
EVIDENCE AGAINST A HIGHER MINIMUM WAGE

HEARING
BEFORE THE
JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES
ONE HUNDRED FOURTH CONGRESS
FIRST SESSION
—
APRIL 5, 1995
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PART II

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EVIDENCE AGAINST A HIGHER MINIMUM WAGE

WEDNESDAY, April 5, 1995

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

The committee met, pursuant to notice, at 9:08 a.m., in room 1100, Longworth House Office Building, Hon. Jim Saxton, Vice Chairman of the Committee, presiding.

Present: Representatives Saxton, Quinn, Thornberry, and Stark.
Staff Present: Lawrence Hunter; Brad Kaufman; Reed Garfield; Dan Miller; Lee Price; Bill Spriggs; Andrew Quinlan; Missy Shorey; Juanita Morgan; and Colleen Healy.

OPENING STATEMENT OF REPRESENTATIVE JIM SAXTON, VICE CHAIRMAN

Representative SAXTON. Good morning. This morning the Joint Economic Committee convenes for a second time to consider President Clinton's proposal to increase the minimum wage by 21 percent from \$4.25 an hour to \$5.15 an hour.

During the first JEC hearing, on this issue back in February, we heard extensively from Labor Secretary Robert Reich and his chief economist, Dr. Alan Krueger, who rested the case for the President's proposed minimum wage hike on a study that Dr. Krueger and his Princeton University colleague Dr. David Card conducted while Krueger was still at Princeton.

In 1992, Card and Krueger conducted a study of fast food restaurants in New Jersey and Pennsylvania as New Jersey was raising its minimum wage. These two economists concluded that jobs were not lost from the mandated wage hike. In fact, in a finding totally at odds with common sense and conventional economic thinking, Card and Krueger contended that in New Jersey where the minimum wage was increased, employment grew, while in Pennsylvania where the minimum wage remained the same, employment actually fell. Their study published last year in the *American Economic Review* has received broad and very positive exposure from the media.

As we saw at the last JEC hearing, the Clinton administration has latched on to the Card and Krueger study as proof that a new view on the minimum wage is taking hold. Laura Tyson, Chairman of the Council of Economic Advisors, says—let me quote this as exactly as I can: "The theory that somehow an increase in the minimum wage might affect employment is now at odds with empirical evidence."

Secretary Reich called the Card-Krueger study, quote, "particularly persuasive and one of the most compelling studies on the employment effects of the minimum wage."

Secretary Reich frequently stresses Card and Krueger's unorthodox finding. For example, at a recent White House press conference, he said, quote, "It actually turned out that those businesses in New Jersey began hiring more than the businesses in Pennsylvania." It—referring to the minimum wage—increased, actually increased jobs.

Last week the Employment Policies Institute Foundation revealed that the Card-Krueger data were bad. The professors' data bear no resemblance to the real payroll data which EPI was able to collect directly from the representative sample of the same New Jersey and Pennsylvania restaurants surveyed by Krueger and Card. EPI has performed a great public service by allowing us to see the real payroll data.

The Card-Krueger study looked like a solid study. After all, they came from Princeton, a highly respected university. The flaws in the study turned out to be so fundamental that nobody ever conceived that such massive errors could have occurred. Everyone took the study at face value, even though it ran completely contrary to common sense and everything we thought we knew about the labor markets and how they work.

How could a higher minimum wage entice employers to hire more people, we asked. It didn't make sense. Well, now we know why. The data from which the conclusion was drawn was wrong, fatally flawed. Until the Employment Policies Institute exposed the details and the actual numbers of the Card-Krueger study and the numbers that were used, nobody ever bothered to question these young economists on such a fundamental point. Fortunately, the truth is now out and the study is wrong and we have been able to show that it is very wrong.

On our first panel today, EPI's Executive Director Richard Berman will explain in detail how the Card-Krueger data were flawed and will explain what the real payroll data reveal.

Also with us today on the first panel is a noted economist from Michigan State university, Dr. David Neumark, who will give his independent assessment of what the real payroll data from New Jersey and Pennsylvania tell us about raising the minimum wage.

The Card-Krueger study which we will put under a microscope today is so important to the administration's case on the minimum wage that the Department of Labor published a set of questions and answers designed specifically to cover inquiries on this single study.

Moreover, during the Reich testimony at the February JEC hearing and without any prior notice to the committee, the Labor Secretary requested that in addition to himself, his chief economist also be permitted to testify to explain his findings. Even though the committee was extremely pressed for time that day, we nevertheless allowed Dr. Krueger to testify and give a thorough presentation of his findings, complete with all his charts and graphs.

It is only fair, therefore, in light of the special treatment given to the proponents of the minimum wage hike in our last hearing, that the first panel today is devoted exclusively to the research

that uncovered the startling flaws in the Card-Krueger study. Before we get to the panel, let me ask the Ranking Minority Member, Mr. Stark if he has an opening statement.

PREPARED STATEMENT OF REPRESENTATIVE JIM SAXTON, VICE CHAIRMAN

This morning the Joint Economic Committee convenes for a second time to consider President Clinton's proposal to increase the minimum wage by 21 percent from \$4.25 an hour to \$5.15 an hour. During the first JEC hearing on this issue back in February, we heard extensively from the Clinton Administration about its new theory on the minimum wage. In fact, five of the 12 witnesses at that hearing supported the President's proposal to raise the minimum wage and one panel was devoted exclusively to two witnesses who advocated a higher minimum wage. That panel consisted of Secretary of Labor Robert Reich and his Chief Economist Alan Krueger. These witnesses rested the case for President Clinton's proposed minimum wage hike on a study that Dr. Krueger and his Princeton University colleague, Dr. David Card, conducted when Krueger was still at Princeton.

In 1992, Card and Krueger conducted a study of fast-food restaurants in New Jersey and Pennsylvania as New Jersey was raising its state minimum wage. These two economists concluded that jobs were not lost from this mandated wage hike. In fact, in a finding totally at odds with common sense and conventional economic thinking, Card and Krueger contended that in New Jersey where the minimum wage was increased, employment grew; while in Pennsylvania where the minimum wage remained the same, employment actually fell. Their study, published last year in the *American Economic Review*, has received broad—and very positive—exposure in the media.

As we saw at the last JEC hearing, the Clinton Administration has latched onto the Card and Krueger study as proof that a "new view" on the minimum wage is taking hold. Laura Tyson, chairman of the Council of Economic Advisers, says, "The theory that somehow an increase in the minimum wage might affect employment is now at odds with empirical evidence." Secretary Reich called the Card/Krueger study, "particularly persuasive," and "one of the most compelling studies," on the employment effects of the minimum wage.

Secretary Reich frequently stresses Card's and Krueger's unorthodox findings. For example, at a recent White House press conference he said, "It actually turned out that those businesses in New Jersey began hiring more than the businesses in Pennsylvania—it (the minimum wage increase), actually increased job growth."

Last week the Employment Policies Institute Foundation revealed that the Card/Krueger data are bad. The professors' data bear no resemblance to the real payroll data, which EPI was able to collect directly from a representative sample of the same New Jersey and Pennsylvania restaurants surveyed by Card/Krueger. EPI has performed a great public service by allowing us to see the real payroll data.

The Card/Krueger study looked like a solid study, and it came from Princeton—a highly respected university. The flaws in the study turn out to be so fundamental that nobody ever conceived that such massive errors could have occurred. Everyone took the study at face value even though it ran completely contrary to common sense and everything we thought we knew about how labor markets work. How could a higher minimum wage "entice" employers to hire more people? It didn't make sense. Well, now we know why. The data from which the conclusion was drawn are fatally flawed.

Until the Employment Policies Institute exposed the details of the actual numbers Card and Krueger used, nobody ever bothered to question these young economists on such a fundamental point. Fortunately, the truth is now out. The study is wrong—very wrong.

Today, EPI's executive director, Rick Berman, will explain in detail how the Card/Krueger data are flawed and will explain what the real payroll data reveal. Also today, we will hear from a noted economist from Michigan State University, Dr. David Neumark, who has no connection with EPI, who will give his independent assessment of what the real payroll data from New Jersey and Pennsylvania tell us about raising the minimum wage. His conclusion: If the correct payroll data on employment hours are substituted for the erroneous data collected from the Card/Krueger telephone survey, the results contradict the Card/Krueger findings. Moreover, he concludes that the correct payroll data yield results right in line with conventional economic thinking about the employment effects of raising the minimum wage.

Today's hearing will also present additional evidence, totally unrelated to the EPI findings, that the Card/Krueger study is fundamentally flawed conceptually, meth-

odologically and operationally. Dr. Daniel Hamermesh will conclude that "(Card's and Krueger's) results should not change any reasonable person's conclusions about how the minimum wage affects employment." In addition, we will hear from Bruce Blakeman, a marketing survey expert, that the survey methodology used by Card and Krueger "leave(s) too many questions to be answered to use their study as conclusive evidence."

The Card and Krueger study, which we put under a microscope today, is so important to the Administration's case on the minimum that the Department of Labor published a set of questions-and-answers designed specifically to cover inquiries on this single study. Moreover, during Mr. Reich's testimony at the February JEC hearing, and without any prior notice to the Committee, the Labor Secretary requested that in addition to himself his chief economist also be permitted to testify to explain his findings. Even though the Committee was extremely pressed for time that day, I nevertheless allowed Dr. Krueger to testify and give a thorough presentation of his findings, complete with all of his charts and graphs.

Today we will hear from 5 witnesses. And it is only fair, in light of the special treatment given to the proponents of a minimum wage hike in our last hearing, that the first panel today is devoted exclusively to the research that uncovered the startling flaws in the Card and Krueger study. One of the three witnesses on the second panel supports an increase in the minimum wage. For both hearings combined, therefore, we have heard from a total of 17 witnesses, 6 of whom (or 35 percent) have supported an increase in the minimum wage.

We will now hear from our witnesses.

OPENING STATEMENT OF REPRESENTATIVE PETE STARK, RANKING MINORITY MEMBER

Representative STARK. Well, thank you, Mr. Chairman.

The Joint Economic Committee usually does seriously examine economic issues, inviting distinguished professionals to enlighten us, and we had been told that we were about to have a hearing on the economic issues surrounding the minimum wage. And we had been told to expect a single panel of scholarly researchers on the general issue of the minimum wage.

Now, I know that yesterday afternoon we found out that this microscope that the Chair talked about is really a kangaroo court, that is what we call it in my neighborhood, run for the benefit of the restaurant industry. The payroll data that I would find interesting is how much the flack for the restaurant industry who sits before us had to pay to come and testify to this.

The last time they had to pay 25,000 bucks to the Speaker to testify to get more drunks coming out of restaurants and onto the highway. He has a long reputation for helping people in this country by increasing drunk driving and maybe even bribing people to get on panels.

So I am curious to see just what kind of nonsense will come out of the lips of hired flacks on this.

Then second, we should have a panel, an economist who provided a small group of fast-food outlets with some information instead of a general analysis on the minimum wage. We are told that the Republican witnesses on the last panel would again focus on this New Jersey study. I gather that that is a little bit of a burr under the saddle of the hired guns of the restaurant industry and they will attempt in whatever flawed way they can to discredit it.

Now, recent analysis circulated by the Republican side of the Joint Economic Committee claimed that it is the unanimous view of economists—that is your quote—that a hike in the minimum wage would have devastating consequences for unemployment among teenagers and it estimated that a mere one penny rise in

the minimum wage would have costed 26,000 jobs. By that reckoning, the job losses of a 90-cent hike would be 2,340,000 jobs.

Now, that gets into the realm of pigs with wings and boiling hot seas, Mr. Chairman. If I believed that, I would oppose a hike in the minimum wage as vehemently as the Republicans are.

But one of the economists invited by the Republicans today doesn't seem to share such a dire view. Dr. Hamermesh told *The New York Times* a couple years ago that "any minimum wage likely to get through Congress" —and I am quoting him—"would not make a big difference in employment," end of quote.

He went on to say that he would support an increase in the minimum wage with indexed increases after that. I will be interested to see what he has to say today.

I hope that this hearing can eventually help us answer really basic questions. What is the likely job effect of the proposed \$5.15 minimum wage and what is its likely income effect? Has the erosion of the minimum wage over the last 15 years contributed to the widening in income disparities in our society?

I look forward to the occasional witness who will come to us with sound economic data and hope that maybe we can make some sense out of this what is now turning into a kangaroo court. I look forward to the pageant as it unfolds today.

[The prepared statement of Mr. Stark follows:]

PREPARED STATEMENT OF REPRESENTATIVE PETE STARK, RANKING MINORITY MEMBER

The Joint Economic Committee should seriously examine the economic issues surrounding the minimum wage. Until yesterday afternoon, that's what we were told that this hearing would do. We had been told to expect a single panel of scholarly researchers on the general issue of the minimum wage.

Yesterday afternoon the Republican majority finally told us what they had arranged more than a week ago: they planned to turn this hearing into a kangaroo court for the benefit of the restaurant industry. *The Wall Street Journal* reported on January 31 that the restaurant industry and other lobbyists opposed to the minimum wage were organizing to "poke holes" in a study showing that New Jersey did not suffer job losses in the fast-food industry after raising the minimum wage. This hearing is the culmination of their strategy sessions.

Yesterday, the Republican majority informed us that we would first have a one person panel, a flak for the restaurant industry here in Washington. Second, we would have another one person panel, an economist who analyzed data provided by a small group of fast-food outlets. Finally, we would get to the panel to which we had been alerted last week. Instead of a general analysis of the minimum wage, however, we were told that the Republican witnesses on the last panel would again focus on the New Jersey study.

