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THE EMPLOYMENT SITUATION: APRIL 1998

HEARING

before the

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

ONE HUNDRED FIFTH CONGRESS

SECOND SESSION

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CONTENTS

OPENING STATEMENTS

Representative Jim Saxton, Chairman	1
Representative Maurice D. Hinchey	3

WITNESS

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	4
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SUBMISSIONS FOR THE RECORD

Prepared Statement of Representative Jim Saxton, Chairman, together with chart, entitled, "Inflation and the Unemployment Rate Fall Together Since 1992"	17
Prepared Statement of Commissioner Katharine G. Abraham, together with Press Release No. 98-194, entitled, "The Employment Situation: April 1998," Bureau of Labor Statistics, Department of Labor, May 8, 1998	19
Memorandum to Representative Hinchey from Commissioner Abraham on "the Consumer Price Index program on the experimental CPI for the elderly and the recent behavior of commodities prices and information of our occupational employment projections" . . .	42

THE EMPLOYMENT SITUATION: APRIL 1998

Friday, May 8, 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: Representatives Saxton and Hinchey.

Staff Present: Christopher Frenze, Robert Kelleher, Juanita Morgan, Mary Hewitt, Darryl Evans, Amy Pardo, Dan Lara, Howard Rosen, and Bettie Landauer-Menchik.

OPENING STATEMENT OF REPRESENTATIVE JIM SAXTON, CHAIRMAN

Representative Saxton. Good morning. We are a very quiet group this morning. I noted to one of the staffers, I said, "My, everybody is quiet and sleepy this morning." He said, "No, they are just statisticians and economists."

Anyway, let me call the hearing to order. I am pleased to welcome Commissioner Abraham and her colleagues before the Joint Economic Committee (JEC) once again.

The payroll data released today shows that the business cycle upswing that began in 1991 continues to expand employment. In April, 262,000 jobs were added to the business payrolls. The household survey also posted solid employment gains. The unemployment rate declined to 4.3 percent, its lowest level in 28 years.

The cyclical expansion also continues to improve the budget outlook. As I suggested last winter, not only would this lead to a budget surplus sooner than expected in 1998, but a spring revenue surprise would lead to a large surplus for fiscal year 1998. Once again, the congressional and Administrative budget projections will be behind the

curve. In the last few days, these official projections have been hastily revised yet again, and the budget surplus estimates now range as high as \$63 billion.

The economic and employment gains produced by this expansion are well recognized. These gains have been sustained by the Federal Reserve's policy of gradual disinflation. Low inflation and interest rates have stimulated the economy and generated a flood of revenue that has erased the deficit. As a result, the national economic and fiscal outlook remains bright.

However, the apparent recent leak of part of the Federal Reserve directive suggests that some within the central bank favor a tightening of monetary policy. The strength of the economy and job market is one factor behind this position.

In my view, an increase in interest rates by the Federal Reserve would be a mistake. The market price indicators used by the JEC, commodity prices, bond yields, and the value of the dollar, do not suggest inflation now or in the foreseeable future. The standard inflation measures prepared by the BLS (Bureau of Labor Statistics) and others also show no sign of inflation. Without evidence of current or future inflation, there is no reason for the Federal Reserve actions to raise interest rates. Only if forward-looking or other inflation indicators start to show building price pressures should such a move be considered by the Fed.

Let me just emphasize as part of my opening statement, during the decade of the '80s, from time to time certain segments of economic academia would worry out loud that the economy was growing too fast, and it was sure to be followed by inflation. We began to watch this very carefully, this phenomenon that was referred to as the Phillips Curve. I believe and many of my associates believe that the Phillips Curve philosophy has been proven to be wrong.

The chart that we have here shows how inflation and unemployment have fallen together during the past six years. In other words, as the economy got better, the rate of unemployment went down and so, too, did the rate of inflation.

We believe that this cycle is largely dependent on and the result of low interest rates, which have followed along with inflation, and so the Phillips Curve, at least in the past six years, has not been proven to be a valid theory.

Instead of looking at some of the factors that I heard on the news this morning, the labor market, et cetera, one might be well advised to look at such forward-looking indicators as long-term bond yields and the price of commodities, which is another indicator that folks look at who are trying to figure out what inflation is going to do in the future, as well as the value of the dollar.

In looking at these three indicators, there continues to be no sign of inflation, and so the notion that I heard on one of the major television stations this morning at 8:30, as soon as the good news was out, was that there would be a tendency on the part of the Federal Reserve to increase interest rates or tighten monetary policy. I think that would be an error, based on what we have learned during the decade of the '90s. So I am hopeful, Commissioner, that the country will accept the good news that we have today and not look at it as a sign of pending bad news.

While I was talking, Mr. Hinchey came in, so let me ask him for whatever opening statement he may have.

[The prepared statement of Representative Saxton, and the chart entitled, "Inflation and the Unemployment Rate Fall Together Since 1992," appear in the Submissions for the Record.]

OPENING STATEMENT OF REPRESENTATIVE MAURICE D. HINCHEY

Representative Hinchey. Mr. Chairman, thank you very much. Welcome, again, Commissioner Abraham. It is delightful to see you again. I look forward to listening to your comments today.

I was listening to the news myself this morning, and I heard that you are going to tell us that unemployment is down again and that the rate of unemployment is the lowest it has been in 28 years.

Assuming the news is accurate, this, of course, is very good news. And I think it is testament to the fact that the economic policies of the Clinton Administration are working well and effectively, that the balanced budget initiative of 1993, which has succeeded in bringing the budget into balance and actually producing a surplus, has worked very well for the economy.

However, I share the sentiments of the Chairman with regard to the so-called Phillips Curve and the relationship between the rate of unemployment and the rate of inflation. It seems to me that this good news ought not to be a signal for the Fed or others to do something that is rash. I think that they would be wise to keep their finger off the interest rate trigger over at the Federal Open Market Committee, and I

am hopeful that when they meet later this month that they will not use this good economic news as an excuse to raise interest rates.

It is only recently that the vast majority of Americans have begun to participate in the benefits of this growing economy. And in fact, last month, in March, weekly wages were down slightly, although they have been going up fairly steadily for the last three years.

So it would be, I think, a mistake on the part of the Federal Reserve to raise interest rates now in the face of this good news. It would be premature, and it might serve to cut short the effects of this continually improving economy and the effects that this economy is having on the majority of working Americans.

Representative Saxton. Commissioner Abraham, the floor is yours. Proceed as you see fit.

**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, Mr. Chairman, Mr. Hinchey. It is also a pleasure to be here to have a chance to talk about the labor market data we have to release.

As you both have noted, employment rose and unemployment fell sharply in April. Nonfarm payroll employment increased by 262,000, following essentially no change in March. The April increase is in line with the average monthly gain for the prior 12 months. The jobless rate dropped four-tenths of a percentage point to 4.3 percent. The unemployment rate had held fairly steady from November of last year through March.

Nearly all of the net employment growth in April occurred in the service-producing sector of the economy, with the services industry alone adding 139,000 jobs. Business services payrolls grew by 60,000, mostly in help supply services, which is principally temporary help firms, and in computer and data processing.

Over the past year, business services has added nearly half a million jobs. Engineering and management services added 19,000 jobs in April, sustaining the faster pace of job growth in that industry that started last spring. Employment in health services rose by 14,000; growth thus far in 1998 has been slightly below the trend exhibited in 1997.

Elsewhere in the service-producing sector, retail trade employment rose by 44,000, more than making up for a modest decline in March. Even with the April increase, however, retail employment growth has been slow so far this year. The April increase was confined largely to eating and drinking places and department stores. The finance and real estate industries each added 12,000 jobs over the month, continuing a pattern of solid job expansion that is related to several factors: a buoyant stock market, low interest rates, and a strong housing market. Job growth continued, in particular, among security brokerages, mortgage banks and brokerages and real estate firms.

In the goods-producing sector of the economy, construction employment rose by 35,000 in April after showing weather-related weakness in March. Since October of last year, the industry has added an average of about 30,000 jobs per month, twice the rate of job growth as in the 12 months prior to October. It is difficult, however, to separate the influence of strong housing demand from the effects of this year's unusual winter weather patterns on the recent movements in construction employment.

Manufacturing employment declined by 10,000 in April, its third month of weakness following a gain of 169,000 between September and January. April job losses were generally small but widespread. Most of the weakness was in nondurable goods with a notable job decline of 6,000 in apparel. In durable goods, small job losses occurred in electronic components and in industrial machinery, industries that had been adding workers at a fairly steady clip during 1997.

Average weekly hours in manufacturing fell by 1.1 hours in April. Although much, even most of this decline reflects the fact that the Easter weekend fell during the survey reference period, I would note that manufacturing hours have been drifting down since the beginning of this year, another indication of weakness in the industry. Average hourly earnings for all private production workers increased by four cents in April and are up 4.4 percent over the year.

Turning to data from our survey of households, the number of unemployed persons declined by 670,000 in April to 5.9 million. The unemployment rate fell by four-tenths of a percentage point to 4.3 percent. The major demographic groups generally shared in the improvement. Notably, the jobless rate for adult men dropped by half a percentage point to 3.4 percent, and the rate for teenagers fell nearly 2 percentage points to 13.1 percent.

Declines occurred over the month in the number of persons who were unemployed because they were on temporary layoff and among those who had left their jobs voluntarily to look for new work. There also was a substantial drop in the number of persons who had been without work for 15 weeks or more.

Civilian employment rose by 389,000 in April. The proportion of the population age 16 years and older that is employed, at 64.2 percent in April, tied the record high level for that series first reached this past January.

In summary, employment rose in April, although there was some weakness in manufacturing; unemployment fell sharply after holding fairly steady for several months, but as always we should be cautious about putting too much weight on any one month's data.

My colleagues and I, of course, would be happy to try to answer any questions that you might want to ask regarding these data.

[The prepared statement of Commissioner Abraham and accompanying Press Release appear in the Submissions for the Record.]

Representative Saxton. Thank you very much, Commissioner. Once again, we are always pleased when you come here, as you have so often in recent years, with good economic news.

Commissioner, let me begin by asking a question, if I may, of Mr. Dalton. Is there any significant indication of inflation in the CPI (Consumer Price Index) or the PPI (Producer Price Index) that you can report, Mr. Dalton?

Mr. Dalton. Both of those indexes are pretty much at historical lows with respect to the rate of increase.

Representative Saxton. And is there any sign of inflation that you can report to us in either of these important indexes? I know what the numbers look like, but is there anything from your daily work with regard to the Consumer Price Index or the Producer Price Index that you can point to that would indicate an emergence of inflation of any kind?

Mr. Dalton. I think, of course, we can't make projections of what is likely to happen with respect to those Indexes, but if you look at the past history, it is fairly clear that the rate of increase, that the low rates of increase are widespread.

Representative Saxton. Are?

Mr. Dalton. Widespread.

Representative Saxton. Widespread. And then it would be fair for someone to conclude, and I know it is not your business perhaps to draw conclusions or make projections about what is going to happen, but it would be fair for someone to conclude that based on the information that we have with regard to these two indices that there is no sign of inflation reemerging or growing?

Mr. Dalton. It might be fair for someone to say that.

Representative Saxton. Someone might be able to say that. Okay, good.

Now, Commissioner, a number of wage-related data have been released in recent days, and today you folks released hourly earning data. Recently, BLS released unit labor cost data as well as employment cost indices.

Can you tell us what this information indicates about wage trends, and does this information portend any future inflationary pressures?

Ms. Abraham. I can answer at least the first part of your question. I think that if what one is interested in getting at is what is happening to employer labor costs, that probably the best measure that we have to look at is our Employment Cost Index, which is a fairly comprehensive measure that attempts to track employer labor costs for holding constant changes in the mix of employment that might cloud the picture emerging from other measures.

In the most recent quarter for which we have that information, which is the quarter ending in March, the year over year increase in the Employment Cost Index was 3.3 percent. That reflects both what is happening to wages and what is happening to benefits.

So, again, it is a more comprehensive measure than others we have available. That is a bit up over the year-over-year increase for the quarter ending in March 1997. It had been 2.9 percent. But that is still running a bit below the increases in other measures from some of our other surveys.

The measure that we reported today is a measure of average hourly earnings for production nonsupervisory workers. That is a less comprehensive measure in that it includes only a part of the work force, and it includes only wages. It is also not controlling for possible changes in the mix of employment. That was up 4.4 percent over the year.

The other thing that you asked about was, I believe, unit labor costs. That is still, again, a different kind of measure. It is looking at

compensation costs but then adjusting for changes in productivity that have occurred.

Over the year, unit labor costs, our preliminary measures for the period ending in the first quarter, were up 3.4 percent. Because of some technical factors that I won't go into, unless you particularly would like me to, related to the way we seasonally adjust our hours figure, it is possible that that may ultimately prove to be a bit lower.

Representative Saxton. Let me just ask once again, in your opinion, which I know you don't like to give, but could someone draw the conclusion from these statistics that this information portends any future inflationary pressures? What kind of a conclusion would a reasonable person draw from this information?

Ms. Abraham. I have to say that I think that the answer to that is a little less clear cut than the answer to the question that you posed to Mr. Dalton. If you look at our Employment Cost Index, employers labor costs are going up year over year a bit faster than they were a year ago at this time. The rate of increase in average hourly earnings is a bit faster than it was similarly a year ago. I think it is a bit more difficult to answer that question, and I suspect that you would get analysts looking at this information coming to different conclusions.

Representative Saxton. When you say "a bit faster," that would perhaps indicate that you don't see any dramatic change?

Ms. Abraham. Well, the Employment Cost Index was up year over year 3.3 percent versus 2.9 percent a year ago, and 2.8 percent the year before that. Average hourly earnings were up 4.4 percent over the year. A year ago it was 3.7 percent.

Representative Saxton. What did you report today about hourly earnings and weekly earnings?

Ms. Abraham. In terms of what happened this past month?

Representative Saxton. Yes.

Ms. Abraham. In terms of what happened this past month, we are reporting an increase in average hourly earnings of four cents and a decline in average weekly earnings, down by .5 percent.

There is an issue with the average weekly earnings numbers that, I mentioned in my statement, which is that the survey week coincided with the Easter weekend. We think that there were some fair number of people who were respondents who were reporting data that included Good Friday. That would have depressed what they were reporting with weekly earnings and weekly hours.

Representative Saxton. But the March to April change is a decline in weekly earnings?

Ms. Abraham. In weekly earnings, but I think that that is largely spurious. I mean, if you were to take out the effect of Good Friday being in some of the payroll periods for which people were reporting, I don't know that you would have gotten that.

Representative Saxton. While we are on the issue of inflation, could you review the improvements? Two years ago, when we were here, we began to discuss the possibility of changing the way we computed the Consumer Price Index. At that time, you agreed and have been diligent, in my opinion, about improving the CPI measure over this period of time, again, which is about two years. What do you expect the total effect of these recent and future changes to amount to?

Ms. Abraham. We have done, as you know, a number of things that we have talked about before and have a number of other things planned to address issues related to the currency of the market basket, the consumer's substitution when the relative prices of goods change, changes in the quality of goods, and new goods coming onto the market. We have made efforts to estimate the effect of some of these things on the rate of growth of the CPI. Others have made estimates of some of the ones where we haven't produced quantitative estimates ourselves.

The Council of Economic Advisers, in their *Economic Report of the President* that came out in January, did a rack up, again resting partly on information that we had generated and partly on their own assessments. Their figures, taking into account everything that we have done to the index beginning in 1995 and projecting out through the end of 1999, things we have already said we are going to do, their estimate was that the things we had done would have slowed the rate of growth of the CPI by about .7 percent per year.

Since they put their report out, we have made an announcement about our use of the geometric mean formula in constructing the Index and our assessment of the impact of that is a bit bigger than what they had assumed so, adjusting that figure, it would come out to a total of slowing the rate of growth of the index by .74 percent per year.

Representative Saxton. Thank you. One final question, and then we will go to Mr. Hinchey.

Commissioner, if I may ask Mr. Dalton just one final question with regard to inflation once again, as we are looking for signs of inflation

because of the issues that we discussed earlier, do you see any signs, Mr. Dalton, of inflation in the import price index?

Mr. Dalton. Import prices, as measured by our index, have been declining for the last two years approximately. So if you look at it historically, it is clear that there is very little inflationary pressure in imports.

Representative Saxton. I have asked a series of questions about inflation here this morning. It would be fair for me to conclude that based on what we are seeing here almost across the board, with the exception, perhaps, of a very slight indication of a small increase in some labor costs, although weekly earnings have declined, that it is hard to find any indication of inflation?

Mr. Dalton. Certainly, you can't find indications of inflation in our recent history. What that says about the future is another issue, of course.

Representative Saxton. And both the CPI and the PPI are stable and that import prices are falling?

Mr. Dalton. Correct.

Representative Saxton. Thank you. Mr. Hinchey.

Representative Hinchey. Thank you very much, Mr. Chairman.

This is a very interesting line of questioning and your answer is also very interesting. Let me just ask you a couple of other questions along those same lines.

There are some indications that we may be seeing labor shortages in some parts of the country. Is there anything in your report that indicates that labor shortages are showing up or about to show up anywhere in the country, Commissioner?

Ms. Abraham. Unfortunately, we don't have the information to be able to answer that question. What I would really like to have in hand at this point to address that would be information tracking what is happening to employers' vacancy rates, the number of job openings that employers have, and what is happening perhaps to turnover rates. We historically have not collected that information so I can not address your question.

We have this year as part of the President's budget proposal that we begin a job openings and labor turnover survey that in the future would allow us, if this kind of question comes up, to have an answer, but we don't have one at this time.

Representative Hinchey. Okay. One of the reasons I asked the question is because there has been some indication that tight labor markets may be one of the reasons why we are seeing an increase in wages, the kind of increase that you have reported to us today and in our recent meetings. I just wonder how much of whatever increase there has been in the CPI can be traced to any increase in wages? Can you address that question?

Ms. Abraham. No. We really don't have any good way to do that.

Representative Hinchey. Okay. It appears that wages are rising at a rate that is faster than overall prices. That is quite clear though, isn't it?

Ms. Abraham. That is clear.

Representative Hinchey. So that would seem to suggest to me, and I would like you to confirm this, that the nonwage part of price increases may actually be falling?

Ms. Abraham. Well, there is an omitted factor there that you would have to look at as well, and that is what is happening to productivity. So if wages are going up, all else the same, eventually you might expect to see that showing up in prices. But if productivity is going up, too, then unit labor costs wouldn't necessarily be rising.

Representative Hinchey. Productivity, you reported, if I recall last time, was going up at the rate of 2 percent. Now you are reporting that productivity has slowed up, and the recent increase is only 2/10 of a percent. Am I correct about those numbers?

Ms. Abraham. Those figures are a little bit apples and oranges. We are seeing a 2 percent increase in business productivity over the year. The figure reported for the most recent quarter was .2 percent, but, putting that on an annual basis, it is .8 percent, which is still down a bit. There is an issue with that productivity number, in my opinion, in that it is calculated using data on an average, on weekly hours coming out of our payroll survey.

I haven't been here for a couple months so I don't know if I have had a chance to talk with you about an issue we have had with our payroll survey in the way that we take into account the fact that the length of the payroll periods for which people are reporting are different in different months. We are going to be making an adjustment for that and, when we make that adjustment, instead of showing hours having risen between the fourth quarter and the first quarter, which, all else the same, it is going to

make productivity look lower, our adjusted numbers are going to show hours holding steady.

I think the bottom line is that, just taking that into account, the productivity growth over the past quarter is likely to look higher than we have reported, though there will be other things that affect our final numbers as well.

What I am trying to say is that although these numbers might make it look as though there had been a big slowdown in productivity in the last quarter, I think there are technical reasons to think that that is not so clear.

