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THE EMPLOYMENT SITUATION: JANUARY 1998

HEARING

before the,

JOINT ECONOMIC COMMITTEE CONGRESS OF THE UNITED STATES

ONE HUNDRED FIFTH CONGRESS

SECOND SESSION

February 6, 1998

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THE EMPLOYMENT SITUATION: JANUARY 1998

Friday, February 6, 1998

CONGRESS OF THE UNITED STATES, JOINT ECONOMIC COMMITTEE, WASHINGTON, D.C.

The Committee met, pursuant to notice, at 9:30 a.m., in Room 1334, Longworth House Office Building, the Honorable Jim Saxton, Chairman of the Committee, presiding.

Present: Representative Saxton.

Staff Present: Christopher Frenze, Colleen J. Healy, Mary Hewitt, Robert Keleher, Juanita Morgan, Amy Pardo, Dan Lara, Howard Rosen, and Joseph Cwiklinski.

OPENING STATEMENT OF Representative Jim Saxton, Chairman

Representative Saxton. Good morning. Once again, it is my pleasure to welcome Commissioner Abraham before the Joint Economic Committee (JEC). Thank you so much for being here. The business cycle expansion that began in 1991 continues to increase payroll employment, according to the Bureau of Labor Statistics (BLS) data released today. Payroll jobs increased by 358,000 in January, bringing the total to 124.2 million jobs. The household survey also reflects healthy employment gains. The unemployment rate was about unchanged, at 4.7 percent.

As I have noted before, the economic employment gains during this expansion period have been sustained by the Federal Reserve's policy of gradual disinflation. Lower inflation and interest rates have boosted the economy and flooded the Treasury with revenues easing the deficits. The domestic economic and fiscal situation remains quite positive.

In addition to the employment data, BLS also produces a variety of statistics on prices. The Consumer Price Index (CPI), Producer Price Index (PPI), Employment Cost Index, and other measures are closely watched BLS price data. Over the last year, we reviewed these data and found no evidence of a significant pickup in inflation.

Furthermore, the forward-looking indicators used by the Joint Economic Committee do not reflect any inflation threat. Instead, these indicators-commodity prices, bond yields and the dollar-suggest that the risk of deflation is becoming less remote. With respect to monetary policy, it is clear that the goal of price stability is inconsistent with inflation or deflation.

Monetary policy, guided by the inflation targeting approach to stable prices, as I favor, actually is slightly biased against deflation. Inflation targeting means that monetary policy aims to prevent a sustained increase or decrease in the price level reflected in broad price indices. Since monetary policy must be preemptive, the Federal Reserve must act before deflation actually materializes.

Let me just say that one more time. Since monetary policy must be preemptive, the Federal Reserve must act before deflation actually materializes. That is why, for several months, I have suggested that a Federal Reserve easing of interest rates would be an appropriate measure, given the fact that there is a substantial time lag between Federal action and the actual effect that we might desire.

Given the intense interest in this inflation/deflation issue, various BLS price measures will be closely scrutinized by the financial markets for the foreseeable future. To gauge the potential of imported deflation, the import and export price indices will receive especially close attention in the coming months.

In closing, I would like to mention an issue that consumed much of our time and effort last year, the Consumer Price Index. With the improvements made in this program by the BLS, Chairman Greenspan recently commented that the BLS was doing, quote, "an excellent job." I would like to second this opinion and thank the BLS for its hard and sometimes unappreciated work in this regard.

Commissioner Abraham, thank you for being here this morning, and we are anxious to hear what you have to bring to us this morning.

[The prepared statement of Representative Saxton appears in the Submissions for the Record.]

STATEMENT OF KATHARINE G. ABRAHAM, COMMISSIONER, BUREAU OF LABOR STATISTICS: Accompanied by Kenneth V. Dalton, Associate Commissioner, Office of Prices and Living Conditions, and Philip L. Rones, Assistant Commissioner of Current Employment Analysis

Ms. Abraham. Thank you very much, Mr. Chairman. As always, I appreciate the opportunity to be here, specifically to comment on the labor market data that we have released this morning. The unemploy-ment rate was unchanged in January at 4.7 percent. As you have noted, nonfarm payroll employment, as measured by our establishment survey increased by 358,000 over the month, and total employment, as measured by our household survey, rose substantially as well.

Payroll employment rose in most of the major industry groups, with particularly strong gains in manufacturing and construction. Con-struction employment jumped by 92,000 in January. Job gains in the industry have totaled 184,000 over the last three months, partly reflecting the strong housing market.

Unusually warm weather during January in many parts of the country, together with cleanup and repairs following the severe ice storms in the Northeast, contributed to the over-the-month growth in January.

Manufacturing added 43,000 jobs last month, about the same number as in each of the previous three months. Several industries that added jobs throughout 1997 continued hiring in January. These included fabricated metal products, industrial machinery, electronic components and aircraft and parts. Within nondurable goods, still within manufacturing, long-term employment declines continued in apparel, textiles and leather products, while rubber and miscellaneous plastics showed an over-the-month gain.

Following two very strong months, the services industry added 89,000 jobs in January. This compares to an average monthly gain of 115,000 in 1997. Employment in help supply services, which is principally a temporary help agency, which had grown by 57,000 in November and 30,000 in December, declined by 16,000 in January. Health services expanded more slowly than average, as over-the-month employment declines in home health care services and nursing homes offset continued growth in hospitals.

Computer and data processing services and engineering and management services continued their rapid growth. Retail trade added 24,000 jobs in January, which is about half the monthly average for 1997. Employment in department stores rose by 31,000 over the month. But following robust holiday hiring, seasonal layoffs were larger than usual in miscellaneous retail establishments, which includes such things as toy stores, book stores, catalog sales houses. That industry lost 25,000 jobs over the month. Wholesale trade employment rose by 30,000 over the month, with strength in both durable and nondurable goods distribution.

Employment in transportation was up 40,000 in January, driven by increases of 27,000 in air transportation, which offset an almost identical decline in December, and 10,000 in trucking. Communications employment rose by 10,000 in January. That industry has added 51,000 jobs over the past year. Real estate had an unusually strong month, adding 10,000 jobs. The employment gain of 12,000 in finance was in line with monthly average gains in 1997 and was led by a 5,000 increase in security and commodity brokerages.

Average hourly earnings of production or nonsupervisory workers in the private sector increased by four cents in January to \$12.51. Over the year, hourly earnings rose by 46 cents or 3.8 percent. Turning to data from the household survey, the unemployment rate was unchanged over the month at 4.7 percent. The rate for adult men fell slightly to 3.8 percent and that for adult women was up to 4.4 percent. The rates for other major worker groups were about unchanged. Total civilian employment grew by 641,000 in January, after adjusting for the effects of some minor changes in our estimation procedures that are described in my written statement, that I won't elaborate on this morning, unless you have got questions. These changes, I would note, did not signifi-cantly affect estimated unemployment rates. Both employment and labor force growth have accelerated sharply during the last three months.

I would like to note one thing about today's employment situation news release which is that it includes a new table on labor force status by educational attainment. I consider this an important addition, since education is such a critical determinant of labor market success. The unemployment rate for those with less than a high school education, for example, is nearly four times that for college graduates. And there are other statistics that similarly show the importance of education in labor market outcomes that are included in this new table.

In summary, employment rose sharply in January, with continued strength in manufacturing and construction, the civilian unemployment rate was unchanged at 4.7 percent. We would, of course, be happy to address any questions you might wish to raise. [The prepared statement of Commissioner Abraham and accompanying Press Release appear in the Submissions for the Record.]

Representative Saxton. Commissioner, thank you very much. Let me just emphasize some information you brought to us in the last part of your statement, which I think is very important and interesting. In fact, years ago, Commissioner Norwood liked to make the same point. The labor force statistics, as you just pointed out, consistently reflect differences in employment levels for a variety of education levels. It is quite evident, it seems to me in this month's data, that that fact continues to remain so. Can you give us the numbers that are in your information relative to this subject?

Ms. Abraham. Yes. Just taking a look at unemployment rates, the January figures for the educational groups that we have broken out in this new table, for people who have less than a high school diploma, the unemployment rate in January was 7.2 percent. For high school graduates, it was 3.9 percent, for people who had some college, but hadn't graduated, it was 3.2 percent, and for college graduates, it was 1.9 percent. So that is one important measure of labor market success.

There are other ways you could look at this. We have also figures on employment-to-population ratios. Those are complicated a little bit by the fact that so many of the people with less education are considerably older, the work force has gotten more educated over time, so that you would really need to, in addition to what we have on the table, look at things broken out by age group, but the pattern there is similar in the sense that less educated people are less likely to be working.

Representative Saxton. And that is undoubtedly more true today than it was in recent history. I mean, as we rely on higher tech types of jobs, particularly in the service industry and in the world of computers, I suspect that more education today is even more meaningful than it was, say, 15 or 20 years ago.

Ms. Abraham. I don't have readily at hand figures that go back that far. It has always been true people with less education are less likely to be employed and more likely to be unemployed. It doesn't show up that this has gotten worse so much in the unemployment figures. There may be more evidence of it in the employment figures. Phil is noting as well also in the earnings. It is very noteworthy that the gap in earnings between more and less educated people has widened considerably over the last 15 years. **Representative Saxton.** Thank you. Let me turn to another issue which is perhaps more evident in public discussions today. Most analysts expect the United States economy to slow because of what we refer to as the crisis in Asia. In what components of the BLS employment and price data can we expect to observe the initial aspects of this effect? I guess asked in another way, where should we be looking at your data to observe whatever impacts may be forthcoming?

Ms. Abraham. Well, I think the first place that I would look in our data for effects associated with what is going on in Asia would probably be our import price statistics, which are most directly tied to devel-opments there. If you want to add to what I am saying, you can. We have not seen a whole lot of evidence in the data we have through December of any impact of what is going on in Asia on import prices, but that was early, and I will be watching those statistics heading into 1998. Our import price statistics for January are due out next week. It is not obvious to me where you would look in terms of our employment statistics. We do have a series, I think Phil has in front of him, and I will let him speak to them, on employment in export-related industries, and you might expect if what is going on in Asia is impacting our exports that something would show up there, but we have measures of employment for industries that do a lot of exporting. We don't have measures of employment that are directly associated with exports.

Representative Saxton. You don't have import indices?

Ms. Abraham. We have an index of employment in industries that do a lot of exporting, but if employment in those industries changes, we can't say directly whether that is because they are exporting less or-

Representative Saxton. You have price indices for both imports and exports?

Ms. Abraham. Yes, we do.

Representative Saxton. Price indices are showing some effect relative to the Asian crisis; is that right?

Ms. Abraham. Well, we are really not seeing much we could directly link to that in the December data. The prices of imports from the Asian economies have been drifting downwards for a couple of years, and there wasn't anything we saw in the December data we could really say was a result of the recent developments.

Representative Saxton. So you are saying at this point that whatever reductions we may see in prices of imports and exports may be evident, but it may not be directly related to the Asian crisis.

Ms. Abraham. We haven't seen anything yet that is other than part of what I would describe as a continuing trend, but we need to look at the January data and the February data. Based on past experience, it often takes a while before, for example, currency rate fluctuations to show up in prices of imports. They don't get passed through immediately. We have not really seen anything dramatic yet.

Representative Saxton. Do you break this down on a commodity basis, or on a consumer item basis?

Ms. Abraham. We have statistics broken down by type of item. We also have some statistics that are country of origin indexes. We have an index for newly industrialized Asian countries that includes some of the countries that are of concern and we have an index for the prices of imports from Japan.

Representative Saxton. So you have indicated that import and export prices have fallen, generally.

Ms. Abraham. Import prices have fallen. Do you have figures on what has happened to export prices? I have been paying more attention to what is going on with import prices and that is what I looked at.

Mr. Dalton. For the past two years, they have been falling as well.

Ms. Abraham. The export prices have been falling as well.

Representative Saxton. Have you noticed any reduction in prices of personal computers? Is that a fair question to ask? Does your data reflect that kind of information?

Mr. Dalton. I don't have the information on personal computers, per se, but I think it is safe to say the price of personal computers is falling irrespective of what is happening in Asia.

Representative Saxton. You are being very careful not to attribute a cause for falling import prices or export prices to the Asian crisis, at least at this point.

Ms. Abraham. The only data we have are data through December, which would have been fairly early for any impact of the recent developments in Asia to have shown up, I think. We are seeing declines, but we are not seeing anything different from the trend over the prior couple of years.

Representative Saxton. Right. The decline in import prices from Asia's newly industrialized countries, from October to November, is a decline of about 1.1 percent. That seems to me to be a fairly substantial decline.

Ms. Abraham. Yes.

Mr. Dalton. That is a relatively large monthly decline and I think over the past two months the decline is somewhere along the order of 1.6 percent. But if you look at what has happened to those currencies, exchange rates have dropped precipitously, by half in some cases, and to date, we have not really seen anywhere near what we would anticipate the full effect of those currency devaluations to be.

Representative Saxton. So you will be watching this closely, obviously, in the coming months to try and determine whether or not there is some direct impact which many of us believe has to come?

Mr. Dalton. Well, I think we believe that as well and all we are saying is that we think the timing is a little bit different. It is going to take some time. But if you look over the past two years, the U.S. dollar has been appreciating relative to most other countries and import prices have been generally declining over that entire period. So I think there clearly is a relationship there. The issue is with drops as large as 30, 40, 50 percent in the exchange rate, will we see that reflected in the import price index itself? That is what we don't really know.

Ms. Abraham. And with what timing.

Mr. Dalton. And with what timing.

Representative Saxton. Let me go one step further and ask you if you anticipate that there might be some reason to expect a weaker Consumer Price Index in the future, reflecting these trends relative to, particularly imports.

Ms. Abraham. What I don't have in my head, and I don't know whether you have any sense of this, is what portion of the items in the CPI market basket are items where either a lot of the consumption is consumption of imported goods, or items that are competing with imports.

Mr. Dalton. I don't have that on the top of my head either.

Representative Saxton. I'm sorry, the data also shows, I believe, that the Producer Price Index has come down some.

Ms. Abraham. Right. That is over the last year or so.

Representative Saxton. We would obviously expect the CPI would follow.

Ms. Abraham. The thing that I think is important to keep in mind is when we are talking about imports and the Producer Price Index, we are talking about goods. The CPI is based on purchases of goods and services, and in fact, services are more than half, I want to say 60 percent of the weight in the CPI market basket, so there isn't going to be any one to one relationship between what is going on with the PPI and what happens with the CPI. Goods prices are a component, and you would expect them to be a factor, but the behavior of services prices has been quite different than the behavior of goods prices.

Representative Saxton. Where would we look for initial effects of the Asian crisis? Would we look at import and export prices? Would we look at producer prices or consumer prices?

Ms. Abraham. I would look first at import prices, since that is where the most direct impact likely would be. Even there, however, there is likely to be some attenuation, effects showing up only over time. And then I would look at producer prices and consumer prices, but any effects-excuse me, let me correct that, not at producer prices, necessarily, in any very direct way-

Representative Saxton. If there is a fall in producer prices, it would follow other earlier indicators.

Ms. Abraham. Well, I could see two routes possibly for producer prices to be affected by changes in the prices of imported items. First, to the degree they impacted cost of materials, and second to the degree that pricing behavior of domestic producers was affected by changes in the price that foreign competitors were charging. And then you could look, as well, at components of the Consumer Price Index where we know a lot of what is being bought is imported items or is in competition with imports. So you could begin over time to try to trace through effects of changes in the prices of imported items, potentially on the Producer Price Index, and to a certain extent, on the Consumer Price Index. But with both the PPI and the CPI, I would expect the effects to be considerably smaller, than in the import price index just given the weight of things that are exposed to international trade in the indexes overall.

Representative Saxton. Obviously, domestically, the competition provided by imports could be expected at some point to have an effect on both Producer Price Index and the CPI. Is that not a fair statement?

Ms. Abraham. I think that is a fair statement. I think the only question would be how large would that be and how do we identify it in the data, as distinct from other things that may be going on. But this all bears watching as we get successive months data for sure.

Representative Saxton. Thank you. As I indicated in an opening statement, a year or so ago, there was a great deal of talk about legislating change in the procedures you use relative to computation of the Consumer

Price Index. In the meantime, Chairman Greenspan has noted significant improve-ments in his opinion relative to the accuracy of the CPI because of certain changes that may have been made in your process. Can you discuss those with us?

Ms. Abraham. Certainly. There is a table that I wish I had with me. I don't know if you have it, Patrick. No. Well, we can supply that for the record. But I can describe in general terms some of the things that we have done. Over the course of 1995 and 1996, we made changes to address the so-called formula bias problem. We, at the beginning of 1997, made some important changes in the way we are pricing hospital services.

Effective with the data for January, which come out later this month, we have updated the market basket of goods and services we are pricing, and are changing the way that we account for quality changes in pricing of computers. We have on our agenda for the next couple of years some prospective changes, the details of which we have not yet announced concerning the way we construct our subindexes. This relates to the so-called substitution bias problem. We have requested funding to take more aggressive steps to get new goods into the index, to do more with adjusting explicitly for items quality in tracking changing price. We are looking as well at the possibility of updating the market basket more frequently in the future. So there is a whole set of things we have done and have planned that taken together, I think, represent important improvements.

Most of these changes have the consequence of slowing the measured rate of inflation. I would stress, however, that this is not why we have undertaken them. We have undertaken the changes because we think they are improvements in our methods. But, they do have the consequence of slowing the rate of growth of the CPI by a significant amount.

Representative Saxton. Help refresh my memory. When the Boskin Commission Report was made public, did it make specific suggestions in the Report; or was it just critical of the process?

Ms. Abraham. There were some specific suggestions. The principal specific suggestions related specifically to the so-called substitution-bias in the Consumer Price Index. There was a change recommended in the way that we put our subindexes together to form the overall Index. That is what we are currently evaluating and we have said we would make a decision about that shortly and are looking at implementing whatever we decide is appropriate to do next January.

There were some suggestions about constructing, in addition to the CPI, separate indexes that would do a better job of addressing the substitution bias problem in a way that we can't do in the monthly CPI because we don't have the needed information quickly enough. We are proceeding on doing that as well. When it comes to adjusting for changes in the quality of items, the value of new goods to consumers, which when taken together, constitute about seven-tenths of the 1.1 percent bias that they believed existed in the CPI, there were very few specific suggestions about what we might do.

The only ideas that I have heard anyone advance that I think are operational are the things that we are moving aggressively to do, in terms of more use of hedonic adjustment; that is, more explicitly adjusting for changes in item characteristics in tracking their price.

Representative Saxton. If I were to ask you to put together a summary of the changes you have made, perhaps in the form of a report to the Committee, would that be a fair thing for us to ask you to do? I am discussing these issues because I got a glimpse of the reemergence of some thought about a legislative change not long ago from some Members of Congress. They ought to at least, before they pursue that line of activity, have access to knowledge relative to the changes that have been made. If you can provide that information for us, I think it would be most helpful.