After we dispense with the restaurant industry's circus, I hope that we can still resolve some of the questions about the economic effects of the minimum wage.

For example, an analysis recently circulated by the Republican JEC claimed that it is the "unanimous view of economists" that a hike in the minimum wage would have devastating consequences for unemployment among teenagers. The study estimated that a mere one penny rise in the minimum wage would cost 26,000 jobs. By that reckoning, the job losses from a 90 cent hike would be at least 90 times as large or 2,340,000 jobs. If I believed that, I would oppose a hike in the minimum wage as vehemently as my friends on the other side of the aisle.

One of the economists invited by the Republicans today does not seem to share such a dire view. Dr. Hamermesh told the *New York Times* a couple of years ago that any minimum wage likely to get through Congress would "not make a big difference in employment." He went on to say that he would support an increase in the minimum wage with indexed increases after that. With enemies like that, who needs friends?

I hope that this hearing can eventually help us answer some basic questions. What is the likely job effect of the proposed \$5.15 minimum wage? What is its likely

income effect? Has the erosion of the minimum wage over the last 15 years contributed to the widening in income disparities in our society?

I look forward to hearing our witnesses.

Representative SAXTON. The gentleman from New York, Mr. Quinn, for an opening statement.

OPENING STATEMENT OF REPRESENTATIVE JACK QUINN

Representative QUINN. Thank you, Mr. Chairman.

I volunteered to become a referee today. If I need to be pressed into service, I will. And I look forward to hearing from all our witnesses today regardless of their message.

I think one of the things that is important for any panel in this House on this hill is to hear from all sides of the story and then to weigh our decisions which all of us will do, and sometimes, many times we are at odds with that information.

It is a pleasure to be here this morning, Mr. Chairman, for the second time to discuss the President's proposal to raise the minimum wage. In my district in Buffalo, NY and the rest of western New York, like in many of my colleagues' districts throughout the Nation, the President's proposal to raise the Federal minimum wage from \$4.25 an hour to \$5.15 an hour is a hotly debated topic. I heard and met with many constituents who have strong opinions on both sides of this issue.

In 1978, a survey some years ago by the American Economic Review, 90 percent of economists agreed that raising the minimum wage increases unemployment among low-skilled workers. Later in 1981, a congressionally mandated study concluded that a 10 percent increase in the minimum wage reduces teenage unemployment by 1 to 3 percent. If this conclusion is correct, this proposal could result no doubt in the reduction of teenage employment.

Many Americans, while being sympathetic to the needs of the minimum wage workers, are deeply concerned that the possible adverse effects of this proposal could cause job loss. It seems to me given the choice that many constituents, at least the ones in Buffalo and western New York, would prefer to have children off the streets of Buffalo and back on the job even if it is at a less than what they would like rate of minimum wage.

In an editorial in yesterday's Washington Post, James Glassman points out that "the major economic problem for many Americans is that they can't earn a decent living even though they work long hours at tough jobs." That is a quote. This problem is particularly acute in my district where companies have migrated south, taking with them the incomes of hard-working western New Yorkers.

However, as Mr. Glassman writes further, "The government can't simply require businesses to pay workers more without causing some adverse consequences." So the intention behind raising the minimum wage is to make the uncomfortable phrase "working poor" obsolete. I don't think anybody disagrees with that.

However, we must not judge this proposal on its intentions but rather on the effects. The people who would be affected by an increase in the minimum wage are already in an extremely tenuous financial situation and Mr. Stark and others pointed that out as information to me, new information to me that was helpful just a few weeks ago, a few months ago when we met on this discussion then.

We must be careful as this proposal has the potential to hurt the very people it intends to help.

I am anxious to hear from today's panelists. Mr. Chairman, I would note that we have in Public Works, my other committee assignments, markups going on all day today. So while I can't be here for all of it, I will be in and out and look forward to hearing all of the comments of all of our colleagues as well as the panelists.

Thank you.

Representative SAXTON. Thank you, Mr. Quinn. We appreciate your—thank you.

I would like to introduce the first panel. First, Mr. Richard Berman. I would like to introduce the gentleman who is the executive director of the Employment Policies Institute Foundation and also president of the government relations consulting firm of Berman & Company. Before that, Mr. Berman served as executive vice president of Public Affairs or Pillsbury Restaurant Group and as director of Labor Law for the U.S. Chamber of Commerce.

Accompanying him is Dr. David Neumark. Prof. David Neumark has served the Department of Economics in Michigan State University since last year. Prior to that, Professor Neumark taught economics at two other highly respected academic institutions, the University of Pennsylvania and Harvard University.

Mr. Berman, would you like to begin.

PANEL I

OPENING STATEMENT OF RICHARD B. BERMAN, EXECUTIVE DIRECTOR, EMPLOYMENT POLICIES INSTITUTE

Mr. BERMAN. Thank you, sir.

I am here today as you indicated, Congressman, representing the Employment Policies Institute Foundation and specifically for purposes of discussing a follow-up study that we had done on the so-called Card-Krueger study or the Princeton, NJ, fast food studies.

I think rather than read my full statement before the committee, I would like to give you a somewhat abbreviated statement in one sense and an expanded statement in another sense by referring to some charts and graphs that might more graphically make the case that I would like to share with you today.

I have been a labor attorney for more than 25 years. I have looked at literally hundreds of payroll records in wage and hour investigations. I have been in labor contract negotiations. I am somewhat familiar with the whole process of paying people for jobs well done throughout a variety of American industries.

I am also somewhat familiar with the minimum wage debate. I have been engaged in that debate from the legislative standpoint over many years. I was fortunate enough to have been retained on a variety of occasions to represent people who had an interest in this issue.

I have to tell you that when I saw the results from the Card-Krueger study, I was not only baffled but I was somewhat intimidated because for the first time in my whole history of dealing with these types of issues, I had seen labor economics stood on its head. Everything that I had been told by liberal as well as conservative economists about supply and demands in the labor market was

wrong. Two professors who hold doctorates in economics from Princeton university were suggesting that water really does flow uphill and the sun rises in the west.

I again will tell you that I scratched my head for some time over this and then pretty much ignored this study. I continued to be baffled by it when the administration started to push a minimum wage increase quite seriously. It appeared that the sole underpinning for their position was the Card-Krueger study.

It was at that point in time that myself and people that I work with started to seriously question how raising minimum wages increased employment could ever be the case. And we looked at some of the methodology.

Admittedly, it is something that only a solid economist could understand and I was left with a more simple application of my confusion. When I looked at the conclusions that Card-Krueger reached, I just asked myself, is it possible that these people asked the wrong questions? It was the only way that I could establish in my own mind that they might have come up with these answers.

We were fortunate through David Card himself to receive the information that was used to develop their final conclusions; that is, we received the questionnaire that was used in the survey to develop the information and we also received the raw data. When I looked at the raw data, several things jumped out at me in terms of payroll shifts that I knew could not be reality. Some of these are outlined on the board here in front of you.

Keep in mind that the Card-Krueger study was focused on all of New Jersey and eastern Pennsylvania, comparing approximately 400 fast-food restaurants owned by people connected with Wendy's, Burger King, Roy Rogers and Kentucky Fried Chicken. They had looked at all of these restaurants in February 1992, collecting payroll data.

Again, there was a minimum wage increase in New Jersey in April 1992. The survey team went back in November 1992, asked the same questions again and basically compared employment shifts between February and November. The thinking was that if the minimum wage had any employment effect in New Jersey, it would have been apparent as compared to Pennsylvania where the minimum wage had stayed the same.

Again, as you know, Card-Krueger said that, New Jersey, even with an increased minimum wage but with the same economy and controlling for all the variables, New Jersey did not suffer an increase in unemployment or a decrease in employment in the surveyed restaurants; in fact, that they had increased their employment.

So now I take you to what I will call some anomalies that we found in the data that told us we were on to something. Just taking the very first example up there—again, all of this data comes from Card-Krueger—they showed a Wendy's in New Jersey. You see it is in zip code 072. They used zip code blocs to sanitize their data so that it is really impossible by looking at their data to figure out where that Wendy's exists except it is somewhere in that broad geographic area of 072. They showed there were no part-time employees in that restaurant—excuse me, no full-time employees but

30 part-time employees. A few months later that restaurant had hired 30 full-time employees and kept the same part-time.

Now, that is a tremendous jump in sales that is unaccounted for in anybody's memory. If you move right down the list, move down to the Kentucky Fried Chicken, three down, again in New Jersey, you see no full-time employees, jumping up a few months later to 22 full-time employees. If you go down to the band that I show there on the Burger King in zip code 190, and this is in Pennsylvania, they show that they had 8 employees on the payroll in February.

I talked to the people that own all the Burger Kings in that zip code. They laugh when I tell them that there is a Burger King with 85 employees.

And then of course you can see in November, even though sales went up for seasonal reasons because sales do go up in November compared to February, the Burger King with 85 employees had cut back to 33 employees. It is clear that what was going here was not wild swings in employment policies inside these Burger Kings, Wendy's or KFC's or Roy Rogers but that somebody was making a mistake in collecting the data.

If you can put the next chart up, please. Quite frankly, despite the fact that you might think it is easy to get all this data and we only started this several weeks ago, we could not accumulate every—we could not accumulate data on every restaurant in such a short period of time, so we decided to focus our study down to an area that we thought would be a representative sample.

Princeton, NJ seemed like a good place to go and it was central New Jersey. And as Secretary Reich has said, he wanted to compare restaurants that were close to each other and I think he mentioned in a press conference he wanted to look right across the river. And so we took several zip codes, zip code blocs.

Now, again, these are bigger than zip codes themselves. In fact, we looked at 25 percent of all the data of franchised restaurants in the whole survey which we think is a fairly representative sample. So we looked at the restaurants right across the river in Pennsylvania and we looked at the New Jersey restaurants and we focused our attention in this area.

In fact, in the end, most of the data that we collected came from Burger King because Card and Krueger made Burger King 40 percent of their study. And so if you were going to look at any one—in any one area, this seemed to be a very logical place for us to go for our sample.

If you can put up the next chart. When we started to look inside these zip codes, we found some interesting analyses. As I said, we could not identify a particular restaurant on the corner of First Street and Main or any other particular location because Card-Krueger had sanitized the data. But what they did do is suggest they had looked at all of the restaurants in these zip codes.

So, for example, in zip code 190, we were told from the Card-Krueger data, which is represented by the red bars that there were six restaurants that they had found—I think it is six there. Am I counting correct? Seven. I am sorry, there is one with an employment loss. Seven restaurants they had found in zip code 190 and

you can see the employment gains by the red bars reported by Card and Krueger from February to November.

You can also see from zip 190 the loss in one Burger King which they reported. This is the Burger King that I showed you on the earlier chart that had gone from 85 employees to 33 employees.

Now, we went to the people who own the Burger Kings, the franchisees in these Burger Kings in this zip code and we covered all the Burger Kings in the zip code. We obviously found two more Burger Kings represented by the blue bars than they had found in their original data. And we tried to match our data up as closely as we could with their data to give every benefit of the doubt to the Card-Krueger researchers.

What is clear from this chart is that Card-Krueger reported huge employment gains and in one instance a huge employment loss. And if you look at the span of the gains from over 150 percent all the way back to a loss of 50 percent, a swing of nearly 200 points, you have to wonder what was going on.

All of these Burger Kings are basically identical operations in very close proximity to each other being run by the very same people. Card and Krueger were reporting these wild employment swings which should be representative of wild swings in business. When we went to the people who own these restaurants, they said here are our employment swings and you can see the growth in employment which is somewhat consistent with seasonal trends.

But the growth of employment on the blue lines are basically consistent among similar units owned by similar people in the similar geographic area. It is basically what you would expect to find. If you go to the next chart, please, we did the same thing with some Wendy's units. The Wendy's corporation does not own these units. These are franchise units in zip code 088.

Again, Card-Krueger only showed four units in that zip code. We showed somewhat more and of course we couldn't figure out which units they had surveyed versus the ones we surveyed, but we tried to match our numbers again giving them the benefit of the doubt as closely as we could compared to the units that they reported.

And so in three instances you can see that our employment gains and in one case employment loss matched theirs almost identically. But then you can see on the very top line they reported a Wendy's unit that had an employment gain of 100 percent between February and November.

Again, we looked at every Wendy's in that zip code. There was no Wendy's that showed that kind of employment gain.

Now, if I can take you a little deeper into the data by bringing you over to the next chart, what you are looking at here are basically three zip codes. The zip codes are noted on the extreme left-hand side there. They are difficult to read. But you have got a zip code 10, I believe, 190 and 19—is that 194 up there? Even with my glasses I have some problem. And in each one of those zip code blocks, you are looking at a pattern that is repeated throughout the data that we had surveyed. The red bars have wild swings. The blue bars tend to hang somewhat around the same axis.

And again, what you are looking at in the blue bars are actual payroll records, and the red bars are actual telephone survey results which I assume were generated by students calling res-

taurants during the working hours of the restaurant. That is Pennsylvania data. If you would move on to the next chart, there are three more zip codes.

Again, all of this is in the area that we showed you on the map and you see the same thing. On the top zip—on the top bar you see one unit had a huge employment gain that in fact we were able to match with payroll records. But after that, the big employment gains in that zip code are not matched by reality and then there is also an employment loss. We could not find an employment loss in that zip code.

If you go down to the next zip code, there are three restaurants that Card-Krueger reported with employment losses. We found no restaurants with employment losses. In the next zip code Card-Krueger showed one restaurant with a small employment loss. Again, we could not find any employment losses there and keeping in mind we were finding more restaurants than they were finding so we were actually doing a better search than they were.