Representative Hinchey. Okay. Well, I am trying to penetrate the opacity here and see this picture with a little more clarity. I am interested in this question of whether prices are in fact falling. I am interested in that in the global context as well as just the context of our own economy. So if—

Ms. Abraham. Maybe—

Representative Hinchey. —if productivity growing at less than half of what it had been, factoring that into the fact that wages are rising much faster than inflation seems to be, does that tell us anything about the cost of goods in the marketplace? It would seem to me that it says that the cost of goods in the marketplace is falling. There have been some indications of that with regard to automobiles and other durable goods recently. I am wondering if you can confirm that.

Ms. Abraham. Yes. Speaking to that point specifically, there is a clear indication that if you look at commodities prices, that would be the automobiles, apparel, other commodities, that prices for those items actually have been falling, as opposed to prices for services, shelter prices, prices of other sorts of services which have been rising. So you are seeing some declines in goods prices compared to services prices.

Representative Hinchey. There are implications here for at least two things. There are implications for the prospect of disinflation, which I think is something that we ought to keep our eyes on in the context of the East Asia crisis. There are also implications here that seem to suggest that wages can go up some more without triggering off any kind of inflation. Would you agree with that or not?

Ms. Abraham. That just gets, I am sorry, beyond my expertise to comment on.

Representative Hinchey. Okay.

The other point, of course, is that as long as we keep our productivity at a decent level, then wage gains can be accommodated along with that productivity increase.

Ms. Abraham. Right.

Representative Hinchey. In fact, it appears that productivity growth in the nonfarm area of the economy in the first quarter of this year did lag behind a bit, and we know that productivity, is a critical component to efforts to improve wages.

Ms. Abraham. Right. That is certainly true.

Representative Hinchey. I understand that the Bureau has recently released a forecast of the demand for occupations over the next 10 years. Could you describe that forecast for us, tell us a little bit about what the typical wages would be for those jobs currently and what they might be and what the educational requirements for those future jobs might be? Do you have any information along those lines in the context of your report?

Ms. Abraham. Not in the context of our report. We released, back in November, our occupational projections, which are something we do routinely every couple of years. As you indicated, they go out over a horizon of about 10 years. So they are long-term projections of where we think the occupational mix of employment is headed. I don't have with me detailed information on specific jobs that are projected to be growing in number. There is some general information that I can give you at this point and then provide you with more details if you would like.

The projections are consistent with recent experience that jobs that require higher amounts of education generally are projected to grow faster in number than jobs that require less education. Business services is projected to be a big part of the growth. Health care is projected to be a big part of the growth. Services generally, of which those are a part, are projected to be a big part of the growth in employment.

We do have information, and I just don't have it in my head, on the wage levels of the jobs and so on, but I would give you that for the record, if you would like it.

Representative Hinchey. Yes, I would. The Department of Commerce recently put out some information indicating that we can anticipate large growth in the area of information technology.

Ms. Abraham. That is another one that we also are projecting large growth. I am sorry that I didn't mention it.

Representative Hinchey. Whatever information you might have on that, I think would be helpful. I would appreciate seeing it. I believe the Chairman would also.

I am interested in pursuing this question of the reduction in the cost of major goods. If you have any information that is not available to you at this moment that you could provide, relative to declines in the cost of durable goods and commodities and other aspects of the economy, I would very much appreciate seeing that.

Ms. Abraham. I would be happy to provide that as well.

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

Representative Hinchey. Let me just ask one other question, if I may, Mr. Chairman. That has to do with something you said a moment ago, and I wanted to see if I understood it correctly. Did you say that the rate of growth in the CPI as a result of the change in the market basket had slowed by .74 percent?

Ms. Abraham. It was as a result of a whole set of things that we had done beginning in 1995, fixing something that has been referred to as formula bias, changing the way that we treat hospital services, changing the way we treat prescription drugs, updating the market basket was a piece of that, changing the way that we calculate the subindexes of the CPI, changing our procedures to bring new items in more quickly, all of those things together, the CEA has estimated, will slow the rate of growth of the CPI by about, adjusting their numbers for the more recent information, .74 percent per year.

Representative Hinchey. That would mean, then, that increases in Social Security payments and pensions, things of that nature, will increase at a rate slower, by .74 percent or so as a result of this change; is that correct?

Ms. Abraham. Slower than they would have had we not made these changes, though many of these changes already are reflected in, for example, projections that people are making of Social Security costs.

Representative Hinchey. When you made these changes, did you take into account the fact that older people use health care services more, that older people have recourse to prescription drugs more than they did in the past? It would seem to me that you would want to factor in those particular costs – health care services, hospital costs, prescription drug costs – at a more significant level than you might otherwise because elderly people who are dependent upon Social Security would be

penalized if their Social Security is going up at a rate slower than the increase in the cost of health care and prescription drugs, just as two examples?

Ms. Abraham. We produce two official CPIs. One is a CPI for the entire urban population, the CPU-I. One is a CPI that covers wage earners and clerical workers, the CPI-W. In producing those measures, we use weights based on spending patterns that are appropriate for those two populations.

Congress, back when it was making a decision about indexation of Social Security, picked the only measure that was available at that point, which was the CPI-W, which is the one covering wage earners and clerical workers. So by and large that population doesn't include the elderly.

When we made the broader CPI-U available, it was decided to stick with using the CPI-W for purposes of indexing Social Security. So we do not, in constructing that measure, base it on the spending patterns of the elderly. And, in fact, for that measure changes in the spending patterns of the elderly would, as a general rule, not have any effect on it at all.

Representative Hinchey. If I understand you correctly, the effect of this is attributed to oversight or certainly something that may not be intentional but nevertheless is resulting in less money for people who may need more given the fact that the things that they rely upon more are increasing in cost faster?

Ms. Abraham. I would like to draw a distinction between, if I could, the measures that we produce, which I have just tried to describe very briefly in terms of what their coverage is, and then policy decisions which obviously are not our decisions, about whether and how those measures get used.

Representative Hinchey. Okay. But I am interested in the effect, not the process. We can correct the process if we understand the effect. It seems to me that the effect is that older people under the present set of circumstances are now likely to be penalized, through no fault of yours but through a policy decision which, upon examination, may need correction.

Ms. Abraham. We have made some efforts that I might make note of to try to put together a measure that is based on spending patterns of the elderly. It is an experimental measure that we produce. It has gone up historically over the last 10 years or so by a few tenths of a percentage

point faster than the CPI-U. In the past year or so, it has looked about the same as the CPI-U. There are some caveats associated with that measure. The only thing that we are able to do in putting it together is to take spending patterns of the elderly and reweight the data that we already have.

So we don't go back and try to go to the stores where the elderly are shopping and price the specific items that they are purchasing. We are just using the data we already have.

There are also issues that people have raised about how good of a job we do of tracking medical care prices. But with those caveats, that information is available.

Representative Hinchey. I thank you. I would like to follow up with you on this question. Thank you very much.

Ms. Abraham. Okay.

Representative Hinchey. Thank you, Mr. Chairman.

Representative Saxton. Commissioner, thank you very much for being here this morning. Let me just conclude with a thought. It has been widely observed during the past several years that the policy of the Fed has been to squeeze inflation out of the economy, and obviously the Fed has been successful in doing so. The Bureau of Labor Statistics price measures that you bring to us this morning show no evidence of inflation continuing. Our economists on the Joint Economic Committee have looked at what we call forward-looking indicators, including the 30-year Treasury bond yield, including the cost of and projected cost of commodities, including the value of the dollar. None of these indicators that we refer to as forward-looking indicators show any evidence of inflation whatsoever.

I would just conclude this morning by saying that given the lack of inflation, a Fed move to increase interest rates now would be, in my view, a mistake.

Thank you for being here this morning. We appreciate the information that you have brought us, as well as your remarks and the information that you have been able to relate to us about the lack of inflation. Thank you very much.

Ms. Abraham. Thank you.

Representative Saxton. The hearing is adjourned.

[Whereupon, at 10:25 a.m., the hearing was adjourned.]

SUBMISSIONS FOR THE RECORD

PREPARED STATEMENT OF REPRESENTATIVE JIM SAXTON, CHAIRMAN

I am pleased to welcome Commissioner Abraham and her colleagues before the Joint Economic Committee (JEC) once again.

The payroll data released today shows that the business cycle upswing that began in 1991 continues to expand employment. In April, 262,000 jobs were added to business payrolls. The household survey also posted solid employment gains. The unemployment rate declined to 4.3 percent in April, its lowest level in 28 years.

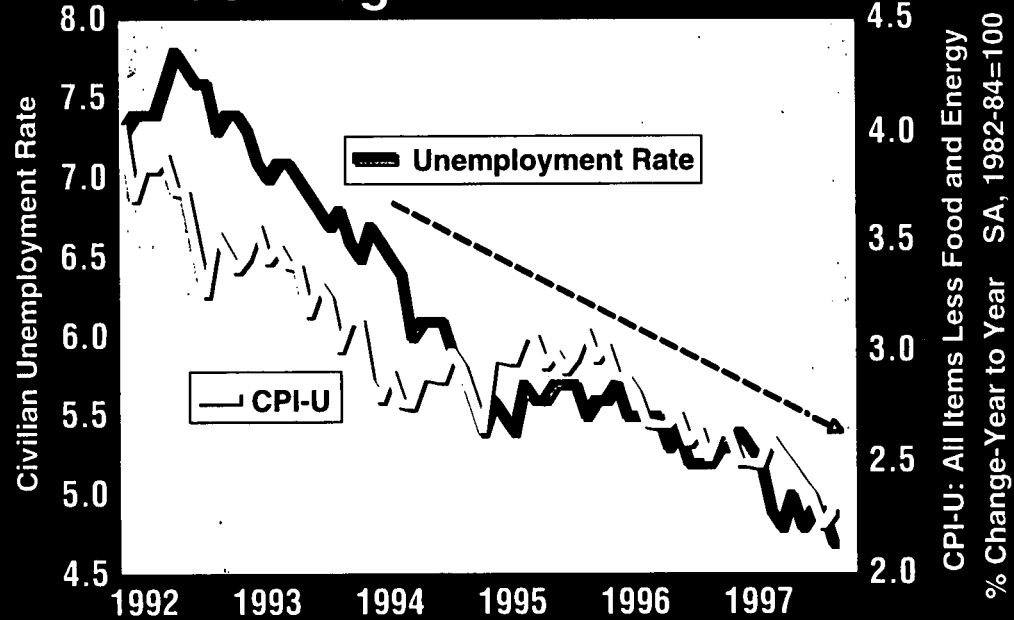
The cyclical expansion also continues to improve the budget outlook. As I suggested last winter, not only would this lead to a budget surplus sooner than expected in 1998, but a spring revenue surprise would lead to a large 1998 surplus. Once again the congressional and Administration budget projections would be behind the curve. In the last few days these official projections have been hastily revised yet again, and the budget surplus estimates now range as high as \$63 billion.

The economic and employment gains produced by this expansion are well recognized. These gains have been sustained by the Federal Reserve's policy of gradual disinflation. Lower inflation and interest rates have stimulated the economy and generated a flood of revenue that has erased the deficit. As a result, the national economic and fiscal outlook remains bright.

However, the apparent recent leak of part of a Federal Reserve directive suggests that some within the central bank favor a tightening of monetary policy. The strength of the economy and job market is one factor behind this position.

In my view, an increase of interest rates by the Federal Reserve now would be a mistake. The market price indicators used by the JEC – commodity prices, bond yields, and the dollar – do not suggest inflation now or in the foreseeable future. The standard inflation measures prepared by BLS and others also show no sign of inflation. Without evidence of current or future inflation, there is no reason for Federal Reserve actions to raise interest rates. Only if forward-looking or other inflation indicators start to show building price pressures should such a move be considered by the Federal Reserve.

Inflation and the Unemployment Rate Fall Together Since 1992



Source: St. Louis Federal Reserve Bank and JEC calculations.

**PREPARED STATEMENT OF
KATHARINE G. ABRAHAM, COMMISSIONER**

Mr. Chairman and Members of the Committee:

I would like to thank you for this opportunity to comment on the labor market data released this morning.

Employment rose and unemployment fell sharply in April. Nonfarm payroll employment increased by 262,000, following essentially no change in March. The April increase is in line with the average monthly gain for the prior 12 months. The jobless rate dropped four-tenths of a percentage point to 4.3 percent. The unemployment rate had held fairly steady from November of last year through March.

Nearly all of the net employment growth in April occurred in the service-producing sector of the economy, with the services industry alone adding 139,000 jobs. Business services payrolls grew by 60,000, mostly in help supply services and in computer and data processing. Over the past year, business services has added nearly half a million jobs. Engineering and management services added 19,000 jobs in April, sustaining the faster pace of job growth that started last spring. Employment in health services rose by 14,000; growth thus far in 1998 has been slightly below the trend exhibited in 1997.

Elsewhere in the service-producing sector, retail trade employment rose by 44,000, more than making up for a modest decline in March. Even with the April increase, however, retail employment growth has been slow so far this year. The April increase was confined largely to eating and drinking places and department stores. The finance and real estate industries each added 12,000 jobs over the month, continuing a pattern of solid job expansion that is related to a buoyant stock market, low interest rates, and a strong housing market. Job growth continued, in particular, among security brokerages, mortgage banks and brokerages, and real estate firms.

Employment in wholesale trade rose by 11,000 over the month, below the average monthly gain during the past year. The number of jobs in transportation and public utilities showed little change in April.

In the goods-producing sector of the economy, construction employment rose by 35,000 in April after showing weather-related weakness in March. Since October of last year, the industry has added an average of about 30,000 jobs per month, twice the rate of job growth as in the 12 months prior to October. It is difficult, however, to separate the influence of strong housing demand from the effects of this year's

unusual winter weather patterns on the recent movements in construction employment. April job gains in the industry were concentrated in heavy construction and among special trade contractors.

Manufacturing employment declined by 10,000 in April, its third month of weakness following a gain of 169,000 between September and January. April job losses were generally small, but widespread. Most of the weakness was in nondurable goods, with a notable job decline of 6,000 in apparel. In durable goods, small job losses occurred in electronic components and in industrial machinery, industries that had been adding workers at a fairly steady clip during 1997.

Average weekly hours in manufacturing fell by 1.1 hours in April. Although much of this decline reflects the fact that the Easter weekend fell during the survey reference period, I would note that manufacturing hours have been drifting down since the beginning of this year, another indication of weakness in the industry. Average hourly earnings for all private production workers increased by 4 cents in April, and are up 4.4 percent over the year.

Turning to data from our survey of households, the number of unemployed persons declined by 670,000 in April to 5.9 million and the unemployment rate fell by four-tenths of a percentage point to 4.3 percent. The major demographic groups generally shared in the improvement. Notably, the jobless rate for adult men dropped by half a percentage point to 3.4 percent, and the rate for teenagers fell nearly 2 percentage points, to 13.1 percent.

Declines occurred over the month in the number of persons who were unemployed because they were on temporary layoff and among those who had left their jobs voluntarily to look for new ones. There also was a substantial drop in the number of persons who had been without work for 15 weeks or more.

The number of persons employed part time even though they would have preferred full-time work also declined in April, to 3.7 million. Among those not in the labor force, the number of persons referred to as "marginally attached" to the labor market was 1.3 million (not seasonally adjusted) in April, down slightly from a year earlier. These are persons who indicate that they want a job and are available to take one, and have tested the job market in the past year. They are, however, not currently working or looking for work. The number of discouraged workers, a subset of this group who indicate that they have given up their search for work because they feel that there are no jobs available for them or none

for which they would qualify, was 344,000 in April, about the same as a year earlier.

Civilian employment rose by 389,000 in April. The proportion of the population age 16 years and older that is employed, at 64.2 percent in April, tied the record-high level first reached this past January.

In summary, employment rose in April, although there was some weakness in manufacturing. Unemployment fell sharply after holding fairly steady for several months, but, as always, we should be cautious about putting too much weight on any one month's data.

My colleagues and I would be glad to answer your questions.

News

United States
Department
of Labor



Bureau of Labor Statistics

Washington, D.C. 20212

Internet address: <http://stats.bls.gov/newsrels.htm>

Technical information:

Household data: (202) 606-6378

USDL 98-194

Establishment data: 606-6555

Media contact: 606-5902

606-6555

606-5902

Transmission of material in this release is embargoed until 8:30 A.M. (EDT), Friday, May 8, 1998.

THE EMPLOYMENT SITUATION: APRIL 1998

Employment increased, and unemployment fell sharply in April, the Bureau of Labor Statistics of the U.S. Department of Labor reported today.

The unemployment rate declined to 4.3 percent in April; from November through March, the rate had been either 4.6 or 4.7 percent. Nonfarm payroll employment grew by 262,000, following a small decline in March. Manufacturing was weak for the third straight month.

Chart 1. Unemployment rate, seasonally adjusted,
Percent May 1995 - April 1998

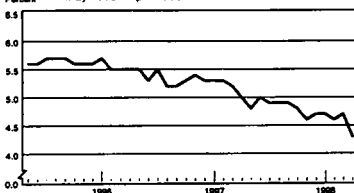
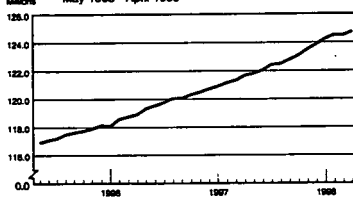


Chart 2. Nonfarm payroll employment, seasonally adjusted,
Millions May 1995 - April 1998



Unemployment (Household Survey Data)

The number of unemployed persons declined from 6.5 to 5.9 million in April, and the unemployment rate fell from 4.7 to 4.3 percent. This improvement was widespread across the major demographic groups. Unemployment rates in April were 3.4 percent for adult men, 4.1 percent for adult women, 13.1 percent for teenagers, 3.6 percent for whites, 8.9 percent for blacks, and 6.5 percent for Hispanics. (See tables A-1 and A-2.)

Across the major educational attainment categories, the largest unemployment rate declines for persons 25 years of age and over took place for those with a high school diploma only (to 3.9 percent) and for those with some college experience but no bachelor's degree (to 2.7 percent). The jobless rates were 7.0 percent for those with less than a high school diploma and 1.7 percent for college graduates. (See table A-3.)

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

Category	Quarterly averages		Monthly data			Mar.- Apr. change
	1997	1998 ¹	1998 ¹			
	IV	I	Feb.	Mar.	Apr.	
HOUSEHOLD DATA						
Labor force status						
Civilian labor force.....	136,813	137,524	137,557	137,523	137,242	-281
Employment.....	130,421	131,080	131,163	130,994	131,383	389
Unemployment.....	6,392	6,444	6,393	6,529	5,859	-670
Not in labor force.....	67,123	66,871	66,844	67,024	67,489	465
Unemployment rates						
All workers.....	4.7	4.7	4.6	4.7	4.3	-0.4
Adult men.....	4.0	3.8	3.8	3.9	3.4	-5
Adult women.....	4.0	4.3	4.3	4.3	4.1	-2
Teenagers.....	15.0	14.6	14.7	15.0	13.1	-1.9
White.....	4.0	4.0	3.9	4.1	3.6	-5
Black.....	9.7	9.4	9.7	9.2	8.9	-3
Hispanic origin.....	7.4	6.9	6.8	6.9	6.5	-4
ESTABLISHMENT DATA						
Employment						
Nonfarm employment.....	123,487	p124,430	124,524	p124,500	p124,762	p262
Goods-producing ²	24,899	p25,131	25,174	p25,079	p25,100	p21
Construction.....	5,693	p5,838	5,878	p5,793	p5,828	p35
Manufacturing.....	18,633	p18,720	18,723	p18,716	p18,706	p-10
Service-producing ²	98,588	p99,299	99,350	p99,421	p99,662	p241
Retail trade.....	22,370	p22,465	22,479	p22,453	p22,497	p44
Services.....	36,108	p36,508	36,534	p36,572	p36,711	p139
Government.....	19,761	p19,802	19,812	p19,814	p19,833	p19
Hours of work ³						
Total private.....	34.6	p34.8	34.9	p34.7	p34.4	p-0.3
Manufacturing.....	42.1	p42.0	42.0	p41.8	p40.7	p-1.1
Overtime.....	4.9	p4.8	4.8	p4.7	p3.9	p-.8
Indexes of aggregate weekly hours (1982=100) ³						
Total private.....	142.2	p143.9	144.5	p143.5	p142.9	p-0.6
Earnings ³						
Average hourly earnings, total private.....	\$12.45	p\$12.58	\$12.59	p\$12.63	p\$12.67	p\$0.04
Average weekly earnings, total private.....	431.30	p437.78	439.39	p438.26	p435.85	p-2.41

¹ Beginning in January 1998, household data reflect new composite estimation procedures and revised population controls.

