-9.5	-17.2	-8.6	p 0.3	( <sup>1</sup> )
Implicit price deflator	7.8	10.3	10.5	7.9	p 9.9	( <sup>1</sup> )	7.8	8.5	9.1	9.1	p 9.6	( <sup>1</sup> )
Manufacturing:												
Output per hour of all persons	0.1	r 0.6	r -5.2	r -1.5	r 11.4	p 1.6	-0.1	r -0.6	r -1.6	r -1.5	1.1	p 1.4
Compensation per hour	8.1	10.1	15.5	12.7	r 10.2	p 10.6	9.4	9.1	9.3	11.6	12.1	p 12.2
Real compensation per hour	r -5.4	r -5.6	r 2.1	r 4.6	r -2.4	p -0.8	-2.9	r -4.5	-4.5	r -1.2	r -0.4	p 0.8
Unit labor cost	8.0	r 9.5	r 21.9	r -14.5	r -1.1	p 8.8	9.6	r 8.5	11.0	r 13.3	10.8	p 10.7

<sup>1</sup> 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, 1976 to date

[In percent]

Sector and measure	Annual average					Quarterly average							
	1976	1977	1978	1979	1980	1979			1980				1981 <sup>P</sup>
						II	III	IV	I	II	III	IV	
Wage and benefit settlements, all industries:													
First-year settlements .....	8.5	9.6	8.3	9.0	10.4	10.5	9.0	8.5	8.8	10.2	11.4	8.5	10.4
Annual rate over life of contract .....	6.6	6.2	6.3	6.6	7.1	7.8	6.1	6.0	6.7	7.4	7.2	6.1	7.3
Wage rate settlements, all industries:													
First-year settlements .....	8.4	7.8	7.6	7.4	9.5	8.9	6.8	6.3	8.2	9.1	10.5	8.3	9.0
Annual rate over life of contract .....	6.4	5.8	6.4	6.0	7.1	7.2	5.1	5.3	6.5	7.3	7.4	6.5	7.7
Manufacturing:													
First-year settlements .....	8.9	8.4	8.3	6.9	7.4	9.7	6.3	5.6	7.2	6.7	8.4	7.8	9.0
Annual rate over life of contract .....	6.0	5.5	6.6	5.4	5.4	8.1	4.7	4.2	5.7	5.1	5.6	5.8	6.7
Nonmanufacturing (excluding construction):													
First-year settlements .....	8.6	8.0	8.0	7.6	9.5	8.5	9.4	7.8	9.4	10.3	9.5	8.2	8.3
Annual rate over life of contract .....	7.2	5.9	6.5	6.2	6.6	5.8	6.5	7.4	7.6	8.5	5.9	6.8	7.6
Construction:													
First-year settlements .....	6.1	6.3	6.5	8.8	13.6	8.7	9.7	7.5	10.8	12.2	15.4	14.3	13.4
Annual rate over life of contract .....	6.2	6.3	6.2	8.3	11.5	8.3	8.5	7.6	9.1	10.4	13.0	12.0	11.6



### 36. Effective wage adjustments going into effect in major collective bargaining units, 1976 to date

[In percent]

Sector and measure	Average annual changes					Average quarterly changes								
	1976	1977	1978	1979	1980	1979				1980				1981 <sup>P</sup>
						I	II	III	IV	I	II	III	IV	
Total effective wage rate adjustment, all industries .....	8.1	8.0	8.2	9.1	9.9	1.4	2.6	3.3	1.6	1.6	3.3	3.5	1.3	1.3
Change resulting from .....														
Current settlement .....	3.2	3.0	2.0	3.0	3.6	.2	1.1	1.0	.5	.4	1.0	1.7	.5	.2
Prior settlement .....	3.2	3.2	3.7	3.0	3.5	.6	1.0	1.0	.4	.5	1.4	1.2	.3	.5
Escalator provision .....	1.6	1.7	2.4	3.1	2.8	.6	.5	1.2	.7	.7	.8	.7	.6	.5
Manufacturing .....	8.5	8.4	8.6	9.6	10.2	1.5	2.3	3.2	2.4	2.0	3.4	2.9	1.7	1.6
Nonmanufacturing .....	7.7	7.6	7.9	8.8	9.7	1.4	2.8	3.4	1.0	1.3	3.2	4.0	1.1	1.0

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 .....	4,827		1,727		34,754	15
1980 <sup>P</sup> : March .....	326	605	98	237	3,230	16
April .....	357	649	98	218	2,579	14
May .....	388	704	116	172	2,099	10
June .....	385	699	173	224	2,441	13
July .....	414	733	241	336	3,954	21
August .....	374	704	80	211	3,079	15
September .....	420	724	126	247	3,407	20
October .....	347	630	90	200	2,195	11
November .....	201	427	52	101	1,110	06
December .....	66	247	18	48	617	03
1981 <sup>P</sup> : January .....	253	297	50	68	614	03
February .....	347	517	90	136	647	04
March .....	314	545	271	336	1,419	07

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