You have to ask yourself assuming that people are not participating in outright fraud and we are not accusing anybody of that, you have to ask yourself how do you get these kind of results if you are trying to do an honest survey? And the only answer quite frankly that we could come up with is that these people had asked the wrong questions.

When we looked at the survey form that was used—and this is the same survey form used in February as used in November, we saw a 24-question survey. Unfortunately, out of 24 questions asked, only one question was asked about minimum wage employment. There were other questions that were peripheral.

There were questions that asked how many cash registers did you have open at 11:00 in the morning. There were questions asked about the price of French fries. There were questions asked about raising your prices because the minimum wage went up.

There were questions that revolved around employment benefits. But there was only one question that was asked that had any relevance to the findings that Drs. Card and Krueger came up with and it is a question that I have laid out here. Basically, how many part-time or full-time people are employed in your restaurant?

Now, I can tell you from having a long history in this business and having done a lot of employment law, if you wanted to get the conclusion that they got to, this was not the right question to ask. If you were going to ask this question on a survey form and you understood the industry, which I don't believe that they did, if you understood the industry, you would have had to have asked most of the extra questions that appear on this chart which I am not going to read to you but which would basically have given you the answers that were necessary to fill in if you were going to ask the superficial question on the left.

The question that should have been asked is, how many hours on a part-time basis or a full-time basis, or quite frankly, all you really needed to know, how many hours of nonexempt workers are being worked. That is, how many non-management hours are being worked in the restaurant during a payroll cycle. If that question had been asked, Card-Krueger would have had their answer. We asked that question and that is the actual payroll data.

Now, interestingly enough, the National Restaurant Association who questioned this survey themselves some time ago sent a letter to Drs. Card and Krueger and they asked them why didn't you look at hours instead of bodies. And to paraphrase the response, they said we recognize that looking at hours would have been a better factor to determine whether or not the minimum wage had hurt, but that we thought it was too difficult to get that information and so we went for a higher rate of response.

Well, in the end, what they ended up with was a lot of quantity but no quality. And at the end of the exercise, the data that was collected by Card and Krueger was seriously flawed, bore no relationship to reality and no matter how much sophisticated an analysis is put against bad data, you still end up with bad data sophisticatedly analyzed.

That, sir, is the basis of our findings. We are continuing to collect data because, as I say, we started this data collection process just a few weeks ago. And we would be happy to share the additional data with you when it comes in.

[The prepared statement of Mr. Berman follows:]

TESTIMONY OF RICHARD B. BERMAN

NEW EVIDENCE ON THE MINIMUM WAGE: THE CRIPPLING FLAW IN THE NEW JERSEY FAST FOOD STUDY

Good Morning. My name is Rick Berman, and I am executive director of the Employment Policies Institute Foundation. The Institute is a non-profit research organization that studies issues surrounding entry-level employment.

Over the past few months, the national minimum wage debate has been driven in large part by a single study—the New Jersey “fast food study. This report, published last September by two Princeton economists, concluded there was no significant job loss after New Jersey raised its state minimum wage in 1992. In fact, according to the analysis in the study, “employment *increased* in New Jersey relative to Pennsylvania” following the mandated wage hike. These findings have rocked the economics profession to its core.

Senior Clinton administration officials have cited the New Jersey study repeatedly in support of proposals to raise the minimum wage. Labor Secretary Robert Reich says this is a “very exhaustive detailed study” which he finds “particularly compelling.” Council of Economic Advisors Chairman Laura Tyson says this study is one of those which use “the most sophisticated techniques available to economists” and concludes job loss is not a factor in the current minimum wage debate.

But there is one catastrophic flaw in the New Jersey study—it is based on ludicrously-flawed data. Quite simply, the employment numbers in the data set used for this study are wrong. As a result, policymakers, economists, and employers have been thoroughly misled in the national minimum wage debate.

How do we know the numbers are wrong? Simple. Over the last several weeks, we have obtained payroll records from many of the establishments surveyed in the New Jersey study. We were shocked to find very few instances in which the payroll records support the conclusions in the New Jersey study.

In one-third of the establishments which we were able to match to the survey data, David Card and Alan Krueger (who co-authored the New Jersey study) failed to report employment shifts which even got the direction of change right—they reported losses where in fact employment grew due to seasonal factors. In addition, the Card-Krueger employment numbers are spread over an extremely wide range between job losses and job gains, while the real payroll data are clustered within a fairly narrow range.

Not only are the Card-Krueger numbers wrong, but they contain numerous major anomalies which defy reasonable explanation. For instance, Card and Krueger report that a Burger King outlet in New Jersey had about six full-time workers in February, but by November, it had added 23 more full-time workers—all told, a 157 percent increase in the employment of this restaurant. According to Card and Krueger, a Burger King in Pennsylvania went from 50 full-time workers in February to 15 in November, and from 35 part-time employees in February to just 18

in November—a 64 percent decline in employment. A Wendy's in Pennsylvania had 30 full-time people on staff in February, but by November all full-timers had apparently quit or been terminated—zero were reported in the Card-Krueger data (a 57 percent decline in employment). Another Wendy's—this one in New Jersey—had zero full-timers in February, but by November had hired 35 full-time workers without any change in the number of part-timers on staff (a 233 percent increase in employment). It is difficult to imagine any rational explanation for such incredible shifts, even after accounting for seasonal sales differences.

In retrospect, we know why the New Jersey study is riddled with such catastrophically-flawed data. The study was based on a 24-question survey which, surprisingly, contained only one question that was related to minimum wage employment. (The others deal primarily with employee benefits and price levels for certain products.) But this single inquiry could never have produced reliable data in the first place!

The survey asked, simply, How many part-time and full-time employees are employed in your restaurant, excluding managers and assistant managers? The question never defined "full-time"—was it 40 hours, as in the Fair Labor Standards Act? 35 hours, as the Bureau of Labor Statistics defines it? 37.5 hours, as Senator Kennedy used in his early health reform proposal? 30 hours, as in the 1993-94 Clinton health reform plan? In addition, the question never provided a frame of reference—were surveyors seeking the number of employees on the current shift? employed today? this week? this payroll period? In short, respondents to the question were allowed to use their own definitions for key aspects of their response, and even with this floating set of definitions there was apparently no attempt to speak with the first respondent when the post-wage hike survey was conducted.

The authors of the New Jersey study never requested information on "hours worked," even though hours worked is the only reliable measure of employment in the restaurant industry. The overall number of employees can rise while hours are declining, and vice versa. Interestingly, Card and Krueger freely admit that an examination of hours would have been more useful. In a 1993 letter to the National Restaurant Association, which had questioned some of the conclusions in the study, Card and Krueger wrote:

We agree that it would be useful to have detailed payroll information, especially in light of our findings . . . We decided to try and keep the questions as simple and "unintrusive" as possible to ensure high response rates.

What does all of this mean for legislators examining minimum wage proposals? Put simply, the evidence" relied on by proponents of a higher minimum wage seeking to convince the public that mandated wage hikes do not cause job loss, has now been wholly discredited. Unfortunately, many leading policymakers have based their positions on the results of the New Jersey study. Rarely does one find that a single study has gained as much influence as this one, but the New Jersey study can no longer be used, in good conscience, as the basis for public policy.

Thank you for the opportunity to appear before this committee today.

Representative SAXTON. Thank you very much, Mr. Berman. We appreciate you being here this morning.

We are going to turn now to Dr. Neumark from the University of Michigan.

Mr. NEUMARK. Michigan State.

Representative SAXTON. Michigan State University. Sorry about that.

Mr. NEUMARK. It is very important in Michigan to get that right.

Representative SAXTON. I am told by staff that Mr. Berman has a time constraint problem and has requested that we ask whatever questions that we may have of him at this time. Is that correct?

Mr. BERMAN. Thank you, sir. Yes. I didn't realize I was going to have to be here today till late in the day.

Representative SAXTON. If we may do that, then. Let me begin by asking this question of Mr. Berman, with your concurrence, Dr. Neumark. Is that all right with you? Thank you.

Mr. Berman, the last time this committee met to discuss the minimum wage, some Members took the opportunity to launch attacks on the character of our witnesses. In fact, many of those at-

tacks were aimed at you even though you weren't here. I am sure you saw these attacks on C-SPAN.

Since the attacks were staged to provide no opportunity for you to respond, I would like to offer you a few minutes before we begin the questions to address your critics so that hopefully we can address the substance of your findings and avoid any further pointless character assassination. So if you would like to address those issues at this time, I would appreciate it.

Mr. BERMAN. Thank you, Mr. Saxton. I think I will address my remarks to Mr. Stark.

Mr. Stark, I actually was complimented by one of your statements during the last hearing when you suggested that you were amazed that one lobbyist could amass so much data in such a short period of time. I took that as a compliment that we were doing some good work even if the conclusions were inconsistent with what you believe the truth to be.

Quite frankly, we have been heavily at work trying to generate research by economists who have very good reputations and it was unfortunate that there was an allegation that we were buying their answers. I don't think that the amount of money involved buys the answers from academicians from leading universities any more than the allegation that I bought my way onto a witness list for \$25,000.

Even if we disagree, Mr. Stark, I know that you have been in this town long enough and that you know that people don't spend \$25,000 with a Republican Congressman who the Democrats dislike trying to get on a panel controlled by the Democrats.

But if I can, I would like to read a letter that I have sent to the ethics committee regarding the allegation that you are making about \$25,000 at a drunk driving hearing so that you can share in the information that I shared with the ethics committee. I sent the letter to them without their requesting it because there was so much of this information circulating in the press that I felt was unnecessary and unfair. Perhaps this will clear up some of the misinformation that has been circulating.

Representative STARK. Are you under rules here?

Mr. BERMAN. I—

Representative SAXTON. The gentleman will suspend. It is my 5 minutes. The gentleman will suspend. The Chair is going to have order in this hearing. We are going to go in accordance—we are going to go in accordance with the rules of the committee. And if the gentleman jumps out of order as he did continually in the last hearing, he will be immediately brought back to order.

Proceed, Mr. Berman.

Mr. BERMAN. The letter I have sent to the ethics committee, as I suggest a letter that I have decided to send on my own to clear up some misimpressions, reads as follows:

"To whom it may concern: In March 1993 at a meeting in Washington, DC., I heard Congressman Newt Gingrich describe his upcoming course at Kennesaw State college entitled 'Renewing American Civilization.' Given that a portion of the proposed course agenda overlapped the goals of the Employment Policies Institute, I made a decision to pursue funding from the institute for a grant

to Kennesaw State to help promote this program. That contribution for \$25,000 was made during the summer of 1993.

"During the summer of 1993, I became aware of a hearing before a House judiciary subcommittee involving traffic safety issues. One of my clients unconnected to the Employment Policies Institute had an interest in the legislation being considered and I sought at a late date an opportunity to be added to the witness list. We contacted committee staff, the office of the Ranking Minority Member as well as Congressman Gingrich's Whip office hoping to be given an opportunity to testify.

"Subsequently we were notified by committee staff that we would be allowed to join a panel. Although I have no reason to believe any particular request was the reason we were successful in securing a position on the panel, as a courtesy, I thanked Congressman Gingrich for any help he might have provided and I am still unaware of the decision-making process on our request and our being invited to testify. The only connection—and I stress the only connection—between the EPI grant and the described hearing was that I penciled a thank-you note to the Congressman on a letter related to the grant rather than send two letters.

"The press reports that have linked the contribution from the Employment Policies Institute to my request of Congressman Gingrich's Whip staff to testify are ridiculous. I have never believed that any payment—and \$25,000 would certainly be ridiculous—was necessary in order to get added to a hearing list."

That is, in a nutshell, the start, middle and end of that whole controversy. And I hope it lays to rest at least for purposes of today what the \$25,000 was all about.

Thank you, Mr. Saxton, for the opportunity to respond to Mr. Stark.

Representative SAXTON. I thank the gentleman for the response.

Let me pursue with you a question now relative to the chart that is on the stand here. On the left-hand side of that chart is written in red print the question that the telephone interviewers in the Card and Krueger study asked of the person responding on the other end of the telephone, is that correct?

Mr. BERMAN. That is correct.

Representative SAXTON. What does that question say? I can't read it from here.

Mr. BERMAN. The question says, How many full-time and part-time workers are employed in your restaurant excluding managers and assistant managers?

Representative SAXTON. You contend that that question made it impossible for the well-intended researchers to get the kind of data that they needed to draw correct conclusions, is that right?

Mr. BERMAN. It is right. And it is so right it is ridiculous.

To put it in simpler terms, part-time is not defined. Full-time is not defined. People were allowed in responding to this question to make up their own definition of part-time and full-time, and in this industry some people think full-time is 40 hours, some people think it is 30 hours.

President Clinton called full-time 30 hours in his health reform bill. Senator Kennedy called full-time 37½ hours in his health care bill. The Fair Labor Standards Act considers 40 hours; 35 hours is

found in some union contracts. Some people think in the restaurant industry full-time is 3 days a week. Some people think it is over 20 hours.

And so Card and Krueger were collecting data on part-time and full-time employment and each respondent was given a different question—a different question based on how they interpreted the question.

The same thing goes for the word employed. How many people are employed? You can see from the survey data that some people were responding on how many people are employed on this shift. Some people were responding to how many people are employed today. Some people were responding to how many people are employed during this payroll cycle. And that might have even been okay if when they called back—well, it really wouldn't have been okay.