Ms. Abraham. I can provide you immediately, as soon as I get back to my office, a table that summarizes the changes, and estimates that have been made, of their impact on the rate of growth of the index. We can get-together with you or your staff to talk about whether you would like something more detailed, in terms of a description of what change is involved and so on.

[Commissioner Abraham's response appears in the Submissions for the Record.]

Representative Saxton. I think that would be very helpful. Thank you. I have no further questions at this point, unless you have some other thoughts you want to leave with us. If not, I have completed the line of questioning that I had in mind this morning.

Ms. Abraham. I think you covered as well the things that were on my mind.

Representative Saxton. Thank you. I would also like to ask unanimous consent that Senator Bingaman's material and statements be included in the record, and since there is no one here to object, they will be. [The prepared statement of Senator Bingaman appears in the Submissions for the Record.]

Thank you again for being with us, Commissioner, Mr. Dalton, Mr. Rones, and we look forward to seeing you in a month or so.

Ms. Abraham. Thank you.

[Whereupon, at 10:00 a.m., the hearing was adjourned.]

SUBMISSIONS FOR THE RECORD

PREPARED STATEMENT OF Representative Jim Saxton, Chairman

Once again it is my pleasure to welcome Commissioner Abraham and her colleagues before the Joint Economic Committee.

The business cycle expansion that began in 1991 continues to increase payroll employment, according to the BLS data released today. Payroll jobs increased by 358,000 in January, bringing the total to 124.2 million jobs. The household survey also reflects healthy employment gains. The unemployment rate was about unchanged at 4.7 percent.

As I have noted before, the economic and employment gains during this expansion have been sustained by the Federal Reserve's policy of gradual disinflation. Lower inflation and interest rates have boosted the economy and flooded the Treasury with revenues, erasing the deficit. The domestic economic and fiscal situation remains very positive.

In addition to the employment data, BLS also produces a variety of statistics on prices. The Consumer Price Index, Producer Price Index, Employment Cost Index, and other measures are closely watched BLS price data.

Over the last year we have reviewed these data and found no evidence of a real pick-up in inflation. Furthermore, the forward-looking price indicators used by the JEC also do not reflect any inflation threat. Instead, these indicators-commodity prices, bond yields and the dollar -suggest that the risk of deflation is becoming less remote.

With respect to monetary policy, it is clear that a goal of price stability is inconsistent with inflation or deflation. Monetary policy guided by an inflation targeting approach to stable prices, as I favor, actually is slightly biased against deflation. Inflation targeting means that monetary policy aims to prevent a sustained increase or decline in the price level reflected in broad price indexes.

Since monetary policy must be pre-emptive, the Federal Reserve must act before deflation actually materializes. Consequently, for several months I have suggested that a Federal Reserve easing of interest rates . would be appropriate.

Given the intense interest of many in this inflation/deflation issue, various BLS price measures will be closely scrutinized by the financial markets for the foreseeable future. To gauge the potential of imported deflation, the import and export price indexes will receive especially close attention in coming months.

In closing, I'd like to mention an issue that consumed much of our time and effort last year-the CPI. With the improvements made in this program, Chairman Greenspan recently commented that BLS was doing "an excellent job." I would like to second this opinion, and thank BLS for its hard and sometimes under-appreciated work in this area.

PREPARED STATEMENT OF KATHARINE G. ABRAHAM, COMMISSIONER

Mr. Chairman and Members of the Committee:

I would like to thank you for the opportunity to comment on the labor market data released this morning. The unemployment rate was unchanged in January at 4.7 percent. Nonfarm payroll employment, as measured by our establishment survey, increased by 358,000 over the month, and total employment, as measured by our household survey, rose substantially as well. Payroll employment rose in most of the major industry groups, with particularly strong gains in manufacturing and construction.

Construction employment jumped by 92,000 in January. Job gains in the industry have totaled 184,000 over the last 3 months, partly reflecting the strong housing market. Unusually warm weather during January in many parts of the country, together with clean up and repairs following severe ice storms in the Northeast, contributed to the over-themonth growth.

Manufacturing added 43,000 jobs in January, about the same number as in each of the previous three months. Several industries that added jobs throughout 1997 continued hiring in January; these included fabricated metal products (8,000), industrial machinery (7,000), electronic components (4,000), and aircraft and parts (2,000). Within nondurable goods, long-term employment declines continued in apparel (-5,000), textiles (-3,000) and leather products (-1,000), while rubber and miscellaneous plastics showed an over-the-month gain (6,000).

Following two very strong months, the services industry added 89,000 jobs in January; this compared to an average monthly gain of 115,000 in 1997. Employment in help supply services, which grew by 57,000 in November and 30,000 in December, declined by 16,000 in January. Health services expanded more slowly than average, as over-the month employment declines in home health care services and nursing homes offset continued growth in hospitals. Computer and data processing services and engineering and management services continued their rapid growth, adding 16,000 and 22,000 jobs, respectively.

Retail trade added 24,000 jobs in January, about half the monthly average for 1997. Employment in department stores rose by 31,000 over the month. Following robust holiday hiring, however, seasonal layoffs were larger than usual in miscellaneous retail establishments-such as toy stores, book stores, and catalogue sales houses-which lost 25,000 jobs over the month. Wholesale trade employment rose by 30,000 over the month, with strength in both durable and nondurable goods distribution.

Employment in transportation was up 40,000 in January, driven by increases of 27,000 in air transportation (offsetting an almost-identical decline in December) and 10,000 in trucking. Communications employment rose by 10,000 in January; the industry has added 51,000 jobs over the past year.

Real estate had an unusually strong month, adding 10,000 jobs. The employment gain of 12,000 in finance was in line with monthly average gains in 1997 and was led by a 5,000 increase in security and commodity brokerages.

Government employment was about unchanged over the month. Since January 1997, state and local government employment has increased by 291,000, while Federal payrolls have declined by 39,000.

Average hourly earnings of production or nonsupervisory workers in the private sector increased by four cents in January, to \$12.51. Over the year, hourly earnings rose by 46 cents or 3.8 percent.

Turning to data from the household survey, the unemployment rate was unchanged over the month at 4.7 percent. The rate for adult men fell slightly, to 3.8 percent, and that, for adult women was up, to 4.4 percent. The rates for other major worker groups were about unchanged. Total civilian employment grew by 641,000 in January, after adjusting for the effects of minor changes in our estimation procedures that I will discuss in a moment. (These changes did not significantly affect estimated unemployment rates.) Both employment and labor force growth have accelerated sharply during the last three months.

I would like to note that today's Employment Situation news release includes a new table on labor force status by educational attainment. I consider this an important addition, since education is a critical determinant of labor market success. The unemployment rate for those with less than a high school education, for example, is nearly four times that for college graduates.

The new estimation procedures that I alluded to earlier are being used to produce all estimates from the household survey beginning with today's data for January 1998. These new composite estimation procedures simplify processing of the monthly labor force data, allow users of the survey microdata to replicate more easily the official estimates, and slightly reduce the month-to-month variability of the employment and labor force estimates. As a result of the introduction of the new procedures,

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beginning in January, labor force and employment levels are not strictly comparable to data for previous months. Unemployment rates were virtually unaffected. An article to appear in the February 1998 issue of Employment and Earnings will provide estimates of the effect of the changes on major labor market indicators for various demographic groups.

In summary, employment rose sharply in January, with continued strength in manufacturing and construction. The civilian unemployment rate was unchanged at 4.7 percent.

My colleagues and I now would be glad to respond to your questions.



Department



Bureau of Labor Statistics

Establishment data:

Media contact:

Washington, D.C. 20212

Internet address: http://stats.bls.gov/newsrels.htm Technical information Household data: (202) 606-6378

USDL 98-37

of Labor

Transmission of material in this release is 606-6555 embargoed until 8:30 A.M. (EST), 606-5902 Friday, February 6, 1998.

THE EMPLOYMENT SITUATION: JANUARY 1998

Employment rose substantially in January, and the unemployment rate remained at 4.7 percent, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. Nonfarm payroll employment grew by 358,000, with large gains occurring in construction and manufacturing.



Unemployment (Household Survey Data)

Both the number of unemployed persons, 6.4 million, and the unemployment rate, 4.7 percent, were essentially unchanged in January, after seasonal adjustment. Among the major worker groups, the jobless rate for adult women (4.4 percent) rose by 0.4 percentage point in January, while the rate for adult men (3.8 percent) declined to its lowest level in nearly 20 years. Unemployment rates for teenagers (14.1 percent), whites (4.0 percent), blacks (9.3 percent), and Hispanics (6.9 percent) showed little or no change over the month. (See tables A-1 and A-2.)

Among the major educational attainment categories, the jobless rate for persons 25 years and over who had not completed high school (7.2 percent) continued its year-long decline. Rates for those with higher levels of educational attainment-including high school graduates with no college experience (3.9 percent), high school graduates with some college experience but no bachelor's degree (3.2 percent), and college graduates (1.9 percent)-were essentially unchanged over the month. (See table A-3.)

Beginning in January 1998, household data reflect new composite estimation procedures and revised population controls. Additional information on the revisions appears on page 4. Also, this release introduces labor force data for persons 25 years and over by major educational attainment categories, which appear in table A-3. All subsequent tables have been renumbered sequentially.

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Table A.	Major indicators of labor market activity, seasonally adj	usted
(Numbers	s in thousands)	

	Quarterly	averages	N	fonthly dat	a	Dec				
Category	19	97	19	97	1998	Jan.				
	ш	IV	Nov.	Dec.	Jan.	change ¹				
HOUSEHOLD DATA			Labor for	rce status						
Civilian labor force	136379	136,813	136,864	137,169	137,493	624				
Employment	129,723	130,421	130,575	130,777	131,083	641				
Unemployment	6,656	6,392	6,289	6,392	6,409	-18				
Not in labor force	66,988	67,123	67,077	66,929	66,745	-484				
			Unemploy	ment rates						
All workers	4.9	4.7	4.6	4.7	4.7	.0				
Adult men	4.1	4.0	3.9	4.1	3.8	-0.4				
Adult women	4.3	4.0	4.0	4.0	4.4	.4				
Teenagers	16.3	15.0	15.2	14.3	14.1	4				
White	4.2	4.0	3.9	3.9	4.0	.0				
Black	9.6	9.7	9.7	9.9	9.3	6				
Hispanic origin	7.6	7.4	6.9	7.5	6.9	7				
ESTABLISHMENT DATA		,	Emplo	yment						
Nonfarm employment	122,575	p123,487	123,512	p123,867	p124,225	p358				
Goods-producing ²	24,750	p24,897	24,888	p24,988	p25,123	p135				
Construction	5,635	p5,691	5,682	p5,742	p5,834	p92				
Manufacturing	18,541	p18,632	18,634	p18,672	p18,715	p43				
Service-producing ²	97,825	p98,591	98,624	p98,879	p99,102	p223				
Retail trade	22,188	p22,378	22,403	p22,472	p22,496	p24				
Services	35,745	p36,104	36,102	p36,265	p36,354	p89				
Government	19,746	p19,761	19,763	p19,772	p19,781	p9				
			Hours o	f work ³						
Total private	34.5	p34.6	34.8	p34.6	p34.8	p0.2				
Manufacturing	41.8	p42.1	42.1	p42.2	p42.1	p1				
Overtime	4.7	p4.9	4.9	p4.9		p.0				
	In	dexes of ag	ggregate we	ekly hours	(1982=100) ³				
Total private	140.6	p142.2	142.9	p142.5	p143.4	p0.9				
-	136,379 136,813 130,824 137,139 137,493 129,723 130,421 130,575 130,777 131,083 6,656 6,392 6,289 6,392 6,409 66,988 67,123 67,077 66,929 66,745 Unemployment rates 4.9 4.7 4.6 4.7 4.7 4.1 4.0 3.9 4.1 3.8 4.3 4.0 4.0 4.0 4.4 16.3 15.0 15.2 14.3 14.1 4.2 4.0 3.9 3.9 4.0 9.6 9.7 9.7 9.9 9.3 7.6 7.4 6.9 7.5 6.9 Employment 122,575 p123,487 123,512 p123,867 p124,225 p 24,750 p24,897 24,888 p24,988 p25,123 p 97,825 p98,591 98,624 p98,879 p99,102 p 22,188 p23,778 22,403 p22,472 p22,496 35,7									
Average hourly earnings.		· · · ·				r				
total private	\$12.30	p\$12.45	\$12.48	p\$12.47	p\$12.51	p\$0.04				
Average weekly earnings.				•	•	.				
total private	424.36	p431.19	434.30	p431.46	p435.35	p3.89				

² Includes other industries, not shown separately.

³ Data relate to private production or nonsupervisory workers.

p=preliminary.

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Total Employment and the Labor Force (Household Survey Data)

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Total employment, as measured by the household survey, at 131.1 million (seasonally adjusted), rose by 641,000 over the month, after adjusting for changes in the composite estimation procedure. The employmentpopulation ratio rose to 64.2 percent, an all-time high. Employment-population ratios for workers 25 years and over at all levels of educational attainment—less than a high school diploma (39.3 percent), high school graduates with no college experience (63.0 percent), high school graduates with some college experience the month. The ratio is low for persons without a high school diploma in part because a very high proportion are age 65 and over. (See tables A-1 and A-3.)

About 7.7 million persons (not seasonally adjusted) held more than one job in January. These multiple jobholders comprised 6.0 percent of all employed persons. (See table A-10.)

The civilian labor force, at 137.5 million (seasonally adjusted), increased by 624,000 in January, after adjusting for changes in the composite estimation procedure, and the labor force participation rate rose to a record 67.3 percent. (See table A-1.)

Persons Not in the Labor Force

About 1.5 million persons (not seasonally adjusted) were marginally attached to the labor force in January. These were people who wanted and were available for work and had looked for a job sometime in the prior 12 months but were not counted as unemployed because they had not searched for work in the 4 weeks preceding the survey.

The number of discouraged workers—a subset of the marginally attached who were not currently looking for jobs specifically because they believed no jobs were available for them—was 374,000 in January, little changed from a year earlier. (See table A-10.)

Industry Payroll Employment (Establishment Survey Data)

Nonfarm payroll employment rose by 358,000 in January to 124.2 million, after seasonal adjustment. Since September, payroll employment has risen by 1.4 million. Over the month, job gains continued in most major industry groups, with particularly strong growth in construction and manufacturing. (See table B-1.)

Construction employment rose by 92,000 in January, after seasonal adjustment. Since October, the industry has added 184,000 jobs. Several factors contributed to January's gain: The weather was warmer than usual over much of the country, there was considerable cleanup and repair activity following is storms in the Northeast, and the housing market remained strong due to low mortgage rates and the healthy economy.

Manufacturing added 43,000 jobs in January, the fourth month in a row with a gain of about this magnitude. Since September, factory employment has risen by 162,000. Several durable goods industries that have made steady job gains for more than a year continued to grow in January. These include fabricated metals (8,000), industrial machinery (7,000), electronic components (4,000), and aircraft (2,000). Among nondurable goods industries, employment in rubber and miscellaneous plastics increased by 6,000, while apparel and textiles continued to decline.

Within the service-producing sector, employment in the services industry rose by 89,000 in January, after 2 months of larger gains. Employment in help supply services decreased by 16,000, following strong growth in November and December. Since October, net job growth in this industry has totaled 71,000. In January, health services added 14,000 jobs; large gains continued in hospitals, but nursing homes and home health care agencies showed declines. Computer services and engineering and management services continued their strong job growth.

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Employment in transportation and public utilities rose by 49,000 in January, after seasonal adjustment. Light holiday hiring in air transportation led to fewer post-holiday layoffs than normal, resulting in a large job gain in January, after seasonal adjustment. Employment in communications rose by 10,000 over the month, primarily in telephone communications, where growth has accelerated since September.

Strength in both the durable and nondurable goods components of wholesale trade led to a relatively large job gain of 30,000 in January. Retail trade employment increased by 24,000 in January, about half the average monthly gain for 1997. Following robust holiday hiring, there were large seasonal layoffs in miscellaneous retail establishments, such as toy stores, book stores, and catalog sales operations.

Elsewhere in the service-producing sector, employment continued to rise in finance (12,000), with the largest increase in security brokerages (5,000). Real estate added 10,000 jobs over the month. Local government employment rose by 18,000 in January, as both the education and noneducation components continued their longterm growth. Federal government employment continued to decline.

Weekly Hours (Establishment Survey Data)

The average workweek for production or nonsupervisory workers on private nonfarm payrolls increased by 0.2 hour in January to 34.8 hours, seasonally adjusted. The manufacturing workweek decreased by 0.1 hour to 42.1 hours, while factory overtime was 4.9 hours for the third straight month. (See table B-2.)

The index of aggregate weekly hours of production or nonsupervisory workers on private nonfarm payrolls increased by 0.6 percent to 143.4 (1982=100), seasonally adjusted. The manufacturing index edged down by 0.1 percent to 109.8. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls increased 4 cents in January to \$12.51, seasonally adjusted. Average weekly earnings increased by 0.9 percent to \$435.35. Since January 1997, average hourly earnings have risen by 3.8 percent and average weekly earnings by 5.0 percent. (See table B-3.)

The Employment Situation for February 1998 is scheduled to be released on Friday, March 6, at 8:30 A.M. (EST).

Revisions in Household Survey Data

Effective with data for January 1998, new composite estimation procedures and minor revisions in the population controls have been introduced into the household survey. (Data for months prior to January 1998, shown in this release, were not recalculated using the new procedures.) The new composite estimation procedures simplify processing of the monthly labor force data at BLS, allow users of the survey microdata to replicate more easily the official estimates released by BLS, and increase the reliability of the employment and labor force and employment and slightly higher estimates of the level of unemployment. Unemployment rates were not significantly affected.

The population controls used in the survey were revised to reflect new estimates of legal immigration to the U.S. and a change in the method for projecting the emigration of foreign-born legal residents. As a result, the estimate of the size of the Hispanic-origin population was raised by about 57,000; however, the estimate for the total civilian noninstitutional population 16 years and over was essentially unchanged. More detailed information on these changes and their effect on the estimates of labor force change and composition will appear in the article, "Revisions in the Current Population Survey Effective January 1998," in the February 1998 issue of Employment and Earnings.

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics survey (establishment survey). The household survey provides the information on the labor force, employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 50,000 households conducted by the Bureau of the Census for the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonfarm payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. In June 1997, the sample included about 390,000 establishments employing about 48 million people.

For both surveys, the data for a given month relate to a particular week or pay period. In the household survey, the reference week is generally the calendar week that commins the 12th day of the month. In the establishment survey, the reference period is the pay period including the 12th, which may or may not correspond directly to the calendar week.

Coverage, definitions, and differences between surveys

Household survey. The sample is selected to reflect the entire civilian noninstitutional population. Based on responses to a series of questions on work and job search activities, each person 16 years and over in a sample household is classified as employed, unemployed, or not in the labor force.