² Includes other industries, not shown separately.

³ Data relate to private production or nonsupervisory workers.

p=preliminary.

The number of persons unemployed for less than 5 weeks declined by 226,000 to 2.6 million in April, after rising in March. The number unemployed for 15 weeks or longer, 1.4 million, also fell over the month and has declined by 630,000 over the year, after adjustment is made for changes in the composite estimation procedure. The number of unemployed job losers on temporary layoff and the number of job leavers both fell over the month. (See tables A-6 and A-7.)

Total Employment and the Labor Force (Household Survey Data)

Total employment rose by 389,000 in April to 131.4 million. Over the year, employment has risen by 2.3 million, after adjusting for changes in the composite estimation procedure. The employment-population ratio—the proportion of the population age 16 and older with jobs—returned to its all-time high of 64.2 percent in April. (See table A-1.)

About 7.9 million persons (not seasonally adjusted) held more than one job in April. They comprised 6.1 percent of the total employed. (See table A-10.)

The civilian labor force, 137.2 million (seasonally adjusted), was about unchanged over the month. The labor force participation rate edged down to 67.0 percent. (See table A-1.)

Persons Not in the Labor Force (Household Survey Data)

About 1.3 million persons (not seasonally adjusted) were marginally attached to the labor force in April, down about 200,000 from a year earlier. 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 work specifically because they believed no jobs were available for them—totaled 344,000 in April, essentially unchanged from a year earlier. (See table A-10.)

Industry Payroll Employment (Establishment Survey Data)

Nonfarm payroll employment rose by 262,000 in April, after seasonal adjustment, following a small decline in March. Employment in construction, services, and retail trade rebounded in April, after showing weakness in the prior month. Finance, insurance, and real estate continued its strong growth, while manufacturing payrolls edged down. (See table B-1.)

Within the goods-producing sector, construction added 35,000 jobs, seasonally adjusted, following a weather-related decline (-85,000) in March. Since last October, employment in this industry has expanded by 178,000.

Manufacturing employment declined by 10,000 in April. Between September and January, factory employment rose by 169,000; in contrast, since January, 16,000 jobs have been lost. In April, declines occurred in electronic components (-4,000) and industrial machinery (-2,000). Until February, both industries had shown strong and consistent growth for about a year. The apparel industry continued to shrink, losing 6,000 jobs in April, and employment in paper and allied products declined by 3,000 over the month. In contrast, job growth continued in furniture, and employment rose by 3,000 in stone, clay, and glass products, offsetting the prior month's decline.

In the service-producing sector, the services industry added 139,000 jobs, following a relatively small rise (38,000) in March. Help supply services gained 30,000 jobs in April, after a decline of 21,000 in the

previous month. Employment growth remained strong in computer services (20,000) and engineering and management services (19,000). Employment in agricultural services rose by 10,000, after 2 consecutive months of losses. Following weakness in March, health services showed a moderate employment increase of 14,000 in April. Gains in hospitals and doctors' offices were partly offset by continuing losses in home health care.

Low mortgage rates and a strong stock market contributed to employment gains in finance, insurance, and real estate. The number of jobs in real estate grew by 12,000 in April, and employment in mortgage brokerages rose by 4,000. Security brokerages continued to exhibit strong growth, adding 3,000 jobs over the month.

Wholesale trade employment grew by 11,000 over the month, with durable goods distribution adding 7,000 jobs. In retail trade, eating and drinking places added 33,000 jobs, recouping much of its March decline.

Employment in transportation and public utilities was relatively flat in April. A large gain in trucking (14,000) was offset by declines in air transportation and in local transportation (both -7,000). Government employment was little changed over the month.

Weekly Hours (Establishment Survey Data)

The average workweek for production or nonsupervisory workers on private nonfarm payrolls declined by 0.3 hour in April to 34.4 hours, seasonally adjusted. The manufacturing workweek dropped by 1.1 hour to 40.7 hours, and factory overtime fell by 0.8 hour to 3.9 hours. These declines reflect, in large part, the unusual timing of the Easter weekend in relation to the survey reference period. (See table B-2.)

The index of aggregate weekly hours of production or nonsupervisory workers on private nonfarm payrolls declined by 0.4 percent to 142.9 (1982=100), seasonally adjusted. The manufacturing index declined by 2.7 percent to 106.0. (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 April to \$12.67, seasonally adjusted. Reflecting the decline in the workweek, average weekly earnings decreased by 0.5 percent to \$435.85. Over the year, average hourly and weekly earnings have risen by 4.4 and 4.1 percent, respectively. (See table B-3.)

The Employment Situation for May 1998 is scheduled to be released on Friday, June 5, at 8:30 A.M. (EDT).

Revisions in the Establishment Survey Data

With the release of May data in June, BLS will introduce revisions in the establishment-based series on nonfarm payroll employment, hours, and earnings to reflect the regular annual benchmark adjustments and updated seasonal adjustment factors. This year's benchmark process affects all unadjusted series from April 1996 forward.

BLS also will implement refinements to the seasonal adjustment process for the hours and earnings series to correct for distortions related to the method of accounting for the varying length of payroll periods across months.

All seasonally adjusted employment series will be revised from January 1993 forward. The hours and earnings series will be revised from January 1989 forward to incorporate the new methodology. Seasonal adjustment factors for March through October 1998 will be available on May 29, 1 week prior to the release of the May estimates, on the Internet (<http://stats.bls.gov/ceshome.htm>). Further information on these revisions is available by calling (202) 606-6555.

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 contains 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 be looking 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 are *not 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 *employment-population ratio* is the employed as a percent of the population.

Establishment 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 self-employed, 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 household 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-to-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, employment 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-June 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. There is about a 90-percent chance, or level of confidence, that an 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 90-percent 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 90-percent 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 nearly 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 sample-based 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.

HOUSEHOLD DATA

HOUSEHOLD DATA

Table A-1. Employment status of the civilian population by sex and age
(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted ¹					
	Apr. 1997	Mar. 1998	Apr. 1998	Apr. 1997	Dec. 1997	Jan. 1998	Feb. 1998	Mar. 1998	Apr. 1998
TOTAL									
Civilian noninstitutional population	202,674	204,847	204,731	202,674	204,098	204,238	204,400	204,547	204,731
Civilian labor force	135,181	138,967	138,379	136,043	137,189	137,493	137,557	137,523	137,242
Participation rate	66.7	67.0	66.8	67.1	67.2	67.3	67.3	67.3	67.0
Employed	128,828	130,160	130,225	128,276	130,777	131,063	131,163	130,994	131,283
Employment-population ratio	63.6	63.6	63.9	63.8	64.1	64.2	64.2	64.0	64.2
Agriculture	3,425	2,931	3,315	3,462	3,285	3,319	3,335	3,132	3,350
Nonagricultural industries	125,403	127,229	127,421	124,814	127,502	127,784	127,829	127,862	128,033
Unemployed	6,851	6,816	6,843	6,788	6,382	6,406	6,383	6,529	5,859
Unemployment rate	4.8	5.0	5.0	4.9	4.7	4.7	4.6	4.7	4.3
Not in labor force	67,494	67,580	68,852	66,631	66,929	66,745	66,844	67,024	67,489
Men, 15 years and over									
Civilian noninstitutional population	97,474	98,403	98,803	97,474	98,225	98,241	98,331	98,425	98,503
Civilian labor force	72,755	73,285	73,286	73,184	73,865	73,832	73,780	73,695	73,790
Participation rate	74.6	74.6	74.5	75.1	75.0	75.2	75.0	74.8	74.8
Employed	68,108	69,508	70,348	68,585	70,195	70,518	70,459	70,297	70,851
Employment-population ratio	70.9	70.8	71.4	71.4	71.5	71.6	71.7	71.4	71.9
Unemployed	3,650	3,778	3,898	3,619	3,687	3,533	3,320	3,389	2,989
Unemployment rate	5.0	5.2	5.5	4.9	4.7	4.8	4.5	4.6	4.0
Men, 20 years and over									
Civilian noninstitutional population	88,880	90,802	90,880	88,880	90,339	90,381	90,478	90,502	90,580
Civilian labor force	68,933	69,368	69,480	68,107	69,561	69,682	69,801	69,451	69,697
Participation rate	78.9	78.6	78.7	77.1	77.1	77.1	77.1	77.9	78.9
Employed	63,957	65,263	67,027	65,188	66,576	67,026	66,980	66,753	67,201
Employment-population ratio	73.5	73.2	74.0	74.0	74.1	74.0	74.0	74.3	74.3
Agriculture	2,386	2,098	2,408	2,411	2,314	2,282	2,284	2,188	2,420
Nonagricultural industries	61,571	63,165	64,621	62,787	64,262	64,742	64,728	64,565	64,881
Unemployed	2,978	3,083	2,453	2,920	2,883	2,644	2,611	2,650	2,388
Unemployment rate	4.3	4.5	3.5	4.2	4.1	3.8	3.8	3.9	3.4
Women, 16 years and over									
Civilian noninstitutional population	108,200	108,141	108,228	108,200	105,753	108,897	106,070	108,141	108,228
Civilian labor force	62,428	63,892	63,043	62,869	63,507	63,841	63,777	63,627	63,443
Participation rate	58.5	60.0	60.3	60.5	60.0	60.0	60.1	60.1	60.1
Employed	59,523	60,644	60,387	60,710	60,582	60,805	60,704	60,687	60,563
Employment-population ratio	56.8	57.1	58.8	58.8	57.2	57.1	57.2	57.2	57.0
Unemployed	2,905	3,028	2,656	2,149	2,925	3,036	3,073	3,130	2,880
Unemployment rate	4.8	4.8	4.2	5.0	4.8	4.8	4.8	4.9	4.6
Women, 20 years and over									
Civilian noninstitutional population	97,885	98,534	98,583	97,885	96,300	96,420	96,471	96,534	96,583
Civilian labor force	58,794	59,899	59,345	58,975	59,824	59,852	59,721	59,771	59,486
Participation rate	60.2	60.8	60.2	60.4	60.7	60.8	60.8	60.7	60.3
Employed	56,388	57,318	57,191	56,387	57,255	57,040	57,146	57,186	57,078
Employment-population ratio	57.7	58.2	58.0	57.7	58.2	58.0	58.0	58.0	57.9
Agriculture	775	679	705	775	845	811	801	717	705
Nonagricultural industries	55,613	56,639	56,486	55,612	56,410	56,229	56,345	56,470	56,373
Unemployed	2,406	2,581	2,213	2,518	2,369	2,512	2,575	2,588	2,411
Unemployment rate	4.1	4.3	3.7	4.4	4.0	4.4	4.3	4.3	4.1
Both sexes, 16 to 19 years									
Civilian noninstitutional population	18,309	18,511	18,989	18,309	18,468	18,427	18,463	18,511	18,989
Civilian labor force	7,453	7,742	7,564	7,381	7,884	8,180	8,236	8,300	8,029
Participation rate	40.7	42.0	40.4	40.3	42.7	44.9	44.6	44.8	42.3
Employed	6,288	6,571	6,577	6,370	6,848	7,036	7,028	7,065	7,027
Employment-population ratio	34.3	35.5	34.7	34.8	37.1	37.6	38.2	38.1	37.0
Agriculture	253	189	204	276	226	227	270	247	229
Nonagricultural industries	6,035	6,382	6,373	6,094	6,622	6,809	6,758	6,818	6,798
Unemployed	1,165	1,170	987	1,011	1,036	1,144	1,207	1,235	1,002
Unemployment rate	15.7	15.1	13.8	13.8	13.3	14.1	14.7	14.0	12.5

¹ The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

NOTE: Beginning in January 1998, data reflect new composite estimation procedures and revised population controls used in the household survey.

HOUSEHOLD DATA

HOUSEHOLD DATA

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

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted ¹					
	Apr. 1987	Mar. 1988	Apr. 1988	Apr. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988	Apr. 1988
WHITE									
Civilian noninstitutional population	186,875	171,016	171,141	186,875	170,848	170,810	170,917	171,016	171,141
Civilian labor force	113,987	114,822	114,380	114,967	115,293	115,293	115,292	115,297	115,007
Participation rate	61.1	67.1	66.8	61.6	67.5	67.5	67.5	67.4	67.2
Employed	108,177	108,842	110,843	108,721	110,729	110,888	110,842	110,805	110,859
Employment-population ratio	58.3	63.2	64.3	58.3	64.3	64.3	64.3	64.3	64.3
Unemployed	4,800	4,980	4,537	4,846	4,534	4,555	4,550	4,492	4,198
Unemployment rate	4.1	4.3	3.9	4.2	3.9	4.0	3.9	4.1	3.6
Men, 20 years and over									
Civilian labor force	58,983	58,084	58,185	58,123	58,289	58,282	58,272	58,201	58,207
Participation rate	77.4	77.0	77.0	77.5	77.5	77.3	77.4	77.1	77.2
Employed	56,772	56,751	57,280	56,978	57,272	57,338	57,456	57,209	57,562
Employment-population ratio	74.5	73.9	74.7	74.8	74.7	74.8	74.9	74.5	74.8
Unemployed	2,212	2,333	1,785	2,147	2,117	1,958	1,816	1,992	1,745
Unemployment rate	3.7	3.9	3.0	3.6	3.6	3.3	3.2	3.4	2.9
Women, 20 years and over									
Civilian labor force	48,526	48,153	48,801	48,880	48,194	49,077	49,057	49,077	48,855
Participation rate	59.8	60.0	60.5	59.8	60.1	60.0	59.9	59.9	58.7
Employed	48,302	47,971	47,200	48,880	47,474	47,275	47,276	47,276	47,200
Employment-population ratio	57.6	57.8	57.7	57.8	58.1	57.7	57.7	57.7	57.7
Unemployed	1,824	1,783	1,801	1,780	1,800	1,827	1,778	1,801	1,654
Unemployment rate	3.3	3.6	3.1	3.7	3.4	3.7	3.6	3.7	3.4
Both sexes, 18 to 19 years									
Civilian labor force	6,357	6,584	6,384	6,755	6,740	6,914	6,983	7,019	6,795
Participation rate	52.4	53.4	51.7	53.7	53.0	56.3	56.8	56.9	54.9
Employed	5,505	5,720	5,653	5,949	5,883	6,113	6,107	6,120	5,986
Employment-population ratio	43.4	46.4	45.7	48.2	48.8	49.8	49.8	49.8	48.8
Unemployed	854	864	731	806	757	800	876	899	799
Unemployment rate	13.4	13.1	11.9	13.5	11.2	11.6	12.9	12.8	11.5
Men	14.7	15.8	12.8	14.8	11.3	14.2	14.7	14.9	12.7
Women	12.1	10.3	10.8	12.3	11.1	8.6	8.8	10.8	10.7
BLACK									
Civilian noninstitutional population	23,823	24,257	24,288	23,823	24,180	24,188	24,229	24,257	24,288
Civilian labor force	15,253	15,855	15,778	15,289	15,709	15,788	15,886	15,971	15,907
Participation rate	63.8	65.4	64.9	64.2	64.9	65.3	65.6	65.8	65.5
Employed	13,801	14,257	14,429	13,884	14,149	14,318	14,348	14,438	14,489
Employment-population ratio	57.7	58.2	59.4	58.0	58.5	59.2	59.2	59.8	59.7
Unemployed	1,452	1,498	1,349	1,325	1,560	1,472	1,535	1,473	1,428
Unemployment rate	8.6	8.4	8.5	8.9	8.9	8.3	8.7	8.2	8.9
Men, 20 years and over									
Civilian labor force	6,798	7,023	7,050	6,832	6,857	7,012	6,974	7,044	7,057
Participation rate	71.3	72.8	72.7	71.7	72.0	72.8	72.1	72.8	73.2
Employed	6,221	6,439	6,327	6,256	6,358	6,486	6,428	6,511	6,573
Employment-population ratio	65.3	66.5	67.4	65.7	65.8	66.9	66.5	67.3	67.8
Unemployed	576	584	523	576	601	556	546	533	524
Unemployment rate	8.5	8.3	7.4	8.4	8.8	7.9	7.8	7.8	7.4
Women, 20 years and over									
Civilian labor force	7,851	7,830	7,814	7,841	7,791	7,799	7,882	7,836	7,822
Participation rate	63.7	63.3	64.2	63.8	64.4	64.3	65.3	65.3	64.3
Employed	6,997	7,277	7,198	6,984	7,183	7,178	7,288	7,284	7,182
Employment-population ratio	58.4	59.9	58.2	58.3	58.2	58.2	58.8	60.0	58.0
Unemployed	635	603	618	657	628	621	667	651	640
Unemployment rate	8.3	8.2	7.9	8.8	8.1	8.0	8.6	8.2	8.2
Both sexes, 18 to 19 years									
Civilian labor force	838	802	812	818	861	877	899	892	886
Participation rate	34.7	37.2	37.4	37.9	38.8	40.3	39.8	40.9	40.5
Employed	583	641	708	624	630	663	686	703	744
Employment-population ratio	24.2	28.4	29.0	26.8	28.1	28.3	27.1	29.0	30.8
Unemployed	254	261	207	292	331	324	332	289	244
Unemployment rate	30.4	29.9	22.7	31.9	34.4	30.1	31.5	29.1	24.7
Men	37.4	30.0	22.7	37.8	38.2	31.8	34.7	27.8	23.9
Women	23.4	28.0	22.7	29.5	33.1	29.4	28.4	30.3	25.3

See footnotes at end of table.