But let's assume for the moment you wanted to give them every benefit of the doubt. When they called back in November if they had talked to the same person when they asked the question, they would have at least had some consistency of some answers inside that one particular location.

Representative SAXTON. You are essentially saying there are two problems with the way the survey was taken. One is the question that was asked because there are different definitions of full-time and part-time, and secondly, the follow-up call which came several months later, the likelihood of having talked to the same person who interpreted the question the first time would have been a different person with a different interpretation of the same question.

Mr. BERMAN. Exactly right. The likelihood was far less than 50 percent that they talked to the same person the second time.

Representative SAXTON. So your contention then is that the data that was collected using this question and the method of surveying were both flawed.

Let me ask the young gentleman to put up the very first chart you had up which shows data. Yes. Thank you.

Now, this is a sampling as I understand it of the data that is collected with the question that you say—and I understand I am not questioning your contention that it is flawed and I understand what you said. Now, this is the data that was collected using that question. And in February I see it says Wendy's in a certain zip code—I think it says 072.

Mr. BERMAN. Yes.

Representative SAXTON. In February that question was asked and the respondent said they had zero full-time employees and 30 part-time employees, is that correct?

Mr. BERMAN. That is correct.

Representative SAXTON. OK. Then the follow-up call came in November 1992 and the respondent said they had 35 full-time employees and 30 part-time employees, is that correct?

Mr. BERMAN. That is correct. They had a terrific jump in business.

Representative SAXTON. So they had zero part-time and full-time employees according to the respondent in the first instance and then at the same restaurant several months later they had 35 full-time employees.

Mr. BERMAN. An infinite increase in full-time employment I think is what the economists would call it.

Representative SAXTON. Now, let me look at Wendy's in 15—in 185. In February, the respondent said they had 30 full-time employees and 10 part-time employees?

Mr. BERMAN. Correct.

Representative SAXTON. And then in November they had zero full-time employees and 30 part-time employees.

Mr. BERMAN. Correct.

Representative SAXTON. Let me look at one more example so that—let's look at the Kentucky Fried Chicken restaurant way down on the bottom there. The first respondent in February said they had zero full-time employees and part-time employees?

Representative BERMAN. That is correct.

Representative SAXTON. And then in February that same restaurant had 25 full-time employees and 15 part-time employees.

Mr. BERMAN. Yes.

Representative SAXTON. Now, where did these numbers come from?

Mr. BERMAN. All of these numbers come from a diskette given to us by David Card of Princeton University.

Representative SAXTON. So the researchers provided this data directly to you.

Mr. BERMAN. Correct.

Representative SAXTON. This wasn't something you cooked up on your own.

Mr. BERMAN. These are not our numbers.

Representative SAXTON. This is exact—this is a sampling of the exact numbers that were used by Card and Krueger in conducting their study.

Mr. BERMAN. They gave us all the raw data for all their restaurants and these numbers are taken directly off of their disk.

Representative SAXTON. In your opinion, could anyone draw conclusions through whatever model would be used to draw conclusions based on data such as this?

Mr. BERMAN. The only conclusion that you could get is that the data is wrong.

Representative SAXTON. Thank you.

Mr. STARK.

Representative STARK. Mr. Chairman, I would just ask unanimous consent to make in order in the record, a copy of a memo to Joe, Tim, and Jeff from Pamela reported to have something to do with GOPAC. It is in the possession I know of the ethics committee, a check dated June 30, 1993 for \$25,000 that Kennesaw College Foundation and a letter to Mr. Gingrich signed by Mr. Berman with a note.

5-10-93

To: Joe, Tim, and Jeff

From: Pamla

Re: After action report - Meeting with Richard Berman, Berman and Company - 202-347-3900 - Kennesaw course

I think there is a very real possibility here of \$20,000 - \$25,000 if the course can incorporate some of the ideas mentioned in the Journal of Labor Research, Volume XIV, Number 3. The papers to read and consider are under "Symposium - Entry-Level Employment and Employees: Problems, Policies, and Prospects. Looking it over very briefly in his office, I think there might be a connect. Maybe some of the 7 people who wrote the papers would contribute something to the course text? His primary concern is a discussion of what he calls "genesis employment opportunities" - the idea that entry level positions are not necessarily "dead end." I will send the papers to Nancy Desmond and will follow up with her as to her thoughts. If it would be helpful to put Nancy in touch with some of the authors, I would think he would do that.

Some of his clients are restaurant chains and this is why his interest is focused here. I did mention the idea of having his clients open their restaurants as locations for a down link. His comment was that too many would view Newt as partisan even with no reference to politics.

I will send him a letter thanking him for the meeting and will send the journal to Nancy. Nancy and I will touch base in a week.

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607-14TH STREET, N.W., SUITE 1110
WASHINGTON, DC 20005

June 30, 93

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R. Berman

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July 1, 1993

Honorable Newt Gingrich
Member of Congress
U.S. House of Representatives
2428 Rayburn House Office Building
Washington, D.C. 20515

Dear Newt:

I've enclosed a check for \$25,000 payable to the Kennesaw State College Foundation. I remember when you first brought this to my attention in March (you were leaving the Chamber of Commerce after speaking to our client-CEO group). I'm sorry it's taken this long, but I'm please to be able to make it happen.

I've spoken with Jeff Eisenach (who has been very helpful) about making available to you anecdotes, stories, and general information that you can use for program material. I know this information will be very useful. I'm delighted that it will be part of your lecture series.

As always, let me know when I can help.

Sincerely,

Richard B. Berman
Executive Director

Enclosure

RBB:cs

*Newt - Thanks again
for the help on
Turkey's committee
hearing.*

Why don't we just add those to the record so that it is in with Mr. Berman's self-serving statement.

Mr. Berman, I understand you have to run off. The last restaurant association person we had here said he had to get back someplace down South, but the truth was he had to get off to a reception for Mr. Gingrich. Do you have a reception with Mr. Gingrich this morning? Is that where you are headed next?

Mr. BERMAN. No, I have a meeting over in the Capitol, Mr. Stark.

Representative STARK. Well, I don't have any other questions.

I, as a matter of fact, Mr. Berman, think you do a great job. I think you are a highly paid lobbyist for a highly profitable industry who has a strong interest in seeing no increase in the minimum wage so they can continue to exploit teenagers and seniors and not pay them health insurance and pay you hundreds and hundreds of thousands of dollars a year so that you can contribute to Mr. Gingrich and others which is, under our Constitution, a good thing to do.

I guess I only ask if you have any indication that you think that either Dr. Card or Dr. Krueger, have any interest on either side of this debate? They are largely being critiqued here. Would you indicate, or is it your belief, that they are anything but independent in this research they did?

Mr. BERMAN. I don't have any knowledge of who paid for the study or what their prior interests were in this issue.

Representative STARK. Have you ever heard it suggested that they were paid by either liberal Democrats like myself, interested in promoting the minimum wage, or labor unions, or anything to indicate bias in their professional judgment—which people can disagree with. I am not suggesting that everybody agrees with them. But have you ever heard any indication that they were making anything but an honest, straight-forward attempt to do good academic economic research?

Mr. BERMAN. I don't know anything about their reputations.

Representative STARK. That isn't what I asked about, their reputation. You haven't heard anybody suggest that they have an axe to grind, either against the restaurant industry or for the labor unions?

Mr. BERMAN. I have no knowledge of them prior to hearing about this study.

Representative STARK. So you don't know whether they are good economists or not highly regarded.

Mr. BERMAN. I don't know if they are good economists or not, that is right.

Representative STARK. So you don't know much about them.

Mr. BERMAN. I know what the survey looks like.

Representative STARK. Might have been done by somebody from the AFL-CIO, huh?

Mr. BERMAN. Could have been.

Representative STARK. So you don't know much about this in general.

Mr. BERMAN. I only know what their data looks like and how it relates to reality.

Representative STARK. Are you willing to show your data?

Mr. BERMAN. The data that I have has been turned over to Dr. Neumark.

Representative STARK. Are you willing to make it available generally to my staff?

Mr. BERMAN. It is not my data. It is proprietary data.

Representative STARK. I understand. You would white the names out and let us see it?

Mr. BERMAN. Absolutely. As a matter of fact, I just showed you some of the data on these charts.

Representative STARK. And the wage data as well?

Mr. BERMAN. Excuse me, sir?

Representative STARK. And the wage data?

Mr. BERMAN. The wage data is proprietary information.

Representative STARK. If you wipe the names out, how are we going to know?

Mr. BERMAN. As a matter of fact—is that Mr. Spriggs back there? I don't know which one of the gentlemen is Mr. Spriggs.

Mr. Spriggs used to work for another organization that is largely funded by organized labor called the Economic Policy Institute. They have also requested that information and I am assuming because they feel that the data that we were able to get is better than the data that was given to Card and Krueger.

And again, my reaction to their letter is the same as my reaction to your request. This isn't my data. I am not in the habit of taking people's payroll records and spreading them around town.

Representative STARK. OK. So you are in the habit, though, of taking money from your clients and spreading that around town to politicians, aren't you?

Mr. BERMAN. Mr. Stark, I gave you my statement about the contribution to Kennesaw State College. If you want to know about political contributions, which is something totally different, I would be happy to discuss it with you at some other time.

Representative STARK. Thank you, sir.

Representative SAXTON. The gentleman from Texas.

Representative THORNBERRY. Mr. Chairman.

Mr. Berman, I am sure you understand that it is often the case, whether you are talking about Washington or trying a car wreck case in Amarillo, TX that when you can't argue the facts you attack the witness personally. And that is a frequently used tactic and I appreciate your willingness to come testify knowing that to be a frequently used tactic here, as well as elsewhere.

Correct me if I am wrong, but my understanding is that Dr. Krueger, one of the gentlemen who did the study we are talking about here, is currently employed at the Department of Labor. Is that your understanding?

Mr. BERMAN. He was hired as chief economist by Secretary Reich.

Representative THORNBERRY. OK. So he certainly has an interest in that—in this issue and pushing a particular point of view.

I want to get back briefly to the data that you looked at. I am certainly not an economist and I do not have a lot of experience in doing studies of this sort, but when I see the numbers that are on the board here with these restaurants having zero full-time employees and then a few months later going up to 35 or going down

to zero after having 30 or 27, I guess that says, should someone who is familiar with studies have some bells go off when you see numbers like that that just don't make common sense?

Mr. BERMAN. I want to give every benefit of the doubt there is to Card and Krueger. On one hand, if they don't understand the restaurant industry, maybe they thought this was typical. When I looked at the data, I knew it was screwy but maybe they thought it was typical.

On the other hand, it could be that somebody amassed all of these numbers and put them all in one big averaged pool and so these anomalies wouldn't jump out at them. Perhaps all this was done by research assistants and when they got the numbers maybe they didn't know the underlying data was so corrupt.

Again, I am giving them the benefit of the doubt in both cases because I don't really know what happened. But anyone who looked at this data and knows anything about this industry would know this is not a typical employment pattern that couldn't be real.

Representative THORNBERRY. That brings up a good point. Based on your understanding, who actually made the telephone calls to the Wendy's and the Burger Kings to get this information?

Mr. BERMAN. Again, I don't know this, but my guess just based upon academic practices is that they probably hired graduate students to make some of these phone calls, college students. There is an abundance of college students in Princeton and it would seem logical that they probably did that, as well.

Representative THORNBERRY. So what the doctors themselves may have done is look at, as you mentioned, the aggregate totals rather than getting down to the each individual restaurants and in which case they may not have seen the silliness that seems to come, jump out at us when we look at the particular numbers.

Mr. BERMAN. Giving them every benefit of the doubt, that may have happened.

Representative THORNBERRY. Let me ask you finally this question. Can you look at the numbers and say that it is skewed one direction or another or are these numbers just wrong and we can't take anything from them?

Mr. BERMAN. Well, again, I don't want to—I don't want to suggest bad faith. But first of all, the numbers are skewed. There is no way you can make any sense out of these numbers. But when you aggregate them all, Card-Krueger showed a bias in New Jersey of employment going up and a bias against the Pennsylvania restaurants in the sense that they were going down in Pennsylvania.

My point is that even with bad numbers, they were showing that the bad numbers were favorable to New Jersey employment and disfavorable or unfavorable to Pennsylvania employment. So not only did they not report accurately but then the poor reporting tended to favor the State that raised the minimum wage in the sense that it suggested that where they raised the minimum wage the employment goes up. I don't know where that bias comes from but it is a consistent bias through the data.

Representative THORNBERRY. Thank you, sir.

Thank you, Mr. Chairman.

Representative SAXTON. I know you are you are in a hurry to rush off. I have one quick question which I think is the crux of the whole thing.

Mr. BERMAN. Yes, sir.

Representative SAXTON. As you know, the President, the chief—one of the chief economists, Laura Tyson in the White House, and Secretary Reich have all pointed to this study as being the basis upon which they draw the conclusion that increasing the minimum wage does not eliminate jobs at the entry level. Based on the information that we have here, is there any way that they can correctly continue to draw that conclusion from this study?

Mr. BERMAN. It may be the best study from the standpoint of the methodology applied and they may, as Laura Tyson said, they may have used the most—and I am quoting, “the most sophisticated techniques available to economists.” That may be true. But when you plug the correct data into the most sophisticated techniques, you find out that the minimum wage caused job loss in New Jersey.

There is still a way that they can use the study honestly, and that is to use the Card-Krueger study with the correct data. They could honestly use it and it would show that minimum wage increases cause job loss. But if they want to use the study with the bad data, there is no way that they can seriously stand in front of a group of people who have an IQ above room temperature and try and suggest to them that this study means anything.