People are classified as *employed* if they did any work at all as paid employees during the reference week; worked in their own business, profession, or on their own farm; or worked without pay at least 15 hours in a family business or farm. People are also counted as employed if they were temporarily absent from their jobs because of illness, bad weather, vacation, labor-management disputes, or personal reasons.

People are classified as unemployed if they meet all of the following criteria: They had no employment during the reference week; they were available for work at that time; and they made specific efforts to find employment sometime during the 4-week period ending with the reference week. Persons laid off from a job and expecting recall need not belooking for work to be counted as unemployed. The unemployment data derived from the household survey in no way depend upon the eligibility for or receipt of unemployment insurance benefits.

The civilian labor force is the sum of employed and unemployed persons. Those not classified as employed or unemployed arenos in the labor force. The unemployment rate is the number unemployed as a percent of the labor force. The labor force participation rate is the labor force as a percent of the population, and the employmentpopulation ratio is the employed as a percent of the population.

Establishments survey. The sample establishments are drawn from private nonfarm businesses such as factories, offices, and stores, as well as Federal, State, and local government entities. *Employees on nonfarm payrolls* are those who received pay for any part of the reference pay period, including persons on paid leave. Persons are counted in each job they hold. Hours and earnings data are for private businesses and relate only to production workers in the goods-producing sector and nonsupervisory workers in the service-producing sector.

Differences in employment estimates. The numerous conceptual and methodological differences between the household and establishment surveys result in important distinctions in the employment estimates derived from the surveys. Among these are:

 The household survey includes agricultural workers, the selfemployed, unpaid family workers, and private household workers among the employed. These groups are excluded from the establishment survey.

 The household survey includes people on unpaid leave among the employed. The establishment survey does not.

• The household survey is limited to workers 16 years of age and older. The establishment survey is not limited by age.

 The bousehold survey has no duplication of individuals, because individuals are counted only once, even if they hold more than one job. In the establishment survey, employees working at more than one job and thus appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. The effect of such seasonal variation can be very large; seasonal fluctuations may account for as much as 95 percent of the month-or-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. For example, the large number of youth entering the labor force each June is likely to obscure any other changes that have taken place relative to May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

In both the household and establishment surveys, most seasonally adjusted series are independently adjusted. However, the adjusted series for many major estimates, such as total payroll employment, and unemployment in most major industry divisions, total employment, and unemployment are computed by aggregating independently adjusted component series. For example, total unemployment is derived by summing the adjusted series for four major age-sex components; this differs from the unemployment estimate that would be obtained by directly adjusting the total or by combining the duration, reasons, or more detailed age categories.

The numerical factors used to make the seasonal adjustments are recalculated twice a year. For the household survey, the factors are calculated for the January-Imme period and again for the July-December period. For the establishment survey, updated factors for seasonal adjustment are calculated for the May-October period and introduced along with new benchmarks, and again for the November-April period. In both surveys, revisions to historical data are made once a year.

Reliability of the estimates

Statistics based on the household and establishment surveys are subject to both sampling and nonsampling error. When a sample rather than the entire population is surveyed, there is a chance that the sample estimates may differ from the "true" population values they represent. The exact difference, or *sampling error*, varies depending on the particular sample selected, and this variability is measured by the standard error of the estimate based on a sample will differ by no more than 1.6 standard errors from the "true" population value because of sampling error. BLS analyses are generally conducted at the 90percent level of confidence.

For example, the confidence interval for the monthly change in total employment from the household survey is on the order of plus or minus 376,000. Suppose the estimate of total employment increases by 100,000 from one month to the next. The 90-percent confidence interval on the monthly change would range from -276,000 to 476,000 (100,000 +/- 376,000). These figures do not mean that the sample results are off by these magnitudes, but rather that there is about a 90percent chance that the "true" over-the-month change lies within this interval. Since this range includes values of less than zero, we could not say with confidence that employment had, in fact, increased. If, however, the reported employment rise was half a million, then all of the values within the 90-percent confidence interval would be greater than zero. In this case, it is likely (at least a 90-percent chance) that an employment rise had, in fact, occurred. The 90-percent confidence interval for the monthly change in unemployment is +/- 258,000, and for the monthly change in the unemployment rate it is +/- .21 percentage point.

In general, estimates involving many individuals or establishments have lower standard errors (relative to the size of the estimate) than estimates which are based on a small number of observations. The precision of estimates is also improved when the data are cumulated over time such as for quarterly and annual averages. The seasonal adjustment process can also improve the stability of the monthly estimates.

The household and establishment surveys are also affected by nonsampling error. Nonsampling errors can occur for many reasons, including the failure to sample a segment of the population, inability to obtain information for all respondents in the sample, inability or unwillingness of respondents to provide correct information on a timely basis, mistakes made by respondents, and errors made in the collection or processing of the data.

For example, in the establishment survey, estimates for the most recent 2 months are based on substantially incomplete returns; for this reason, these estimates are labeled preliminary in the tables. It is only after two successive revisions to a monthly estimate, when early all sample reports have been received, that the estimate is considered final.

Another major source of nonsampling error in the establishment survey is the inability to capture, on a timely basis, employment generated by new firms. To correct for this systematic underestimation of employment growth (and other sources of error), a process known as bias adjustment is included in the survey's estimating procedures, whereby a specified number of jobs is added to the monthly samplebased change. The size of the monthly bias adjustment is based largely on past relationships between the sample-based estimates of employment and the total counts of employment described below.

The sample-based estimates from the establishment survey are adjusted once a year (on a lagged basis) to universe counts of payroll employment obtained from administrative records of the unemployment insurance program. The difference between the March sample-based employment estimates and the March universe counts is known as a benchmark revision, and serves as a rough proxy for total survey error. The new benchmarks also incorporate changes in the classification of industries. Over the past decade, the benchmark revision for total nonfarm employment has averaged 0.2 percent, ranging from zero to 0.6 percent.

Additional statistics and other information

More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for \$17.00 per issue or \$35.00 per year from the U.S. Government Printing Office, Washington, DC 20402. All orders must be prepaid by sending a check or money order payable to the Superintendent of Documents, or by charging to Mastercard or Visa.

Employment and Earnings also provides measures of sampling error for the household survey data published in this release. For unemployment and other labor force categories, these measures appear in tables 1-B through 1-H of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables 2-B through 2-G of that publication.

Information in this release will be made available to sensory impaired individuals upon request. Voice phone: 202-606-STAT; TDD phone: 202-606-5897; TDD message referral phone: 1-800-326-2577.

Table A-1. Employment status of the civilian population by ask and age

(Humbers in thousands)

	Not ee	econally a	Gusted	Sessonally adjusted					
Citinghing and a series on a series	Jan. 1987	Dec. 1997	Jan. 1998	Jan. 1997	Sept. 1987	Oci. 1907	Nov. 1987	Dec. 1997	Jan. 1986
TOTAL							•		
Civilian noninatitutional population	202,895	204,000	204,236	202,285	203.570	203,767	203.941	204,098	204,238
Civilian labor force	134,317	136,742	135,951	135,729	136,439	136,406	471	67.2	67.3
Pertopation rate	126.364	130 785	128.882	128.541	129,761	129,910	130,575	130,777	131,083
Employee	62.5	64.1	63.1	61.5	63.7	63.6	84.0	64.1	64.2
Agriculture	3,036	3,103	2,938	3,453	3,422	3,327	3,384	3,385	3.319
Nonegricultural industries	121,348	127,642	125,944	125,086	126,330	126,563	127,191	127,382	6,409
Unemployed	7,903	5,957	7,000	6.3	4.0	4.6	4.6	4.7	4,7
Not in labor torce	67,968	67,356	68,287	66,556	67,131	67,361	67,077	66,929	65,745
Men, 16 years and over								, i	
Civilian noninstitutional population	97,284	98,225	96,241	\$7,264	97,945	96,050	98,141	96,225	73.657
Civilian labor force	72,117	73,153	72,815	73,052	74.192	74,011	75.1	75.0	75.2
Participation rate	87 840	a 200	68,832	69,209	69,696	69.785	70,362	70,195	70,518
Employed	6.5	71.1	70.2	71.2	71.1	71.2	71,7	71.5	71.8
Unemployed	4,477	3,304	1,862	3,843	3,536	3,526	3,330	3,467	3,333
Unemployment rate	6.2	4.5	ស	្រស	- 48	4.8	4.5	4	4.5
Men, 20 years and over									90 191
Civilian noninstitutional population	89,446	90,356	90,391	88,445	90,000	80,140	90,251	60,5561	69,652
Chillion labor torce	78.5	76.6	76.3	77.1	74.8	78.8	77.0	77.0	77.1
Federad	64,683	65,524	65.811	45,856	66,295	66,337	66,624	66,676	67,008
Employment-population ratio	72.3	73.6	72.8	73.6	73.6	73.6	74.0	73.8	74.1
Agriculture	2,132	2,151	2,056	2.00	2,33	2,200	2,323	2,334	44.726
Nonegricultural industries	1 2,561	94,373	1,902	3,007	2.836	2,854	2,676	2.865	2,644
Unemployeed	5.5	4.1	4.6	45	4.1	4.1	3.9	4.1	3.8
Women, 16 years and over									
Civilian noninetilutional population	105.022	105.873	105,997	105,022	105,623	105,718	105,799	105,873	105,997
Civilian labor force	62,200	63,589	63,136	62,677	63,247	63,085	63,182	63,507	63,641
Penicipation rate	50.2	60.1		500.7	40,105	00 125	#0 223	60.582	60.565
Engloyed	55.9	57.6	56.5	56.5	56.9	56.9	56.9	57.2	57.1
Unergrighted	3,457	2,653	3,186	3,345	3,142	2,970	2,009	2,825	3,076
Unemployment rate	5.6	42	50	\$3	5.0	4.7	4.7	4.6	4.6
Women, 20 years and over		1							
Civilian noninstitutional population	97,520	98,300	84,420	\$7,520	594,082	1 98,144 60 314	50.344	89,624	59,652
Civilian abor lorge	80.1	60.9	804	60.3	60.6	60.5	80.4	60.7	60.6
Factored	55,730	57,847	56,674	56,078	56,863	56,919	56,953	57,255	57,040
Employment-population ratio	57.2	58.6	57.6	\$7.5	58.0	58.0	58.0	56.2	58.0
Agriculture	703	786	728	707	625	614	533	66,410	56 229
Nonegricultural industries	9 888	2 187	2 750	2,754	2.549	2.419	2,395	2,389	2,612
Unemployment rate	1	\$.7	4.6	4.7	43	4.1	4.0	4.0	4.4
Both sexes, 16 to 19 years									
Civilian noninectutional population	15,318	15,459	15,427	15,318	15,420	10,463	13,4/6	7 664	A 189
Civilian labor force	1,251	7,308	7,5/3	51.9	51.0	50.9	51.0	\$1.6	53.1
Ferderal	5,952	6,614	6.386	6,607	6,580	6.854	6,798	6,845	7,035
Encloyed and occulation ratio	38.9	20	41.5	43.1	42.7	43.0	419	44.3	45.8
Agriculture	202	184	198	207	213	215		226	
Nongricultural industries	5,750	6,450	1 117	1 1 341	1,291	1,221	1,211	1,124	1.154
Unemployed	17.9	12.5	14.9	16.9	18.4	15.5	15.2	14.3	14.1
	1					1		L	

¹ The population figures are not adjusted for seasonal variation; theetow, identical numbers appear in the unadjusted and seasonally adjusted columns. procedures and revised population controls used in the household survey.

Table A-2. Employment status of the civilian population by race, sex, age, and Hapanic origin

. (Numbers in thousands)

Employment status, race, sex, age, and	Not see	eonally M	Şusted	Seesonalty adjusted ¹							
Hispanic origin	Jan. 1997	Dec. 1987	Jan. 1988	Jan. 1987	Sept. 1987	Ocl. 1997	Nov. 1997	Dec. 1987	Jan. 1998 -		
WHITE							170 545	170 440	170.810		
Civilian noninstitutional population	189,436	170,648	170,810	100,430	114 758	114 784	115,073	115.263	115,253		
Civilian labor force	113,330	114,867	114,133	67.5	67.4	87.4	67.5	67.5	67.5		
Participation rate	107,425	110.002	108,987	109,154	109,904	110,063	110,804	110,729	110,698		
Engloyed	63.4	64.8	63.8	64.4	64.5	64.8	64.9	84.9	64.8		
Linenoicest	5,913	4,205	6,226	5,157	4,864	4,721	4,400	4,534	4,000		
Unemployment reter	5.2	8.7	4.6	45	42	4.1			~~		
Men, 20 years and over			68 885	Sa 000	59,110	59.098	59,355	59,300	59,262		
Civilian tabor torce	77.0	773	78.8	77.6	77.3	772	77.5	77.5	77.3		
Persoperation rate	55,803	57,162	56.476	56,661	56,989	56,965	67,363	57,272	\$7,336		
Englight	78.4	74.8	73.7	74.5	74.5	74,4	74.9	74.7	74.8		
Unendand	2,000	2,091	2,410	2,316	2,121	2,132	1,982	2,11/	3.3		
Unemployment rate		- 36	4.1				-				
Women, 20 years and over		41.234	44.897	49.625	48,955	48,976	48,305	49,134	49,077		
CAMERIN 19007 10108		60.2	50.7	59.8	80.0	60.0	56.9	60.1	60.0		
Ferdinati	46,423	47,726	46,919	46,731	47,165	47,284	47,265	47,474	47,200		
Employment-copulation ratio	57.1	58.4	57.3	57.5	57.8	\$7.9	57.8	1 1 1 1	1 827		
Unamployed	2,050	1,507	1,079	1,000	1,700	1,002	1 34	1 1	11		
Unemployment rate	42	l			– ″	-	-				
Both sexes, 16 to 19 years	6,174	6.380	6,410	6,686	6,683	6,710	6,612	6,740	6,914		
Cardination rate	50.9	52.1	\$2.2	55.1	54.8	54.9	55.6	65.0	56.3		
Emologia	5,198	5,773	5,573	6,742	5,750	5,613	\$,976	5,983	6,113		
Employment-population ratio	42.9	47.1	45.4	47.4	47.0	47.5		757	802		
Unemployed	976	1	8.56				1 173	112	11.6		
Unemployment rate	15.6		13.1	141	144	143	12.8	11.3	14.2		
Manan	143		9.7	13.1	13.7	123	11.6	11.1	8.8		
RI ACK	ł		l I		ļ		1				
Civilian accountly donat account (23.847	24,180	24,196	23,847	24,081	24,117	24,149	24,180	24,196		
Chillion labor 1999	15,141	15,685	15,535	15,380	15,691	15,565	15,636	15,709	15,/80		
Perticipation rate	63.5	64.9	64.2	64.5	65.2	14.057	14 198	14 149	14.316		
Employed	13,474	14,243	14,045	13,730	54.0	58.3	58.5	58.5	59.2		
Employment-population ratio		1 417	1,000	1 1 444	1.511	1.444	1.510	1,580	1,472		
Unemployed	11.0	9.2	8.6	10.7	9.6	9.6	9.7	9.9	8.3		
New 20 years and cour			ļ					I			
Challen labor 1000	6,749	6,945	6,910	6,639	6,978	6,945	6,985	6,967	7,012		
Participation rate	. 71.0	71.9	71.8	71.9	72.6	72.3	4450		6.656		
Employed	. 6.061	6,374		4,225			66.5	65.8	66.9		
Employment-population ratio	. 6.7			614	854	578	545	801	556		
Unemployed	10.2	1 12	8.0	8.0	7.9	8.3	7.8	8.6	7.9		
Women, 20 years and over	1			1							
Civilian labor force	7,580	7,840	7,776	7,580	7,790	7,880	7,781	7,70	1 443		
Perticipation rate	. 63			63.5	1	204	7,000	7 163	7.178		
Employed		1 2/3	1,140	1 574	1 1822	663	544	59.2	59.2		
Employment-population ratio		847	1 23	1 702	665	636	651	628	621		
Unemployed		72	1 1	1 13	8.4	63	8.4	8.1	8.0		
	1										
BOD SERE, 19 10 19 years	811	800	840	961	923	\$30	942	961	977		
Civilian labor labor		\$73	35.2	40.1	81.3	38.2	39.2	39.8	40.5		
Factored	560	801	609	633	621	656	626	630	1		
Employment-population ratio	23.4	24.9	25.2	28.4	25.8	86.9	ろ는	줬는	20.3		
Unemployed	. 272	200	240	1 22		274	314	الم الأله	1		
Unemployment rate	- 문?	비장		404	374	201	360	1 382	31.6		
	1 200	314	1 24	277	28.6	28.8	31.9	33.1	20.5		
		1	1 -~~	-/,			1	1	1		

See footnotes at end of table.

Table A-2. Employment status of the civilian population by race, eax, age, and Hispanic origin - Continued

(Numbers in thousands)

Employment status, race, sez, age, and Hispanic origin	Not se	accoulty a	djusted	Seasonally adjusted ¹						
	Jan. 1997	Dec. 1997	Jan. 1996	Jan. 1997	Sept. 1997	Oct. 1997	Nov. 1997	Dec. 1997	Jan. 1996	
HSPANIC OPICIN Civilian noninstbutionel population Civilian tabor tore Participation nale Employed Employeed Unemployed Unemployeed Unemployeed	20,013 13,600 68,0 12,349 61,7 1,251 9,2	20,629 13,996 67,5 12,998 63,0 967 7,1	20,741 13,880 68.9 12,783 61.7 1,087 7.8	20,013 13,669 68,3 12,554 62,7 1,115 8,2	20,464 13,861 67.7 12,807 62.6 1,054 7.5	20,519 13,896 67.7 12,805 62.4 1,090 7.8	20.575 13.680 67.5 12.921 62.8 959 6.9	20,629 13,973 67.7 12,921 62.6 1.052 7.5	20,741 13,954 67.3 12,988 62.6 958 6.9	

¹ The population figures are not adjusted for associativariation; therefore, identical numbers appear in the unadjusted and sessionally adjusted obtumns. NOTE: Detail for the other accest group are not presented and Happinics are because data for the "other accest" group are not presented and Happinics are included in both the while and black population groups. Beginning in January 1998, data relified new composite estimation procedures and revised population controls used in the household survey.