HOUSEHOLD DATA

HOUSEHOLD DATA

Table A-2. Employment status of the civilian population by race, sex, age, and Hispanic origin — Continued
(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted ¹					
	Apr. 1987	Mar. 1988	Apr. 1988	Apr. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988	Apr. 1988
HISPANIC ORIGIN									
Civilian noninstitutional population	20,180	20,851	20,915	20,180	20,829	20,741	20,798	20,851	20,915
Civilian labor force	13,427	14,225	14,179	13,801	13,873	13,894	14,148	14,288	14,389
Participation rate	66.3	68.2	67.8	67.4	67.7	67.3	68.0	68.6	68.7
Employed	12,858	13,132	13,259	12,514	12,821	12,888	13,181	13,205	13,434
Employers-population ratio	61.2	63.0	63.4	62.0	62.8	62.8	63.4	63.8	64.2
Unemployed	1,089	1,083	915	1,287	1,052	985	988	983	953
Unemployment rate	8.0	7.7	6.5	8.0	7.5	6.9	6.8	6.9	6.5

¹ The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.
NOTE: Data for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanic are included in

both the white and black population groups. Beginning in January 1988, data reflect 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, seasonally adjusted
(Numbers in thousands)

Educational attainment	Not seasonally adjusted			Seasonally adjusted ¹					
	Apr. 1987	Mar. 1988	Apr. 1988	Apr. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988	Apr. 1988
Less than a high school diploma									
Civilian noninstitutional population	30,088	29,251	29,638	30,088	29,288	29,281	29,228	29,251	29,638
Civilian labor force	12,723	12,588	12,867	12,343	12,555	12,682	12,553	12,582	12,884
Percent of population	42.3	43.0	43.4	41.7	42.5	42.3	43.0	42.4	42.7
Employed	11,872	11,835	11,838	11,513	11,808 ²	11,771	11,678	11,880	11,773
Employers-population ratio	39.3	38.4	40.3	38.3	39.3	39.3	38.9	39.3	38.7
Unemployed	1,081	1,033	920	1,030	949	911	879	891	891
Unemployment rate	8.3	8.2	7.2	8.2	7.8	7.2	7.0	7.1	7.0
High school graduates, no college²									
Civilian noninstitutional population	57,238	57,885	57,484	57,238	57,831	57,808	57,419	57,885	57,484
Civilian labor force	37,708	37,873	37,374	37,887	37,827	37,787	37,807	37,831	37,840
Percent of population	64.3	65.4	65.0	66.2	65.6	65.4	65.8	65.3	65.9
Employed	36,118	36,113	35,821	36,088	36,297	36,303	36,302	36,331	36,285
Employers-population ratio	63.1	62.4	62.5	63.1	63.0	63.0	63.2	63.2	62.4
Unemployed	1,980	1,780	1,453	1,889	1,540	1,488	1,505	1,600	1,464
Unemployment rate	4.2	4.6	3.9	4.2	4.1	3.9	4.0	4.2	3.8
Less than a bachelor's degree²									
Civilian noninstitutional population	41,828	42,313	42,303	41,828	42,085	41,718	42,527	42,313	42,303
Civilian labor force	30,880	31,424	31,177	31,182	31,508	31,440	31,205	31,615	31,517
Percent of population	74.4	74.3	73.7	75.1	74.8	75.4	74.1	74.5	74.5
Employed	29,853	30,219	30,321	30,153	30,484	30,528	30,528	30,471	30,889
Employers-population ratio	71.3	71.7	71.7	72.8	72.4	72.8	71.8	72.0	72.5
Unemployed	1,037	1,105	848	1,029	1,023	1,011	987	1,043	848
Unemployment rate	3.4	3.5	2.7	3.3	3.2	3.2	3.1	3.3	2.7
College graduates									
Civilian noninstitutional population	41,088	42,085	42,187	41,088	41,822	41,874	42,238	42,085	42,187
Civilian labor force	33,125	33,887	33,888	33,135	33,878	33,885	33,672	33,777	33,889
Percent of population	80.8	80.7	80.5	80.8	80.8	80.3	79.7	80.3	80.6
Employed	32,547	33,344	33,485	32,477	33,283	33,040	33,029	33,145	33,418
Employers-population ratio	79.2	79.2	79.4	79.0	79.1	79.7	79.2	79.8	79.2
Unemployed	578	614	501	658	595	645	643	632 ³	571
Unemployment rate	1.7	1.8	1.5	2.0	1.8	1.9	1.8	1.8	1.7

¹ The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

² Includes the categories, some college, no degree, and associate degree.
NOTE: Beginning in January 1988, data reflect new composite estimation procedures and revised population controls used in the household survey.

³ Includes high school diploma or equivalent.

HOUSEHOLD DATA

HOUSEHOLD DATA

Table A-4. Selected employment indicators

(In thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Apr. 1997	Mar. 1998	Apr. 1998	Apr. 1997	Dec. 1997	Jan. 1998	Feb. 1998	Mar. 1998	Apr. 1998
CHARACTERISTIC									
Total employed, 16 years and over	128,629	130,150	130,735	129,275	130,777	131,083	131,163	130,994	131,383
Married men, spouse present	42,371	42,808	42,790	42,428	42,952	42,977	42,915	42,779	42,885
Married women, spouse present	32,953	33,003	33,056	32,549	32,578	32,793	32,921	32,872	32,973
Women who maintain families	7,908	7,801	7,838	7,780	7,822	7,784	7,884	7,778	7,813
OCCUPATION									
Managers and professional specialty	37,585	38,861	38,631	37,571	38,205	38,009	38,164	38,454	38,643
Technical, sales, and administrative support	37,998	38,677	38,431	38,143	38,652	38,382	38,491	38,623	38,585
Service occupations	17,219	17,498	17,460	17,325	17,800	18,162	17,850	17,732	17,478
Precision production, craft, and repair	14,087	14,421	14,556	14,216	14,299	14,285	14,456	14,656	14,873
Operators, laborers, and laborers	18,183	17,831	18,253	18,382	18,394	18,822	18,832	18,179	18,447
Farming, forestry, and fishing	3,478	2,962	3,404	3,572	3,472	3,355	3,436	3,289	3,485
CLASS OF WORKER									
Agriculture									
Wage and salary workers	1,985	1,733	2,003	1,852	1,844	1,949	1,828	1,868	1,987
Self-employed workers	1,323	1,188	1,281	1,438	1,486	1,348	1,324	1,242	1,324
Unpaid family workers	87	30	31	82	54	44	41	32	28
Nonagricultural industries									
Wage and salary workers	115,947	118,294	118,217	118,515	118,403	118,829	118,961	119,131	118,774
Government	18,307	18,289	18,478	18,048	18,248	18,421	18,378	18,072	18,202
Private industries	97,640	100,005	99,742	98,467	100,155	100,408	100,583	101,059	100,571
Private households	871	1,010	882	923	948	985	1,033	1,022	1,014
Other industries	98,769	98,994	98,790	97,544	99,209	99,123	99,547	100,037	99,557
Self-employed workers	9,132	8,819	9,087	9,124	8,886	8,864	8,761	8,784	8,689
Unpaid family workers	126	108	117	133	89	131	117	102	124
PERSONS AT WORK PART TIME									
All industries									
Part time for economic reasons	4,244	4,011	3,849	4,380	3,855	4,082	3,882	3,902	3,735
Sick work or business conditions	2,419	2,300	2,088	2,402	2,230	2,282	2,123	2,188	2,074
Could only find part-time work	1,371	1,487	1,296	1,625	1,323	1,450	1,485	1,445	1,330
Part time for noneconomic reasons	10,138	10,280	10,808	10,155	10,388	10,515	10,407	10,448	10,084
Nonagricultural industries									
Part time for economic reasons	4,086	3,834	3,498	4,204	3,854	3,885	3,743	3,726	3,808
Sick work or business conditions	2,279	2,188	2,010	2,279	2,113	2,182	2,025	2,087	1,988
Could only find part-time work	1,547	1,448	1,252	1,589	1,291	1,273	1,433	1,418	1,276
Part time for noneconomic reasons	10,582	10,738	11,204	10,588	10,791	10,868	10,788	10,829	10,470

NOTE: Persons at work excludes employed persons who were absent from their jobs during the entire reference week for reasons such as vacation, illness, or industrial dispute. Part time for noneconomic reasons excludes persons who usually work full time

but worked only 1 to 34 hours during the reference week for reasons such as holidays, illness, and bad weather. Beginning in January 1998, data reflect new composite estimation procedures and revised population controls used in the household survey.

HOUSEHOLD DATA

HOUSEHOLD DATA

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates ¹					
	Apr. 1987	Mar. 1988	Apr. 1988	Apr. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988	Apr. 1988
CHARACTERISTIC									
Total, 16 years and over	6,768	5,520	5,859	5.0	4.7	4.7	4.8	4.7	4.3
Men, 20 years and over	2,909	2,639	2,398	4.2	4.1	3.8	3.8	3.8	3.4
Women, 20 years and over	2,618	2,585	2,411	4.4	4.0	4.4	4.3	4.3	4.1
Both sexes, 16 to 19 years	1,241	1,245	1,028	15.8	14.3	14.1	14.7	15.0	13.1
Married men, spouse present	1,178	1,111	974	2.7	2.8	2.8	2.5	2.5	2.2
Married women, spouse present	1,050	1,114	928	3.2	2.8	3.1	3.1	3.3	2.8
Women who maintain families	683	642	640	7.9	7.7	7.8	7.8	7.8	7.8
Full-time workers	5,375	5,128	4,880	4.8	4.8	4.5	4.5	4.5	4.2
Part-time workers	1,384	1,400	1,170	5.8	5.0	5.4	5.2	5.7	4.8
OCCUPATION²									
Managerial and professional specialty	772	702	734	2.0	1.9	2.0	2.0	1.8	1.9
Technical, sales, and administrative support	1,889	1,834	1,473	4.2	4.0	4.2	4.0	4.1	3.7
Precision production, craft, and repair	718	686	562	4.8	4.7	4.8	4.1	4.5	3.7
Operators, laborers, and laborer	1,460	1,340	1,188	7.4	7.0	8.9	6.5	6.9	6.1
Farming, forestry, and fishing	280	248	218	6.8	7.2	8.8	6.3	7.1	5.8
INDUSTRY									
Nonagricultural private wage and salary workers	3,228	4,975	4,534	5.0	4.8	4.7	4.7	4.7	4.5
Goods-producing industries	1,588	1,443	1,293	5.4	5.0	4.8	4.7	5.0	4.4
Mining	14	22	14	2.3	3.3	4.0	2.8	3.7	2.3
Construction	621	612	447	6.8	6.9	7.9	7.8	8.8	6.3
Manufacturing	933	809	822	4.4	3.8	3.8	3.7	3.8	3.8
Durable goods	464	455	438	3.8	3.1	3.4	2.9	3.6	3.5
Non-durable goods	469	354	388	5.5	4.9	4.5	5.0	4.2	4.4
Service-producing industries	3,880	3,332	3,271	4.9	4.7	4.7	4.7	4.8	4.3
Transportation and public utilities	213	254	238	2.9	3.3	3.8	3.2	3.3	3.1
Wholesale and retail trade	1,654	1,457	1,395	6.2	5.8	5.8	5.8	5.4	5.2
Finance, insurance, and real estate	248	209	178	3.3	2.8	2.8	2.8	2.8	2.2
Services	1,564	1,813	1,981	4.6	4.5	4.3	4.7	4.7	4.3
Government workers	452	338	302	2.4	2.1	2.4	2.3	2.9	2.0
Agricultural wage and salary workers	205	201	172	6.5	6.7	10.8	8.8	9.7	8.0

¹ Unemployment as a percent of the civilian labor force.² Seasonally adjusted unemployment data for service occupations are not available because the seasonal component, which is small relative to the trend-cycle and irregular

components, cannot be separated with sufficient precision.

NOTE: Beginning in January 1988, data reflect new composite estimation procedures and revised population controls used in the household survey.

Table A-8. Duration of unemployment

(Numbers in thousands)

Duration	Not seasonally adjusted			Seasonally adjusted					
	Apr. 1987	Mar. 1988	Apr. 1988	Apr. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988	Apr. 1988
NUMBER OF UNEMPLOYED									
Less than 5 weeks	2,131	2,824	2,220	2,471	2,531	2,486	2,822	2,858	2,832
5 to 14 weeks	1,981	3,274	1,734	2,177	1,882	1,871	1,808	1,879	1,807
15 weeks and over	2,439	2,019	1,899	2,088	1,884	1,811	1,830	1,791	1,417
15 to 26 weeks	1,289	1,085	754	1,033	938	773	682	641	664
27 weeks and over	1,147	934	928	1,055	1,088	1,038	974	891	833
Average (mean) duration, in weeks	16.7	15.2	15.5	15.4	16.3	15.8	15.8	14.3	14.3
Median duration, in weeks	10.2	8.0	8.1	8.1	7.7	7.4	7.2	6.8	6.4
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	32.5	37.0	38.9	36.7	28.4	28.7	41.2	43.5	44.2
5 to 14 weeks	30.2	33.4	30.7	32.3	30.0	31.4	30.0	30.1	31.9
15 weeks and over	37.2	29.6	29.4	31.0	31.8	39.9	28.8	26.4	23.9
15 to 26 weeks	19.7	15.9	13.4	15.3	14.8	12.3	13.4	12.8	8.9
27 weeks and over	17.5	14.1	16.1	18.7	16.0	16.6	15.3	13.8	14.0

NOTE: Beginning in January 1988, data reflect new composite estimation procedures

and revised population controls used in the household survey.

HOUSEHOLD DATA

HOUSEHOLD DATA

Table A-7. Reason for unemployment

(Numbers in thousands)

Reason	Not seasonally adjusted			Seasonally adjusted					
	Apr. 1987	Mar. 1988	Apr. 1988	Apr. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988	Apr. 1988
NUMBER OF UNEMPLOYED									
Job losers and persons who completed temporary jobs	3,080	3,311	2,847	3,038	2,891	2,807	2,793	2,880	2,831
On temporary layoff	888	1,238	723	858	981	880	821	880	898
Not on temporary layoff	2,052	2,073	1,823	2,080	2,000	1,927	1,972	2,000	1,933
Permanent job losers	1,453	1,611	1,381	(1)	(1)	(1)	(1)	(1)	(1)
Persons who completed temporary jobs	600	662	342	(1)	(1)	(1)	(1)	(1)	(1)
Job leavers	723	735	579	776	662	608	780	744	625
Reentrants	2,238	2,848	1,859	2,422	2,170	2,229	2,286	2,219	2,599
New entrants	840	928	479	588	522	518	843	849	911
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers and persons who completed temporary jobs	48.8	48.8	48.9	44.8	48.7	44.1	43.7	43.9	44.9
On temporary layoff	15.1	18.2	12.8	14.1	15.0	13.8	12.8	15.1	11.8
Not on temporary layoff	31.8	30.4	34.1	30.8	31.7	30.8	30.9	30.8	33.0
Job leavers	11.0	11.1	10.3	11.4	10.8	12.7	13.3	11.3	10.7
Reentrants	34.2	32.9	34.4	26.6	33.9	35.0	35.9	34.1	35.7
New entrants	8.2	7.4	8.5	8.4	8.6	8.1	8.3	8.5	8.7
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers and persons who completed temporary jobs	2.3	2.4	1.9	2.2	2.2	2.0	2.0	2.2	1.9
Job leavers8	.8	.4	.5	.5	.8	.5	.5	.5
Reentrants	1.7	1.8	1.4	1.8	1.8	1.8	1.8	1.8	1.5
New entrants4	.4	.4	.4	.4	.4	.4	.4	.4

1 Not available.

NOTE: Beginning in January 1988, data reflect new composite estimation procedures

and revised population controls used in the household survey.

Table A-8. Range of alternative measures of labor underutilization

(Percent)

Measure	Not seasonally adjusted			Seasonally adjusted					
	Apr. 1987	Mar. 1988	Apr. 1988	Apr. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988	Apr. 1988
U-1 Persons unemployed 15 weeks or longer, as a percent of the civilian labor force	1.8	1.5	1.2	1.8	1.4	1.3	1.3	1.3	1.0
U-2 Job losers and persons who completed temporary jobs, as a percent of the civilian labor force	2.3	2.4	1.9	2.2	2.2	2.0	2.0	2.2	1.9
U-3 Total unemployed, as a percent of the civilian labor force (official unemployment rate)	4.8	6.0	4.1	5.0	4.7	4.7	4.8	4.7	4.3
U-4 Total unemployed plus discouraged workers, as a percent of the civilian labor force plus discouraged workers	6.1	6.2	4.4	(1)	(1)	(1)	(1)	(1)	(1)
U-6 Total unemployed, plus discouraged workers, plus all other marginally attached workers, as a percent of the civilian labor force plus all marginally attached workers	8.8	8.0	6.0	(1)	(1)	(1)	(1)	(1)	(1)
U-6 Total unemployed, 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	9.0	8.9	7.7	(1)	(1)	(1)	(1)	(1)	(1)

1 Not available.

NOTE: This range of alternative measures of labor underutilization replaces the U1-U7 range published in table A-7 of the release prior to 1984. Marginally attached are persons who currently are neither working nor looking for work but indicate that they want and are available for a job and have looked for work sometime in the recent past. Discouraged workers, a subset of the marginally attached, have given a job-market related reason for not currently

looking for a job. Persons employed part time for economic reasons are those who want and are available for full-time work but have had to settle for a part-time schedule. For further information, see "SLS introduces new range of alternative unemployment measures," in the October 1983 issue of the Monthly Labor Review. Beginning in January 1988, data reflect new composite estimation procedures and revised population controls used in the household survey.

HOUSEHOLD DATA

HOUSEHOLD DATA

Table A-8. Unemployed persons by sex and age, seasonally adjusted

Age and sex	Number of unemployed persons (in thousands)			Unemployment rates ¹					
	Apr. 1987	Mar. 1988	Apr. 1988	Apr. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988	Apr. 1988
Total, 16 years and over	6,788	6,229	5,889	5.0	4.7	4.7	4.6	4.7	4.3
16 to 24 years	2,434	2,235	2,053	11.3	10.6	10.6	10.8	10.7	9.8
16 to 19 years	1,241	1,243	1,053	15.8	14.3	14.1	14.7	15.0	13.1
16 to 17 years	810	879	808	18.4	17.7	17.2	18.5	18.9	15.2
18 to 19 years	432	470	546	12.2	11.7	11.8	11.3	13.7	11.6
20 to 24 years	1,193	1,050	1,011	8.8	8.5	8.9	8.5	8.0	7.4
25 years and over	4,287	4,184	3,781	3.7	3.8	3.5	3.5	3.6	3.2
25 to 34 years	3,787	3,712	3,353	3.8	3.7	3.5	3.5	3.6	3.3
35 years and over	479	468	428	2.9	2.9	2.7	2.7	2.9	2.5
Men, 16 years and over	3,619	3,389	3,089	4.8	4.7	4.5	4.5	4.6	4.0
16 to 24 years	1,334	1,282	1,105	11.8	11.1	11.2	11.7	11.2	9.7
16 to 19 years	710	700	573	17.4	14.2	16.4	17.0	16.5	14.0
16 to 17 years	341	330	253	20.2	18.4	18.3	21.0	18.5	14.9
18 to 19 years	371	374	320	15.3	11.1	14.9	13.1	15.2	13.3
20 to 24 years	654	562	532	8.7	8.3	8.1	8.7	8.1	7.3
25 years and over	2,272	2,102	1,854	3.7	3.5	3.3	3.2	3.4	3.0
25 to 34 years	1,884	1,829	1,609	3.8	3.5	3.4	3.2	3.5	3.0
35 years and over	282	283	244	2.9	3.4	3.1	2.9	3.1	2.8
Women, 16 years and over	3,149	3,130	2,880	5.0	4.8	4.8	4.8	4.9	4.6
16 to 24 years	1,100	1,023	958	10.8	10.2	10.4	9.9	10.1	9.2
16 to 19 years	531	545	479	13.7	14.3	11.8	12.3	13.4	12.1
16 to 17 years	289	248	253	16.6	17.0	16.3	16.0	15.2	15.5
18 to 19 years	241	296	226	11.9	12.4	8.2	9.5	12.2	9.8
20 to 24 years	289	308	479	9.0	7.8	8.7	8.3	7.9	7.5
25 years and over	2,015	2,082	1,887	3.8	3.6	3.7	3.6	3.9	3.6
25 to 34 years	1,773	1,884	1,689	3.9	3.9	3.5	3.5	4.1	3.7
35 years and over	217	201	182	3.0	2.1	2.3	2.4	2.8	2.4

¹ Unemployment as a percent of the civilian labor force.

and revised population controls used in the household survey.

NOTE: Beginning in January 1988, data reflect new composite estimation procedures

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

(Numbers in thousands)

Category	Total		Men		Women	
	Apr. 1987	Apr. 1988	Apr. 1987	Apr. 1988	Apr. 1987	Apr. 1988
NOT IN THE LABOR FORCE						
Total not in the labor force	67,494	68,352	34,719	25,167	42,775	43,185
Persons who currently want a job	4,626	4,901	2,070	2,111	2,786	2,790
Searched for work and unable to work now ¹	1,480	1,375	700	588	780	690
Reason not currently looking:						
Discouragement over job prospects ²	379	344	208	188	173	148
Reasons other than discouragement ³	1,101	934	494	380	606	544
MULTIPLE JOBHOLDERS						
Total multiple jobholders ⁴	7,674	7,200	4,123	4,204	3,751	3,728
Percent of total employed	6.1	6.1	6.0	6.0	6.3	6.2
Primary job full time, secondary job part time	4,448	4,523	2,631	2,631	1,814	1,882
Primary and secondary jobs both part time	1,828	1,810	889	919	1,287	1,091
Primary and secondary jobs both full time	221	286	182	181	59	66
Hours vary on primary or secondary job	1,351	1,490	762	639	590	641

¹ Data refer to persons who have searched for work during the prior 12 months and were available to take a job during the reference week.² Includes those with no work available, could not find work, lack schooling or training, employer thinks too young or old, and other types of discrimination.³ Includes those who did not actively look for work in the prior 4 weeks for such reasons as child-care and transportation problems, as well as a small number for which

reason for nonparticipation was not determined.