Representative SAXTON. Well, thank you very much for being with us today. We appreciate it very much. And we look forward to seeing you, working with you in the future.

Thank you.

Mr. BERMAN. Thank you all.

Representative SAXTON. Dr. Neumark, we would like to hear from you at this point.

Dr. Neumark, as I pointed out earlier, is with the Department of Economics at Michigan State University. And, Dr. Neumark, we would ask you to explain your involvement in this study, and I guess you reviewed it, and we will turn the floor over to you for your statement at this point.

**OPENING STATEMENT OF DAVID NEUMARK, PROFESSOR,
DEPARTMENT OF ECONOMICS, MICHIGAN STATE UNIVERSITY**

Mr. NEUMARK. Thank you, Mr. Chairman. I would like my written statement entered into the record.

Representative SAXTON. Without objection. Thank you.

Mr. NEUMARK. Let me make a couple of comments in response to some things that came up here. First of all, correcting one point of order, my mother would be thrilled to know I was a professor at Harvard, but I was actually only a graduate student at Harvard prior to moving to the Federal Reserve Board, then the University of Pennsylvania.

Representative SAXTON. Dr. Neumark, excuse me. If you could pull that microphone just a bit closer.

Mr. NEUMARK. Yes. The second point is that I would hope this hearing would help to serve as a discussion of general analyses of

minimum wage effects as nearly everybody suggested would be useful.

I will be happy in the question and answer period to summarize some of our other findings, to give you an assessment of the overall state of research of which the Card and Krueger paper is simply one piece. I gather the second panel will also provide some more general comments.

Third, I would like to state unambiguously that I think this discussion of whether the researchers involved myself, David Card, Alan Krueger, or any others—have any biases that somehow influences our results is really out of line. I have no reason to believe that they are doing anything but independent analyses. I have great respect for them and I will argue that my analyses have also been independent.

The only thing I am getting out of this is indicated in the—somebody, I believe Carlos Bonilla from the EPI, gave me. It reads “David, you are free to release the data at the time of your choosing, as we agreed.” The only thing I am getting out of this is first cut at the data.

When I was contacted 3 or 4 weeks ago and told that EPI was collecting this data, I said it sounds fascinating. I would like to work with them, but here are my conditions. I want all the data you get and I want to be able to call the franchisees and companies directly and verify that the data came from the payroll records. I am continuing to do this as more data comes in. Second, I would be free to release the data and the results, whatever they show.

I think it is interesting the results come out showing an opposite finding to what Card and Krueger found. There was no reason to believe that this would happen going into the project, even though we knew the data were noisy, as Mr. Berman discussed. In particular, there was no reason to believe going in that the results were going to come out with a different signed effect, and I would have been just as interested to publish a paper—or write a paper—it is not published yet—saying, “Look the data were flawed. We have got a much better data source but in fact these data show the same thing.”

I have no vested interest, financial or otherwise, in the outcome of this study, which I would like to have that stated up front.

Now let me turn to my prepared statement. Card and Krueger’s findings, if correct, would be quite profound. Most existing evidence, including a number of papers that I have co-authored with William Wascher of the Federal Reserve Board, indicate that minimum wages do in fact reduce employment of low-wage workers.

Consistent with our findings, most economists—not all—but most economists believe that minimum wage increases lead to some job loss, an efficiency cost that must be weighed against the benefits of increasing the income of those low-wage workers who remain employed and reap the gain of the higher minimum. The latter point is an important one that I think is often lost sight of.

We are not claiming, based on any of our research, that minimum wages are necessarily a bad thing. All our research shows is that there is a tradeoff. Some people lose jobs. Others maintain their jobs and no doubt earn a higher wage. And there are tradeoffs

that policymakers have to face in making their decisions. I, as an academic, don't have to make those decisions fortunately.

The research does not imply that minimum wages are a bad thing or should not be increased, but it implies we have to think about the tradeoffs. As Mr. Quinn suggested, it really is weighing the issue of higher income for some, fewer jobs for others.

Card and Krueger's results, certainly the New Jersey study, implies there is no tradeoff. As they state in their book, based on their evidence the minimum wage is mainly a distributional issue. Let me now turn to the results which you have heard described that cast doubt on the conclusions Card and Krueger reached from the New Jersey minimum wage study. These findings are contained in a new, as yet unpublished paper, co-authored with William Wascher.

In addition to summarizing our findings, I hope to answer questions you may have to help you assess the evidence. Before discussing these, let me address one issue. As has already been discussed—and this discussion of the role of lobbyists is something that is a bit beyond me, I am afraid—economists who have received some research support from EPI have been accused of letting that support affect their conclusions, and not just in this forum, I might add.

Let me make four points that should dispel any doubts that you may have about my impartiality. First, the only time I received support from EPI was about 2½ years ago for providing a nontechnical version of a paper that was written and accepted for publication before they ever contacted me. All they wanted was a three-page summary of a 25-page paper, and all the equations and econometric methodology thrown into appendices that non-academicians would not have to read.

I agreed to provide this paper for a fee, provided they exert no editorial control over the contents or conclusions. They didn't, and they didn't try to. I received fees later on for unrelated work that did not have a research component.

Because I knew that the current atmosphere surrounding the minimum wage debate is highly charged, when they contacted me regarding the present study, I said I would take no money from them. Rather, as I stated, I would simply analyze the data, and wanted to be free to circulate the results, whatever they showed.

And finally, as I said before, I have great respect for the research abilities of economists on both sides of this debate. Because these data will eventually be made publicly available once this paper is finished, I know that there is no way to hide behind shoddy or biased research. I would never risk my academic reputation trying to do so.

I should add that if anyone here thinks I am a hired gun of the restaurant industry, I recently completed a study documenting serious sex discrimination against women in high-priced restaurants, something I don't think the restaurant industry wants to hear. (It was actually written up in "Newsweek" yesterday.)

Card and Krueger collected their data on employment at fast food restaurants using a telephone survey. This is a bit repetitive, but I think it is one of the main points. The question the interviewers asked of managers or assistant managers was, "How many full-

time or part-time employees are employed in your restaurant, excluding managers and assistant managers?"

In retrospect the question is very vague. The respondent may have interpreted employment as current employment on a shift, a day or over a payroll period.

More importantly, the key datum here is the change in employment at a restaurant measured as the change in employment in two surveys conducted 8 months apart. Card and Krueger made no attempt to ensure that the same managers responded to the survey both times or that the same definition of employment was used.

Figure 1 documents the consequences of the imprecision with which their data were collected. The first row shows that employment changes over the period ranged from negative 43 to 35 employees, and this is when the average employment at a fast food restaurant in their sample and the sample I gather is around 20 employees.

Because this much variability of employment change seemed implausible, the EPI began to contact franchise owners as well as, more recently, the corporations who own other restaurants, to collect data on employment from the actual payroll records. These data used consistent definitions of employment over the 8-month period and are accurate readings of the actual numbers of hours worked at each restaurant.

As I stated, I have contacted each person who supplied data. I called them up and I said, "I am David Neumark. I am doing the study with the EPI data that you supplied, and because I am attempting to be an independent academic—and I think I am being successful in that—I want to identify where the data came from."

The response was really two-fold. They said they completely understand why I was calling. They understood that there is a hot political debate going on and that I wanted to make sure the data was clean and had not been "cooked" in any way. That was the first response.

The second response was that the question is a bit ridiculous. All of them said that they simply punched up their payroll records and either wrote them down on a spread sheet or called them into EPI, at which point they were relayed to me. In fact, in many cases, the franchise owner simply said the data were provided by ADP, which is a company that does processing of payroll records for a huge number of companies in this country.

The last row of figure 1 shows that the payroll data which were collected this way indicate much less volatile employment changes. The standard deviation of employment change is one-eighth as big as in the Card-Krueger survey data, and the minimum and maximum cover ranges about one-seventh as large.

The next figure displays the same information graphically. The left-hand chart shows the distribution of employment changes in the restaurants in Card and Krueger's data from which we sampled, and the right hand chart shows the distribution of employment changes in the payroll data.

Clearly, Card and Krueger's method of obtaining data on employment changes resulted in the introduction of a great deal of inaccurate or extraneous information into their analysis. I should emphasize I think this is simply an honest mistake. I can sit here now

and say, that, in retrospect it would have been nice to collect the data the other way. We are not saying that they were stupid or they were silly. Nor are we saying that, had we sat down and been the first ones to do this study, we would have collected the data any differently.

People have been looking at the data and scratching their heads. It is an intriguing and striking study. One result of this head-scratching has been looking at how the question was asked, asking it another way and seeing whether the result differed. That is all we are saying here.

The obvious question, though, is what impact, if any, this had on the results when they compared employment changes in New Jersey and Pennsylvania. It turns out to have had relatively serious consequences.

Employment at fast food restaurants in New Jersey using their data grew by 2.9 full-time employees relative to Pennsylvania, in contrast to the standard prediction that relative employment would fall. This difference is statistically significant and implies that the 18.8 percent increase in the New Jersey minimum resulted in a strikingly large 15.6 percent increase in fast food employment.

The last row of figure 3 shows the results we obtained using the payroll data. In contrast to Card and Krueger's results, we find evidence that minimum wages reduced employment in New Jersey. Employment grew by .8 fewer full-time employees, an effect that is significant at the 10 percent level. This estimate implies that the New Jersey minimum wage increase reduced fast food employment in New Jersey by 4.8 percent relative to Pennsylvania.

I should point out that the magnitude of the disemployment effect we find here is quite similar to the magnitude you find in other studies—some of my own with Bill Wascher included—which do find a negative effect of minimum wages.

As academics are wont to do, I must offer at least one important qualification of our findings. To this point, we have collected payroll data only from a subset of the restaurant chains and zip codes represented in Card and Krueger's data. On the one hand, this isn't as troublesome as it seems. If we restrict attention only to Card and Krueger's data for the restaurant chains and zip codes for which they collected data, we get the same results you get with their full data set.

So the differences between our results and theirs are driven by the data sources, not driven by the fact that so far we have data from a subset of the zip codes and from two of the four restaurant chains.

On the other hand, our sample is still relatively small. I am working with EPI and at this point working more directly with the franchises and corporations to collect data from more of the restaurants, and we will eventually attempt to get data from every restaurant covered in Card and Krueger's data set. We are doing this by contacting the companies to get all the company owned stores and by contacting or by attempting to contact all of the franchisees who own restaurants in any one of these zip codes. The only ones you really can't track down are franchisees whose corporate headquarters are in another State but happen to own out-

lets in New Jersey or Pennsylvania. But that should be a relatively small set.

In principle—and this is the important qualification—the results could change with more data. For my part, I can assure you and the research community that we will make the results available regardless of what they show.

At this point, though, the evidence supports two conclusions. First, Card and Krueger's telephone survey did lead to unreliable data, and, second, more reliable data from payroll records indicate that the New Jersey minimum wage increase resulted in a sizable decline in fast food employment.

Let me make one additional comment. Mr. Stark quoted somebody—I don't know who—as claiming that the minimum wage has devastating consequences. The number was a reduction in employment of some 20 thousand per penny. I don't know where those numbers come from. I don't think any reliable academics are making those claims.

If you put up the last figure, I can just give you some notion of what the estimates show. The consensus view from our study, as well as many other past studies, is that the elasticity of employment with respect to minimum wage, which I will explain in a moment, is $-.1$ to $-.2$.

What does that mean? That means that a 10 percent increase in the minimum reduces employment of these workers by 1 or 2 percent. It is often suggested that such estimates imply that even if minimum wages reduce employment, the effect is small, and in percentage terms, they are. However, keep in mind that this is a big country. If you look at figure 5, which I hope you have in your packets, we give you some indication of what these estimates mean. In 1994, annual average employment of 16- to 24-year-olds was nearly 19 million. A minimum wage increase of 10 percent would reduce employment of these people by 1 to 2 percent.

To figure out what this means, we applied these estimates to the 21 percent increase in the minimum that was recently proposed. First, use the smaller elasticity estimate of $-.1$ that is, I think, fairly good consensus estimate among economists. I am not certain—you would have to ask them—that Card and Krueger would disagree with the statement that the elasticity $-.1$.

If you took that number, then employment of 16- to 24-year-olds would be reduced by 401,000. That is clearly a lot less than 26,000 per penny but it is not a tiny number. Using a larger estimate, perhaps more contentious of $-.2$, employment would be reduced by 800,000.

To provide some perspective of what these numbers mean, the bottom of the table reports total employment changes for all age groups for 1991, 1992 and 1993. This is just changes in the economy irrespective of minimum wages.

In 1991, a recession year, employment fell by just over one million. That is, depending on which estimate you use, about two times larger than the predicted decline in employment for 16- to 24-year-olds that might obtain as the result of a minimum wage increase to \$5.15.

In 1993, a relatively robust year, employment grew by 1.7 million, perhaps three or four times the predicted employment decline

from the minimum wage increase. Thus, relative to the types of employment changes we associate with the business cycle, employment declines caused by minimum wage increases are not trivial. Nonetheless, none of are claiming that minimum wages bring about unmitigated disaster, but they do represent a tradeoff.

Thank you.

[The prepared statement of Mr. Neumark follows:]

PREPARED STATEMENT OF DAVID NEUMARK

On February 14, 1995, Democratic leaders in the House and Senate introduced President Clinton's proposal to raise the minimum wage from \$4.25 per hour to \$5.15 per hour. Supporters of this proposal have frequently stated that recent evidence indicates that this increase will not result in job losses and may lead to employment increases. Statements such as these are based, at least in part, on recent research by David Card and Alan Krueger. Card and Krueger compared the growth in fast-food employment in New Jersey and Pennsylvania following a minimum wage increase in New Jersey. Contrary to the standard prediction that employment should have grown more slowly in New Jersey, Card and Krueger found that employment grew *faster*.