Table A-3. Employment status of the civilian population 25 years and over by educational attainment

(Numbers in thousands)

Educational attainment	Not se	econelly a	djusted			Sessonally adjusted ¹ Oct. Nov. I 1997 1997 1 28.045 29.505 2 12.465 12.211 1 13.0.6 39.2 62.4 9065 11.575 1 30.6 39.2 6 97.7 7.5 57.453 57.759 57.750 57.7310 36.79 37.741 3 1.500 1.446 4.2 31.338 31.544 3 77.4 77.4 37.4 97.4 77.4 77.4	1				
	Jan. 1997	Dec. 1997	Jan. 1998	Jen. 1997	Sept. 1997	Oct. 1997	Nov, 1997	Dec. 1997	Jan. 1998		
Less then a high school diploma											
Civilian noninstitutional population	30,477	29,565	29,981	30,477	29,350	29,046	29,505	29,566	29,981		
Civilian labor torce	12,093	12.580	12,695	12,666	12,555	12,468	12,511	12,555	12,682		
Percent of population	41.6	42.5	42.3	41.8	42.8	42.9	42.4	42.5	42.3		
Encloved	11,371	11,599	11.630	11.533	11,548	11,502	11,575	11,606	11,771		
Employment-population ratio	37.3	39.2	36.8	37.8	39.3	39.6	39.2	39.3	39.3		
Unemployed	1,321	962	1,065	1,133	1,007	986	936	949	911		
Unemployment rate	10.4	7.7	8.4	6.9	8.0	7.7	7.5	7.6	72		
High school graduates, no college ²											
Civilian noninstitutional population	57.422	57,631	57,806	57,422	57,483	57,459	57,310	57,631	57,605		
Civilian labor force	37,724	37,940	37,849	37,632	37,585	37,750	37,841	37,827	37,787		
Percent of population	65.7	65.8	65.4	65.9	65.4	65.7	65.7	65.6	65.6		
Employed	35,718	36,444	35,867	36,157	36,003	36,179	36,193	36,287	36,303		
Employment-population ratio	62.2	63.2	62.3	63.0	62.6	63.0	63.2	63.0	63.0		
Unemployed	2,006	1,497	1,782	1,675	1,582	1,580	1,448	1,540	1.485		
Unemployment rate	5.3	3.9	4.7	4.4	4.2	42	3.0	4,1	3.9		
Less then a bachelor's degree ³							1				
Civilian noninatilations) population	41,145	42,085	41,718	41,145	42,075	42,613	42,417	42,085	41,718		
Civilian labor torce	30,862	\$1,440	\$1,012	31,229	31,401	31,328	31,544	31,508	31,440		
Percent of population	75.0	74.7	74.3	75.9	74.6	73.5	74,4	74.9	75.4		
Employed	29,863	30,464	29,911	30,125	30,382	30,410	30,574	30,484	30,429		
Employment-population ratio	72.1	72.4	71.7	73.2	72.2	71.4	72.1	72.4	72.9		
Unemployed	1,199	976	1,101	1,104	1,019	918	\$70	1,022	1,011		
Unemployment rate	3.9	3.1	3.5	35	32	2.9	3.1	3.2	3.2		
College graduates											
Civilian noninstitutional population	40,447	41,822	41,974	40,447	41,769	41,898	41,739	41,822	41,974		
Civilian labor torce	32,558	33,739	33,671	32,558	\$3,577	33,510	33,505	33,678	33,685		
Percent of population	80.5	80.7	80.2	60.5	80.4	80.4	60.3	80.5	80.3		
Employed	31,846	33,204	33,007	31,888	32,891	32,868	32,916	33,083	33,040		
Employment-population ratio	78.7	79.4	78.6	76.8	78.7	78.8	78.9	79.1	78.7		
Unemployed	712	535	664	660	686	642	589	595	645		
Unemployment rate	2.2	1.6	2.0	21	20	1.9	1.8	1.8	1.9		

¹ The population figures are not adjusted for sessonal variation, therefore, identical numbers appear in the unadjusted and sessonally adjusted columns.
² Includes high school cliptoms or equivalent.

³ Includes the categories, some college, no degree; and associate degree. NOTE: Beginning in January 1988, data reflect new composite estimatic procedures and available conclution controls used in the household survey.

Table A-4. Belocied employment indicators

(in thousands)

Galaxyer	Not ee	econality at	ijunted		1	Basecnally	y adjusted		
· · · · · · · · · · · · · · · · · · ·	Jan. 1987	Dac. 1997	ја, 19	Jan. 1987	Sept. 1997	Qc1. 1987	Nov. 1987	Dec. 1997	Jan. 1998
CHARACTERISTIC									
Total employed, 15 years and over	126,364	130,785	128.862	128,541	129,761	128,910	130,375	130,777	42 977
Merried men, spouse present	42,308	43.040	42,461	42,615		5.00	12.00	12 675	32 783
Married women, spouse present	22,531	33,265	22,500	12/11		2,010	7 7 7 9 8	7 877	7 784
Women who maintain families	7,433	7,708	7,873	7,536	1,210		1,740		
OCCUPATION									
Managarial and contessional aparially	37,357	35,415	38,036	37,416	\$7,860	37,844	37,988	38,205	38,099
Technical sales and administrative succord	37,744	36,791	36.037	36,062	38,535	38,537	38,540	36,562	30,362
Service ontrottime	16,793	17,738	17,708	17,206	17,746	17,723	17,827	17,860	16,102
Precision production, craft, and repair	13,610	14,213	14,027	13,878	13,859	14,001	14,191	19,200	18,622
Operators, tebricators, and laborers	17,854	18,465	16,179	18,304	18,302	18,385	10,407	1472	3 355
Ferming, forestry, and fehing	3,027	3,132	2,860	3,519	3,465		3,014		
CLASS OF WORKER					1				
Acriculture									1 000
Wage and salary workers	1,648	1,653	1,051	1,955	1,000	1,010		1.44	1345
Self-employed workers	1,835	1,405	1,347	1.44	1,480				- 44
Unpaid family workers	54		~		l –	~	-		
Nonegricultural industrial:				118.001	1	117 635	118.063	118,403	118.529
Wage and salery workers	113,961	114.724	10,000	18.247	18 109	18,075	18,170	18,248	18,421
Government	18,311	10,000	44 511	07 184		99.540	99,913	100,155	100,108
Private industries	10.070			995	877	877	910	946	985
Privete households	4770		87.586	96,199	88.317	98.663	99.003	99,209	99,123
Other inclusives	6 210	1 100	8,803	9,300	8.949	8,930	9,004	8,895	8,964
Sell-employed womens	- 144		114	166	83	92	97	99	131
PERSONS AT WORK PART TIME		ļ							
All inclusions:				1	1				
Part time for economic mesore	4,541	3,000	4,299	4,319	1,928	3,913	3,890	3,855	4,082
Slack work or business conditions	2,735	2,323	2,611	2,391	2,187	2,211	2,221	2,230	1.000
Could priv ind part-time work	1,474	1,240	1,315	1,564	1,455	1,408	1,300	1.223	
Part time for noneconomic reasons	18,450	19,557	18,756	16,210	17,001	18,113	18,083	10,000	
At a second second least unbiast									1
	4.334	2.644	4.080	4,099	3,739	3,732	3,669	3,654	3.865
First wat a butiess confident	2.603	2.188	2,476	2,273	8,067	2,103	2,100	2,113	2,162
Could only find partition with	1.447	1,216	1,295	1,527	1,417	1,378	1,346	1,291	1,873
But the by antercomic March	17,879	18,946	18,202	17,575	17,381	17,637	17,486	17,701	17,000
		1	L		L	1	L		·

NOTE: Persons at work excludes employed parants who wave absent from their jobs during the entire reference week for neseons such as vecation, litess, or industrial depete. Full time for noneconomic reseons excludes penders who used in the boashild survey.

Table A-5. Selected uner nployment indicators, seesonally adjusted

Number of unemployed persons (in thousands) Unemployment rates¹ Category Dec. 1997 Jan. 1996 Oct. Nov. 1997 Dec. 1997 Jen. 1997 Jan. 1997 Sept. 1997 Jan. 1996 CHARACTERISTIC Total, 16 years and over Men, 20 years and over Women, 20 years and over Both series, 16 to 19 years 7,188 3,093 2,754 1,341 6,392 2,885 2,369 1,138 5.3 4.5 4.7 16.9 4,9 4,1 4,3 16,4 4.8 4.1 4.1 15.5 4.6 3.9 4.0 15.2 4.7 4.1 4.0 14.3 4,7 3,8 4,4 14,1 6,409 2,644 2,612 1,154 Married men, spouse present Married women, spouse present . Women who maintain tamilies 1,244 1,132 722 1,151 960 653 1,141 1,033 638 2.8 3.3 8.7 2.6 3.1 7.8 2.6 2.8 7.8 2.4 2.8 8.1 2.6 2.8 7.7 2.6 3.1 7.8 m ... 5,774 1,415 5,203 1,238 5,075 1,339 5.2 5.7 4,7 5.5 4,7 5.3 4,4 5.4 4.6 5.0 4.5 5.4 _____ OCCUPATION 821 1,757 744 1,568 279 779 1,677 685 1,168 246 735 1,588 708 1,375 268 2.1 4.4 5.1 7.9 7.3 2.0 4.0 4.8 7.8 6.7 1.8 3.9 5.3 7.1 7.3 1.7 3.9 4.5 7.1 6.6 1.9 4.0 4.7 7.0 7.2 2.0 4.2 4.6 5.9 6.8 INDUSTRY word INT
 torogricultral private wage and salary workers Goods-producing industries
 Maning
 Construction
 Manufacturing
 Manufacturing
 Monanziale goods
 Monanz 5,030 1,449 22 621 806 390 416 3,581 251 1,555 218 1,557 398 199 5,514 1,674 31 675 968 549 419 3,840 285 1,655 254 1,646 552 187 4,945 1,405 255 823 432 390 3,541 298 1,569 209 1,465 456 230 5.4 5.8 5.3 9.8 4.6 4.3 5.0 5.2 4.0 6.4 3.4 4.9 2.9 8.7 5.0 5.2 3.4 8.7 4.1 3.3 5.3 4.9 3.8 6.2 3.0 4.6 2.6 9.0 4.8 5.0 4.5 8.7 3.8 3.1 4.8 4.7 3.3 6.1 2.9 4.3 2.4 9.6 4.7 4.8 3.3 7.9 3.6 3.1 4.4 3.1 6.2 2.4 4.4 2.3 8.6 4.8 5.0 3.3 8.9 3.8 3.1 4.9 4.7 3.3 5.8 2.8 4.5 2.1 9.7 4.7 4.8 4.0 7.9 3.4 4.5 4.7 3.8 5.9 2.6 4.3 2.4 10.6 Aa

¹ Unemployment as a percent of the civilian tabor force.
² Seasonaby adjusted unemployment data for service occupations are not railable because the seasonal component, which is small relative to the trans-oyde

and imagular components, cannot be separated with sufficient pracision. NOTE: Beginning in January 1998, data reflect new composite procedures and revised population controls used in the household survey.

Table A-6. Duration of unemploys

(Numbers in thousands)

Duration	Not se	esonally a	djusted	Sessonally adjusted						
	Jan.	Dec.	Jan.	Jan.	Sept.	Oct.	Nov.	Dec.	Jan.	
	1997	1997	1996	1997	1997	1997	1997	1997	1998	
NUMBER OF UNEMPLOYED										
Less The 5 weeks	3.352	2,243	3,132	2,678	2,484	2,558	2,423	2,531	2,488	
	2.329	1,949	2,036	2,251	2,115	1,912	2,048	1,922	1,971	
	2.232	1,765	1,898	2,150	2,109	1,980	1,865	1,984	1,811	
	1.029	832	825	984	1,031	919	899	836	773	
	1.223	933	1,074	1,186	1,076	1,071	986	1,029	1,038	
	15.3	18.0	14,9	15.9	15.9	16.3	15.6	16.3	15.6	
	7.4	7.4	6,9	7.9	8,1	7.7	7,8	7,7	7,4	
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
	42.3	37.7	44.3	37.6	37.0	39.6	38.2	39,4	38.7	
	29.4	32.7	28.8	31.8	31.5	29.6	32.3	30.0	31.4	
	28.4	29.6	26.9	30.4	31.4	30.8	29.4	30.6	28.9	
	13.0	14.0	11.7	13.6	15.4	14.2	14.2	14.6	12.3	
	15.4	15.7	15.2	16.6	16.1	16.6	15.2	16.0	16.6	

NOTE: Beginning in January 1998, data refle .

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Table A-7. Reason for unemploy .

ers in thousands)

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8	Not yes	ecosity at	Şusted		1	Seesonally adjusted Sec. Oct. Nov. Dec. 1007 1997 1997 1997 663 663 615 615 663 663 615 615 2,114 1,177 2,070 2,050 2,114 1,177 2,070 2,050 2,115 2,170 655 660 555 560 552 2,170 560 555 560 552 100,0 45,4 42,8 42,7 13,4 14,0 12,9 15,0 31,4 30,5 82,7 31,7 12,4 11,3 10,3 10,4				
Property -	Jan. 1997	Dec. 1997	Jan. 1986	Jan. 1997	Sept. 1997	Oci. 1997	Nov. 1997	Dec. 1997	Jan. 1998	
NUMBER OF UNEMPLOYED Job loans and paraons who completed surporary jobs On surporary layoff Not on surporary layoff Persons who completed surporary jobs Persons who completed surporary jobs New prize s	4,027 1,802 1,805 1,805 805 2,525 805 2,525 805 2,525 805 2,525 805 805 805 805 805 805 805 805 805 80	3,051 1,053 1,985 1,385 634 1,346 433	3,536 1,362 2,165 1,485 811 2,253 449	3,191 953 2,228 (1) (1) 851 2,469 595	3,007 883 2,114 (1) 853 2,883 860	2,834 963 1,971 (1) 732 2,347 555	2,885 815 2,071 (1) (1) (1) 655 2,229 560	2,991 961 2,030 (1) (1) 862 2,170 552	2,807 880 1,947 (¹) (¹) 805 2,229 518	
PERCENT DISTINUED TRUN Total unemployed	100.0 \$0.6 18.9 \$1.6 10.8 \$1.8 6.6	100.0 51.2 17.7 33.5 10.5 31.0 7.1	100.0 50.3 19.3 31.0 11.5 31.9 6.3	100.0 44.5 13.3 31.3 12.0 35.0 8.3	100.0 45.0 13.4 31.6 12.8 32.9 8.4	100.0 45,4 14,9 20,5 11,3 34,7 8,6	100.0 45.6 12.9 10.3 26.2 8.8	100.0 46.7 15.0 31.7 10.8 33.9 8.6	100.0 44.1 13.5 30.6 12.7 35.0 8.1	
Job losers and persons who completed temporary jobs Job leavers Reprinters New anizants	30 4 1.9 4	22 5 1.4 3	24 4 17 3	24 8 18 4	22 A 1.7 A	82 5 1.6 .4	2.1 .5 1.6 .4	22 5 1.6 A	2.0 .\$ 1.5 .4	

¹ Not available. NOTE: Beginning in January 1988, data reflect new comp

procedures and rev id pa in controls used in the hour nid a

Table A-8. Range of alternative i e of tabor underutilization

(Percent)

Messeure	Not	edjusted	ally I	Seasonally adjusted							
	Jan. 1997	Cec. 1997	Jan. 1995	Jun. 1997	Sept. 1987	Oct. 1997	Nov. 1987	Dec. 1997	Jen. 1996		
U-1 Persons unamployed 15 weeks or longer, as a percent of the civilian labor force	1.7	1.3	1.4	1.6	1.5	1.6	1.4	1.4	1.3		
U-2 Job losers and persons who completed temporary jobs, as a percent of the civilian labor force	30	u	24	24	22	22	21	22	2.0		
U-3 Total unangloyed, as a persent of the civilian labor layer (official unangloyment rate)		4.4	5.2	53	49	4	4.6	4.7	4.7		
U-4 Total unamployed plus discouraged wolkers, as a persent of the chellen labor force plus decouraged workers	u	45	5	es	0	en (0	en	0		
U-5 Totel unemptoyed, plus discouraged workers, plus all other marginally allached workers, as a percent of the civilian labor force plus all marginally atlached workers	7.0	м	62	0	0	c)	0	(*)	e.		
U-6 Total unamployed, plus all marginally attached workers, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all marginally attached workers	10.4		13	es.	(1)	e	en	(')	es		

¹ Not evaluate. NOTE: This range of elementies measures of litter un-10-1/37 range addited in undle A-7 of this release prior attached unders are periods who currently are nather while an inducts the time want and are evaluate for a job and sometime in the spont past. Discourged wolkers, a so -maked, have given a job-natist release rescon for not out the spont past. e prior to 1 Ţ, ment of the margin

when the function part time for ecc able for full-date work but have ar information, see "BLS infrad-ures," in the October 1985 issue way 1988, data reflect new oc lation controls used in the insural had to be case report as of the M -

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Table A-9. Unemployed persons by sex and age, seasonally adjusted

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Age and sex	Number of unemployed persons (in thousands)				Unemployment rates*						
	Jan. 1997	Dec. 1997	Jan. 1996	Jan. 1997	Sept. 1997	Oct. 1997	Nov. 1997	Dec. 1997	Jan. 1998		
Total, 16 years and over 16 to 24 years 16 to 19 years 16 to 19 years 20 to 24 years 20 to 24 years	7,188 2,591 1,341 571 762 1,250 4,564	6,392 2,300 1,138 576 555 1,162 4,149 3,650	6,409 2,371 1,154 596 549 1,218 4,019 2,559	5.3 12.0 16.9 17.8 16.2 9.2 4.0	4.9 11.2 16.4 19.3 14.5 8.2 3.7	4.8 11.1 15.5 17.5 14.1 8.5 3.6	4.6 10.9 15.2 17.6 13.6 6.4 3.4	4.7 10.6 14.3 17.7 11.7 8.5 3.6	4.7 10.8 14.1 17.3 11.6 8.9 3.5		
25 to 54 years and over	504	480	3,500	3.1	3.1	2.8	2.8	2.8	2.7		
Mar. to years and over 16 to 19 years	3,843 1,440 750 336 412 690 2,393 2,124 293	3,46/ 1,250 582 310 268 668 2,213 1,896 925	3,333 1,278 689 330 357 588 2,050 1,785	5.3 12.7 18.3 20.3 16.9 9.5 3.9 4.0	48 120 172 188 16.1 9.1 3.5 3.6	4.8 12.0 16.3 18.2 14.8 9.5 3.5 3.6 2.0	4.5 11.6 15.8 18.2 14.1 9.3 3.2 3.3	4.7 11.1 14.2 18.4 11.1 9.3 3.5 3.6	4.5 11.2 16.4 16.3 14.9 6.1 3.3 3.4		
Women, 16 years and over 16 to 24 years 16 to 19 years 16 to 19 years 20 to 24 years 20 to 24 years 25 years and over 25 years and over 55 years and over	2,345 1,151 591 235 350 560 2,171 1,960 211	2,925 1,050 556 286 287 494 1,936 1,763 155	289 3,076 1,094 464 266 191 629 1,969 1,802 1,802 1,70	3.2 5.3 11.3 15.4 15.1 15.4 8.9 4.1 4.3 2.9	3.0 5.0 10.4 15.5 19.8 12.8 7.3 4.0 4.1 3.2	4.7 10.1 14.7 18.7 13.4 7.4 3.7 3.8 2.7	2.9 4.7 10.1 14.7 17.0 13.0 7.4 3.6 3.8 2.6	3.4 4.6 10.2 14.3 17.0 12.4 7.6 3.8 3.9 2.1	3.1 4.6 10.4 11.6 16.3 8.2 9.7 3.7 3.9 2.3		

¹ Unemployment as a percent of the civilian labor force. NOTE: Beginning in January 1998, data reflect new composite estimation

procedures and revised population controls used in the household survey.