⁴ Includes persons who work part time on their primary job and full time on their secondary job(s), not shown separately.

NOTE: Beginning in January 1988, data reflect new composite estimation procedures and revised population controls used in the household survey.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-1. Employees on nonfarm payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Apr. 1997	Feb. 1998	Mar. 1998P	Apr. 1998P	Apr. 1997	Dec. 1997	Jan. 1998	Feb. 1998	Mar. 1998P	Apr. 1998P
Total	121,436	122,940	123,596	124,623	121,671	123,866	124,265	124,524	124,500	124,762
Total private	101,483	102,838	103,382	104,404	102,092	104,096	104,484	104,712	104,696	104,929
Goods-producing	24,413	24,508	24,580	24,847	24,667	24,895	25,139	25,174	25,079	25,100
Mining	567	559	559	560	573	574	574	573	570	566
Metal mining	53.6	50.8	50.8	50.8	54	53	52	52	52	52
Coal mining	92.6	99.1	99.0	99.3	93	90	96	90	90	89
Oil and gas extraction	313.8	319.9	316.2	314.1	319	323	324	324	321	318
Nonmetallic minerals, except fuels	106.7	99.3	102.6	106.7	107	108	108	107	107	107
Construction	5,437	5,341	5,395	5,659	5,599	5,747	5,843	5,878	5,793	5,828
General building contractors	1,250.1	1,255.0	1,291.9	1,333.4	1,297	1,343	1,393	1,369	1,365	1,370
Heavy construction, except building	748.7	654.1	682.2	756.4	767	774	782	792	786	788
Special trade contractors	3,430.1	3,401.9	3,420.8	3,572.3	3,535	3,650	3,698	3,717	3,659	3,673
Manufacturing	18,409	18,808	18,826	18,828	18,495	18,674	18,722	18,723	18,718	18,708
Production workers	12,712	12,858	12,873	12,964	12,774	12,913	12,944	12,946	12,937	12,922
Durable goods	10,838	11,052	11,069	11,082	10,856	11,043	11,093	11,101	11,097	11,100
Production workers	7,434	7,595	7,613	7,619	7,440	7,593	7,623	7,629	7,627	7,624
Lumber and wood products	766.3	791.6	793.8	798.2	799	806	808	808	808	810
Furniture and fixtures	536.1	619.1	621.1	623.0	536	513	518	519	521	524
Stone, clay, and glass products	538.8	530.1	534.7	547.7	541	543	550	550	547	550
Primary metal industries	708.3	720.0	719.9	717.8	710	717	719	720	720	718
Blat furnaces and basic steel products	234.8	236.1	235.8	234.7	(1)	(1)	(1)	(1)	(1)	(1)
Fabricated metal products	1,463.8	1,492.5	1,491.4	1,492.0	1,468	1,489	1,498	1,497	1,494	1,495
Industrial machinery and equipment	2,145.7	2,190.5	2,200.6	2,198.6	2,142	2,198	2,194	2,195	2,194	2,192
Computer and office equipment	373.4	385.1	384.0	382.3	375	387	387	387	387	385
Electronic and other electrical equipment	1,638.3	1,683.2	1,682.4	1,678.8	1,643	1,678	1,685	1,686	1,686	1,683
Electronic components and accessories	617.0	653.1	652.7	648.4	618	651	655	654	654	650
Transportation equipment	1,639.5	1,676.5	1,676.5	1,681.1	1,604	1,668	1,674	1,680	1,679	1,680
Motor vehicles and equipment	980.3	990.9	992.3	993.2	957	986	992	993	991	993
Aircraft and parts	495.1	529.5	526.7	527.9	495	526	527	530	528	529
Instruments and related products	853.4	858.3	861.3	860.3	855	861	864	860	862	861
Miscellaneous manufacturing	385.8	382.4	385.0	386.3	388	385	387	386	388	387
Nondurable goods	7,573	7,556	7,557	7,548	7,639	7,626	7,629	7,622	7,619	7,608
Production workers	5,278	5,263	5,260	5,245	5,334	5,320	5,321	5,317	5,310	5,298
Food and kindred products	1,648.4	1,669.2	1,668.6	1,666.1	1,699	1,706	1,710	1,710	1,711	1,712
Tobacco products	38.5	42.3	40.7	39.6	41	41	40	41	42	42
Textile mill products	606.9	595.8	594.5	594.2	600	604	601	598	595	595
Apparel and other textile products	820.7	778.6	778.7	773.6	822	795	792	783	782	776
Paper and allied products	672.9	675.3	674.6	672.4	677	678	678	679	679	678
Printing and publishing	1,538.7	1,553.6	1,552.5	1,553.9	1,541	1,553	1,559	1,558	1,557	1,555
Chemicals and allied products	1,028.0	1,024.2	1,028.3	1,025.0	1,029	1,029	1,027	1,026	1,028	1,027
Petroleum and coal products	136.1	130.8	132.0	134.0	140	138	134	135	135	135
Rubber and misc. plastics products	987.4	989.6	1,002.5	1,001.5	986	986	1,002	1,002	1,004	1,003
Leather and leather products	82.9	86.9	86.1	85.4	83	86	87	88	88	88
Service-producing	97,023	98,432	99,018	99,776	97,004	98,871	99,126	99,350	99,421	99,662
Transportation and public utilities	6,384	6,479	6,508	6,538	6,421	6,478	6,518	6,544	6,559	6,587
Transportation	4,151	4,219	4,236	4,253	4,170	4,221	4,247	4,270	4,277	4,273
Railroad transportation	225.0	227.9	228.0	229.6	225	230	233	232	231	230
Local and interurban passenger transit	471.0	476.3	480.5	474.7	480	482	483	486	488	481
Trucking and warehousing	1,651.7	1,663.2	1,660.2	1,709.5	1,678	1,699	1,713	1,721	1,723	1,737
Water transportation	175.7	170.3	173.3	176.4	177	175	172	177	179	177
Transportation by air	1,178.5	1,205.5	1,205.5	1,204.4	1,192	1,201	1,210	1,218	1,218	1,211
Pipelines, except natural gas	14.2	14.1	14.1	14.1	14	14	14	14	14	14
Transportation services	434.2	441.9	443.9	444.2	435	440	442	444	444	443
Communications and public utilities	2,233	2,260	2,272	2,275	2,242	2,257	2,260	2,274	2,282	2,284
Communications	1,363.3	1,402.4	1,412.9	1,419.0	1,359	1,396	1,408	1,411	1,418	1,425
Electric, gas, and sanitary services	869.8	858.0	859.2	856.3	873	861	863	863	864	859
Wholesale trade	6,801	6,735	6,785	6,798	6,822	6,748	6,790	6,791	6,805	6,816
Durable goods	3,895	4,019	4,039	4,056	3,900	4,008	4,024	4,041	4,052	4,059
Nondurable goods	2,706	2,716	2,728	2,742	2,722	2,740	2,768	2,760	2,763	2,767

See footnotes at end of table.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

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

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Apr. 1997	Feb. 1998	Mar. 1998P	Apr. 1998P	Apr. 1997	Dec. 1997	Jan. 1998	Feb. 1998	Mar. 1998P	Apr. 1998P
Retail trade	21,750	21,925	21,989	22,247	22,029	22,450	22,492	22,479	22,453	22,497
Building materials and garden supplies	936.9	933.1	917.5	936.4	931	934	945	948	952	948
General merchandise stores	2,682.2	2,760.8	2,763.3	2,776.5	2,799	2,874	2,896	2,882	2,876	2,884
Department stores	2,355.5	2,423.4	2,426.1	2,439.0	2,446	2,520	2,531	2,506	2,521	2,532
Food stores	3,439.9	3,501.0	3,492.1	3,498.2	3,480	3,622	3,533	3,539	3,541	3,540
Automotive dealers and service stations	2,300.0	2,309.5	2,319.0	2,339.1	2,310	2,338	2,330	2,339	2,341	2,347
New and used car dealers	1,053.5	1,057.9	1,059.8	1,063.2	1,055	1,061	1,061	1,062	1,062	1,064
Apparel and accessory stores	1,075.3	1,067.9	1,062.4	1,069.2	1,105	1,108	1,111	1,102	1,096	1,094
Furniture and home furnishings stores	1,015.3	1,070.8	1,096.8	1,098.6	1,029	1,070	1,073	1,076	1,081	1,080
Eating and drinking places	7,550.3	7,444.1	7,519.6	7,599.4	7,571	7,698	7,694	7,711	7,683	7,696
Miscellaneous retail establishments	2,741.8	2,878.0	2,844.4	2,851.8	2,798	2,918	2,901	2,902	2,904	2,907
Finance, insurance, and real estate	6,985	7,131	7,175	7,219	7,019	7,151	7,170	7,180	7,218	7,249
Finance	3,370	3,481	3,509	3,519	3,381	3,472	3,479	3,490	3,508	3,520
Depository institutions	2,032.2	2,053.4	2,059.4	2,052.1	2,041	2,084	2,091	2,083	2,098	2,099
Commercial banks	1,477.5	1,493.9	1,495.9	1,497.2	1,486	1,502	1,500	1,501	1,502	1,503
Savings institutions	253.2	251.0	251.6	252.7	253	253	252	252	252	252
Nondepository institutions	539.0	569.0	578.6	589.8	539	561	563	568	578	583
Mortgage bankers and brokers	243.3	258.6	266.1	270.8	243	253	252	250	258	261
Security and commodity brokers	590.1	621.0	625.7	629.9	585	614	619	623	628	635
Holding and other investment offices	218.5	231.3	236.5	238.1	218	233	236	236	236	237
Insurance carriers	2,217	2,255	2,264	2,269	2,221	2,257	2,257	2,262	2,266	2,272
Insurance agents, brokers, and service	1,489.3	1,524.9	1,533.0	1,539.2	1,502	1,529	1,527	1,530	1,533	1,541
Real estate	717.7	730.2	730.6	730.0	719	738	730	732	731	741
Services ²	1,398	1,395	1,411	1,437	1,417	1,422	1,434	1,436	1,444	1,458
Agricultural services	35,350	36,090	36,365	36,765	35,334	36,276	36,417	36,534	36,572	36,711
Hotels and other lodging places	669.9	674.1	668.5	667.7	664	682	687	684	680	680
Personal services	1,707.5	1,679.0	1,698.7	1,724.2	1,786	1,799	1,772	1,765	1,787	1,788
Business services	1,253.4	1,263.9	1,257.2	1,256.2	1,193	1,185	1,187	1,192	1,193	1,195
Services to buildings	7,493.9	7,643.9	7,627.9	7,603.1	7,684	7,918	7,970	8,029	8,031	8,091
Personal supply services	669.3	693.5	693.2	693.2	602	608	612	614	620	624
Help supply services	2,670.7	2,757.9	2,806.8	2,851.1	2,762	2,898	2,872	2,823	2,900	2,931
Computer and data processing services	2,338.6	2,416.4	2,462.3	2,501.6	2,419	2,520	2,515	2,572	2,591	2,591
Auto repair, services, and parking	1,308.6	1,455.1	1,475.5	1,489.1	1,308	1,421	1,433	1,451	1,469	1,489
Miscellaneous repair services	1,131.9	1,152.9	1,159.1	1,160.1	1,132	1,137	1,163	1,189	1,192	1,192
Motion pictures	380.5	386.9	388.9	391.6	382	390	392	393	392	393
Amusement and recreation services	529.4	598.0	585.7	559.6	528	591	590	589	582	581
Health services	1,469.6	1,413.3	1,472.5	1,599.1	1,503	1,600	1,608	1,615	1,618	1,625
Offices and clinics of medical doctors	9,627.2	9,788.5	9,810.4	9,824.8	9,644	9,795	9,801	9,819	9,822	9,836
Nursing and personal care facilities	1,723.1	1,784.2	1,790.0	1,782.8	1,728	1,760	1,760	1,769	1,766	1,766
Hospitals	1,753.9	1,781.4	1,783.7	1,782.0	1,780	1,790	1,798	1,798	1,797	1,798
Home health care services	3,852.3	3,925.3	3,933.7	3,942.2	3,857	3,917	3,927	3,930	3,934	3,948
Legal services	681.7	666.1	663.6	660.0	684	681	673	670	665	659
Educational services	945.5	973.4	977.7	979.4	951	975	975	979	982	983
Social services	2,191.2	2,265.7	2,281.6	2,294.2	2,092	2,121	2,132	2,141	2,148	2,157
Child day care services	2,471.9	2,532.0	2,554.9	2,572.2	2,458	2,521	2,529	2,535	2,545	2,558
Residential care	691.7	716.8	722.6	728.3	694	716	717	720	724	728
Museums and botanical and zoological gardens	85.4	81.6	84.4	89.0	87	89	89	90	90	91
Membership organizations	2,185.5	2,193.4	2,203.0	2,207.0	2,160	2,209	2,214	2,216	2,218	2,220
Engineering and management services	2,976.9	3,128.9	3,159.5	3,186.5	2,965	3,026	3,125	3,134	3,147	3,166
Engineering and architectural services	862.7	867.0	863.9	861.0	869	891	897	900	912	918
Management and public relations	934.7	1,004.0	1,009.5	1,018.7	936	993	1,009	1,013	1,012	1,015
Services, nec	48.0	48.9	48.5	48.7	(1)	(1)	(1)	(1)	(1)	(1)
Government	19,953	20,192	20,214	20,219	19,579	19,770	19,781	19,812	19,814	19,833
Federal	2,700	2,861	2,862	2,886	2,708	2,896	2,874	2,876	2,871	2,872
Federal, except Postal Service	1,852.5	1,808.4	1,809.4	1,812.0	1,856	1,818	1,825	1,820	1,818	1,813
State	4,790	4,782	4,798	4,807	4,835	4,865	4,864	4,863	4,874	4,876
Education	2,074.1	2,078.0	2,105.8	2,107.9	1,938	1,984	1,980	1,980	1,989	1,970
Other State government	2,685.8	2,694.2	2,690.8	2,698.3	2,897	2,701	2,704	2,703	2,706	2,708
Local	12,493	12,679	12,756	12,746	12,236	12,416	12,443	12,473	12,469	12,486
Education	7,208.5	7,337.1	7,391.2	7,382.4	6,859	6,985	6,985	7,008	7,003	7,009
Other local government	5,286.9	5,342.2	5,364.4	5,363.8	5,378	5,451	5,458	5,467	5,466	5,476

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.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-2. Average weekly hours of production or nonsupervisory workers¹ on private nonfarm payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted						
	Apr. 1987	Feb. 1988	Mar. 1988P	Apr. 1988P	Apr. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988P	Apr. 1988P	
Total private	34.4	34.6	34.5	34.3	34.5	34.8	34.8	34.9	34.7	34.4	
Goods-producing	41.1	40.9	40.8	40.2	41.4	41.4	41.6	41.4	40.9	40.1	
Mining	45.1	43.9	43.3	43.4	45.3	45.0	45.5	44.0	43.4	43.5	
Construction	38.7	37.9	37.8	37.8	38.9	38.8	39.8	39.3	38.3	38.0	
Manufacturing	41.8	41.7	41.7	40.8	42.1	42.2	42.1	42.0	41.8	40.7	
Overtime hours	4.8	4.5	4.8	4.0	4.9	4.9	4.9	4.8	4.7	3.9	
Durable goods	42.7	42.5	42.5	41.4	43.0	43.0	42.8	42.7	42.4	41.1	
Overtime hours	5.0	4.9	4.9	4.2	5.3	5.2	5.2	5.1	5.0	3.9	
Lumber and wood products	41.2	40.5	40.8	40.9	41.2	41.0	41.3	41.2	41.1	40.8	
Furniture and fixtures	39.5	40.5	40.4	39.8	40.1	40.7	41.2	41.5	40.7	40.0	
Stone, clay, and glass products	42.9	42.6	42.4	42.8	43.0	43.9	43.9	43.8	43.0	42.8	
Primary metal industries	44.7	44.7	44.8	43.4	45.1	45.3	45.4	44.7	44.5	43.1	
Basic furnaces and basic steel products ..	44.9	45.2	45.2	44.2	45.2	45.5	45.2	45.3	45.3	44.1	
Fabricated metal products	42.4	42.3	42.2	40.9	42.9	42.9	42.7	42.6	42.3	40.8	
Industrial machinery and equipment	43.6	43.5	43.5	42.0	43.9	43.6	43.5	43.3	43.2	41.6	
Electronic and other electrical equipment ..	41.8	41.6	41.4	40.3	42.3	42.0	41.9	41.8	41.3	40.2	
Transportation equipment	44.7	43.5	43.8	42.1	44.8	44.7	43.8	43.7	43.6	41.4	
Motor vehicles and equipment	45.4	43.5	43.9	42.3	45.3	45.0	43.8	43.7	43.6	41.3	
Instruments and related products	41.7	42.1	41.7	40.9	41.9	41.8	41.7	42.1	41.5	41.0	
Miscellaneous manufacturing	40.2	40.2	40.3	39.3	40.5	40.7	40.2	40.7	40.2	39.0	
Nondurable goods	40.5	40.6	40.6	40.0	40.9	41.1	41.2	40.9	40.8	40.1	
Overtime hours	4.1	4.0	4.2	3.8	4.4	4.5	4.4	4.3	4.4	3.9	
Food and kindred products	40.4	40.9	40.9	40.4	41.1	41.7	41.9	41.4	41.4	41.0	
Tobacco products	38.4	37.4	37.1	37.2	39.0	39.1	38.4	38.7	37.5	37.4	
Textile mill products	41.3	41.1	41.2	40.0	41.7	41.7	41.8	41.7	41.2	39.8	
Apparel and other textile products	37.2	37.1	37.2	36.4	37.5	37.5	37.6	37.4	37.1	36.4	
Paper and allied products	43.4	43.0	43.1	42.3	43.9	43.8	43.6	43.4	43.4	42.5	
Printing and publishing	38.3	38.2	38.4	37.9	38.5	38.6	38.5	38.5	38.3	37.9	
Chemicals and allied products	43.0	43.3	43.4	42.9	43.1	43.1	43.5	43.5	43.4	43.1	
Petroleum and coal products	42.4	42.2	43.2	42.5	(2)	(2)	(2)	(2)	(2)	(2)	
Rubber and misc. plastics products	41.7	41.6	41.5	40.9	42.0	42.1	42.0	41.8	41.5	40.5	
Leather and leather products	38.1	37.9	37.7	36.1	38.5	38.3	38.3	38.8	37.8	36.3	
Service-producing	32.6	33.0	32.9	32.6	32.7	32.8	32.9	33.1	33.0	33.0	
Transportation and public utilities	39.2	39.8	39.3	39.3	39.3	39.7	39.8	40.0	39.5	39.6	
Wholesale trade	38.3	38.5	38.4	38.3	38.4	38.2	38.4	38.6	38.5	38.4	
Retail trade	28.6	28.7	28.7	28.8	28.9	28.9	29.0	29.1	29.0	29.1	
Finance, insurance, and real estate	35.9	37.1	36.9	36.5	(2)	(2)	(2)	(2)	(2)	(2)	
Services	32.4	32.8	32.7	32.6	(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; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonfarm

payrolls.

² These series are 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.