Card and Krueger's findings are quite profound. Most existing evidence, including a number of papers that I have co-authored with William Wascher of the Federal Reserve Board, indicate that minimum wages reduce employment of low-wage workers. Consistent with our findings, most economists believe that minimum wage increases lead to some job loss—an efficiency cost that must be weighed against the benefits of increasing the income of those low-wage workers who remain employed and reap the gain of a higher minimum. In contrast, Card and Krueger's results imply—as they argue in their new book—that “the minimum wage is mainly a distributional issue.”

The purpose of my appearance before the committee today is to report on new findings that cast doubt on the conclusions that Card and Krueger reached from the New Jersey minimum wage study. These findings are contained in a new, as yet unpublished paper co-authored with William Wascher. In addition to summarizing our findings, I hope to answer questions you may have to help you assess or interpret our evidence.

Before discussing these findings, let me address one issue. Economists who have received some research support from the Employment Policies Institute have been accused of letting that support affect our conclusions. Let me make four points that should dispel any doubts that you might have about my impartiality. First, the only research support I ever received from the EPI was for providing a non-technical version of a paper that was written well before they ever contacted me. I only agreed to provide them with this paper provided that they exert no editorial control over the contents or conclusions. I also received minor consulting fees for unrelated work that did not have a research component. Second, because I knew that the current atmosphere surrounding the minimum wage debate is highly charged, when they contacted me regarding *this* study I said I would take no money from them. Rather, I would simply analyze the data they provided to me, and be free to circulate the results—whatever they showed. Third, my co-author on all of my minimum wage papers is an employee of the Federal Reserve Board, and has never had the opportunity to earn any income from the EPI. Finally, I have great respect for the academic abilities of economists on both sides of this debate. Because these data will eventually be made publicly available, I know that there is no way to hide behind shoddy or biased research, and would never risk my academic reputation by trying to do so. With that said, let me turn to the evidence in our paper.

Card and Krueger collected their data on employment at fast-food restaurants using a telephone survey. The question their interviewers asked—of managers or assistant managers—was “How many full-time and part-time workers are employed in your restaurant, excluding managers and assistant managers?” In retrospect, this question is very vague. The respondent may have interpreted employment as current employment on the shift, in a day, or over a payroll period. Moreover, the key datum is the change in employment at a restaurant, measured by the change in employment between two surveys conducted 8 months apart. Card and Krueger made no attempt to ensure that the same manager responded to the survey both times, or that the same definition of employment was used.

Figure 1 documents the consequences of the imprecision with which their data were collected. The first row shows that employment changes over the 8-month pe-

riod ranged from 43.5 to 35 employees, and this when the average employment level in a fast-food restaurant is around 20. Similarly, the standard deviation of employment change is 17.7, implying enormous swings in employment over an 8-month period.

Because this much variability in employment change seemed implausible, the EPI began to contact franchise owners to collect data on employment levels from actual payroll records. These data use consistent definitions of employment over the 8-month period, and are accurate readings of the actual numbers of hours worked at each restaurant. They should therefore be completely reliable.

The last row of Figure 1 shows that the payroll data indicate much less volatile employment changes than do Card and Krueger's data. The standard deviation is one-eighth as big, and the minimum and maximum cover a range about one-seventh as large. The next figure (Figure 2) displays the same information graphically. The left-hand chart shows the distribution of employment changes in the restaurants in Card and Krueger's data from which we sampled in obtaining our data, and the right-hand chart shows the distribution of employment changes in the payroll data. Clearly, Card and Krueger's method of obtaining data on employment changes resulted in the introduction of a great deal of inaccurate or extraneous information into their analysis.

The obvious question is what impact, if any, this had on their results when they compare employment changes in New Jersey and Pennsylvania. It turns out to have had a serious impact. The first row of Figure 3 reports the results using their data. Employment at fast-food restaurants in New Jersey grew by 2.9 full-time employees relative to Pennsylvania, in contrast to the prediction that relative employment would fall. This difference is statistically significant, an implies that the 18.8 percent increase in the New Jersey minimum resulted in a strikingly large 15.6 percent increase in fast-food employment.

The last row of the figure shows the results we obtain using the payroll data. In contrast to Card and Krueger's results, we find evidence that minimum wages reduced employment in New Jersey. Employment grew by .8 fewer full-time employees, an effect that is significant at the 10 percent significance level. This estimate implies that the New Jersey minimum wage increase reduced fast-food employment in New Jersey by 4.8 percent relative to Pennsylvania. The magnitude of this disemployment effect is similar to the magnitude obtained by many other studies of minimum wage effects.

As academics are wont to do, I must offer an important qualification to our findings. To this point, we have collected payroll data only from a subset of the restaurant chains and zip codes represented in Card and Krueger's data set. On the one hand, this is not as troublesome as it seems. If we restrict attention only to Card and Krueger's data for the chains and zip codes from which we sampled, the findings are very similar to what they obtain with their full sample. Thus, the differences between our results and their's are not driven by differences in the samples, but by differences in the quality of the data. On the other hand, our sample is still relatively small. I am still working with the EPI, and directly with the franchises and corporations, to collect data from more restaurants, and will eventually attempt to get data from every restaurant covered in Card and Krueger's data set. In principle, the results could change 4 with more data. For my part, I can assure you that we will make the results available regardless of what they show.

At this point, though, our evidence supports two conclusions. First, Card and Krueger's telephone survey led to unreliable data. Second, more reliable data from actual payroll records indicate that the New Jersey minimum wage increase resulted in a sizable decline in fast-food employment.

Evidence from BLS Payroll Data

In response to our paper, the BLS has issued a statement noting that BLS establishment payroll data for eating and drinking establishments indicate that employment grew in both New Jersey and Pennsylvania in 1992. This statement is true. However, Figure 4 provides additional details from the payroll data supporting the conclusion that minimum wage increases do in fact reduce employment in such establishments. The top panel shows December to December percentage changes in payroll employment at eating and drinking establishments in New Jersey and Pennsylvania, along with percentage changes in minimum wage levels in each state, for the years 1989-1993. These figures support three conclusions.

First, while employment did grow in both New Jersey and Pennsylvania in 1992, it grew faster in Pennsylvania, consistent with a negative employment effect of the New Jersey minimum wage increase.

Second, in both States employment growth was lower in years in which minimum wages increased substantially. For example, Pennsylvania had sizable minimum

wage increases in 1989 and 1991. In these years, employment grew slower than over the period 1982–1988. New Jersey had sizable minimum wage increases in 1990, 1991, and 1992. In these years, employment also grew slower than over the period 1982–1988, with employment declining in the first two of these years, and growing by only 0.7 percent in 1992, compared with 2.9 percent growth in the earlier period.

Third, regression analysis provides more systematic evidence that minimum wages reduce employment. Using only BLS payroll data for eating and drinking establishments in New Jersey and Pennsylvania, this analysis indicates that a 10 percent increase in the minimum wage reduces employment by 2.1 percent. Again, this magnitude is in line with many other estimates of the disemployment effects of minimum wages.

Implications for Employment Levels

The consensus view from our studies, as well as many past studies, is that the elasticity of employment with respect to minimum wages, for young workers, is .1 to .2. These numbers mean that a 10 percent increase in the minimum wage reduces employment of these workers by one to 2 percent. It is often suggested that such estimates imply that—even if minimum wages reduce employment—the effects are small. Figure 5 presents some numbers which provide a better understanding of the meaning of these estimates.

As an example, in 1994 annual average employment of 16–24 year-olds was nearly 19 million. True, a minimum wage increase of 10 percent may reduce employment by only one to 2 percent. But this represents a large number of workers. To see this, we applied these elasticity estimates to the 21 percent increase in the minimum wage that was recently proposed. Using the smaller elasticity estimate of .1, employment of 16–24 year-olds would be reduced by 401,000. Using the larger estimate of .2, employment would be reduced by 801,000.

To provide some perspective on these numbers, the bottom of the table reports total employment changes for all age groups, for 1991, 1992, and 1993. In 1991, a recession year, employment fell by just over one million. This is not that much larger than the predicted 6 decline in employment that 16–24 year-olds would experience from raising the minimum wage to \$5.15. In 1993, a relatively robust year, employment grew by 1.7 million, about two to four times more than the predicted employment decline from the minimum wage increase. Thus, relative to the types of employment changes we associate with the business cycle, employment declines caused by minimum wage increases are far from trivial.

Figure 1

Variability of Employment Change in the Card/Krueger Data vs. the Payroll Data.
Full-Time Equivalent Employees

	Standard deviation	Minimum	Maximum	Percent of obs. with employment change between -5 and 5 FTE's
All units in Card/Krueger data:	17.7	-43.5	35	60
Card/Krueger units in sampled universe: ^a	11.5	-43.5	26	48
Payroll data:	2.1	-3.0	9.0	90

a. Burger King and Wendy's franchises in particular zip codes.

Figure 2--Variability of Employment Change in the Two Data Sources

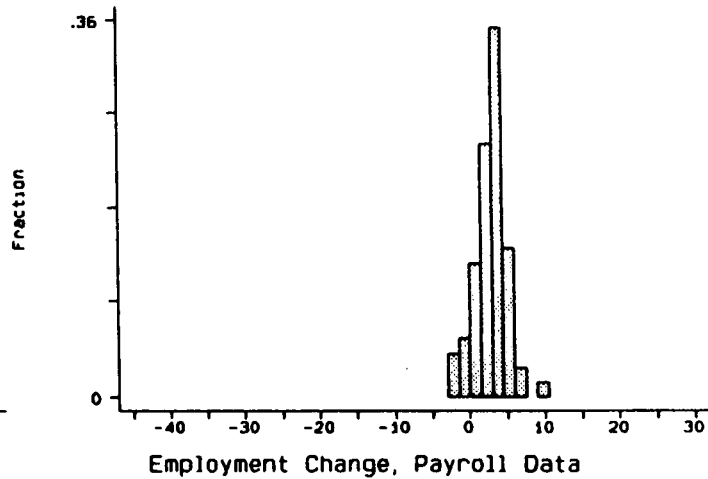
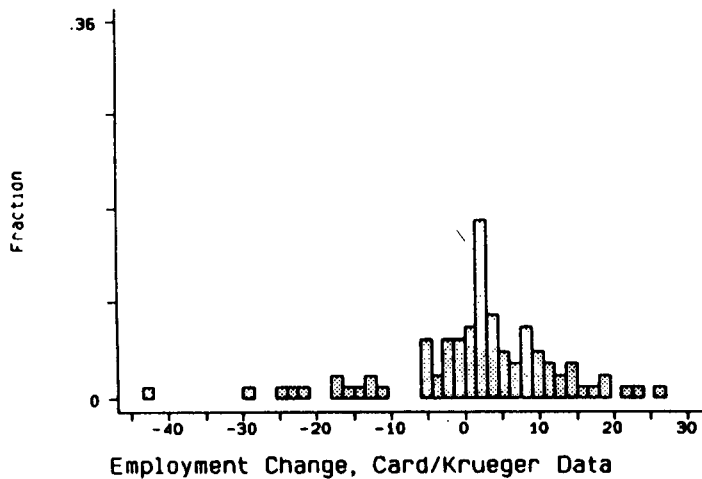


Figure 3

Employment Effects of the 1992 New Jersey Minimum Wage Increase

Difference between New Jersey and Pennsylvania Growth of Full-Time Employees,
February-November 1992

	Estimated difference	T-statistic	Elasticity	Employment effect of NJ minimum wage increase
Card/Krueger data, all units:	2.94	2.60	0.88	+15.6%
Card/Krueger data, units in sampled universe: ^a	3.70	1.18	0.96	+18.1%
Payroll data:	-0.82	1.74	-0.25	-4.8%

a. Burger King and Wendy's franchises in particular zip codes.

Figure 4

Minimum Wage Effects on Employment in Eating and Drinking Establishments,
Using BLS Payroll Data

	Year	Percentage increase in minimum	Employment growth rate	Employment growth rate minus 1982-1988 average growth rate
PA	1989	10.5	1.9	-1.1
PA	1990	2.7	0.5	-2.5
PA	1991	11.8	-0.5	-3.5
PA	1992	0.0	1.4	-1.6
PA	1993	0.0	1.2	-1.8
NJ	1989	0.0	0.1	-2.8
NJ	1990	13.4	-4.2	-7.1
NJ	1991	11.8	-.2	-3.1
NJ	1992	18.8	.7	-2.2
NJ	1993	0.0	2.1	-0.9

1982-1988 average employment growth rate:

PA 3.0, NJ 2.9

Estimated effects of minimum wage change on employment growth

Sample period: 1982-1994

$$\% \text{ change in employment} = 2.4 + .11 \cdot \text{NJ} - .21 (\% \text{ change in minimum wage})$$

(3.5) (.11) (2.4)

Interpretation: 10 percent increase in minimum wage lowers employment
by 2.1 percent.

Figure 5

Employment Effects of Proposed (21 Percent) Minimum Wage Increase

	Employment in 1994	Employment <u>loss</u> , -.1 elasticity	Employment <u>loss</u> , -.2 elasticity
16-24 year-olds	18,919,000	401,000	801,000
16-19 year-olds	6,161,000	130,000	261,000
Total Employment Change by Year, All Ages			
	1991:	-1,037,000	
	1992:	721,000	
	1993:	1,708,000	

Representative SAXTON. Thank you, Dr. Neumark.