Table A-10. Persons not in the labor force and multiple jobholders by sex, not sessonally adjusted

(Numbers in thousands)

Category	T	stal		le n		men
	Jen.	Jan.	Jan.	Jan.	Jan.	Jan.
	1997	1998	1997	1996	1997	1998
NOT IN THE LABOR FORCE						
Total not in the tabor force	67,968	68,287	25,147	25,425	42,821	42,061
	5,164	5,028	2,204	2,190	2,960	2,636
	1,615	1,479	818	734	797	745
Ressons other than discouragement ³	1,218	1,105	200 550	502	663	142 603
Total multiple jobholders ⁴	7,572	7,702	4,076	3,995	3,496	3,707
Percent of total employed	6.0	6.0	6.0	5.8	6.0	6.2
Primary job bit line, secondary job part time	4,270	4,238 -	2,540	2,446	1,730	1,790
Primary and secondary jobs both part time	1, 638	1,644	525	489	1,113	1,175
Primary and secondary jobs both full time	210	289	154	200	56	69
Hours vary on primary or secondary job	1,427	1,614	845	861	582	653

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Note refer to persons who have exercised for work during the prior 12 months and evaluate to take a job during the reference week. Includes thikes now not available, could not find work, lucks achooing or training, includes those work available, could not find work lucks achooing or training, includes those who did not achievely look for work in the prior 4 weeks for auch ns as child-care and transportation problems, as well as a small number for

which reason for nonparticipation was not determined. ⁴ Includes parsons who work part liter on their primary job and full time on the secondary job/job, not shown appressibly. NOTE: Beginning in January 1998, data reflect new composes semimati procedures and revised population controls used in the household survey.

HOUSEHOLD DATA

Table 8-1. Employees on nonlarm payrolls by industry

(in thousands)

	N		ily adjust	d			Seesonal	y adjusted		
industry	Inc	New	Dec	.ten		Sect.	Oct.	Nov.	Dec.	Jan.
	1997	1997	1997P	19989	1997	1997	1997	1997	1997P	19959
Total	118,903	124,531	124,699	122,125	120,909	122,792	123,083	123,512	123,867	124,225
Total private	99,448	104,346	104,583	102,428	101,380	103,078	103,334	103,749	104,095	104,444
Goods-producing	23,961	25,088	24,901	24,482	24,581	24,771	24,814	24,886	24, 98 8	25,123
Mining	560	576	572	562	574	576	574	572	574 54	574
Metal mining	53.7	53.1	53.1	52.5	20	34 61	20	5	5	š
Coal mining	\$3.4	90.4	124.0	921.4	317	323	323	322	322	324
Oil and gas extraction	319,3	108.2	105.1	09.2	109	108	107	105	108	107
Nonmetalic minerals, except tues	90.0	100.2					6 860	5.683	5742	5 R34
Construction	5,070	5,817	5,535	1 200 2	1 207	1 9/16	1 311	1 327	1342	1.360
General building contractors	1,219.5	1,346.0	724.4	445.8	774	762	758	759	772	780
Special trade contractors	3,209.6	3,679.0	3,577.7	3,402.5	3,481	3,575	3,581	3,595	3,628	3,694
Menufacturing	18,331	18,695	18,694	18,583	18,465	18.553	18,590	18,634	18,672	18,715
Production workers	12,642	12,935	12,931	12,631	12,758	12,818	12,851	12,662	12,913	12,943
Durattie coorts	10,761	11,055	11,074	11,030	10,821	10,952	10,985	11,020	11,047	11,089
Production workers	7,364	7,598	7,614	7,571	7,417	7,518	7,545	7.570	7,592	7,622
Lumber and wood products	774.0	805.8	804.7	793.6	789	798	800	800	807	810
Furniture and fixtures	505.6	514.7	517.2	516.0	505	508	509	511	513	515
Stone, clay, and glass products	521.7	545.6	538.7	525.3	543	541	543	542	544	546
Primary metal industries	708.5	718.3	720.5	719.4	708	713	716	716	717	718
Blast turnaces and basic steel products	237.0	237.0	236.7	235.8	(1)	(1)	(1)	(1)	(1)	
Fabricated metal products	1,456.2	1,491.8	1,494.3	1,491.5	1,460	1,477	1,462	1,485	1,400	1,460
Industrial machinery and equipment	2,124.5	2,178.5	2,187.5	2,191.6	2,125	2,168	2,176	2,184	2,100	2,190
Computer and office equipment	366.8	384.1	395.0	385.5	36/	364	300	304	300	1.000
Electronic and other electrical equipment	1,644.0	1,680.3	1,005.0	1,554.8	1,043	1,003	1,000	1,0/3	651	855
Electronic components and accessories	609.0	04/.1	001.0	633.4	1 010	1 840	1 8/0	1 969	1 847	1 873
Transportation equipment	1,783.1	1,871.7	1,6/8./	1,004,0	1,502	1,040	077	005	997	991
Motor vehicles and equipment	400.0	893.0	536.0	677 1	493	515	518	621	525	527
Altoran and parts	403.0	861.0	8624	861 9	ASA	858	659	860	862	864
Miscellaneous manufacturing	581.1	387.6	384.9	381.1	386	386	385	381	385	386
Nondurable goods	7,570	7,640	7,620	7,553	7,544	7,601	7,605	7,614	7,625	7,626
Production workers	5,278	5,337	5,317	5,260	5,341	5,300	5,305	5,312	5,321	5,321
Food and kindred products	1,652.9	1,708.8	1,691.1	1,005.2	1,695	1,698	1,690	1,701	1,705	1,707
Tobacco products	43.8	43.7	43.4	41.5	41	40	41			
Textile mill products	611.9	603.3	603.5	397.2	015	800	8004	704	₩ ₩	790
Apparel and other textile products	623.8	8003	/102.0	475.7	833	676	676	676		678
Paper and alled products	0/3.4	1 666 9	1 077.7	1 661 4	1 634	1547	1 548	1 551	1.554	1.556
Printing and pucessing	1,020.0	1 026 3	1 028 2	1 023 5	1 028	1.026	1.028	1.028	1.028	1.028
Crismicals and asial products	135.3	138.0	135.4	134.2	139	138	137	137	138	138
Debas and miss plastics products	000.0	0057	997.8	997.0	965	990	923	992	995	1,002
Leather and leather products	\$3.1	89.5	86.2	86.6	94	89	89	69	86	87
Service-producing	94,942	99,443	99,798	97,643	96,328	98,021	96,259	98,624	98,879	99,102
Transportation and public utilities	6,296	6,542	6,547	6,400	6,351	6,473	6,497	6,495	8,470	6,519
Transportation	4,080	4,287	4,291	4,208	4,121	4,232	4,247	4,243	4,213	4,253
Rairoad transportation	224.2	229.7	229.8	229.0	226	227	225	229	230	233
Local and interurban passenger transit	461.9	475.1	477.0	472.4	452	457	458	459	461	463
Trucking and warehousing	1,621.4	1.720.0	1,711.0	1,669.1	1,656	1,708	1,710	1.702	1,697	1,707
Water transportation	167.5	173.9	170.6	165.1	175	176	178	1	1 . 175	1/2
Transportation by air	1,166.6	1,233.9	1,249.4	1221.2	1,168	1211	1,221	1 222	1,190	1,2223
Pipelines, except natural gas	14.2	142	14.2	14.2	1,14		1	1		
Transportation services	424.3	439.7	439.3	437.1	428	439	440		440	1
Communications and public utilities	2,216	2,255	2250	2,252	2,230	2241	2,250	2202		
Communications	1,344.3	1,394.1	1,394.9	1,395,3	1,354	1,3/0	1,365		1,000	984
Electric, gas, and senitary services	0/1.4	800.5		630.0	^{8/8}		003		002	
Wholesale trade	6,514	6,741	6,748	6,718	6,570	6,667	6,712	6,72	6,746	6,776
Durable goods	3,843	3,992	4,006	4.003	3,653	3,962	3,978	3,963	4,000	9,024
Nondurable goods	2,671	2,740	2,742	2,715	2,707	2,725	2,734	2,730	2,740	2/52
	L	L	I	<u> </u>	<u> </u>			·		·

See footnotes at end of table.

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Table B-1. Employees on nonlarm payrolls by industry - Continued

(in thousands)