P = preliminary.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

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

Industry	Average hourly earnings				Average weekly earnings			
	Apr. 1987	Feb. 1988	Mar. 1988 ^P	Apr. 1988 ^P	Apr. 1987	Feb. 1988	Mar. 1988 ^P	Apr. 1988 ^P
Total private	\$12.17	\$12.83	\$12.86	\$12.88	\$418.65	\$437.00	\$436.77	\$434.82
Seasonally adjusted	12.14	12.59	12.63	12.67	418.63	439.39	438.28	435.85
Goods-producing	13.77	14.11	14.18	14.26	565.95	577.10	578.54	573.25
Mining	16.05	16.85	17.08	17.10	723.88	739.72	738.70	742.14
Construction	15.75	16.18	16.27	16.34	608.53	613.22	615.01	619.29
Manufacturing	13.09	13.42	13.48	13.51	547.16	559.61	562.12	551.21
Durable goods	13.64	13.98	14.04	14.03	582.43	594.15	596.70	590.84
Lumber and wood products	10.84	10.90	10.96	10.99	438.37	441.45	447.17	449.49
Furniture and fixtures	10.42	10.77	10.80	10.82	411.59	436.19	436.32	430.84
Stone, clay, and glass products	13.06	13.45	13.48	13.67	560.27	572.87	571.55	585.08
Primary metal industries	15.15	15.46	15.51	15.72	677.21	691.06	691.75	682.25
Basic furnaces and basic steel products	17.88	18.31	18.28	18.78	802.81	827.81	825.35	830.08
Fabricated metal products	12.90	13.02	13.05	12.94	542.72	550.75	550.71	539.25
Industrial machinery and equipment	13.94	14.36	14.35	14.33	607.78	624.68	624.23	601.88
Electronic and other electrical equipment	12.55	12.97	13.07	13.17	524.59	539.55	541.10	530.75
Transportation equipment	17.48	17.81	17.98	17.91	781.36	774.74	786.85	754.01
Motor vehicles and equipment	18.01	18.35	18.55	18.88	817.85	795.23	814.35	785.93
Instruments and related products	13.47	13.72	13.78	13.76	591.70	577.81	574.83	583.80
Miscellaneous manufacturing	10.53	10.80	10.79	10.74	423.31	434.16	434.84	422.08
Nonurable goods	12.27	12.58	12.64	12.73	486.94	510.75	513.18	508.20
Food and kindred products	11.45	11.84	11.71	11.78	482.58	478.08	478.94	478.91
Tobacco products	20.32	18.10	18.42	18.49	789.29	676.94	683.38	687.46
Textile mill products	9.94	10.25	10.26	10.38	410.52	421.29	423.54	415.20
Apparel and other textile products	8.21	8.38	8.42	8.50	305.41	310.90	313.22	309.40
Paper and allied products	15.00	15.23	15.32	15.50	651.00	654.89	660.29	655.85
Printing and publishing	12.99	13.33	13.37	13.35	497.52	508.21	513.41	505.97
Chemicals and allied products	16.42	16.94	16.97	17.17	708.05	733.80	736.80	736.89
Petroleum and coal products	19.97	20.92	21.15	20.88	848.73	882.82	913.88	887.40
Rubber and misc. plastics products	11.53	11.78	11.79	11.86	480.80	490.05	489.29	485.07
Leather and leather products	8.87	9.25	9.31	9.25	337.95	350.58	350.99	333.93
Service-producing	11.83	12.16	12.17	12.17	379.14	401.28	400.39	399.18
Transportation and public utilities	14.77	15.23	15.16	15.24	578.96	606.15	595.79	598.93
Wholesale trade	13.33	13.84	13.85	13.91	510.54	532.84	531.84	532.75
Retail trade	8.28	8.62	8.66	8.69	236.81	247.39	248.54	250.27
Finance, insurance, and real estate	13.09	13.92	13.96	13.95	469.93	516.43	515.12	509.18
Services	12.20	12.75	12.77	12.74	398.28	418.20	417.58	415.32

¹ See footnotes 1, table B-2.

P = preliminary.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-4. Average hourly earnings of production or nonsupervisory workers¹ on private nonfarm payrolls by industry, seasonally adjusted

Industry	Apr. 1997	Dec. 1997	Jan. 1998	Feb. 1998	Mar. 1998 ^P	Apr. 1998 ^P	Percent change from: Mar. 1998-Apr. 1998
Total private:							
Current dollars	\$12.14	\$12.48	\$12.52	\$12.59	\$12.63	\$12.67	0.3
Constant (1982) dollars ²	7.49	7.62	7.84	7.69	7.72	N.A.	(3)
Goods-producing	13.80	14.17	14.15	14.21	14.25	14.28	.2
Mining	15.98	16.41	16.42	16.73	17.03	17.04	.1
Construction	15.86	16.36	16.22	16.29	16.41	16.46	.3
Manufacturing	13.07	13.39	13.28	13.43	13.47	13.47	.0
Excluding overtime ⁴	12.38	12.64	12.64	12.70	12.75	12.84	.7
Service-producing	11.58	11.82	11.97	12.06	12.10	12.16	.5
Transportation and public utilities	14.76	15.09	15.26	15.23	15.19	15.28	.8
Wholesale trade	13.27	13.69	13.67	13.80	13.87	13.90	.2
Retail trade	8.26	8.51	8.57	8.59	8.63	8.69	.7
Finance, insurance, and real estate	13.00	13.59	13.63	13.84	13.89	13.95	.4
Services	12.16	12.48	12.52	12.62	12.68	12.75	.6

¹ See footnote 1, table B-2.² The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) is used to deflate this series.³ Change was .4 percent from February 1998 to March

1998, the latest month available.

⁴ Derived by assuming that overtime hours are paid at the rate of time and one-half.

N.A. = not available.

P = preliminary.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-6. Indexes of aggregate weekly hours of production or nonsupervisory workers¹ on private nonfarm payrolls by industry (1982=100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Apr. 1997	Feb. 1998	Mar. 1998P	Apr. 1998P	Apr. 1997	Dec. 1997	Jan. 1998	Feb. 1998	Mar. 1998P	Apr. 1998P
Total private	138.2	140.4	140.8	141.5	139.6	142.5	143.6	144.5	143.5	142.9
Goods-producing	111.2	110.5	110.9	110.6	113.3	115.0	116.4	115.9	114.0	111.7
Mining	54.9	53.1	53.3	53.5	55.6	56.0	56.7	54.8	54.5	54.1
Construction	147.2	139.4	140.8	149.9	153.2	156.7	164.3	163.5	155.9	155.6
Manufacturing	107.2	108.1	108.3	105.9	108.5	109.9	110.0	109.7	108.9	108.0
Durable goods	110.9	112.6	112.8	110.0	111.7	113.9	113.9	113.8	112.9	109.4
Lumber and wood products	140.8	139.5	140.6	141.9	143.3	144.2	145.9	145.1	144.7	143.5
Furniture and fixtures	124.6	131.5	132.0	130.3	126.7	130.5	133.1	134.7	132.7	131.4
Stone, clay, and glass products	106.8	106.3	106.9	110.8	109.2	112.8	114.4	114.4	111.0	111.3
Primary metal industries	93.9	95.6	95.5	92.8	94.5	96.5	97.2	95.6	95.3	92.1
Blas furnaces and basic steel products	72.8	74.3	74.1	71.8	73.6	74.3	75.9	74.4	74.4	71.6
Fabricated metal products	118.3	118.7	118.2	114.6	118.0	119.8	119.8	119.9	118.7	113.9
Industrial machinery and equipment	108.8	111.4	111.8	107.6	109.2	110.8	110.9	110.7	110.2	105.9
Electronic and other electrical equipment	107.7	110.0	109.2	108.0	109.1	111.1	111.0	110.4	108.1	105.9
Transportation equipment	127.9	128.1	129.6	124.5	126.5	131.4	128.6	128.8	126.8	122.1
Motor vehicles and equipment	166.1	153.3	155.2	158.8	164.4	169.6	164.5	164.3	163.1	154.7
Instruments and related products	74.7	76.6	76.2	74.7	75.1	75.6	76.1	76.7	75.9	75.0
Miscellaneous manufacturing	102.4	101.3	102.3	100.3	103.3	103.4	102.2	103.4	102.5	99.8
Nondurable goods	102.1	102.0	102.2	100.2	104.2	104.4	104.7	104.0	103.5	101.5
Food and kindred products	110.8	113.9	113.7	112.0	117.0	118.0	119.9	118.7	118.8	117.6
Tobacco products	54.9	61.6	58.2	56.9	59.9	60.0	60.9	61.3	61.3	61.1
Textile mill products	88.8	86.4	86.5	83.9	89.6	88.7	88.4	88.0	86.6	83.5
Apparel and other textile products	73.2	68.7	68.8	66.7	73.9	71.2	70.6	69.5	66.9	66.7
Paper and allied products	106.4	106.0	106.1	106.0	110.4	110.2	110.1	109.8	108.4	106.8
Printing and publishing	123.9	123.8	124.3	122.2	124.7	125.9	125.3	125.3	123.7	122.2
Chemicals and allied products	99.4	102.0	102.4	101.1	99.9	101.3	102.4	102.7	102.5	102.0
Petroleum and coal products	73.6	67.9	70.3	70.4	73.6	72.4	74.6	70.8	72.9	70.9
Rubber and misc. plastics products	144.8	146.3	146.4	144.2	145.9	147.2	147.8	147.3	146.5	143.1
Leather and leather products	41.5	38.1	37.8	35.7	42.0	38.6	38.8	39.3	37.7	35.7
Service-producing	150.3	153.9	154.2	155.4	151.3	154.9	155.6	157.3	156.8	156.6
Transportation and public utilities	129.0	130.7	129.6	130.0	130.1	131.1	132.0	132.8	131.3	131.8
Wholesale trade	124.9	127.3	127.4	127.6	125.7	126.9	128.1	129.0	128.6	128.5
Retail trade	134.6	136.0	136.3	136.2	137.9	140.5	140.8	141.6	141.0	141.3
Finance, insurance, and real estate	126.2	133.7	133.9	133.5	126.7	129.3	130.3	134.8	135.2	134.2
Services	182.0	187.1	188.1	189.6	181.7	187.5	188.6	190.4	190.0	190.3

¹ See footnote 1, table B-2.

P = preliminary.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

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

(Percent)

Time span	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Private nonfarm payrolls, 356 industries ¹												
Over 1-month span:												
1994	57.6	61.9	67.1	64.5	57.7	63.9	62.5	62.6	61.4	60.3	63.8	62.4
1995	62.4	60.1	54.5	55.6	48.0	53.9	54.1	59.8	57.0	54.9	57.2	57.9
1996	51.7	64.3	60.1	54.9	62.9	60.5	56.5	59.3	54.4	62.8	58.1	61.0
1997	59.3	59.1	59.0	61.1	57.4	50.7	59.8	58.7	56.5	64.2	61.7	61.4
1998	64.5	58.3	P55.2	P54.1								
Over 3-month span:												
1994	65.3	69.5	70.4	68.7	67.1	67.0	69.1	69.7	65.7	65.6	67.0	66.2
1995	65.4	62.5	58.7	53.2	54.6	52.4	57.9	59.6	59.7	59.0	57.0	58.3
1996	62.6	63.8	62.8	61.2	62.1	63.1	62.6	58.8	62.8	60.4	64.7	65.0
1997	64.6	62.2	64.2	65.6	59.7	58.7	59.1	65.0	65.3	67.3	68.4	69.9
1998	66.4	P64.5	P60.7									
Over 6-month span:												
1994	71.1	69.8	69.8	70.9	70.1	69.8	69.7	69.4	69.4	67.4	67.7	66.2
1995	66.9	61.4	58.1	58.6	58.1	58.1	56.7	59.8	60.3	59.1	61.5	63.3
1996	62.2	63.5	63.5	63.5	62.6	61.2	65.3	63.6	62.8	64.5	64.2	67.4
1997	67.6	66.6	64.5	64.6	64.3	66.7	67.0	69.3	70.2	72.9	73.0	P71.3
1998	P69.5											
Over 12-month span:												
1994	70.2	71.6	71.8	71.8	72.1	71.8	71.5	72.1	70.1	69.5	66.6	65.0
1995	63.6	62.4	62.6	63.3	61.7	61.9	58.7	62.2	62.2	61.1	62.2	63.3
1996	63.5	64.7	62.4	62.9	64.7	64.2	65.0	63.1	63.8	66.7	65.7	65.0
1997	67.3	66.2	69.4	70.4	70.1	69.5	71.3	71.6	P72.2	P71.3		
1998												
Manufacturing payrolls, 139 industries ¹												
Over 1-month span:												
1994	55.8	59.0	60.4	58.8	52.9	56.6	59.4	56.1	52.9	55.0	58.6	58.3
1995	54.3	56.1	44.2	51.4	42.1	42.8	43.5	52.2	47.1	50.0	47.5	50.7
1996	45.7	54.3	47.8	39.2	52.2	52.2	44.2	52.8	44.2	50.7	49.6	52.2
1997	54.0	50.4	52.9	52.9	51.4	49.3	51.8	49.8	54.3	57.6	59.4	57.2
1998	60.8	50.0	P47.5	P47.1								
Over 3-month span:												
1994	61.9	64.7	65.5	59.7	57.8	60.1	62.2	57.9	55.0	55.4	60.1	59.4
1995	59.7	50.4	47.5	40.3	42.4	38.3	38.5	43.9	49.3	48.4	45.3	43.9
1996	47.5	47.8	42.1	38.5	43.2	45.0	46.9	43.2	50.4	46.4	52.5	52.5
1997	53.2	51.4	50.7	52.5	48.6	48.9	48.6	53.6	55.8	62.9	64.0	67.3
1998	60.4	P56.5	P45.0									
Over 6-month span:												
1994	62.2	62.2	62.6	63.3	59.4	56.5	56.5	59.6	59.6	55.0	58.3	56.0
1995	55.8	48.6	43.9	38.8	39.2	39.6	39.8	39.6	43.9	45.0	44.2	44.6
1996	41.4	41.7	41.0	38.1	39.6	40.8	47.5	46.8	45.3	50.4	48.2	53.2
1997	53.2	53.2	50.4	49.3	46.6	52.2	55.0	58.3	60.8	65.1	68.0	P63.7
1998	P60.8											
Over 12-month span:												
1994	57.9	58.6	60.8	60.8	60.8	63.3	59.4	60.1	57.2	56.5	50.4	49.6
1995	46.0	44.2	46.0	47.8	41.0	41.7	38.8	38.8	36.3	37.4	38.1	38.9
1996	39.6	42.8	39.2	39.6	42.4	40.3	43.5	40.3	43.5	46.8	48.4	47.1
1997	51.4	47.8	52.2	55.0	57.8	55.8	57.2	58.3	P60.4	P60.1		
1998												

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 = preliminary.

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.

U. S. Department of Labor

Commissioner
Bureau of Labor Statistics
Washington, D.C. 20212

MAY 27 1998

Honorable Maurice D. Hinchey
Joint Economic Committee
House of Representatives
Washington, D.C. 20515

Dear Congressman Hinchey:

At the Joint Economic Committee hearing on May 8, you asked that I provide you with information from the Consumer Price Index (CPI) program on the experimental CPI for the elderly and the recent behavior of commodities prices. In addition, you asked that I provide you with information on our occupational employment projections.

I have enclosed a table (Enclosure 1) that shows the experimental CPI for the Elderly (CPI-E) from December 1982 through April 1998. This index was compiled in response to the 1987 amendments to the Older Americans Act of 1965, which directed the Bureau of Labor Statistics to develop an experimental measure of change in consumer prices for those 62 years of age or older. The index was compiled by taking existing samples of areas, outlets, and prices used in producing the CPI for All Urban Consumers (CPI-U) and weighting the prices by the spending patterns of the population of older Americans. The article *Experimental price index for elderly consumers* (Enclosure 2) provides more detail on the scope and important limitations of this measure.

In response to your request for further information on the recent behavior of prices of commodities, I am enclosing a table (Enclosure 3) that provides annual percentage changes for the overall CPI-U, and for selected components, from 1993 through the present. This table is intended to facilitate the comparison of recent rates of price change for commodities with those for services. It is interesting to note that, as was discussed at the hearing, the growth in commodities prices decelerated in 1997, even excluding the volatile food and energy components from consideration.

Honorable Maurice D. Hinchey--2

MAY 27 1998

The decline in the index for commodities thus far in 1998, however, is directly attributable to the sharp drop in petroleum-based energy prices.

I also have enclosed two publications that present information related to your question about occupations that are projected to have significant growth and the wage levels of those occupations. Much of that information is available in the Winter 1997-98 *Occupational Outlook Quarterly* (Enclosure 4), which presents a graphical summary of the Bureau's 1996-2006 projections. The charts on pages 14 and 15 present the 20 fastest growing occupations and the 20 occupations projected to have the largest numerical growth. The chart indicates how each occupation ranks in terms of earnings--very high (VH) indicates it ranks in the top quartile, high (H) in the second quartile, low (L) in the third quartile and very low (VL) in the bottom quartile. The chart presenting the fastest growing occupations indicates that the three fastest growing occupations are associated with computer technology and have very high earnings. Of the 20 fastest growing occupations, 13 have above average earnings. You also may be interested in the information on pages 17-23 that identifies occupations having above-average projected growth, above-average earnings, and a below-average unemployment rate.

The second publication, *Occupational Projections and Training Data* (Enclosure 5), presents information on the projected growth of more than 500 occupations (see table 1 on page 8). The quartile rankings of earnings for each occupation also are presented. In addition, for each occupation information is presented on the usual educational or training requirement, percent self-employed, and quartile ranking by unemployment rate and percent who work part time.

Honorable Maurice D. Hinchey--3

MAY 27 1998

Please let me know if you have any questions about the materials that I have provided.

Sincerely yours,

A handwritten signature in cursive script that reads "Katharine Abraham".