As I sat and listened to your discussion, I was reminded of my college days many years ago when I took economics courses and ran real fast mentally trying to keep up with the professor. But I thank you for your testimony and your explanation. I just have several very rudimentary questions that I would like to ask.

If I could ask the—to put up the chart with the question on it once again. Mr. Berman testified that the question itself was inadequate to expect to derive the kind of data and he also testified that the methodology that was used in asking the question for all the reasons that you heard discussed would have been expected that inaccurate data would likely be obtained. Do you agree with those two points?

Mr. NEUMARK. Yes, I agree that the question—with hindsight—is too vague.

Now, we have to realize that in any surveys we do—any time we collect data—or get measurement error or noise. You get all sorts of things unrelated to what is going on. In this case, there seems to be a lot of it. Again, I want to emphasize that I am coming at this from the perspective of more accurate hindsight. I doubt that David Card or Alan Krueger would agree after looking at our data that it wouldn't have been better to get the payroll data.

I think the dispute you will get from them with respect to our data is twofold, and I have tried to address these issues. One is that so far the sample is relatively small. I agree and I noted that. It is conceivable the results will change. The second is that many of their papers don't show the positive effect of minimum wages that the New Jersey—Pennsylvania study shows. Many of their studies basically show no effect or zero effect.

If you ask me whether our results are strongly inconsistent with no effects of minimum wages, the answer is no. We find a small negative effect. If they want to argue it is zero, maybe slightly negative, then our results are not that different.

What we are very different from in terms of our findings is the statement that there is a strong positive effect of minimum wages. I think that has been a statement that has been made more strongly in the political sphere than in their writing.

Representative SAXTON. During your testimony, you used one phrase in which you said this is really about asking the question, is it about fewer jobs for some and higher wages for others.

Mr. NEUMARK. Correct.

Representative SAXTON. Based on what you have concluded, is in fact raising the minimum wage in the area that the study was done, did it result in fewer jobs for some and higher wages for others?

Mr. NEUMARK. Sure. Absolutely.

Representative SAXTON. It did.

Mr. NEUMARK. Yes.

Representative SAXTON. Then we must conclude that the contention that job growth actually took place in New Jersey because of or in spite of the increase in the minimum wage is incorrect.

Mr. NEUMARK. I think that is true. Let me just add if I may that there have been a lot of studies written on minimum wages in the last 4 or 5 years, by Card and Krueger, Laurence Katz, myself and

Bill Wascher and others. A lot—many of these papers tend to show zero effects or not a significant negative effect. Many of the papers also show significant negative effects. In my view, the preponderance of the evidence from all of these papers still says what economists were saying back in 1981, as a result of the Minimum Wage Study Commission that elasticity estimates of $-.1$ to $-.2$ are still pretty much on the money.

Representative SAXTON. So if we conclude raising the minimum wage would have a negative effect on entry-level jobs, we would be correct.

Mr. NEUMARK. Yes, I would agree with that.

Representative SAXTON. Thank you.

Mr. STARK.

Representative STARK. Dr. Neumark, I don't want to frighten you. The bad news is I have studied under Paul Samuelson at great length. The good news is he gave me a "D." So I have a great deal of respect for those of you who can stick with this.

Let me start out, would you, with your personal opinion as an economist, do you think it is a good idea to raise the minimum wage for the country as a whole?

Mr. NEUMARK. I have been asked that many times. I won't dodge the bullet here. I dodge it elsewhere by saying that is the politicians' job to make the tradeoff.

I would say that we are better off if we can fund them, policies that are job creating, such as the earned income tax credit. A minimum wage is a lot easier to do. It is not a budget item. I understand that and I understand its attractiveness.

I would pursue an earned income tax credit until we are confident we are at the point where that policy—which, again, has some negative consequences, as you know—starts to run into those negative consequences. I think it is a better idea.

Let me also point out one thing, if I may. Some of our other research—

Representative STARK. I guess what I am trying to get at (I don't care much which way you answer it) we only have the choice at some point to vote to increase the minimum wage or not, which is pretty much our choice. Unfortunately we can't do those other choices. I can't vote I will do this "maybe if." I have to vote yes or no.

Mr. NEUMARK. Yes.

Representative STARK. Do you think it would be good for the economy of the country at this time? That is all I am wondering.

Mr. NEUMARK. No. If forced to decide, which is what you are forced to do, I would say no.

Representative STARK. OK. I have got a couple of quotes here that—one in January in The Washington Post, you are quoted as saying, "Anyone who says we are as sure as we used to be about the job losses just isn't being honest." That doesn't say that we were not very sure about them before. And then you recently co-authored an article that says, "Several recent studies have reexamined the long-standing consensus that the minimum wage laws reduce employment opportunities for youth.

A striking feature of most of these studies, including ours, is that simple comparisons or regressions controlling for exogenous shifts

in labor demand do not reveal disemployment effects of minimum wages for teenagers." You said those things.

Mr. NEUMARK. Yes. Shall I explain?

Representative STARK. In a minute. There is one other thing and then I have asked everything that I can dig out of your testimony. Well, two things.

You mentioned, and I asked the Chairman to interrupt at the time—probably wise that he told me not to—there is a 10 percent increase in the minimum wage is apt to cause around a 1 percent decrease in employment.

Mr. NEUMARK. One to two is where I would put it.

Representative STARK. OK. Isn't it also that out of these minimum wage employees, about three-quarters of them are not teenagers. In other words, about one quarter of them are teenagers and almost all of that loss of employment will be concentrated in that quarter of the younger population. Is that not correct?

Mr. NEUMARK. No. It is true that about one quarter are teenagers and a little over 50 percent are 16- to 24-years-olds. But people haven't really studied the job loss for older workers from the minimum wage, partly because older workers at the minimum are harder to find. There is no way to conclude that job loss would or wouldn't occur, let us say, among senior citizens.

Representative STARK. Evenly across the full spectrum.

Mr. NEUMARK. There really is no evidence, for example, that senior citizens—

Representative STARK. You don't know.

Mr. NEUMARK. Right.

Representative STARK. OK. The other—the only other question is that everybody seems to agree across the country we are going to lose about 1 percent, and as far as we know, you have studied this in teenagers for an increase in minimum wage, that does mean there will be a lot of people that benefit, they will continue to work and they will get more money. That is the other side of that teeter totter.

Mr. NEUMARK. That some will, correct.

Mr. STARK. Then the only other question is that we seem to have a whole hearing here on Card and Krueger. I take it you have no beef with them as professionals.

Mr. NEUMARK. Of course not.

Representative STARK. And I gather that you are not—you don't have a disagreement with the process of their survey, in other words, the outline or the formula. It is the data coming in and the way the data was collected and perhaps the questions asked.

Mr. NEUMARK. The specific question about employment in retrospect seems to have been too vague.

Representative STARK. Now, we will hear testimony later from somebody suggesting that in one—in some of the data, for instance, that McDonald's was left out and therefore this could just be a function of Kentucky Fried Chicken being different from McDonald's, but the person—Dr. or Mr. Blakeman is going to suggest that there weren't enough surveys and yet you only had two restaurants in the data you used, is that right?

Mr. NEUMARK. Two chains out of four.

Representative STARK. And Card and Krueger had how many?

Mr. NEUMARK. Four.

Representative STARK. So you ought to have more chains.

Mr. NEUMARK. Absolutely.

Representative STARK. Having two chains could skew it, and having four could skew it if there are 10. The broader you get, the better.

Mr. NEUMARK. The more we get, the better. However, we show in the paper that you don't skew the results because we run their models just on Burger King and Wendy's. For these two chains for which we have so far been able to obtain data you still get their results. So it is not that employment growth was negative in Burger King and positive in Kentucky Fried Chicken and we are getting negative employment because we studied Burger King.

Representative STARK. Could you, or could another economist skew the study, if you knew something ahead of time by picking data?

I mean, if you knew that one chain only hired kids under 18 and only let them work 10 hours a week and another chain hired all senior citizens over 65 because they didn't have to pay them health insurance, could you move the data one way or the other with what you know by plugging in different data to a study like this?

Mr. NEUMARK. I could certainly. If I sat down with a full data set and plotted them and said, "Let me now make this line slope the other way, I could probably throw in enough data points." Carlos Bonilla might kill me, but I don't think EPI could figure that out.

Mr. STARK. A good economist could.

Mr. NEUMARK. Absolutely. This data is available. We will provide all data we can get.

Representative STARK. I don't want to get into the argument on whose data. You would lose me on that. I am saying somebody is very upset about what Card and Krueger said and I thought this was a former Congressman from Texas and somebody else.

I have always just gone on the theory that a small increase in the minimum wage does impact most on teenagers. But you tell me that is only because that is the only data we have and that the rest of the folks at the minimum wage make a little more money. And that Card and Krueger are pretty honest, hard-working guys and there is a squabble over the data in a State. And I guess we are going to hear a lot of testimony today about whether they are right or wrong, and I appreciate your attempting to enlighten us on it.

Mr. NEUMARK. Let me say quickly that that is a fair characterization: This is a squabble over the data. We are not in this study addressing their other work. I have said, by the way—at the American Economics Association meetings I spoke about minimum wages as did Alan Krueger and some other people—and I said that anyone who claims that we are as sure as we used to be isn't being honest. What I mean by that is there have been studies by hard-working, honest people that more than in the past failed to find negative effects of the minimum wages, and our confidence should be a little shakier than it used to be.

Representative STARK. So you think there are some economists out there who might think it is a good idea to raise the minimum wage.

Mr. NEUMARK. Well, you asked the question two ways. I think there will be some that say it is a good idea because they say the tradeoff is worth it. If you ask, are there other economists that are convinced minimum wage increases don't reduce employment, some—but it is a much smaller number. Some are more convinced than others, most are not. But we resist change, there is no denying that, and it takes more than one paper to sway a profession, certainly. It takes many papers.

The other point I would like to touch on is you quoted my paper with Bill Wascher saying that our paper as well as some others failed to find overall net disemployment effects for teenagers. There is an important point we have been emphasizing in some of our research, findings that hasn't really been picked up on very much.

What seems to happen for teenagers in particular when you raise the minimum wage is really three different things. One is some teenagers who are enrolled in school and are either not working or working part-time—who are probably the higher productivity teenagers—leave school and take jobs. They can now earn a higher wage than they used to and those on the margin make that choice. As a consequence of that, some of the people who were previously employed at the minimum, probably the low productivity teenagers, get bounced from their jobs.

And finally, the proportion of teenagers who are not in school and not employed goes up.

Mr. STARK. I just want to tell you the chief truancy officer from Oakland, California has a quarrel with how you collected the data on those 18- and 19-year-olds. I want to bring you out to Oakland and show you whether they are in school or not.

Mr. NEUMARK. I will be happy to see that. But that is part of what is going on. There were shifts going on in the overall population of teenagers that obscure to some extent the employment effects.

There is not a big net effect on teen employment but there are quite substantial effects in terms of declining enrollment. And most importantly, the lowest-wage teens, not surprisingly, are the ones that get hit hardest and the disemployment effect for them is pretty sizable.

Mr. STARK. Thank you, Mr. Chairman.

Representative SAXTON. Mr. Thornberry.

Representative THORNBERRY. Thank you, Mr. Chairman.

Let me make sure I understand. When you went back and tried to get a better feel for the data that Card and Krueger used, you went back to the same restaurant chains in the same zip code.

Mr. NEUMARK. Correct.

Mr. THORNBERRY. I guess there is no way to know whether you were calling the same restaurants they called.

Mr. NEUMARK. It is still unclear to me whether eventually we will be able to resolve that. I have asked David Card—only recently—and the fact he has not responded simply suggests he has not gotten around to it. It has only been a couple days. Perhaps they can provide the five-digit zip codes for these restaurants. I don't know if they can provide these data.

And I also don't know whether there will be any barrier even if we don't say in our paper that this is the restaurant on such and

such a street in New Jersey. If we say here is the exact match and here is what the data look like, I would love to be able to do that. It is not yet clear that we won't.

Representative THORNBERRY. Your feeling is we are comparing apples to apples.

Mr. NEUMARK. Yes. For some, some of the data we highlight in figure 2 that was up there are those zip codes for which we have all of the restaurants in the chain that were located in the zip code when they did their survey. So we may have eight because we have got all the restaurants owned by franchise owners. They have got the franchises that they found in the phone books and who responded. There was some nonresponse to their survey. That always happens. But we know we have gotten all of them. Therefore, in that subset of zip codes their restaurants have to be represented. So it is fair to say can we find their restaurants in our data.

Representative THORNBERRY. It is going to be there. That restaurant will be there when you get all of them in a certain area.

Mr. NEUMARK. Right. We will have what we call a closed zip code.

Representative THORNBERRY. Let me ask you generally about using this approach to compare changes in wages or employment from one State to another. How does that take into effect the other economic policies that occur in different States, taxes and the rest of the things that are happening?

Mr. NEUMARK. It is an interesting point. I think in general the notion of comparing employment changes across States when minimum wage goes up in one and not another is a good idea. Bill Wascher and I have done that. That is really what most of the recent papers do.

In one of our papers, we look across the 50 States and D.C. over a 17-year period and are effectively doing hundreds of similar experiments and averaging the effect. What they are doing is really getting that from one State, so in that sense their data is narrower.

Their data is richer in the sense they are getting data from each restaurant whereas we look at average employment changes in the State. So I don't think it is necessarily a bad idea. I think it is a good idea and that is what people do. That doesn't mean it is flawless.