Industry Jan. Nov. Dec. Jan. Sept. Oct. Nov. Dec. Jan. Sept. Oct. Nov. Dec. Jan. Sept. Dec. Jan. Sept. Dec. Jan. Sept. Dec. Jan. Sept.		Not seasonally adjusted						Seasonalt	y adjusted	1	
Petal trade 21,54 22,752 21,31 22,081 21,97 22,215 22,228 22,403 22,472 2 Building materials and garden supples 2607 2623 2803 914 626 </th <th>industry</th> <th>Jan. 1997</th> <th>Nov. 1997</th> <th>Dec. 1997P</th> <th>Jan. 1998P</th> <th>Jan. 1997</th> <th>Sept. 1997</th> <th>Oct. 1997</th> <th>Nov. 1997</th> <th>Dec. 1997P</th> <th>Jan. 1998P</th>	industry	Jan. 1997	Nov. 1997	Dec. 1997P	Jan. 1998P	Jan. 1997	Sept. 1997	Oct. 1997	Nov. 1997	Dec. 1997P	Jan. 1998P
Backing meteries and genom supples 680.7 97.7 922.2 980.1 974 928.8 928	Rotal varie	21.514	22.752	23.131	22.091	21,917	22.215	22.258	22,403	22,472	22,496
General mechanicis stores 2.759.8 3.079.5 3.165.2 2.867.7 2.216 2.2461 2.227.2 2.232 2.252 2.2530 Food stores 3.454.3 3.555.5 3.500.3 3.517.3 3.474 3.007 3.520 3.521 3.520 3.521 3.520 3.521 3.520 3.521 3.520 3.521 3.520 3.521 3.520 3.521 3.520 3.521 3.520 3.521 3.525 3.521 3.525 3.523 1.082 1.111 1.102 1.102 1.102 1.102 1.102 1.102 1.102 1.102 1.102 1.022 1.026 1.025 1.028 1.025 1.028 1.025 1.026 1.025 1.026 1.025 1.026 1.0	Building materials and garden supplies	863.7	927.7	925.2	893.1	914	926	926	834	836	945
Department stores 2416.1 2703.7 2723.3 2240.1 2423 2474 2522 2530 Automotive dealers and service stations 2278.8 2334.8 2357.3 3,577 3,577 3,577 3,577 3,577 3,577 3,577 3,577 3,577 3,577 3,577 3,577 3,577 3,577 3,577 3,577 3,577 3,577 1,557 1,558 1,558 1,558 1,552 1,552 1,552 1,552 1,552 1,552 1,552 1,552 1,552 1,552 1,552 1,552 1,552 2,565 2,565 2,565 2,565 2,565 2,565 2,565 2,565 2,565 2,565 2,565 2,565 2,565 2,565 2,555 2,565 2,555 2,555 2,555 2,555 2,555 2,556 2,556 2,556 556 556 556 556 556 556 556 556 556 556 556 556 556 556 556 </td <td>General merchandise stores</td> <td>2,759.8</td> <td>3,079.5</td> <td>3,195.2</td> <td>2,897.7</td> <td>2,757</td> <td>2,618</td> <td>2,824</td> <td>2,868</td> <td>2,884</td> <td>2,697</td>	General merchandise stores	2,759.8	3,079.5	3,195.2	2,897.7	2,757	2,618	2,824	2,868	2,884	2,697
Food stores 3,444,3 3,256,3 3,471,3 3,474,3 3,201,2 3,241,3 3,241,4 1,001,1 1,102,4 1,115,2 1,105,3 1,105,4 1,115,2 1,105,3 1,105,4 1,115,2 1,105,3 1,105,4 1,115,2 1,105,3 1,105,4 1,115,2 1,105,3 1,105,4 1,115,2 1,105,3 1,205,4 7,205,2 7,205,2 7,205,2 7,205,2 7,205,2 7,205,2 7,205,2 7,205,2 7,205,2 7,204,7 3,444,3 3,471,3,471,3,475,3,375,3 3,444,3,437,3,473,3,470,3,471,3,473,1,405,1 1,405,1 1,405,1 1,405,1 1,405,1 1,405,1 1,405,1 1,405,1 1,405,1 1,405,1 1,405,1 1,405,1 1,405,1 1,405,1 1,405,1 1,405,1 1,405,1 1,405,1 1,405,1 1,405,1	Department stores	2,416.1	2,709.7	2,792.3	2,540.1	2,420	2,469	2,474	2,522	2,530	2,561
Automotive dealerst and services statiots 2,72,8 2,52,8 2,52,8 2,50,0 1,50,0	Food stores	3,454.3	3,556.5	3,590.3	3,51/3	3,4/4	3,50/	3,320	3,321	2,323	2 342
Anametian accessory stores 11574 12703 11574 12703 1107 1108 1111 1008 Purphare and home burnishings stores 72274 7596.5 7638.8 7.328.7 7.522 7.688 7.689 <	Automotive desers and service stations	1 044 4	1 081 1	1056.8	1 056 1	1.051	1.057	1.060	1.082	1.050	1.052
Eximance and home luminatings stores 1,028.5 1,028.4 1,029 1,040 1,055 1,062 1,070 Miscollaneous real establishments 2,795.5 3,013.4 3,128.9 2,910.2 2,786 2,858 7,880 7,852 7,827 7,560 7,690 Finance, insurance, and neal estate 6,917 7,105 7,135 7,122 6,771 7,087 7,132 7,164 1,491 1,405 1,500 1,502 2,508 2,508 2,508 2,508 2,508 2,508 2,508 5,509 5,56 5,509 5,56 5,509 5,56 5,509 5,56 5,509 5,56 5,509 5,56 5,509 5,56 5,509 5,56 5,509 5,56 5,509 5,56 5,509 5,56 5,509 5,50	Accessory stores	1,109.8	1.157.4	1,210.9	1,118.9	1,107	1,102	1,108	1,111	1,108	1,114
Eating and drinking places 7,227,4 7,580.6 7,830.9 7,830.9 7,830.9 7,852.7 7,852 7,868 2,069 2,285 2,868 2,809 2,282 Finance, insurance, and real estate 6,917 7,109 7,135 3,713 3,471 3,475 3,351 3,447 3,477 3,473 3,473 3,473 3,473 3,473 3,473 3,471 3,475 3,231 3,447 3,475 3,270 2,083 2,008 <td>Furniture and home furnishings stores</td> <td>1,026.5</td> <td>1,086.4</td> <td>1,115.8</td> <td>1,078.8</td> <td>1,020</td> <td>1,049</td> <td>1,055</td> <td>1,062</td> <td>1,070</td> <td>1,072</td>	Furniture and home furnishings stores	1,026.5	1,086.4	1,115.8	1,078.8	1,020	1,049	1,055	1,062	1,070	1,072
Miscellaneous retail establishments 2,795.8 3,013.4 3,128.9 2,910.2 2,785 2,265 2,084 2,022 2,255 2,085 2,026 2,255 2,285 </td <td>Eating and drinking places</td> <td>7,227.4</td> <td>7,596.5</td> <td>7,638.9</td> <td>7,363.7</td> <td>7,552</td> <td>7,626</td> <td>7,626</td> <td>7,689</td> <td>7,690</td> <td>7,695</td>	Eating and drinking places	7,227.4	7,596.5	7,638.9	7,363.7	7,552	7,626	7,626	7,689	7,690	7,695
Finance. 6,917 7,105 7,122 6,971 7,082 7,108 7,135 7,122 6,971 7,082 7,108 7,135 7,122 6,971 7,082 7,082 7,082 7,082 7,082 7,082 7,082 7,082 7,082 7,087 3,445 3,457 3,447 3,447 3,445 3,457 3,447 3,445 3,457 3,445 3,457 3,445 3,457 3,445 3,455 2,058 2,058 2,058 2,058 2,559 550 1,478 1,449 1,405 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 552 2551 250 252 252 252 252 252 252 252 252 252 252 252 252 253 2,501 2,501 2,501 2,502 2,552 2,552 2,551 2,531 2,531 2,532 2,531 2,532 2,531 2,532 2,531 2,532 2,531 2,532 2,531 2,531 3,545 3,545 3,545 3,542 3,545 <td>Miscellaneous retail establishments</td> <td>2,795.8</td> <td>3,013.4</td> <td>3,126.9</td> <td>2,910.2</td> <td>2,796</td> <td>2,856</td> <td>2,863</td> <td>2,900</td> <td>2,922</td> <td>2,66/</td>	Miscellaneous retail establishments	2,795.8	3,013.4	3,126.9	2,910.2	2,796	2,856	2,863	2,900	2,922	2,66/
Instantos 3,445 3,447 2,208 2,218 2,208 2,218 2,208 2,218 2,208 2,218 2,218	Finance, insurance, and real estate	6,917	7,109	7,135	7,122	6,971	7,082	7,108	7,132	7,154	7,176
Commercial lanks 1.4763 <	Finance	3,345	3,449	2 064 5	2063.4	2,032	2048	2 052	2,058	2.054	2.065
Servings institutions 1294.8 2465 1252.1 252.4 253 250 250 253 Mortigage bankers and brokers 220.5 246.8 250.6 251.2 233 544 559 555 550 1552 250 252 252 252 252 252 252 252 252 253 254 233 544 572 000 005 6110 614 615 572 000 005 6110 614 615 723 728	Commercial banks	1 476 1	1,496.6	1.502.7	1.501.8	1.478	1.491	1.495	1.500	1.502	1,504
Hordiepointory institutions 332.8 552.8 560.5 562.1 533 554 559 559 Security and commosity brokers 690.5 690.5 690.5 221.2 223.9 249 225.2 225.1 223.2 231 233 233.2 234.2 238.2 237.2 238.1 1350 1,501 1,501 1,515 1,521 1,333 1,402 1,425	Savings institutions	254.8	249.5	252.1	252.4	255	251	250	250	253	253
Morgage bankers and brokers 220.5 249.6 250.6 251.2 259 249 252 252 251 Security and commonity brokers 201.2 203.3 224.4 233.3 224.4 223.5 214 223.5 228 228 228 228 228 228 228 228 228 228 227 2289 227 2289 227 2289 2287 2289 2287 2289 2287 2289 2287 2289 2287 2287 2289 2287 2289 2287 2289 2287 2289 2287<	Nondepository institutions	532.8	555.8	560.5	562.1	533	554	559	558	559	562
Security and commodity botkers 580.5 600.0 613.1 613.9 572 600.2 600.2 610.2 <th< td=""><td>Mortgage bankers and brokers</td><td>239.5</td><td>249.8</td><td>250.6</td><td>251.2</td><td>239</td><td>249</td><td>252</td><td>252</td><td>251</td><td>250</td></th<>	Mortgage bankers and brokers	239.5	249.8	250.6	251.2	239	249	252	252	251	250
Procend arrows investment offices 1.2.1 2.2.22 2.2.20 <th2.2.2.700< th=""> 2.2.70 <th2.2.< td=""><td>Security and commodity brokers</td><td>569.5</td><td>609.0</td><td>613.1</td><td>615.9 223 s</td><td>5/2</td><td>226</td><td>226</td><td>231</td><td>233</td><td>236</td></th2.2.<></th2.2.2.700<>	Security and commodity brokers	569.5	609.0	613.1	615.9 223 s	5/2	226	226	231	233	236
Insurance carriers 1,50:5 1,520.5 1,520.5 1,527.3 7,503 7,511 1,515 1,527 7,331 Insurance agents, brokers, and service 710.8 724.1 727.3 728.7 713 724 723 726 7283 778 737 778 738 738 728 7283 738 728	Holding and other investment othices	2 212.4	2 245	2256	233.0	2218	2232	2 239	2.247	2,259	2,259
Insurance agents, brokers, and service 770.8 724.1 726.7 721 721 723 726 728 Red estate 1,400 1,415 1,400 1,402 1,425 1,427 1,525 1,754 1,754 1,754 1,751	Insurance carriers	1.501.5	1.520.5	1.528.6	1.527.3	1,505	1,511	1,516	1,521	1,531	1,531
Reat estate 1,300 1,415 1,406 1,333 1,422 1,423 1,425 1,425 Services ² 34,246 36,111 35,563 34,900 35,543 36,102 35,245 36,102 36,285 3 36,102 36,285 3 36,102 36,285 3 36,102 36,285 3 36,102 36,285 3 36,102 36,285 3 36,102 36,285 3 36,102 36,285 3 36,102 36,285 3 36,102 36,102 36,102 36,102 36,102 36,102 36,102 36,102 36,102 36,102 36,102 36,102 36,102 36,102 36,102 37,77 7,751 3,775 7,752 3,775 7,759 7,822 7,719 7,832 2,702 2,472 2,423 2,447 2,444 2,514 Computer and data processing services 1,270.1 1,402.1 1,416.1 1,1161 1,416.1 1,1161 1,142.1 1,368 366	Insurance agents, brokers, and service	710.8	724.1	727.3	726.7	713	721	723	726	728	726
Services ² 34,246 38,111 38,1071 35,853 34,200 35,853 36,102 35,855 35,945 36,102 35,855 35,945 36,102 35,855 35,945 36,102 35,855 35,945 36,102 35,855 35,945 36,102 35,855 35,945 36,102 35,855 35,945 36,102 35,855 35,945 36,102 35,855 35,945 36,102 35,855 35,945 36,102 35,855 35,945 35,945 36,102 35,855 35,945 36,102 35,855 35,945 35,945 35,945 35,945 35,945 35,945 35,945 35,945 37,875 1,765 1,7765 1,7765 1,7765 1,7765 1,7765 3,7475 7,735 7,375 2,762 2,902 2,907 2,2162 2,902 2,2776 2,243 2,427 2,428 2,247 2,448 2,314 1,415 1,426 1,415 1,426 1,415 1,426 1,4175 1,455 1,436 <t< td=""><td>Real estate</td><td>1,360</td><td>1,415</td><td>1,408</td><td>1,393</td><td>1,402</td><td>1,423</td><td>1,425</td><td>1,428</td><td>1,425</td><td>1,435</td></t<>	Real estate	1,360	1,415	1,408	1,393	1,402	1,423	1,425	1,428	1,425	1,435
Agricultural services 543.0 682.1 622.5 573.1 647 680 684 687 679 Hoxts and Onte todging places 1.534.8 1.694.2 1.680.1 1.835.8 1.743 1.756 1.755 1.757 Personal services 7.2284.1 1.162.4 1.686.6 1.231.2 1.167 1.168 1.167 1.168 Business services 2.590.9 2.900.3 9.07.7 7.873 7.478 7.732 7.873 2.742 2.703 2.002 903 903.2 2.773 2.763 2.277 2.244 2.2170 2.2170 2.218 2.2473 2.2763 2.423 2.427 2.423 2.427 2.423 2.427 2.423 2.427 2.438 2.427 2.438 2.427 2.438 3.41 1.415 1.415 1.416.2 1.1713 1.745 1.445 1.445 1.445 1.445 1.445 1.445 1.445 1.455 1.455 1.455 1.455 1.455 1.455 1.455 1.455 1.455 1.455 1.455 1.555 1.555 1.555 <td>Services²</td> <td>34,248</td> <td>36,114</td> <td>36,101</td> <td>35,553</td> <td>34,990</td> <td>35,850</td> <td>35,945</td> <td>36,102</td> <td>36,265</td> <td>36,354</td>	Services ²	34,248	36,114	36,101	35,553	34,990	35,850	35,945	36,102	36,265	36,354
Persons and corres county places 1,53,53 1,264,1 1,654,1 1,165	Agricultural services	543.0	682.1	623.5	573.1	1 742	1 766	1 785	1 763	1 754	1 761
Total a services 7.284.1 7.286.1 7.775.7 7.776.7 7.776.7 7.776.7 7.776.7 7.776.7 7.776.7 7.776.7	Hotels and other looging places	1,034.6	1 169 4	1 168 6	1 231 2	1 195	1,730	1 198	1,197	1.185	1.187
Services to buildings T72.8 T002 T017 B52.3 B533 T02 T002 T003 T003 Personnel supply services 2.564.9 2.280.0 2.280.0 2.271.2 2.703 2.777 2.481 2.777 2.481 2.277 2.481 2.477 2.481 2.477 2.481 2.477 2.481 2.477 2.481 2.477 2.481 2.477 2.481 2.477 2.481 2.477 2.481 2.477 2.481 2.477 2.481 2.477 2.481 2.477 2.481 2.477 2.481 2.471 1.481 1.145 1.155 1.505 1.505 1.505 1.505 1.505	Personal services	7.298.4	7.960.3	7.973.7	7.751.3	7,476	7.732	7,759	7.832	7,913	7,942
Personnal supply services 2.99.9 2.826.0 2.912.2 2.706.3 2.743 2.7762 2.4772 2.4437 2.4447 2.4447 2.4447 2.4447 2.4447 2.4447 2.4471 2.4501 <td>Services to buildings</td> <td>878.8</td> <td>903.2</td> <td>901.7</td> <td>892.3</td> <td>893</td> <td>902</td> <td>902</td> <td>903</td> <td>906</td> <td>905</td>	Services to buildings	878.8	903.2	901.7	892.3	893	902	902	903	906	905
Hetp supply services 2.280.2 2.577.9 2.387.3 2.427 2.423 1.41 1.41 1.41 1.41 1.41 1.41 1.41 1.41 1.41 1.41 1.41 1.415 1.426 1.111 1.115 1.415 1.420 1.568 1.563 1.553 1.551 1.571 1.776 1.755 1.753 1.776 1.756 1.757 1.776 1.756 1.756 1.756 1.756 1.756 1.756 1.756 1.757 1.756	Personnel supply services	2,594.9	2,926.0	2,912.2	2,706.3	2,743	2,762	2,770	2,819	2,864	2,854
Computer and oscilar processing services 1,702 1,702 1,702 1,702 1,702 1,703 1,705 1,706 1,705 1,705 1,706 1,705 1,706 1,705 1,706 1,705 1,706 1,705 1,706 1,706 1,706 1,706 1,706 1,706 1,706 1,706 1,706 1,707 1,779	Help supply services	2.290.2	2,577.6	2,557.9	2,367.3	2,427	2,423	2,427	2,484	2,514	1,435
Aussiliance Total Total <thtotal< th=""> Total Total</thtotal<>	Computer and data processing services	1,2/0.3	1,402.0	1,421.0	1 148 2	1 117	1 145	1 148	1 153	1.157	1,163
Motion pictures Seas	Miscalaneous repair services	374.1	389.9	389.7	384.7	380	386	386	389	391	391
Anusement and recreation services 1,272.5 1,415.5 1,426.1 1,366.8 1,400 1,563 1,500 Heath services 9,562.0 9,770.0 9,040.0 9,750.0 9,040.0 9,750.0 9,770.0 9,750.0 9,750.0 9,770.0 1,750.1 1,770.0 1,770.0 1,770.0 1,770.0 1,770.0 1,770.0 1,770.0 1,770.0 1,770.0 1,770.0 1,770.0 1,770.0 1,770.0 1,770.0 1,770.0 1,770.0 1,770.0 1,770.0 1,770.0 1,771.0 686.0 682.0 685.0 680.0 673.1 2,240.2 2,105.2 2,110.2 2,110.2 2,110.2 2,110.2 2,110.2 2,110.2 2,110.2 2,110.2 2,110.2 2,110.2 2,110.2	Motion pictures	528.5	548.7	565.7	555.1	530	549	550	551	564	557
Heath services 9,652,0 9,778,0 9,058,0 9,778,0 9,058,0 9,778,0 9,078,0 9,778,0 9,778,0 9,778,0 9,778,0 9,778,0 9,778,0 9,778,0 9,778,0 9,778,0 9,778,0 9,778,0 9,778,0 9,778,0 9,778,0 9,778,0 1,770,3 1,778,1 1,778,1 1,778,1 1,778,1 1,778,1 1,778,1 1,778,1 1,778,1 1,778,1 1,778,1 1,778,1 1,778,1 1,778,1 1,778,1 1,778,1 1,778,1 1,778,1 1,778,1 3,000 3,910,1	Amusement and recreation services	1,272.5	1,415.5	1,425.1	1,368.6	1,490	1,558	1,563	1,583	1,600	1,609
Chicks and chicks of medical occors 1.70/3 1.	Health services	9,562.0	9,779.0	9,804.0	9,780.9	9,585	9,731	9,750	9,//1	9,791	9,805
Hoppits Josep <	Unices and clinics of medical occlors	1,707.5	1,770.5	1,770.0	1,757.8	1,713	1,754	1,763	1,767	1,768	1,763
Home health care services 674.6 687.0 672.0 672.1 677.1 2.102 2.102 2.101 2.111 2.022 2.007 2.517 2.516 2.432 2.502 2.507 2.517 2.516 2.432 2.502 2.507 2.517 2.516 2.432 2.663 657.5 715.2 684 707 700 717.1 716	Hospitals	3.833.7	3,910,7	3.919.8	3,923,7	3,841	3.892	3,900	3,910	3,918	3,931
Logal services 907.3 907.1 971.4 990.5 942 962 963 965 973 Education learvices 1,999.3 2,280.9 2,235.1 2,042 2,105 2,110 2,118 2,128 2,202 2,507 2,507 2,511 2,524 2,507 2,508 3,078 3,078 3,078 3,078 3,078 3,078 3,078 3,078 3,078 3,078 3,078 3,078 3,078 3,078 3,078 3,078 3,079 9,03 3,079 3,079 3,079 3,079 <td>Home health care services</td> <td>674.6</td> <td>687.0</td> <td>682.0</td> <td>671.1</td> <td>677</td> <td>684</td> <td>682</td> <td>683</td> <td>680</td> <td>674</td>	Home health care services	674.6	687.0	682.0	671.1	677	684	682	683	680	674
Educational services 1,998.3 2,286.9 2,235.1 2,046.9 2,042 2,105 2,110 2,112 Social services 2,419.4 2,251.9 2,250.0 2,511.1 2,507 2,517 2,507 2,517 2,508 3,773 508 509 508 509 508 509 508 509 508 509 508 509 508 509 508 509 608 308 508 608 508 508 608 508	Legal services	937.3	957.1	971.4	969.5	942	952	963	968	973	974
Social services 24194 22510 22103 2432 2432 2432 2431 2211 2234 Child dey care services 690.0 705.1 715.3 715.2 694 596 596 596 596 596 596 596 <td< td=""><td>Educational services</td><td>1,998.3</td><td>2,286.9</td><td>2,235.1</td><td>2,064.9</td><td>2,042</td><td>2,105</td><td>2,110</td><td>2,118</td><td>2,122</td><td>2,112</td></td<>	Educational services	1,998.3	2,286.9	2,235.1	2,064.9	2,042	2,105	2,110	2,118	2,122	2,112
Construction Construction<	Child day care empires	2,419,4	2.521.9	611 0	8/10.5	£A32 579	2,302 507	2,50/	2,511 504	500	604
Museums and boartical and zoological gardens. 79.0 80.5 85.5 79.0 67 85 85 89 89 89 Membership organizations 2,155.5 2,167.4 2,182.5 2,172.6 2,192 2,202 2,204 2,199 2,205 Engineering and management services 2,880.0 3,064.5 3,087.4 2,916 3,074 3,086 3,074 3,086 3,061 3,075 600 890.3 807 807 806 807 807 808 807 807 808 807 807 808 807 807 808 807 807 808 807 807 808 807 809 807 807 808 807 809 807 807 9083 803 807 10	Critic day care services	690.6	709.1	715.3	715.2	684	707	709	711	716	719
gardens 79.0 86.5 79.9 67 88 80 88 Memberhip organizations 2155.5 2167.4 2167.7 217.86 2192 2202 2204 2199 2206 Engineering and management services 2455.5 2467.4 2106.7 217.86 2067.4 2.916 3.006 3.001 3.007.4 2.916 3.006 3.001 3.006 3.001 3.006 3.001 3.006 3.001 3.006 3.001 3.006 3.001 3.006 3.001 3.006 3.001 3.006 3.001 3.006 3.001 3.006 3.001 3.006 3.001 3.006 3.001 3.006 3.001 3.006 3.001 3.005 3.001 3.005 3.001 3.006 3.001	Museums and botanical and zoological										-
Membership organizations 2,155.5 2,162.7 2,122.2,202 2,200	gardens	79.0	86.5	85.5	79.9	87	68	88	89	86	86
Engineering and management services 2288.0 3.064.3 3.067.4 2.076 3.074 3.088 3.081 3.074 3.086 Engineering and architectraf services 847.5 844.5 690.0 690.3 557 685 801 5305 602 690.3 557 685 801 830.5 602 590.3 557 685 690.9 690.3 913 690.9 597.9 993.3 587 686.5 602.4 480.4 482.2 (1)	Membership organizations	2,155.5	2,187.4	2,196.7	2,172.6	2,192	2,202	2,204	2,199	2,208	2,210
Engineering and public relations 697.5 694.5 664.9 603.3 607 606 697.6 697.9 993.3 Management and public relations 893.3 970.1 994.4 993.3 913 996 976 979 993 Services, nec 46.9 49.4 48.2 (1) (1) (1) (1) (1) Government 19.455 20,185 20,136 19,690 19,529 19,714 19,749 19,753 19,772 1 Federal 2,703 2,579 2,721 2,664 2,723 2,680 2,887 2,264 2,200	Engineering and management services	2,8850.0	3,054.5	3,083.1	3,087.4	2,916	3,038	3,051	3,074	3,000	3,120
Meangement Constrained Constrained <thconstrained< th=""> <thconstrained< th=""></thconstrained<></thconstrained<>	Engineering and architectural services	04/.0	070 1	090.4	090.3	013	000	076	979	993	1 005
Government 19,455 20,185 20,196 19,690 19,529 19,714 19,749 19,753 19,772 1 Federal 2,703 2,679 2,721 2,664 2,2690 2,687 2,680 2,687 2,690 2,690 2,687 2,690 2,687 2,690 2,690 2,690 2,690 2,690 2,690 2,690 2,690 2,690 2,690 2,690 2,690 2,690 2,690 2,690 2,690 2,690 2,690	Services, nec	46.9	49.6	49.4	48.2	(1)	(1)	(1)	(1)	(1)	(1)
Federal 2,703 2,879 2,721 2,884 2,723 2,880 2,887 2,894 2,890	Government	19,455	20,185	20.135	19,599	19.529	19,714	19,749	19,763	19,772	19,781
الأعجب المخبب المعبير المعجب المعجب المعتميا مستميا المستمي المنام منام المستم	Federal	2,703	2,679	2,721	2,664	2,723	2,680	2.687	2.094	2,690	2,684
Federal, except Postal Service	Federal, except Postal Service	1,637.1	1,810.9	1,803.9	1,790.5	1,862	1,824	1,832	1,825	1,819	1,816
State 4,560 4,808 4,750 4,601 4,621 4,662 4,663 4,673 4,668	State	4,560	4,808	4,750	4,601	4,621	4,662	4,663	4,673	4,668	4,005
Education	Education	1,891.1	2,125.1	2,074.4	1,921.3	1,928	1,962	2 701	3.70=	2 7 19	2 704
Currer State government	Uner State government	12 102	12700	12 645	12 434	12,185	12,572	12 300	12,398	12,414	12,432
Education 6.963 6.964 6.963 6.964 6.963	Education	6.968.1	7,329.1	7,305.7	7,110.2	6.831	6,957	6,963	6,964	6,963	6,974
Other local government	Other local government	5,223.6	5,370.B	5,359.1	5,324.2	5,354	5,415	5,435	5,432	5,451	5,458

¹ This series is not published seasonally adjusted because the seasonal component, which is small relative to the trend-cycle and irregular components, cannot be separated with sufficient precision.