KATHARINE G. ABRAHAM
Commissioner

Enclosures

**Table 1. Experimental consumer price index for older Americans, for all items and for CPI major expenditure groups
(December 1982=100, unless otherwise stated)**

Month/year	Food and beverages						Recreation (1)	Education and communication (1)	Other goods and services
	All items	Food and beverages	Housing	Apparel	Transportation	Medical care			
Dec-82	100.0	100.0	100.0	100.0	100.0	100.0		100.0	
Jan-83	100.4	100.5	100.5	98.5	99.5	101.0		101.2	
Feb-83	100.5	100.9	100.6	99.0	98.5	102.1		101.9	
Mar-83	100.6	101.5	100.6	100.3	97.7	102.4		101.9	
Apr-83	101.2	102.0	101.1	100.9	98.4	102.7		102.5	
May-83	101.7	102.2	101.6	101.2	100.6	102.9		102.7	
Jun-83	102.0	102.2	102.0	101.1	101.3	103.2		103.0	
Jul-83	102.4	102.3	102.4	100.7	101.9	103.8		104.0	
Aug-83	102.7	102.3	102.6	102.2	102.4	104.5		104.7	
Sep-83	103.2	102.4	103.1	104.0	102.7	104.8		105.9	
Oct-83	103.4	102.5	103.2	104.0	103.1	105.3		106.3	
Nov-83	103.5	102.2	103.3	103.9	103.4	105.8		106.9	
Dec-83	103.7	102.7	103.4	103.2	103.4	106.2		107.2	
Jan-84	104.4	104.9	104.0	101.5	103.4	107.2		107.8	
Feb-84	105.1	106.0	104.7	101.4	103.4	108.3		108.2	
Mar-84	105.3	106.0	104.8	103.3	103.7	108.7		108.4	
Apr-84	105.7	106.0	105.3	103.5	104.4	109.0		108.7	
May-84	106.0	105.6	105.7	103.3	105.2	109.3		108.9	
Jun-84	106.3	105.9	106.1	102.5	105.4	109.6		109.4	
Jul-84	106.7	106.3	106.8	101.7	105.4	110.3		110.2	
Aug-84	107.2	106.9	107.2	103.7	105.5	110.8		110.5	
Sep-84	107.6	106.6	107.7	106.0	105.7	111.1		111.8	
Oct-84	107.8	106.7	107.7	106.7	106.3	111.7		112.3	
Nov-84	107.9	106.5	107.6	106.3	106.5	112.3		112.7	
Dec-84	108.0	106.6	107.6	105.3	106.5	112.7		112.8	
Jan-85	108.3	107.6	108.0	103.4	106.2	113.5		113.6	
Feb-85	108.8	108.5	108.5	104.3	106.1	114.3		114.2	
Mar-85	109.2	108.6	108.9	106.4	106.9	115.0		114.4	

Month/year	All Items	Food and beverages	Housing	Apparel	Transportation	Medical care	Recreation	Education and communication	Other goods and services
Apr-85	109.7	108.5	109.3	106.9	108.0	115.5			114.8
May-85	110.1	108.3	110.1	106.5	108.6	116.0			115.1
Jun-85	110.5	108.4	110.7	106.0	108.8	116.6			115.4
Jul-85	110.8	108.5	111.0	104.8	109.0	117.3			116.1
Aug-85	111.1	108.5	111.4	106.2	108.7	118.1			116.5
Sep-85	111.4	108.5	111.7	108.7	108.5	118.6			117.9
Oct-85	111.7	108.6	111.9	109.5	108.9	119.2			118.5
Nov-85	112.1	108.9	112.2	109.6	109.7	120.0			118.6
Dec-85	112.4	109.7	112.5	108.4	110.0	120.5			119.0
Jan-86	112.9	110.7	112.6	106.0	110.1	121.6			119.9
Feb-86	112.7	110.7	112.6	105.7	108.6	122.9			120.4
Mar-86	112.3	110.8	112.6	107.0	105.5	123.9			120.6
Apr-86	112.3	111.1	113.0	107.5	103.4	124.6			121.1
May-86	112.6	111.4	113.1	108.6	104.3	125.1			121.3
Jun-86	113.1	111.4	113.8	105.7	105.3	125.6			121.5
Jul-86	113.3	112.5	113.9	105.2	104.2	126.7			122.3
Aug-86	113.6	113.4	114.1	107.3	103.1	127.5			122.7
Sep-86	114.1	113.5	114.5	110.0	103.4	128.1			123.9
Oct-86	114.2	113.7	114.3	110.5	103.5	128.9			124.3
Nov-86	114.2	113.9	114.0	110.4	104.2	129.6			124.5
Dec-86	114.4	114.1	114.1	109.1	104.5	130.3			124.8
Jan-87	115.2	115.5	114.8	107.1	105.8	131.0			125.6
Feb-87	115.7	116.0	115.2	107.8	106.3	131.8			126.4
Mar-87	116.1	115.9	115.7	111.5	108.5	132.5			126.8
Apr-87	116.7	116.2	116.1	113.5	107.3	133.0			127.1
May-87	117.1	116.9	116.6	113.0	107.7	133.4			127.5
Jun-87	117.7	117.5	117.3	110.9	108.4	134.0			127.9
Jul-87	117.9	117.2	117.7	108.4	109.0	134.6			128.7
Aug-87	118.6	117.2	118.5	111.1	109.6	135.3			129.3
Sep-87	119.0	117.6	118.6	115.5	109.7	135.8			130.5
Oct-87	119.3	117.7	118.6	117.6	110.0	136.4			130.9
Nov-87	119.5	117.5	118.6	117.6	110.8	136.9			131.1
Dec-87	119.5	118.2	118.7	114.3	110.5	137.2			131.4

Month/year	Food and beverages					Recreation	Education and communication	Other goods and services
	All Items	Housing	Apparel	Transportation	Medical care			
Jan-88	120.0	119.2	119.5	111.9	110.1	138.5		132.7
Feb-88	120.3	119.2	119.9	112.0	109.7	139.5		133.8
Mar-88	120.9	119.4	120.5	116.3	109.5	140.4		134.3
Apr-88	121.5	120.1	120.8	118.6	110.2	141.0		134.5
May-88	121.9	120.6	121.2	118.9	111.1	141.8		134.9
Jun-88	122.5	121.1	122.0	116.8	111.5	142.9		135.3
Jul-88	123.0	122.4	122.5	114.6	111.9	143.7		136.4
Aug-88	123.6	123.0	123.1	114.8	112.5	144.4		137.0
Sep-88	124.2	123.9	123.3	120.1	112.6	145.2		138.6
Oct-88	124.6	124.0	123.3	123.3	112.6	146.2		139.1
Nov-88	124.8	123.6	123.4	122.4	113.5	146.9		139.6
Dec-88	124.9	124.2	123.7	120.0	113.7	147.5		140.1
Jan-89	125.7	125.8	124.3	117.0	114.0	149.1		142.2
Feb-89	126.3	126.6	124.7	117.2	114.5	150.6		143.0
Mar-89	127.1	127.3	125.4	122.0	114.8	151.7		143.5
Apr-89	127.9	128.1	125.6	124.2	117.6	152.5		143.9
May-89	128.6	128.9	126.1	123.2	119.0	153.3		144.9
Jun-89	129.0	129.0	126.9	120.2	118.9	154.4		145.9
Jul-89	129.6	129.6	128.0	117.4	118.4	155.8		146.8
Aug-89	129.8	129.8	128.4	118.9	117.4	156.9		148.1
Sep-89	130.0	130.1	128.5	117.1	117.7	157.5		148.5
Oct-89	130.8	130.8	128.9	120.5	118.5	158.7		149.0
Nov-89	131.1	131.1	129.2	120.1	119.1	160.1		149.2
Dec-89	131.4	131.6	129.6	116.6	119.3	160.8		150.4
Jan-90	133.0	135.2	130.9	114.0	121.4	162.6		151.7
Feb-90	133.6	136.2	131.0	118.0	121.4	164.4		152.4
Mar-90	134.4	136.2	131.6	123.0	121.3	166.1		153.2
Apr-90	134.6	135.7	131.7	124.3	121.8	167.3		154.0
May-90	134.9	135.8	132.0	123.4	122.3	168.7		154.7
Jun-90	135.6	136.5	133.2	121.0	122.8	170.0		156.0
Jul-90	136.6	137.4	134.3	118.5	123.0	172.0		157.4
Aug-90	137.9	137.5	136.6	120.0	125.3	173.7		158.1
Sep-90	138.8	137.7	135.8	123.9	128.0	174.7		159.3

Month/year	All Items	Food and beverages	Housing	Apparel	Transportation	Medical care	Recreation	Education and communication	Other goods and services
Oct-90	139.6	138.1	136.1	128.0	130.8	178.3			159.8
Nov-90	140.0	138.5	136.0	124.8	132.1	177.8			160.3
Dec-90	140.1	136.7	136.1	122.4	132.6	178.9			161.3
Jan-91	141.2	141.1	137.6	121.5	130.9	180.9			163.2
Feb-91	141.6	141.1	138.2	124.5	128.1	182.9			164.4
Mar-91	141.9	141.5	138.5	127.1	127.6	184.4			165.1
Apr-91	142.0	142.5	138.1	128.1	127.4	185.2			166.0
May-91	142.4	142.6	138.3	127.7	128.5	186.1			166.5
Jun-91	142.9	143.2	139.0	125.0	128.8	187.2			167.5
Jul-91	143.2	142.2	139.9	123.5	128.6	188.7			168.0
Aug-91	143.6	141.5	140.3	125.6	129.0	190.1			169.2
Sep-91	144.0	141.5	140.3	129.1	129.0	191.1			170.7
Oct-91	144.1	141.0	140.3	128.8	129.2	192.1			171.3
Nov-91	144.5	141.5	140.4	129.6	130.5	193.2			171.9
Dec-91	144.8	142.0	140.8	126.5	130.6	194.1			172.7
Jan-92	145.4	142.8	141.7	126.2	130.3	195.9			173.7
Feb-92	146.0	143.0	142.2	127.8	129.9	197.9			174.6
Mar-92	146.7	143.7	142.7	130.5	130.5	199.2			175.2
Apr-92	146.8	143.7	142.5	130.7	131.2	199.9			175.7
May-92	147.0	142.9	142.6	130.7	132.1	200.6			176.8
Jun-92	147.3	142.1	143.5	130.2	131.8	201.3			177.2
Jul-92	147.8	142.0	144.3	128.3	132.2	202.6			177.8
Aug-92	148.2	142.9	144.7	128.9	131.9	203.4			179.0
Sep-92	148.4	143.3	144.3	131.9	131.6	204.1			180.4
Oct-92	148.0	143.2	144.5	135.0	133.3	205.3			181.1
Nov-92	149.2	143.0	144.4	134.6	134.7	206.3			181.2
Dec-92	149.2	143.4	144.5	131.2	134.6	206.9			182.3
Jan-93	150.1	144.7	145.4	129.7	134.9	208.6			184.5
Feb-93	150.7	144.8	145.9	133.3	135.1	210.6			185.1
Mar-93	151.2	145.1	146.5	135.9	134.8	211.2			186.0
Apr-93	151.7	145.6	146.7	137.1	135.2	212.0			186.5
May-93	152.0	146.2	146.8	135.4	136.0	213.3			187.7

Month/year	All items	Food and beverages	Housing	Apparel	Transportation	Medical care	Recreation	Education and communication	Other goods and services
Jun-83	152.2	145.2	147.8	131.5	135.9	214.0			187.8
Jul-83	152.4	145.2	148.2	129.3	136.0	215.2			188.0
Aug-83	152.8	145.9	148.6	132.7	136.0	216.0			188.9
Sep-83	152.9	148.0	148.5	135.4	135.8	216.8			185.0
Oct-83	153.4	146.7	148.4	136.1	137.5	217.7			185.3
Nov-83	153.6	146.9	148.2	136.1	138.5	218.3			185.7
Dec-83	153.8	147.7	148.6	133.2	138.1	218.7			188.3
Jan-84	154.4	148.8	149.4	131.4	137.7	220.2			187.9
Feb-84	155.0	148.0	150.4	132.5	138.1	221.7			187.4
Mar-84	155.6	148.3	150.8	135.5	138.6	222.4			187.7
Apr-84	155.7	148.5	150.5	136.3	138.9	223.4			188.9
May-84	155.8	148.7	150.7	135.3	138.7	224.1			189.8
Jun-84	156.3	148.7	151.5	133.1	139.5	224.8			190.1
Jul-84	156.8	149.7	152.0	130.9	140.3	228.2			190.4
Aug-84	157.5	150.4	152.6	130.1	141.5	227.1			191.4
Sep-84	157.7	150.8	152.3	133.5	141.3	227.8			192.2
Oct-84	157.9	150.5	152.3	135.3	141.4	229.1			192.6
Nov-84	158.0	150.8	152.1	134.0	142.2	228.8			193.3
Dec-84	158.0	152.5	151.9	130.3	142.0	230.6			193.7
Jan-85	158.9	153.2	153.2	129.1	142.3	232.1			194.1
Feb-85	159.5	153.0	153.9	130.5	142.4	233.5			195.3
Mar-85	160.0	153.0	154.4	133.2	143.0	234.1			195.3
Apr-85	160.5	154.0	154.6	134.2	144.0	234.5			195.7
May-85	160.8	154.0	154.7	133.0	145.2	234.9			196.4
Jun-85	161.2	153.7	155.6	129.4	146.2	235.3			196.6
Jul-85	161.5	153.8	156.4	127.9	145.5	236.2			197.3
Aug-85	161.9	154.1	156.8	130.3	144.4	237.0			198.8
Sep-85	162.1	154.8	156.6	133.1	144.0	237.5			200.7
Oct-85	162.5	155.2	156.7	134.8	144.7	238.4			201.2
Nov-85	162.5	155.1	156.5	134.4	144.7	239.0			201.7
Dec-85	162.4	155.8	156.7	130.5	144.0	239.4			201.6
Jan-86	163.5	156.9	158.0	129.2	144.9	240.9			202.9

Month/year	All Items	Food and beverages	Housing	Apparel	Transportation	Medical care	Recreation	Education and communication	Other goods and services
Feb-96	164.1	156.7	158.8	129.7	145.7	242.0			203.6
Mar-96	164.9	157.5	159.4	133.1	146.5	242.4			204.1
Apr-96	165.4	158.2	159.4	133.4	148.4	242.7			204.3
May-96	165.7	158.0	159.6	132.5	149.7	243.1			205.1
Jun-96	165.9	158.8	160.2	129.2	149.5	243.4			205.2
Jul-96	166.5	159.3	161.3	127.2	149.0	244.3			205.7
Aug-96	166.7	159.8	161.7	127.2	148.3	244.6			207.0
Sep-96	167.0	160.7	161.3	130.6	148.9	244.9			208.0
Oct-96	167.8	161.5	161.5	133.6	149.8	245.8			208.4
Nov-96	167.8	161.9	161.4	132.9	150.7	246.0			209.0
Dec-96	167.9	162.4	161.6	129.6	151.3	245.9			208.6
Jan-97	168.6	162.5	162.9	128.2	150.9	247.2			209.9
Feb-97	169.2	162.5	163.8	130.3	150.6	248.0			211.0
Mar-97	169.6	162.6	164.1	132.7	151.0	248.6			212.1
Apr-97	169.7	162.6	163.9	134.5	150.9	249.0			213.7
May-97	169.6	162.6	163.7	133.7	150.5	249.5			214.1
Jun-97	169.9	162.7	164.8	130.3	150.2	249.6			213.9
Jul-97	170.3	163.2	165.6	128.5	150.0	250.2			214.2
Aug-97	170.6	163.9	165.7	129.2	150.0	250.6			215.7
Sep-97	170.8	164.1	165.4	132.6	150.5	250.7			217.2
Oct-97	171.2	164.4	165.6	135.3	151.0	251.2			218.5
Nov-97	171.2	164.6	165.6	135.2	150.3	251.7			219.0
Dec-97	171.0	164.8	165.6	131.6	149.6	252.5	100.0	100.0	219.3
Jan-98	171.5	166.2	166.3	129.4	149.2	253.6	100.5	99.9	220.2
Feb-98	171.9	165.5	166.9	132.1	148.7	254.9	101.1	99.7	221.6
Mar-98	172.3	165.9	167.3	135.4	148.1	255.5	101.5	99.9	221.5
Apr-98	172.6	165.9	167.6	136.1	148.1	256.4	101.7	100.0	223.1

Experimental price index for elderly consumers

An experimental consumer price index for older Americans rose somewhat faster than each of two published BLS Consumer Price Indexes: as might be expected, expenditures for medical care accounted almost entirely for this difference

Nathan Amble
and
Ken Stewart

The Consumer Price Index (CPI) of the Bureau of Labor Statistics measures the average change in prices over time for a fixed market basket of goods and services for two population groups. The CPI for All Urban Consumers (CPI-U) represents the spending habits of about 80 percent of the population of the United States. The CPI for Urban Wage Earners and Clerical Workers (CPI-W) is a subset of the CPI-U and represents about 32 percent of the total U.S. population.

The 1987 amendments to the Older Americans Act of 1965 directed BLS to develop an experimental index for a third population of consumers: those 62 years of age and older. In its 1988 report to Congress, BLS observed that from December 1982 to December 1987, the experimental consumer price index for older Americans rose slightly faster than the CPI-U and CPI-W.¹ (See table 1.)

This article updates the analysis of the behavior of the experimental index for older Americans for the period from December 1987 through December 1993. Over this 6-year period, the experimental price index rose 28.7 percent, slightly more than the increases of 26.3 percent for the CPI-U and 25.5 percent for the CPI-W.

Methodology, data, and limitations

Although the study discussed in this article indicates a higher overall inflation rate for older

Americans compared with the rates for the official CPI population groups, any conclusions drawn should be used with caution because of the various limitations inherent in the methodology.

Expenditure weights. For each CPI population group, item strata are weighted according to their importance in the spending patterns of the population. The population of older Americans used for the experimental price index was defined to be all urban noninstitutionalized consumer units that were either

1. unattached individuals who were at least 62 years of age; or
2. members of families whose reference person (as defined in the Consumer Expenditure Survey) or spouse was at least 62 years of age; or
3. members of groups of unrelated individuals living together who pool their resources to meet their living expenses and whose reference person was at least 62 years of age.

In the 1982-84 Consumer Expenditure Survey, which is used as the source of expenditure weights in the current CPI, 19 percent of the total sample of eligible urban consumer units (3,135 out of 16,500) met this definition. Because the number of consumer units used for determining weights in the experimental index was relatively small, expenditure weights used in the construction of the experimental price index have a higher sampling error than those used for the larger populations.

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CPI for Elderly Consumers

Table 1. Experimental consumer price index for older Americans, December 1982 through December 1993, for all items and for major CPI expenditure components

December 1982 = 100								
Month and year	All items	Food and beverages	Housing	Apparel and upkeep	Transportation	Medical care	Entertainment	Other goods and services
1982:								
December	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983:								
January	100.4	100.5	100.5	99.5	99.5	101.0	100.8	101.2
February	100.6	100.9	100.6	99.9	99.9	102.1	101.3	101.9
March	100.8	101.5	100.8	100.3	97.7	102.4	101.8	101.9
April	101.2	102.0	101.1	100.9	99.4	102.7	101.9	102.5
May	101.7	102.2	101.6	101.2	100.6	102.9	102.0	102.7
June	102.0	102.2	102.0	101.1	101.3	103.2	102.3	103.0
July	102.4	102.3	102.4	102.7	101.9	103.6	102.7	104.0
August	102.8	102.3	102.6	102.2	102.4	104.5	102.8	104.7
September	103.2	102.4	103.1	104.0	102.7	104.4	103.4	105.9
October	103.4	102.8	103.2	104.0	103.1	105.3	104.2	106.3
November	103.5	102.2	103.3	103.9	103.4	106.6	104.5	106.9
December	103.7	102.7	103.4	103.2	103.4	106.2	104.6	107.2
1984:								
January	104.4	104.9	104.0	101.5	103.4	107.2	104.8	107.8
February	106.1	106.0	104.7	101.4	103.4	106.3	105.4	108.2
March	105.3	106.0	104.8	103.3	103.7	108.7	106.4	108.4
April	105.7	106.0	105.3	103.5	104.4	109.0	106.4	108.7
May	106.0	106.4	106.7	103.3	105.2	109.3	106.3	108.9
June	106.3	106.9	106.1	102.5	106.4	109.6	106.9	109.4
July	106.7	106.3	106.8	101.7	105.4	110.3	107.2	110.2
August	107.2	106.9	107.2	103.7	105.5	110.9	107.7	110.5
September	107.6	106.6	107.7	106.0	105.7	111.1	108.1	111.8
October	107.8	106.7	107.7	106.7	106.3	111.7	108.7	112.3
November	107.9	106.5	107.6	106.3	106.5	112.3	109.1	112.7
December	108.0	106.8	107.8	106.3	106.5	112.7	108.6	113.8
1985:								
January	108.3	107.8	108.0	103.4	106.2	113.5	109.9	113.6
February	108.9	108.5	108.5	104.3	106.1	114.3	110.0	114.2
March	109.2	108.6	108.6	106.4	106.9	115.0	110.5	114.4
April	108.7	108.8	109.3	106.9	108.0	115.8	111.0	114.8
May	110.1	108.3	110.1	106.5	108.6	116.0	111.2	115.1
June	110.5	108.4	110.7	105.0	108.9	116.6	111.6	115.4
July	110.9	108.5	111.0	104.8	109.0	117.3	112.4	116.1
August	111.1	108.5	111.4	108.2	108.7	118.1	112.4	116.5
September	111.4	108.5	111.7	108.7	108.5	118.6	112.9	117.0
October	111.7	108.5	111.9	109.6	108.9	119.2	113.7	118.5
November	112.1	108.9	112.2	109.8	109.7	120.0	113.9	118.6
December	112.4	109.7	112.5	108.4	110.0	120.5	113.7	119.0
1986:								
January	112.9	110.7	112.9	108.0	110.1	121.6	114.6	119.9
February	113.7	110.7	112.6	106.7	109.6	122.9	115.2	120.4
March	112.3	110.9	112.8	107.0	109.9	123.9	115.4	120.8
April	112.3	111.1	113.0	107.5	103.4	124.6	115.8	121.3
May	112.6	111.4	113.1	106.6	104.3	125.1	115.9	121.3
June	113.1	111.4	113.8	105.7	105.3	125.6	116.2	121.5
July	113.3	112.5	113.9	105.2	106.2	126.7	116.3	122.3
August	113.6	113.4	114.1	107.3	103.1	127.5	117.7	122.7
September	114.1	113.5	114.5	110.0	103.4	128.1	117.1	123.9
October	114.2	113.7	114.3	110.5	103.5	129.9	117.7	124.3
November	114.2	113.9	114.0	110.4	104.2	129.6	118.2	124.6
December	114.4	114.1	114.1	108.1	104.5	130.5	118.1	124.8
1987:								
January	115.2	118.5	114.8	107.1	105.8	131.0	118.4	125.8
February	116.7	118.0	115.2	107.9	106.3	131.8	118.6	126.4
March	118.1	118.9	115.7	111.5	106.5	132.5	119.0	126.8
April	118.7	118.2	116.1	113.5	107.3	133.0	119.6	127.1
May	117.1	118.9	116.6	113.0	107.7	133.4	119.9	127.5
June	117.7	117.8	117.3	110.9	108.4	134.0	120.1	127.9
July	117.9	117.2	117.7	108.4	109.0	134.9	120.4	128.7
August	118.8	117.2	118.6	111.1	109.8	135.3	120.7	129.3
September	118.0	117.8	118.6	113.6	109.7	135.8	121.2	130.9
October	118.3	117.7	118.9	117.2	110.0	136.6	122.0	131.4
November	118.5	117.5	118.8	117.8	110.8	136.9	122.3	131.1
December	118.8	118.2	118.7	114.3	110.9	137.2	122.5	131.4