 2 Includes other industries, not shown separately. p = preliminary.

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Table B-2. Average westly hours of production or nonsepervisory workers¹ on private nonline payrolls by industry

	Not seasonally adjusted				Seesonally adjusted					
Industry	Jan. 1997	Nov. 1997	Dec. 1997P	Jan. 19989	Jan. 1997	Sept. 1997	8 19 19	Nov. 1997	Dec. 1997P	Jan. 19989
Total private	33.9	34.8	34.7	34.2	34.4	34.5	34.5	34.6	34.6	34.8
Goods-producing	40,4	41.4	42.0	40.8	41.1	41.2	41.3	41.2	41.4	41.5
Mining	44.2	45.7	45.1	44.9	44,7	45.1	45.2	45.6	44.8	45.4
Construction	36.4	37.8	38.4	37.3	38.6	38.9	38.6	38.1	38.8	39.7
Manufacturing	41.5 4.5	42.6 5.2	43.1 5.4	41.8 4.7	41.8 4.7	41.9 4,7	42.0 4.8	421 49	422 49	42.1 4.9
Durable goods	42.3 4.8	43.3 5.5	43.9 5.8	42.5 5.0	42.5 5.0	42.6 5.0	42.8 5.1	429 5.2	43.0 5.2	42.8 5.2
Lumber and wood products	39.6 39.3	41.4 41.2	41.2 42.1	40.1 40.9	40.7 39.8	40.9 40.2	41.1 40.0	41.2 40.5	41.0 40.7	41.2 41.5
Stone, ciay, and glass products Primary metal industries	40.9 44.5 44.7	43.1 45.5 45.5	43.5 46.1 46.1	42.2 45.3 45.8	42.5 44,4 44,7	43.1 44.9 45.1	43.1 45.1 45.3	45.3	45.3 45.6	45.3 45.9
Fabricated metal products Industrial machinery and equipment	42.1 43.3	43.3 44.0	44.0 44.8	42.6 43.6	42.4 43.2	42.4	42.6	42.6	42.9 43.6	42.7
Electronic and other electrical equipment Transportation equipment Motor vehicles and equipment	41.2 44.6 45.5	44.5 44.8	45.7 46.3	43.6 43.4	44.7 45.6	43.9 44.1	44.4 45.0	44.0 44.3	44.7 45.0	43.6 43.4
Instruments and related products Miscellaneous manufacturing	41.7 39.6	42.8 41.2	429 41.3	41.7 40.2	41.6 39.9	42.0 40.3	41.9 40.2	42.2	41.8	41.5
Nondurable goods Ovenime hours	40.5 4.0	41.5 4.7	41.8 4.7	40.8 4.2	40.7 4.2	40.9 4.3	40.B 4.A	41.1 4.5	41.1 4.5	41,1 4,4
Food and kindred products	40.7 39.2	42.2 39.5	42.3 41.3	41.0 38.0	41.2 39.9	41.2 38.1	41.2 38.7	41.6 39.3	41.8 40.3	41.5 38.6 41.5
Apparel and other textile products Paper and allied products	41.0 36.9 43.8	37.6 44.4	42.1 38.1 44.7	37.3 43.7	37.2 43.7	37.3 43.7	37.2	87.1 44.1	37.5 43.8	37.6 43.6
Printing and publishing Chemicals and allied products	37.8 43.1	39.2 43.7	39.3 43.9	38.0 43.3	38.3 43.2 (2)	38.7 43.4 (2)	38.7 43.2 (2)	88.8 43,4 (2)	38.7 43.0 (2)	38.5 43.4 (2)
Petroleum and cost products Rubber and misc, plastics products Leather and leather products	45.0 41,4 37,7	42.5 38.5	43.3	42.3 37.7	41.4 38.4	41.6 38.4	41.8 38.6	42.2 38.0	424 38.3	423 383
Service-producing	32.2	33.0	32.9	32.4	32.7	32.8	32.8	33.1	32.8	\$3.0
Transportation and public utilities	38.6	40.3	39.8	39.5	39.5	39.9	39.8	40.2	39.7	40.1
Wholesale trade	37.9	38.7	38.4	38.1	38.2	38.3	38.3	38.7 29.9	38.2	38.4
Retail trade	35.7	36.7	35.8	35.9	(2)	(2)		100	(2)	2
Services	32.0	32.8	32.6	32.4	(2)	(2)	(2)	(2)	(2)	(2)

¹ Data relate to production workers in mining and manufacturing: construction workers in construction; and nonsupervisory workers in transportation and public utilities; wholesale and retail trade; thance, insurance, and real estate; and services. These groups account for approximately tour-fifths of the total employees on private nonterm

payods. ² These series are not published seasonally adjusted because the seasonal component, which is small relative to the trand-cycle and inequalar components, cannot be separated with sufficient precision. ^p = preliminary.

ESTABLISHMENT DATA

Table 3-3. Average hourly and weekly earnings of production or nonsupervisory workers¹ on private nonform payrolls by industry

<u></u>		Average ho	uriv eeminas			Average we	kiv eeminas	
lands writes.	<u> </u>	1	1	· · · · · ·		I	,	<u> </u>
incusary	Jan. 1997	Nov. 1997	Dec. 1997P	Jan. 19989	Jan. 1997	Nov. 1997	Dec. 1997P	Jan. 1998 ^p
Tomi orbotte	61211	812.61	812 51	\$12.59	\$410.53	\$435.35	8434 10	\$430.24
Seasonally adjusted	12.05	12.48	12.47	12.51	414.52	434.30	431.46	435.35
Goods-producing	13.58	14.11	14.20	14.11	552.67	584.15	596.40	575.69
Mining	18.18	16.38	16.47	16.70	715.16	748.57	742.80	749.83
Construction	15.73	16.25	16.34	16.24	572.57	614.25	627.46	605.75
Manufacturing	13.04	13.37	13.48	13.42	541.16	569.56	580.99	560.96
Durable goods	13.62	13.97	14.07	13.96	576,13	604.90	617.67	593,30
Lumber and wood products	10.58	10.90	10.93	10.85	418.97	451.26	450.32	435.09
Furniture and fixtures	10.38	10.70	10.79	10.77	407.93	440.B4	454.26	440.49
Stone, clay, and class products	12.99	13.36	13.39	13.36	531.29	575.B2	582.47	563.79
Primary metal industries	15.12	15.39	15.41	15.48	672.B4	700.25	710.40	701.24
Blast turnaces and basic steel products	17.71	18.25	18.10	18.39	791.64	830.38	834.41	842.26
Fabricated metal products	12.75	12.97	13.09	13.02	536.78	561.60	575.96	554.65
Industrial machinery and equipment	13.91	14.29	14,39	14.34	602.30	628.76	644.67	625.22
Electronic and other electrical equipment	12.46	13.00	13.05	12.91	513.35	553.80	562.46	535.77
Transportation equipment	17.48	17.98	18,15	17.83	778.72	800.11	829.46	777.39
Motor vehicles and equipment	18.02	18.57	18,71	18.31	819.91	831.94	866.27	794.65
Instruments and related products	13.38	13.70	13.73	13.69	557.95	583.62	589.02	570.87
Miscellaneous manufacturing	10.59	10.72	10.83	10.82	419.36	441.56	447.28	434.96
Nondurable goods	12.20	12.48	12.59	12.60	494.10	517,92	526.26	514.08
Food and kindred products	11.41	11.60	11.73	11.70	464.39	489.52	496.18	479.70
Tobacco products	18.55	17.78	19.05	18.86	727.55	702.31	786.77	716.68
Textile mill products	9.93	10.15	10.24	10.25	407.13	425.29	431.10	423.33
Apparei and other textile products	8,12	8.33	8.43	8.45	299.63	313.21	321.18	315.19
Paper and allied products	14.84	15.24	15.30	15.20	649.99	676.66	683.91	664.24
Printing and publishing	12.86	13.25	13.30	13.29	486.11	519.40	522.69	505.02
Chemicals and allied products	16.37	16.85	16,91	16.93	705.55	736.35	742.35	733.07
Petroleum and coal products	20.13	20.40	20.55	20.44	905.85	885.36	867.21	867.10
Rubber and misc, plastics products	11.49	11.65	11.81	11.84	475.69	495.13	511.37	500.83
Leather and leather products	8.83	9.10	9.17	9.25	332.89	350.35	355.80	348.73
Service-producing	11.60	11.98	11.95	12.08	373.52	395.34	393.16	391.39
Transportation and public utilities	14,71	15.14	15.12	15.16	570.75	610.14	601.78	598.82
Wholesale trade	13.18	13.74	13.71	13.77	499.52	531.74	528.46	524.64
Retail trade	8.24	8.51	8.50	8.61	230.72	245.09	248.20	241.94
Finance, insurance, and real estate	12.99	13.69	13.58	13.63	463.74	502.42	486.16	489.32
Services	12.19	12.58	12.62	12.68	390.08	412.62	411.41	410.83

¹ See tootnote 1, table B-2.

P = preliminary.

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Table B-4. Average hourty earnings of production or nonsupervisory workers¹ on private nonterm payrolls by industry, seesonally adjusted

Total private: Current dollars \$12.05 \$12.35 \$12.40 \$12.48 \$12.47 \$12.51 0.3 Constant (1962) dollars ² 7.46 7.56 7.56 7.52 7.51 N.A. (3) Goods-producing 13.73 13.97 14.07 14.11 14.16 0.4 Mining 15.98 16.20 16.27 16.33 16.39 16.51 7 Construction 15.73 18.08 16.12 15.23 13.39 13.39 13.39 13.39 13.39 13.39 13.39 13.39 13.39 13.39 13.39 3.39 13.39 3.39 13.39 3.39 13.39 3.39 13.39 3.39	Industry	Jan. 1997	Sept. 1997	Oci. 1997	Nov. 1997	Dec. 1997P	Jan. 1998P	Percent change trom: Dec. 1997- Jan. 1998
Construction \$12.05 \$12.35 \$12.40 \$12.48 \$12.47 \$12.51 0.3 Constant (1962) dollars ² 7.46 7.56 7.56 7.52 7.51 N.A. (3) Goods-producing 13.73 13.97 14.07 14.11 14.16 0.4 Mining 15.96 16.20 16.27 16.33 16.39 16.51 7 Construction 15.73 18.08 16.12 16.22 16.39 16.24 -7 Manufacturing 13.02 13.22 13.35 13.37 13.39 13.39 13.39 13.39 13.39 13.39 10.25 .1 Excluding overtime ⁴ 12.34 12.51 12.60 12.63 12.64 12.65 .1 Service-producing 11.40 11.81 11.85 11.94 13.27 13.26 13.26 .1 .255 .1 Service-producing 11.40 11.81 11.85 11.94 12.05 .7 .7								
Current count 61/205	toer private:	4.0.00		*12.40	812.49	812 47	812 61	0.1
Constructing Construction 7.86 16.43 16.43 16.51 7.7 7.86 16.30 16.51 7.7 7.86 17.80 16.12 16.22 16.22 16.36 16.24 -7.7 Manufacturing 113.01 13.20 13.22 13.35 13.37 13.39	Currera conars	a12.05	#12.00	012.40	012.40	012.47		
Goods-producing 13.73 13.97 14.07 14.11 14.16 14.16 0.0 Mining 15.98 16.20 16.27 16.43 16.39 16.51 .7 Construction 15.73 18.08 16.12 16.24 16.24 .7 Menufacturing 13.02 13.22 13.35 13.37 13.39 .1 Excluding overtime ⁴ 12.24 12.24 12.25 12.24 12.25 .1 Service-producing 11.49 11.81 11.85 11.94 11.91 11.96 A Transportation and public utilities 14.74 14.95 15.05 15.09 15.20 .7 Wholesale trade 13.12 13.54 13.57 13.73 13.69 .3.68 .1 Resail trade 61.19 6.42 8.46 8.50 8.55 .8 Finance, insurance, and reat 12.95 13.47 13.54 13.69 13.69 .2 Services 12.05	Constant (1962) dollars4	7,46	7.56	7.58	/.62	1.61		(3)
Maring 15.96 16.20 16.27 10.43 16.39 16.51 7 Construction 15.73 16.08 16.12 16.22 16.30 16.24 -7 Memotacturing 13.02 13.22 13.35 13.37 13.36 16.24 -7 Memotacturing 13.02 13.22 13.35 13.37 13.39 0 Excluding overtime ⁴ 12.34 12.51 12.60 12.63 12.64 12.65 1 Service-producting 11.40 11.81 11.95 1.194 11.91 11.96 A Transportation and public utilities 14.74 14.95 15.01 15.05 15.06 13.60 -1 Herail rande 8.19 6.42 8.46 6.50 8.50 8.55 8 Finance, insurance, and reat 12.95 13.47 13.54 13.69 2.55 3 Services 12.05 12.240 12.60 12.49 12.53 3 3	Goods-oraducing	13.73	13.97	14.07	14.11	14,16	14.16	م
Construction 15,73 18,08 16,12 16,22 16,38 16,24 7 Menufacturing 13,02 13,22 13,35 13,30 13,39 13,39 0 Excluding overtime ⁴ 12,34 12,51 12,63 12,65 12,64 12,65 .1 Service-producing 11,49 11,81 11,85 11,94 11,91 11,96 .4 Transportation and public utilities 14,74 14,95 15,01 15,05 15,09 15,20 .7 Wholesale rade 13,12 13,54 13,57 13,73 13,89 13,89 .1 Resail rade 63,19 8,42 8,46 8,50 8,55 .6 Finance, insurance, and rest 12,95 13,47 13,54 13,66 13,56 13,69 .2 Services 12,05 12,40 12,50 12,49 12,50 .2 .7	Mining	15.98	16.20	16.27	16.43	16.39	16.51	.7
Operation 13.02 13.22 13.35 13.37 13.39 13.39 .0 Excluding overtime ⁴ 12.34 12.51 12.20 12.23 12.25 .1 Service-producing 11.49 11.81 11.85 11.94 11.91 11.96 .4 Transportation and public utilities 11.47 14.95 15.01 15.05 15.00 15.20 .7 Wholesale trade 13.12 13.54 13.57 13.73 13.69 13.68 1 Resail trade 8.19 8.42 8.46 8.50 8.55 .6 Finance, insurance, and real 12.95 13.47 13.54 13.64 13.56 13.59 .2 Services 12.05 12.05 12.44 12.55 .3 .2	Construction	15.73	16.08	16.12	16.22	16.36	16.24	-7
Service-producing 12.34 12.35 12.80 12.83 12.84 12.85 .1 Service-producing 11.49 11.81 11.85 11.94 11.91 11.96 .4 Transportation and public utilities 14.74 14.95 15.01 15.05 15.09 15.29 .7 Wholesaid rade 13.12 13.54 13.57 13.78 13.69 13.69 .3 .1 Resail rade 6.19 8.42 8.46 8.50 8.55 .6 extrate 12.95 13.47 13.54 13.64 13.69 13.69 .2 Services 12.05 12.49 12.49 12.50 3	Man data cina	13.02	11.22	13.35	13.37	13.39	13.39	Ö
Example of the second s	Custodian constituted	42.54	13.61	12.60	12.63	12.64	1265	1
Service-producing 11.40 11.81 11.85 11.94 11.91 11.96 A Transportation and public utilities 14.74 14.95 15.01 15.05 15.09 15.20 .7 Wholessite inde .13.12 13.54 13.57 13.74 13.69 13.68 1 Recall rade .8.19 8.42 6.46 6.50 8.55 .6 Finance, resurance, and reel 12.95 13.47 13.54 13.64 13.56 13.59 .3 Services .12.05 12.49 12.50 12.40 12.49 12.53 .3	excluding overalitie*	16.04	12.01	10.00	12.00	12.07	1200	
Transportation and public utilities 14.74 14.95 15.01 15.05 15.00 15.20 7 Wholksafe trade 13.12 13.54 13.57 13.73 13.86 13.68 -1 Resail trade 8.19 8.42 8.45 8.50 8.50 8.55 8 Finance, insurance, and read 12.95 13.47 13.54 13.66 13.69 2 Sarvices 12.05 12.40 12.40 12.49 12.53 3	Service-oraducing	11.49	11.81	11.85	11.94	11,91	11.96	
Wholesale trade 13.12 13.54 13.57 13.73 13.68 1 Recall trade 6.19 6.42 6.46 8.50 8.55 .6 Finance, insurance, and real 12.95 13.47 13.54 13.64 13.55 13.69 .2 extate 12.95 13.47 13.54 13.64 13.55 13.69 .2 Services 12.05 12.49 12.50 12.40 12.53 .3	Transportation and public utilities	14.74	14.95	15.01	15.05	15.09	15.20	.7
Result rade 8.19 8.42 8.46 8.50 8.55 8 Finance, insurance, and real 12.95 13.47 13.54 13.64 13.56 13.59 2 senters 12.95 13.47 13.54 13.64 13.56 13.59 2 senters 12.05 12.36 12.41 12.50 12.49 12.53 3	Wholesale trade	13.12	13.54	13.57	13.73	13.69	13.68	1
Present latter c.t.s c.t.s <thc.t.s< th=""></thc.t.s<>	Detail tende	0 10	8.42	8.46	8.50	8.50	8 55	A
estate	Cinesco increases and sold	3.18		3.70	3.50			~
Services 12.05 12.36 12.41 12.50 12.49 12.53 3	Pengrice, ensurance, and real	10.00	40.40	19.54		13.58	13.60	
Services	CSILID	12,95	13.4/	13.54	13.04	13.30	13.50	
	Services	12.05	12.36	12,41	12.50	12.49	12.53	<i>د</i>

December 1997, the latest month available. ⁴ Derived by assuming that overtime hours are paid at the rate of time and one-hall. NA = not evailable. ^p = preliminary.

¹ See toothole 1, table B-2. ² The Consumer Price Index for Urban Wage Earners and Clarical Workers (CP-W) is used to delate this series. ³ Change was -:1 percent from November 1997 to

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Table 8-5. Indexes of aggregate weekly hours of production or nonsupervisory workers¹ on private nonfarm payrolis by industry (1982-100)

		Not seas	ionally adju	sted			Season	ally adjus	ted	
Industry	Jan. 1997	Nov. 1997	Dec. 1997P	Jan. 1998 ⁰	Jaan. 1997	Sept. 1997	Oct. 1997	Nov. 1997	Dec. 1997P	Jan. 1998P
Total private	133.0	143.8	143.9	138.0	138.2	140.9	141.2	142.9	142.5	143.4
Goods-producing	106.6	115.7	116.0 ·	110.3	112.0	113.3	113.6	.113.9	115.0	116.1
Mining	52.7	56.8	55.8	54.3	54.8	56.1	56.1	56.2	55.7	56.5
Construction	127.2	155.4	151.7	137.3	151.0	154.2	153.5	152.2	156.6	163.6
Manufacturing	105.8	111.0	112.3	108.2	107.4	108.3	108.7	109.4	109.9	109.8
Durable goods	108.5	114.B	116.7	112.3	110.0	111.8	112.5	113.2	113.9	113.7
Lumber and wood products	133.1	145.5	144.5	138.4	140.3	142.1	143.0	143.6	144.6	146.0
Furniture and fixtures	123.8	132.5	136.2	132.2	125.1	127.6	127.3	129.6	130.5	134.1
Stone, clay, and glass products	99.8	111.5	110.6	104.0	108.9	110.0	110.5	110.0	112.3	113.1
Primary metal industries	93.2	97.2	98.8	96.8	93.1	95.0	85.9	96.5	96.5	96.7
Blast turnaces and basic steel products	73.1	74.7	75.7	74.9	73.4	74.1	74.0	74.0	74.5	75.0
Fabricated metal products	114.7	121.3	123.5	119.2	115.7	117.4	118.4	118.6	119.9	119.9
Industrial machinery and equipment	106.4	111.3	114.0	111.5	108.0	108.9	109.7	111.1	110.7	111.0
Electronic and other electrical equipment	106.3	112.6	114.3	110.0	106.6	109.0	109.4	110.3	110.8	110.3
Iransportation equipment	125.5	131.5	135.4	127.4	126.4	127.6	129.6	129.7	131.4	128.2
Motor vehicles and equipment	166.0	170.5	176.6	161.9	167.7	164.7	168.3	169.7	169.8	163.2
Instruments and related products	74.9	76.8	77.8	75.8	75.1	75.6	75.4	76.0	75.6	75.B
Miscellaneous manufacturing	99.5	105.3	104.7	100.2	102.5	102.0	101 <i>.</i> B	101,4	103.4	103.3
Nondurable goods	102.0	105.8	106.2	102.6	104.0	103.5	103.6	104.3	104.5	104.4
Food and kindred products	112.0	120.8	119.4	114.0	117.0	116.2	116.5	118.4	118.6	118.6
Tobacco products	67.1	68.0	69.9	65.2	63.2	58.5	61.3	64.2	61.9	61.2
Textile mill products	88.3	89.1	89.6	86.9	89.4	88.2	88.0	88.1	88.7	87.8
Apparel and other textile products	73.0	72.1	72.1	69.2	74.6	71.6	71.2	70.6	71.2	70.7
Paper and allied products	109.7	111.6	112.9	110.3	110.2	109.5	109.5	110.7	110.4	110.5
Printing and publishing	121.3	128.3	129.3	122.9	123.3	125.6	125.8	126.4	126.2	124.8
Chemicals and allied products	99.5	102.2	103.1	101.6	100.1	100.9	100.8	101.6	101.0	102.3
Petroleum and coal products	74.4	74.B	70.9	72.1	78.0	74.2	73.1	73.9	73.0	75.3
Rubber and misc. plastics products	142.4	148.7	151.8	148.1	143.1	144.7	145.6	146.8	148.3	148.9
Leather and leather products	41.3	40.1	39.B	37.9	42.5	39.5	40.3	39.1	38.8	38.8
Service-producing	144.9	158.4	156.4	150.4	150.0	153.3	153.6	155.9	154.8	155.7
Transportation and public utilities	125.8	134.8	132.9	129.8	129.3	132.2	132.1	133.2	131.0	133.1
Wholesale trade	121.8	128.6	127.5	125.6	124.3	126.2	126.7	128.3	126.9	128.0
Retail trade	130.0	142.3	146.5	133.8	136.7	138.5	139.2	140.3	140.6	140.9
Finance, insurance, and real estate	124.2	131.6	129.0	128.9	124.7	128.6	128.1	132.9	129.0	129.5
Services	173.8	188.0	186.4	181.8	180.2	185.0	185.3	188.3	187.4	188.4

¹ See tootnote 1, table B-2.