Table 1. Continued—Experimental consumer price index for older Americans, December 1982 through December 1993, for all items and for major expenditure components

[December 1982 = 100]

Month and year	All items	Food and beverages	Housing	Apparel and upkeep	Transportation	Medical care	Entertainment	Other goods and services
1988								
January	120.0	119.2	118.5	111.0	110.1	138.5	123.4	132.7
February	120.3	119.2	118.9	112.0	109.7	129.5	127.7	133.9
March	120.9	119.4	120.5	116.3	108.5	140.4	124.4	134.3
April	121.5	120.1	120.5	119.8	110.2	141.0	126.1	134.5
May	121.8	120.6	121.2	119.0	111.1	141.9	125.2	134.9
June	122.5	121.1	122.0	119.8	111.5	142.9	125.6	135.3
July	122.0	122.4	122.5	114.6	111.9	143.7	126.2	136.4
August	122.6	122.0	123.1	114.8	112.5	144.4	126.5	137.0
September	123.2	122.9	122.5	120.1	112.6	145.2	127.0	138.5
October	124.6	124.0	123.3	123.3	112.8	146.2	127.5	139.1
November	124.8	123.9	123.4	122.4	113.5	146.9	127.5	139.6
December	124.9	124.2	123.7	120.0	113.7	147.5	128.4	140.1
1989								
January	125.7	125.8	124.3	117.0	114.0	149.1	129.8	142.2
February	126.3	125.6	124.7	117.2	114.6	150.6	130.2	143.0
March	127.1	127.3	125.4	122.0	114.8	151.7	130.6	143.5
April	127.9	128.1	126.6	124.2	117.6	152.5	131.5	143.9
May	128.6	128.9	128.1	123.3	118.0	153.3	131.6	144.9
June	129.0	129.0	126.9	120.2	118.9	154.4	132.3	145.9
July	129.6	129.8	128.0	117.4	119.4	155.8	133.2	146.8
August	129.9	129.9	128.4	116.9	117.4	155.9	133.4	146.1
September	130.0	130.1	128.5	117.1	117.5	157.1	133.7	146.8
October	130.9	130.5	129.9	120.5	118.5	158.7	134.3	149.0
November	131.1	131.1	129.2	120.1	119.1	160.1	134.7	149.2
December	131.4	131.8	129.6	118.8	119.3	160.6	135.1	150.4
1990								
January	133.0	132.2	130.8	114.0	121.4	162.6	138.0	151.7
February	133.8	132.2	131.0	118.0	121.4	164.4	136.4	152.4
March	134.4	132.2	131.8	123.0	121.3	166.1	137.0	153.2
April	134.8	133.7	131.7	124.3	121.9	167.3	137.5	154.0
May	134.9	135.8	132.0	123.4	122.3	168.7	137.6	154.7
June	135.9	136.5	133.2	121.0	122.8	170.0	138.3	156.0
July	137.4	137.4	134.3	118.5	123.0	172.0	139.2	157.4
August	137.9	137.5	135.5	120.0	125.3	173.7	139.4	158.1
September	138.9	137.7	135.9	122.9	128.0	174.7	140.5	159.3
October	139.5	138.1	136.0	126.0	129.8	176.5	142.7	159.8
November	140.0	138.5	136.0	124.8	132.1	177.8	141.0	160.3
December	140.1	139.7	136.1	122.4	132.6	178.9	141.3	161.3
1991								
January	141.2	141.1	137.6	121.5	130.8	180.9	142.5	163.2
February	141.8	141.1	138.2	124.5	129.1	182.9	143.1	164.4
March	141.9	141.5	138.3	127.1	127.8	184.4	143.9	165.1
April	142.0	142.5	138.1	128.1	127.4	185.2	144.0	166.0
May	142.4	142.6	138.3	127.7	128.5	186.1	145.2	166.8
June	142.8	143.2	139.0	125.0	128.8	187.2	145.3	167.5
July	143.2	142.2	139.9	122.5	128.8	188.7	145.9	168.0
August	143.8	141.5	140.3	125.6	129.0	190.1	146.7	169.2
September	144.0	141.5	140.3	129.1	129.0	191.1	147.6	170.7
October	144.1	141.0	140.3	130.8	130.2	192.1	147.9	171.3
November	144.5	141.3	140.4	129.6	130.5	193.2	147.9	171.9
December	144.8	142.0	140.8	126.5	130.8	194.1	147.5	172.7
1992								
January	145.4	142.6	141.7	125.2	130.3	195.9	147.8	173.7
February	146.0	143.0	142.2	127.4	129.9	197.8	148.5	174.6
March	146.7	143.7	142.7	130.5	130.5	199.2	149.0	175.2
April	146.8	143.7	142.5	131.2	130.7	199.9	150.1	175.7
May	147.0	143.9	142.6	130.7	132.1	200.5	150.0	176.8
June	147.5	142.1	143.5	130.2	131.8	201.3	150.9	177.2
July	147.6	143.0	144.2	128.3	132.2	202.6	150.7	177.8
August	148.2	142.9	144.7	128.9	131.9	203.4	150.9	179.0
September	148.4	143.2	144.3	131.9	131.8	204.1	151.8	180.4
October	149.0	143.2	144.5	135.0	133.2	205.3	151.9	181.1
November	148.2	143.0	144.4	134.8	134.7	206.3	152.0	181.2
December	149.2	143.4	144.5	131.2	134.6	208.9	152.2	182.3

CPI for Elderly Consumers

Table 1. Continued—Experimental consumer price index for older Americans, December 1982 through December 1993, for all items and for major CPI expenditure components

(December 1982 = 100)								
Month and year	All items	Food and beverages	Housing	Apparel and upkeep	Transportation	Medical care	Entertainment	Other goods and services
1982								
January	180.1	144.7	143.4	129.7	124.9	208.8	182.8	184.5
February	180.7	144.8	142.9	133.3	125.1	210.3	183.0	185.1
March	181.2	145.1	146.5	135.9	124.9	211.2	183.3	185.0
April	181.7	145.9	148.7	137.1	126.2	212.0	184.0	185.5
May	182.0	146.2	148.8	138.4	126.0	213.3	183.7	187.7
June	182.2	146.2	147.8	131.8	125.9	214.0	184.5	187.6
July	182.4	146.2	146.2	129.3	126.0	215.2	184.1	188.0
August	182.8	145.8	145.6	132.7	126.0	216.0	184.7	188.9
September	182.9	148.0	148.5	125.4	126.8	218.6	185.5	188.0
October	183.0	146.7	146.4	126.1	127.6	217.7	186.2	188.3
November	183.9	146.9	148.2	126.1	129.2	218.3	186.8	189.7
December	183.9	147.7	148.8	123.2	129.1	218.7	187.0	188.3

For each population group, the base expenditure weight of any component represents the actual expenditure on that component in the base period. The *relative importance* of any component is its expenditure weight (updated for changes in relative prices) and represents the proportion of that weight to total expenditures for the population. The relative importances of selected components for each of the three population groups are shown in table 2 for December 1987, the first month of the study.

Areas and outlets priced. The experimental consumer price index for older consumers is a weighted average of price changes for the same set of item strata collected from the same sample of urban areas as are used in calculating the CPI-U and CPI-W.

Retail outlets are selected for pricing in the CPI based on data reported in a separate survey representing all urban households. The experimental index also uses the same retail outlet sample. Thus, the outlets selected may not be representative of the places where older persons purchase their goods and services.³

Items priced. As with retail outlets, a major limitation of the experimental index is that the categories of items to be priced are selected using expenditure weights calculated from the expenditure surveys for the urban population. As a result, the specific item classes selected for each stratum may not be representative of those classes used by the older population.

Prices collected. A final source of uncertainty about the appropriateness of using the CPI-U prices for the index of the older population concerns the availability of discount prices for older Americans. For example, senior-citizen discount rates are used in the CPI-U in proportion to their use by the urban population as a whole. To the

extent that senior-citizen discounts take the form of a percentage discount from the regular price, this may not be a problem. If, however, the discount is not a fixed percentage of the price, the scarcity of senior-citizen discount prices in the current CPI could lead to error in the experimental index.

Because of the preceding limitations, any conclusions drawn from the analyses presented in this article should be treated as tentative.

Relative behavior of price indexes

Table 3 gives the annual price changes in the all-items CPI-U, CPI-W, and experimental price index during the period 1988-93. Table 4 shows the behavior of these three indexes at the major component levels during the same period.

Over the 6-year period from December 1987 through December 1993, the reweighted experimental price index for older Americans rose 28.7 percent. This compares with increases of 26.3 percent for the CPI-U and 25.5 percent for the CPI-W.

Examining the indexes in more detail, we see that medical care prices during the period rose slightly more than twice as fast as the average for all items in each population group. Because the elderly typically spend more on medical care than does the population as a whole (see table 2), the medical care component accounted for most of the difference between the experimental index and either of CPI-U and CPI-W. In the experimental index, this component increased 59.4 percent during the period 1988-93. By contrast, inflation for the medical care component of the CPI-U was 54.2 percent and that for the CPI-W was 53.3 percent.

The price change for each major expenditure component varied by population because the expenditure weights of the items that comprised the major components varied among the three

population groups the indexes served. The expenditure weight that an item had in a particular population reflected the importance of that item as a proportion of the total expenditures of that population. For example, the relatively high expenditure weights of the medical care component of the experimental index may largely be attributed to the differences in the nature of the demand for medical care services by the elderly, compared with the demand for such services by all urban consumers or by urban wage earners and clerical workers. Within the medical care component, the elderly had larger out-of-pocket costs relative to both of the other groups chiefly because those groups had employer-provided health care benefits more readily available to them. An analysis of the relative importance of the various subcomponents making up the medical care component for the elderly and for all urban consumers indicates that older Americans devote a substantially larger share of their medical care budget to physicians' services, followed by hospital room stays and commercial health insurance coverage.

Of the seven major expenditure components, the apparel category registered the smallest price change for all three population groups over the 1988-93 period.

Within the transportation component, public transportation items such as airline fare, intercity bus fare, intercity train fare, and taxi fare had higher relative importance for the elderly than for all urban consumers. These items contributed to the observed overall higher inflation rates in the transportation component of the experimental index.

Like medical care, another expenditure component that rose significantly in all three indexes during the study period was the "other goods and services" category. However, unlike medical care, this component recorded the *smallest* increase in the experimental price index (41.8 percent), compared with the CPI-U (47.0 percent) and the CPI-W (46.2 percent). The reason for the lesser rise could be found in differences in the composition of the three populations. For instance, the CPI-U and CPI-W, with their relatively larger concentration of younger people, had a significantly higher relative importance for college tuition, which increased faster than the average of all items in each year of the study. In addition, the populations of all urban consumers and urban wage earners and clerical workers spend proportionately more for tobacco and other smoking products, which have also typically increased faster in price than the "other goods and services" component, of which they are a subcomponent. These items have thus contributed to the faster rise in the "other goods and services" com-

ponent of the CPI-U and CPI-W relative to the experimental price index for older Americans.

Cost-of-living adjustments

Adjustments to Social Security benefits are currently based on the percentage change in the CPI-W, measured from the average of the third quarter of one year to the third quarter of the succeeding year.

While the Senate Special Committee on Aging stipulated that the current study cover persons 62 years of age and older, this population is not likely to be the most appropriate one for defining and developing an index for use in indexing Social Security benefits. The reason is twofold. First, many Social Security beneficiaries are younger than 62 years and receive benefits

Table 2. Comparative analysis of relative importances of selected components of consumer price indexes, December 1987

Component	CPI-U	CPI-W	Experimental Index for older Americans
All items	100.00	100.00	100.00
Food and beverages	17.81	18.45	15.48
Food at home	8.88	11.14	9.78
Food away from home	8.19	6.63	4.87
Alcoholic beverages	1.56	1.88	1.13
Housing	22.48	20.55	23.20
Current expenditures	19.28	18.84	25.47
Apparel and upkeep	6.34	6.26	6.88
Medical care	8.23	4.25	9.47
Transportation	17.45	19.81	14.43
Motor fuels	3.29	4.03	2.87
Entertainment	4.37	4.04	3.34
Other goods and services	5.52	5.84	4.31
College tuition	1.13	.84	.48
Tobacco and other smoking products	1.29	1.70	1.02

Table 3. Percent change in alternative consumer price indexes, all items, 12 months ended December, 1988-93

Year	CPI-U	CPI-W	Experimental Index for older Americans
1988	4.6	4.4	4.5
1989	4.5	4.5	5.2
1990	6.1	6.1	6.8
1991	3.1	2.9	3.4
1992	2.8	2.9	3.0
1993	2.7	2.5	3.1
Cumulative change, December 1987-December 1993	26.3	25.5	28.7

CPI for Elderly Consumers

Table 4. Percent change in alternative consumer price indexes, by major components, December 1987-93

Component	CPI-U	CPI-W	Experimental Index for older Americans
All items	28.3	25.5	25.7
Food and beverages ..	24.8	24.8	25.0
Housing	23.1	22.4	25.1
Apparel and upkeep ..	17.7	18.6	18.8
Transportation	22.8	21.9	23.0
Medical care	54.2	53.3	58.4
Entertainment	25.9	25.0	26.2
Other goods and services	47.0	46.2	41.8

because they are surviving spouses or minor children of covered workers or because they are disabled. The spending patterns of this younger group are excluded in the weights for the experimental index for older Americans. Second, a substantial number of persons 62 years of age and older—especially those 62 to 64 years—do not receive Social Security benefits at all. Although these older consumers are included in the population covered by the reweighted experimental index, they presumably should be excluded from an index designed to reflect the experience of Social Security pensioners. In short, an index designed specifically to measure price changes for Social Security beneficiaries—that is, one that excludes older persons who do not receive benefits, but includes younger persons who receive survival and disability benefits—might well show price movements that differ significantly from those of the experimental index set out in this article.

Conclusions

This article examined changes in three distinct Consumer Price Indexes—the Index for All Urban Consumers (CPI-U), Index for Urban Wage Earners and Clerical Workers (CPI-W), and experimental Index for Americans 62 years of age and older—for the period December 1987 through December 1993. Analysis of the relative behavior of the three indexes at the all-items level reveals that the experimental index rose slightly faster than the two published indexes.

The experimental price index, reweighted to incorporate the spending patterns of older con-

sumers, behaves more like the CPI-U than the CPI-W. This is to be expected, because the CPI-U comprises the expenditures of all urban consumers, including those 62 years of age and over. The CPI-W, on the other hand, is limited to the spending patterns of families of wage earners and of clerical workers and, therefore, specifically excludes the experience of families whose primary source of income is from retirement pensions.

As an estimate of the inflation rate experienced by older Americans, the experimental index has several limitations. One of these is that the samples from which expenditure weights for the index were calculated are substantially smaller than those used in either the CPI-U or the CPI-W. This means that the experimental price index is subject to larger sampling errors than either of the two official indexes.

To produce a more precise CPI for older Americans, sample sizes would need to be strengthened for the Consumer Expenditure Survey to reflect the spending habits of the elderly more accurately. In addition, the point-of-purchase survey and the pricing surveys would need to be improved to reflect which retail outlets and items should be sampled for older Americans. These improvements in the sample design could yield altogether different results from those obtained in the study described in this article. Finally, it should be noted that the medical care component of the CPI has a substantially larger relative weight in the experimental index than in the CPI-U or CPI-W. As a result, this component of the experimental index tends to have a larger impact on the elderly than it does on either all-urban consumers or urban wage earners and clerical workers.

Footnotes

¹ Charles C. Mann, "An Analysis of the Rates of Inflation Affecting Older Americans Based on an Experimental Reweighted Consumer Price Index," report presented to Congress, June 1988. During the period from December 1982 through December 1987, the CPI-U rose 18.2 percent, the CPI-W increased 16.5 percent, and the experimental index for older Americans grew 19.5 percent. Over the 11-year period from December 1982 through December 1993, the CPI-U rose 49.4 percent, the CPI-W increased 46.2 percent, and the experimental CPI for older Americans grew 53.8 percent.

² The sample size of the current point-of-purchase survey is not adequate to determine whether older Americans typically shop in different types of outlets from those frequented by the general population.

Consumer Price Index for All Urban Consumers (CPI-U), percent change,
12 months ended in December, selected series, 1993-98

	Relative importance	12 months ended in December					SAAR 4-months ended in April
		1993	1994	1995	1996	1997	1998
All Items	100.000	2.7	2.7	2.5	3.3	1.7	0.9
Services	57.365	3.8	2.9	3.5	3.3	2.6	2.8
Energy services	3.757	2.2	-0.6	0.8	3.6	0.2	-5.9
Services less energy	53.608	3.9	3.2	3.6	3.3	3.0	3.4
Commodities	42.635	1.5	2.3	1.4	3.2	0.2	-1.5
Nondurables	31.039	1.1	2.0	1.4	4.0	0.6	-2.4
Food	15.236	2.9	2.9	2.1	4.3	1.5	1.1
Apparel	4.944	0.9	-1.6	0.1	-0.2	1.0	-1.6
Nondurables less food & apparel	10.768	-1.1	2.7	1.1	5.6	-0.4	-7.4
Energy commodities	3.256	-5.1	5.2	-3.3	13.8	-6.9	-28.1
Durables	11.596	2.7	2.9	1.7	0.7	-1.5	0.0
Furniture and bedding *	1.141	3.6	1.6	4.2	1.0	-0.7	5.5
Appliances *	0.368	na	na	na	na	na	0.6
Other household equipment *	0.548	na	na	na	na	na	10.2
Tools, hardware, etc. *	0.653	na	na	na	na	na	3.6
New vehicles	5.063	3.3	3.3	1.9	1.9	-0.9	0.8
Used cars and trucks *	1.890	8.0	8.8	4.4	-1.6	-4.9	0.6
Motor vehicle parts, and equipment	0.560	-1.6	0.5	0.5	-0.1	-0.9	-2.1
Televisions *	0.215	-1.7	-1.4	-4.0	-5.3	-4.3	1.0
Other video equipment *	0.087	na	na	na	na	na	-12.6
Audio equipment *	0.167	0.4	-1.0	-2.6	-0.6	-2.0	-5.0
Sporting goods *	0.493	0.3	3.2	-0.6	-0.1	-0.4	-1.5
Personal computers, and peripheral equipment *	0.234	na	na	na	na	na	-35.1
Computer software and accessories *	0.037	na	na	na	na	na	-6.2
Other information processing equipment *	0.057	na	na	na	na	na	-7.6
Commodities less food & energy commodities	24.053	1.6	1.4	1.7	1.1	0.4	1.1

* Data for 1998 are not seasonally adjusted at an annual rate

SAAR = Seasonally Adjusted at an Annual Rate

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