P = pretiminary.

ESTABLISHMENT DATA

Table B-6. Diffusion indexes of employment change, sessonally adjusted

(Percent)

Time span	Jan.	Feb.	Mer.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
					Private no	potarm pag	rolis, 356	industries	1			
Over 1-month spen: 1994 1995 1997 1998	57.6 62.4 51.7 59.3 P62.5	61.9 60.1 64.3 59.1	67.1 54.5 60.1 59.0	64.5 55.6 54.9 61.1	57.7 48.0 62.9 57,4	63.9 53.9 60.5 50.7	62.5 54.1 56.5 58.8	62.6 59.8 59.3 58.7	61,4 57,0 54,4 56,5	60.3 54.9 • 62.6 64.2	63.8 57.2 58.1 61.7	62.4 57.9 61.0 P60.8
Over 3-month span: 1994 1995 1996 1997 1998	65.3 65.4 62.6 64.6	69.5 62.5 63.6 62.2	70.4 58.7 62.6 64.2	68.7 53.2 61.2 65.6	67.1 54.6 62.1 59.7	67.0 52.4 63.1 58.7	69.1 57.9 62.6 59.1	69.7 59.6 58.8 65.0	65.7 59.7 62.8 65.3	65.8 59.0 60.4 67.3	67.0 57.0 64.7 968.3	66.2 56.3 65.0 P67.3
Over 6-month span: 1994 1995 1995 1997 1998	71.1 66.9 62.2 67.6	69.8 61.4 63.5 66.6	69.8 58.1 63.5 64.5	70.9 56.6 63.5 64.6	70.1 58.1 62.6 64.3	69.8 58.1 61.2 66.7	69.7 58.7 65.3 67.0	69.4 59.8 63.6 68.3	69.4 60.3 62.6 P69.5	67.4 59.1 64.5 P71.2	67.7 61.5 64.2	66.2 63.3 67.4
Over 12-month spen: 1994 1995 1996 1997 1998	70.2 63.6 63.5 67.3	71.6 62.4 64.7 68.2	71.8 62.6 62.4 69.4	71.8 63.3 62.9 70.4	72.1 61.7 64.7 70.1	71.8 61.9 64.2 P69.5	71.5 58.7 65.0 P70.4	72.1 62.2 63.1	70.1 62.2 63.8	69.5 61.1 66.7	68.6 62.2 65.7	65.0 63.3 65.0
					Manutac	turing pay	rolis, 139 i	ndustries ¹				-
Over 1-month span: 1994 1995 1996 1997	55.8 54.3 45.7 54.0 P60.1	59.0 56.1 54.3 50.4	60.4 44.2 47.8 52.9	58.6 51.4 39.2 52.9	52.9 42.1 52.2 51.4	58.6 42.8 52.2 49.3	59.4 43.5 44.2 51.8	58.1 52.2 52.9 49.6	52.9 47.1 44.2 54.3	55.0 50.0 50.7 57.6	58.6 47.5 49.6 59.4	58.3 50.7 52.2 P55.4
Over 3-month span: 1994 1995 1995 1997 1998	61.9 59.7 47.5 53.2	64.7 50.4 47.8 51.4	65.5 47.5 42.1 50.7	59.7 40.3 38.5 52.5	57.8 42.4 43.2 48.6	60.1 36.3 45.0 48.9	62.2 38.5 48.9 48.6	57.9 43.9 43.2 53.6	55.0 49.3 50.4 55.8	55.4 46.4 48.4 62.9	60.1 45.3 52.5 P62.9	59.4 43.9 52.5 P65.1
Over 6-month span: 1994 1995 1996 1997 1998	62.2 55.8 41.4 53.2	62.2 48.6 41.7 53.2	62.6 43.9 41.0 50.4	63.3 38.8 38.1 49.3	59.4 39.2 39.6 48.6	58.5 39.6 40.6 • 52.2	58.5 38.8 47.5 55.0	58.6 39.6 46.8 58.3	58.6 43.9 45.3 P59.0	55.0 45.0 50.4 P62.9	58.3 44.2 48.2	55.0 44.6 53.2
Over 12-month span: 1994 1995 1996 1997 1998	57.9 46.0 39.6 51.4	58.6 44.2 42.8 47.8	60.8 46.0 39.2 52.2	60.8 47.8 39.6 55.0	60.8 41.0 42.4 57.6	63.3 41.7 40.3 956.5	59,4 38,5 43,5 P56,1	60.1 38.8 40.3	57.2 36.3 43.5	56.5 37 <i>A</i> 46.8	50.4 38.1 46.4	49.6 39.9 47,1

 1 Based on seasonally adjusted data for 1-, 3-, and 6-month spans and unadjusted data for the 12-month span. Data are centered within the span. P = pretiminary.

NOTE: Figures are the percent of industries with employment increasing plus one-half of the industries with unchanged employment, where 50 percent indicates an equal balance between industries with increasing and decreasing employment.

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PREPARED STATEMENT OF Senator Jeff Bingaman, Ranking Minority Member

Over the past year, we have followed the admonition not to read too much into one month's data on improvements in the US labor market. Now, with data for the complete year, it seems appropriate to make some overall comments on the health of the US labor market. The unemployment rate in 1997, at 4.9 percent, was the lowest since 1973. Yet in contrast to 24 years ago, this year's low unemployment rate was coupled with historic low inflation. In fact, 1997 signified the lowest combination of unemployment and inflation in more than 30 years. One has to go back to the 1950s to find multiple years of such low unemployment and inflation.

Although this achievement deserves our applause and recognition, we must also not forget that there remain large groups of people throughout the country who have not yet enjoyed the full benefits of the current expansion. As evidence of this phenomenon, I once again ask the Chairman's permission to enter into the official record for this hearing, the most recent release of Professor Medoff's Job Quality Index (JQI), which covers the fourth quarter of 1997.

Two very important issues are raised in this quarter's index. First, according to Professor Medoff's 1997 index of wages, health insurance and pension coverage-otherwise known as total compensation-most workers have only now returned to the level of compensation they were receiving when the recovery began in 1991. Second, despite a strong pick-up in average wages during 1997, the Job Quality Index suggests that compensation in the form of health and pension coverage continued to fall in 1997. The gap between wages and benefits places a heavy burden on middle income Americans and is contributing to a further deterioration in the distribution of income in the country. This issue deserves serious attention by my colleagues in Congress.

On a related issue, I agree with Chairman Saxton that the Asian financial crisis is likely to have serious consequences for American workers. Already at this early point, most analysts agree that the crisis may raise the US trade deficit to as high as \$300 billion and lower US economic growth by up to $\frac{3}{4}$ of a percentage point or more in 1998. American workers and firms face the prospect of losing their export markets while at the same time competing against cheaper imports from Asia. The United States should play a central role in helping to manage this crisis. At the same time, we must also be acutely aware of the impact

the crisis will likely have on American workers and develop quick responses to offset any economic burden placed on them as a result.

Once again, I welcome Commissioner Abraham this morning, and I look forward to her report on developments in the US labor market and the subsequent discussion.

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Center for National Policy

FOR IMMEDIATE RELEASE February 5, 1998 CONTACT: AMY GALGON 202/682-1800

U.S. Job Creation in 1997: Higher Pay, Lower Benefits

WASHINGTON- While the U.S. economy created a net 3.2 million new jobs in 1997, the shifting mix of jobs by occupation and industry continued to decrease health and pension benefit coverage.

The CNP Job Quality Index (JQI), which tracks the impact of the changing distribution of jobs across the economy, indicates that shifts in the mix of employment by industry and occupation during 1997 contributed to a solid increase in wages for the average U.S. worker. At the same time, however, this shift also resulted in declines in benefit coverage. The JQI developed by Harvard economist and CNP National Fellow James Medoff, shows how the changing job mix has been affecting primary components of compensation-wages and basic benefits-since 1985.

Service Jobs Not As Good, on Average

"Real wages have nearly recovered to 1989 levels; nonetheleas, the average American worker remains less well-compensated overall," said Michael Calabrese, CNP director of domestic policy programs.



"The long-term trend that replacing heavily is jobs unionized in manufacturing with service sector jobs that include a far greater proportion of lower-wage jobs lacking health and pension benefits, slowed last year, but did not reverse.'

U.S. jobs are classified most generally as goodsproducing or serviceproducing. Weekly wages in goods-producing industries -- which includes manufacturing, construction and mining -average \$596, compared to \$393 in service sector

Center for National Policy

One Massachusetts Avenue, NW, Suite 333 +Washington, DC 20001 • Phone (202)682-1800 + Faz (202)682-1818 E-mail: cnp@access.digez.net = Internet Homepage: http://www.access.digez.net/-cnp/index.html industries, according to Department of Labor establishment survey data for December. Goodsproducing jobs, particularly in manufacturing, also are far more likely to offer employer-paid health and pension benefits.

One reason average weekly earnings rose an average 3.4 percent during 1997 was improved job creation in high-compensation industries — particularly manufacturing, construction, finance and computer services. Manufacturing added more new jobs in 1997 (230,000) than the total number added during the preceding five years since 1991. Last year's resurgence in manufacturing also showed up in relatively high-paying industries, including motor vehicles and equipment (up 25,000), which pays an average \$870 weekly. The bad news is that manufacturing employment still grew at less than half the 2.9 percent rate of growth for private employment overall.

Employment in construction — which averages \$627 weekly — grew faster than overall job growth (3.8 percent), adding 209,000 new jobs, though less than the 289,000 added in 1996.

In the service sector, computer, engineering and management services added a combined 350,000 generally well-compensated jobs – more than 10 percent of all jobs added in 1997. Average compensation levels also improved because employment in the low-paying retail trade, hotel and personal

services grew slower than overall job growth, retail adding with 513,000 jobs (up 2.3 percent). The lowpaying temporary personnel industry, which has nearly doubled in size since 1991, added 143,000 jobs in 1997 - a 5.3 percent increase.

During the entire period since 1991, which marked the end of the last recession, total payroll employment has risen by 15.7 million (15 percent). But job creation by industry varies greatly. While goods-producing jobs have increased less than

JQI: Average Total Compensation



7 percent (by 1.5 million), employment in service-producing industries has surged nearly 17 percent (by 14.2 million). While service industries employing technical and professional workers have added a substantial number of high-compensation jobs, a far larger number of jobs have been added in low-compensation and more contingent categories, such as retail trade and temporary employment services.

Manufacturing jobs - employing 18.7 million at average weekly wages of \$580 - dominate the goodsproducing sector, but have increased by just 2.5 percent (450,000) since 1991. Jobs in construction --

Center for National Policy

One Massachusetts Avenue, NW, Sutie 333 • Washington, DC 20001 • Phone (202)682-1800 • Fax (202)682-1818 E-mail: cnp@access.diger.net =Internet Homepage: http://www.access.diger.net/cnp/inder.html with average weekly earnings of \$627 -- have jumped 26.7 percent since 1991, while mining (weekly carnings of \$741) employs 86,000 (13 percent) fewer workers.

Among service-producing industries, the biggest job gains since 1991 have been in personal, business and other consumer services (up 7.7 million, or 27 percent), as well as in retail trade (up 3.2 million, or 16.6 percent). Since jobs in the general services and retail trade categories pay an average weekly wage of \$411 and \$248, respectively, the 10 million jobs added in those industries more than offset the positive wage and benefit gains associated with the 1.6 million new construction and manufacturing jobs that nav an average \$596 weekly.

"Unemployment is at a 24-year low, yet the New Economy has so far failed to lift all boats," Calabrese stated. "We do see a two-tier compensation structure emerging from this shift to a high-tech service economy. The challenge for policy makers is to improve skill levels and improve incentives for health care and private pension coverage among the lower-paid half of the workforce," Calabrese added.

JOI: Annual Index Values for Components of Compensation

Period Ending	Total Comp.	Ave. Wage	Ave. Hitb-Ins	Ave. Pension	<u>Total Jobs</u>
1985	100.00	100.00	100.00	100.00	100.00
1989	99.49	99.78	99.14	98.64	110.78
1990	99. 11	99.4 1	98.90	98.46	112.34
1991	98.94	99.29	98.93	98.65	111.16
1992	98.57	98.96	98.67	98.39	111.51
1995	98.67	99.25	97.87	96.92	120.34
1996	98.79	99.43	97.73	96.62	122.72
hme 1997	98.95	99.61	97.70	96.47	125.33
December 1997	98.99	99.69	97.66	96.40	127.19

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FEB 24 1998

MEMORANDUM FOR: Honorable James Saxton Chairman Joint Economic Committee

FROM : KATHARINE G. ABRAHAM Commissioner

SUBJECT : Consumer Price Index Improvements

This memorandum is in response to your request at the February 6 Joint Economic Committee hearing for a summary of the recent and planned improvements we have made in the Consumer Price Index (CPI).

As you know, criticism of the CPI, most notably contained in the Boskin Commission report, centers on three perceived weaknesses: (1) lack of currency of the spending pattern that underlies the index; (2) failure of the index to reflect the effect of consumer substitution in response to relative price change; and (3) inadequate treatment of new product introductions and improvements in the quality of existing consumer goods and services. This memorandum briefly summarizes the actions we have taken and plan to take in each of these areas to improve the CPI.

Currency of Expenditure Patterns

On February 24, with release of data for January, we introduced a CPI that is based upon consumer spending patterns in the 1993-95 period, a new sample of geographic areas that better represents the distribution of the U.S. population, and a new classification structure that better reflects the goods and services consumers buy and how they buy them. In addition, we have requested funding to expand our consumer expenditure survey and to develop systems that will allow us to introduce substantially more current consumer spending patterns in future updatings of the CPI. Finally in this area, we have committed to more frequent updating of the weighting patterns used to calculate the CPI. We have not yet decided on the optimal frequency of Memorandum for Honorable James Saxton-2 FFR 2 4 1998

weight updates, but it is clear to us that a reduction in the current (approximately 10-year) period between updatings is warranted.

Consumer Substitution

We currently are conducting an evaluation of a new index formula for use in the CPI that accounts in part for the fact that consumers change their spending patterns in response to changes in relative prices. Research on the new formula, called the geometric mean formula, is nearing completion, and we expect to announce the results of this effort sometime next month. Any changes resulting from our evaluation will be incorporated in the index beginning with data for January 1999.

In this connection, I also should mention that we have requested funds to produce a new index, as a complement to the CPI, that more completely accounts for consumer response to relative price changes. This index, which is of the so-called superlative type, would be produced to the same standards of statistical and compilation accuracy that we enjoy with the CPI.

Quality Changes and New Goods

The Bureau of Labor Statistics (BLS) long has had an active program to address the complex issues stemming from changes that occur in the quality of the goods and services consumers buy. Among the recent steps we have taken to address such issues are:

- Development of regression-based estimates of the value of quality change in the apparel component of the index (1991);
- Institution of new procedures that better capture price changes associated with the introduction of generic forms of prescription drugs (1995);
- Restructuring of the hospital services component of the index to track changes in reimbursement methods and patterns of treatment more efficiently (1997); and

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 Use of regression-based estimates of the value of quality change in personal computers (1998).

We also have requested new funding to undertake additional work on accounting for quality change and new goods. Specifically, we plan to collect additional data on prices and characteristics of goods in support of extending explicit, regression-based, quality adjustment techniques to more index components. We also plan to establish new procedures that will ensure the inclusion in the index of new goods in a more timely fashion. Finally, we expect to change the way in which the index's item samples are updated, in order to focus more effort on product or service areas that are impacted by rapid changes in technology.

Other Improvements

In the interest of completeness, I also should mention a few additional improvements we have made to the CPI that do not fall neatly into any of the above categories. In January 1995, we changed the method used to calculate price changes for both the residential rent and owners equivalent rent components of the index to remove a net upward bias. Similarly, we instituted, in two stages during 1995 and 1996, new procedures that effectively eliminated what some critics have called the "formula bias" problem.

The Economic Report of the President (1998) presents estimates of the impact on the CPI of many of the improvements summarized above. I am attaching a copy of that information. I also should mention that the Congressional Budget Office presented similar estimates in The Economic and Budget Outlook: Fiscal Years 1999-2008 (January 1998).

I believe it is clear that the BLS has made, and will continue to make, real progress in improving the accuracy of the CPI. At the same time, however, it is also quite clear that we do not have solutions for all of the vexing measurement issues we face in producing the CPI. For example, despite the progress we have made, and expect to make, in the area of adjusting the index for the effects of quality change and new goods, we still do not see our way to the complete resolution of these problems. Much has been accomplished, but much yet remains to be done.

Attachment

BLS/OPLC/CPI Kdalton/zd/2/24/98:RM 3130PSB:606-6952

Cc: Gen. F. Comm RF. Abraham Dalton Greenlees

TABLE 2-4.—Expected Effects on Changes in the CPI and Real GDP of CPI Methodological Changes

	Year	Percenta effec	ge-point st on:
Change in method	introduced	CPI percent change	Real GDP percent change
Pre-1998		-0.28	0.06
Generic prescription drugs Food at home seasoning Owners' equivalent rent formula Rent composite estimator	1995 1995 1995 1995	01 04 10 .03	· .00 .0 .00 .00
General seasoning	1996	10	.06
Hospital services index	. 1997	06	00.
1998 and after		41	.14
Personal computer hedonics Updated market basket	1998 1998	06 15	.00 .02
Geometric means Rotation by item	1999 1999	15 05	.09 03
Total		69	20

Sources: Department of Labor (Bureau of Labor Statistics) and Council of Economic Advisers

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