You have to think about, as you noted, whether something else changed in the State when the minimum wages went up. I think averaging over lots of these studies and lots of observations is more useful. When I average over 200 States—200 minimum wage increases relative to 200 control groups—I can be more confident that whatever else is going on more or less averages out. When you take one State versus another State the same year, it is more plausible that something else has happened. But no one has decisively said their experiment was flawed because Pennsylvania went into the tank or New Jersey was booming or something like that.

Representative THORNBERRY. Sure. But as you point out when you just focus on one State versus another in a very limited time frame, I guess those other things that could be happening could potentially have a bigger impact on your results, rather than a 200 incidents that you talk about.

Mr. NEUMARK. Yes. There is more likely to be something else going on.

Representative THORNBERRY. What is your opinion about, as Mr. Stark was asking, what is your opinion about the methodology that was used in this study as opposed to the data they collected?

Mr. NEUMARK. Subject to the discussion we just had the methodology is just fine. I have no squabble with it whatsoever.

Representative THORNBERRY. Would you agree with those who said this is the best, most sophisticated methodology that has ever been used in the history of creation?

Mr. NEUMARK. "Sophisticated" is a loaded term in economics. Some people like sophisticated studies that are so complicated you can't tell what is going on. These are relatively simple, straightforward methods. Card and Krueger favor them. I favor them. It tends to be what is favored in the labor economics profession now. I do not know if the label "sophisticated" is correct or not. Straightforward is a better label.

Mr. THORNBERRY. You mention in your opening comments that up would be willing to discuss briefly the overall state of the research. I know you have done that somewhat so far, but can you tell us generally to the extent there was a consensus opinion on the subject what it is, whether that consensus has changed yet or if it is going to among economists?

Mr. NEUMARK. Yes. I think the consensus quite remarkably is still where it was when the Minimum Wage Study Commission finished their report. When Bill Wascher and I started our first paper on this, we, of course, as all academics hope to do, hoped to overturn the conventional wisdom. It is better for your career.

We worked and worked and basically came to the same conclusion. We have done follow-up work, and others have. As I said, the preponderance of the evidence still points in that direction. That is not to say that there haven't been studies—and this is a new phenomenon—that don't find negative effects, and we should hold these beliefs a little less confidently than we used to. There is more room to entertain doubts that over some range—and this is all David Card and Alan Krueger would say when pressed—that over some range minimum wages might not have much of an effect. I think they still do. I do not think it is completely unreasonable to suggest they may not. It is wrong at this point based on the evidence test, not completely unreasonable.

Representative THORNBERRY. Thank you, Mr. Chairman.

Representative SAXTON. I thank the gentleman from Texas.

Dr. Neumark, we want to thank you for your indulgence here with us today and for the fine work that you have done. And someone said to me today that we are going to have this hearing to re-establish that water does indeed flow downhill. And we appreciate your helping us to understand this issue clearly, and your being here with us today is very much appreciated.

Mr. NEUMARK. Thank you.

Representative SAXTON. We are going to move now to our second panel. It consists of Dr. Bruce Blakeman. Dr. Blakeman is with the Wirthlin Group, a national political public research, consumer research firm.

Dr. DANIEL HAMERMESH. Dr. Hamermesh joins from us the University of Texas at Austin.

And Dr. Gary Burtless. Dr. Burtless, the Senior Fellow in the Economics Studies Program at the Brookings Institute.

We thank you for being with us this morning. We apologize for the delay. You obviously heard the discussion that has transpired so far.

We appreciate each of you being with us, and so if we may ask Mr. Blakeman to begin and we will give you your 5 or 7 minutes, whatever it turns out to be, to summarize your testimony for us.

PANEL II

OPENING STATEMENT OF BRUCE BLAKEMAN, VICE PRESIDENT OF CAMPAIGN RESEARCH, THE WIRTHLIN GROUP

Mr. BLAKEMAN. Thank you, Mr. Chairman. It is a pleasure to be here this morning to give testimony to this committee.

I was asked this morning to give my professional opinion as a survey research practitioner on a survey instrument written and conducted by two economists, David Card and Alan Krueger.

As a research practitioner who has written questionnaires, designed sample frames, analyzed data and presented data worth well over \$1 million in the past 12 months for both corporate and political clients for the Wirthlin Group, I can tell you that the Card-Krueger study gives me some concerns and a great deal of concerns on a couple matters.

I also want to add that my concerns are not only based on the standard research practices, but I also hold that about the fast food industry.

About 18 years ago I actually spent a summer in my home town of St. Joseph, Michigan working at a Burger King so I think I bring a little bit of experience to this, and this experience in the fast food industry has helped me have a little further insight into this study.

Let me talk a little bit about my concerns with the instrument. I am going to limit my comments to the actual survey collection instrument, not the analysis of the data.

I have four points that raise concerns for me. First of all, I was concerned about the sample frame in the study.

Second, the screener used to select who was actually interviewed for collection of the data.

Third, because the screener was designed—not designed correctly, it is impossible to determine whether the respondents were giving facts or opinions.

And fourth, the design of the questionnaire. Respondents were not instructed to tell interviewers that they were looking for facts and just facts, and when you don't tell respondents that they can give you an answer of "no opinion" or "I don't know," this leads respondents quite naturally to give you answers when they may or may not actually know the facts of the question that they have been asked.

Let me start with the sample frame. Sampling is the heart of all survey research and collecting data. If you do not get a good representative sample, it doesn't matter how well you design the questionnaire, you will most likely get faulty data. That is not saying

that you won't get correct data but it makes it very hard to get correct data if you do not have a good sample frame.

From the information I have about this study, there was no stratification, how many specific fast food restaurants of each chain should have been interviewed or should have been included in this study. This presents a large problem. Without having a quota of how many each specific restaurants should be interviewed, the study could produce skewed data toward one chain or one type of establishment.

Now, this is not saying that if you just look at Burger King or just look at Wendy's that the data in those cells could be correct, but if you try to take this data and extrapolate it across all fast food restaurants, I would say that you would have a problem trying to say that this survey was representative, of all fast food restaurants in Pennsylvania and New Jersey.

It would not have been difficult for the researchers to determine how many restaurants of each chain are in the geographic area of this study. This can be done through the Yellow Pages or industry magazines. They could have figured out how many McDonald's or how many Burger Kings or how many Wendy's were in New Jersey and Pennsylvania. And once you have that information, a very reliable sample frame could be designed to ensure that you get a representative sample of each chain included in this study.

A good example of this survey procedure would be if I were taking an opinion survey in your district or your State, I know from the census what percentage of your total population comes from each county and when we design the sample frame, we would try to get the same percentage of interviews of the total sample in each county that reflect the same percentage of each county in your total population. Therefore, we know we have a good representative distribution of interviews.

Let me give you an example how this could present a problem. Let's say that the Kentucky Fried Chicken managers and assistants were more friendly people than people at Burger King. If the KFC managers participated in the study at a higher rate of what is actually found in Pennsylvania and New Jersey, than the burger chains, your data will not be representative of the fast food industry. It may be that the pay scale or the employment scale for KFC is different from the hamburger chain and you can't tell that without having a good distribution.

The other issue of the sample frame is that local burger establishments and McDonald's were not included in the study. So once again you have the country's largest fast food burger chain not included in the sample. And therefore I think it is very hard to say that the data collected is representative of the fast food industry.

Let me go into the screener. Another problem I have with the study is the screener used in the questionnaire. And by screener, I mean the questions used to determine who will actually qualify to be interviewed in the study.

In the study the interviewer asked to speak to either the manager or the assistant manager. This may sound straightforward enough, but it presents several problems for the validity of the study.

First, the methodology assumes that all managers and assistant managers have the information to correctly answer the questions that are being asked. The questionnaire contains very specific questions about wages people make, when raises are given, how many employees are full-time, how many employees are part-time, what is the starting rate for nonmanagement employees, what is the percentage of employees that are teenagers, do employees receive training wages under \$4.25 an hour, and so on.

Unless the manager or assistant manager is directly involved with these functions in their particular store, the information they give the interviewer may be based solely on the respondent's opinion and not fact.

Second, the questionnaire does not screen for someone in the restaurant who may actually know the answers to these questions. In some cases, I am sure only the owner of the store or the bookkeeper would be able to correctly answer such specific questions about the employees' pay scales and when they receive raises.

A better way to screen for the proper person in the store of the interview would be to ask for the person who handles the payroll or the store's owner if he or she works in the store. Or better yet, the interview should have been conducted in person with the store's payroll manager and whoever that may be in each of the specific restaurants.

Because the screener is in this study is so loose, it allows interviewees, in other words, managers and assistant managers, who are not able to supply correct information to participate in the study. The bottom line is that all you are getting is the managers' and assistant managers' opinion if they don't have this information. You are getting nothing more, nothing less.

A good example of the problem with this study is the question reads, How many cash registers do you actually have open at 11 a.m.? Again, this may sound like a very straightforward question. But if the interview was conducted in the afternoon or the evening, it is quite likely that the manager or assistant manager who qualified to be interviewed may not work in the morning. It is quite common for managers and assistant managers to work only in the evenings because they may have a daytime job.

I ask you, how much could a person who only works in the evenings be able to tell you how many cash registers are open at 11 a.m.? He or she can't do it really with any accuracy unless they are there and that have information. If the manager cannot tell you how many cash registers are open at 11 a.m., how can you expect the same person to know how much effect a raise of minimum wage will have on the store's cost of doing business? The answer is, they cannot.

My last concern with the study is the lack of instruction given to respondents that if they do not know the answer to the question that they should tell the interviewer that they don't know the answer. If this instruction is not expressly read to the respondent, in any cases the respondent will venture an opinion when they do not have the facts.

Since the objective of the study was to collect information and not get opinions, this instruction should be have been read to the

respondent at the beginning of the survey questionnaire. If it had, I am sure some of the results would be very different.

In summation, it is my professional opinion that unless the questions that I have raised about the methodology about the Card-Krueger study are answered, the results of this study should be investigated before they are used to write important legislation.

I am sure Mr. Krueger and Mr. Card had the best intentions in conducting their study. But as economists they missed some of the standard research practices that would have made their data more reliable. I cannot tell you if their findings are correct or incorrect, but their methodology leaves too many questions to be answered to use the study as conclusive evidence.

With that, I would like to thank the committee for your indulgence in this matter, and if I can be of any other assistance, I would be more than happy to provide that.

[The prepared statement of Mr. Blakeman follows:]

TESTIMONY OF BRUCE W. BLAKEMAN

Mr. Chairman and distinguished members of Congress, I am pleased to be here today to testify before your committee.

I was asked to give my professional opinion as a survey research practitioner on a survey instrument written and conducted by two economists, David Card and Alan Krueger. As a research practitioner who has written questionnaires, designed sample frames, analyzed data, and presented data worth over \$1 million in the past 12 months for both corporate and political clients, I can tell you the Card-Krueger study gives me a great deal of concern.

And my concerns are not only based from standard research practices. I happen to know a little bit about the fast food industry. Some 18 years ago, I spent a summer working in a Burger King in my home town of St. Joseph, Michigan. This experience has helped me have further insight to the Card-Krueger study.

My concerns with the instrument are four-fold, and I will expound on each of these points in my testimony.

- First, I am not aware of any sample frame for the study.
- Secondly, the screener used in the survey is insufficient.
- Thirdly, because the screener was not designed correctly, it is impossible to determine whether the answers are opinions or facts.
- Respondents were not instructed to tell the interviewer to only give answers where the respondent is sure their answer is factual. This leads the respondent to answer questions based on their opinion.

I know for a fact from my fast food restaurant experience that several of the managers and all of the assistant managers in that store could not have supplied the correct information if this survey was given to them.

Sample Frame

Let me start with the issue of the sample frame. Sampling is the heart of survey research. If you do not get a representative sample, I do not care how well you have designed your questionnaire, you will most likely get faulty data.

From the information I have been given about this study, there is no stratification on how many of each specific fast food chains should be included in the survey.

This presents a large problem. Without having a quota of how many of each specific restaurant should be interviewed, the study could produce skewed data towards one chain or a certain type of establishment.

It would not be hard for the researchers to determine how many restaurants of each chain are in the geographic area of the study. Once you have that information, a very reliable sample frame could be designed to insure you get a representative sample of each chain for the study.

Let me give you an example of how this could present a problem. Lets say that KFC managers and assistant managers are friendly people. If the KFC managers participated in the study at a higher rate than what is actually found in New Jersey and Pennsylvania, your data will not be representative.

It may be that the pay scale for KFC is different from the hamburger chains.

The other issue in the sample frame is that local hamburger establishments and McDonalds are NOT part of the sample frame.

Why was McDonalds left out of the sample frame? I am sure there are McDonalds in Pennsylvania and New Jersey. This absence of the nation's largest hamburger chain presents a real problem with how representative the data is in this study.

Screeners

Another sampling concern I have with this study is the screener used in the questionnaire. By screener, I mean the questions used to determine who will qualify to be interviewed for the study.

In this study, the interviewer asked to speak to either a manager or assistant manager. This may sound straight forward enough, but it presents several problems with the validity of the study.

First, the methodology assumes that all managers and assistant managers have the information to correctly answer the questions they are being asked. The questionnaire contains very specific questions about the wages people make, when raises are given, how many employees are full-time, how many are part-time, what is the starting rate for non-management employees, what percentage of employees are teenagers, do employees receive a training wage under \$4.25 an hour, and so on.

Unless the manager is directly involved in these functions in their particular store, the information they give the interviewer is based solely on the respondent's opinion, not fact.

I feel very confident in stating that not all managers and assistant managers could correctly answer such questions.

Second, the questionnaire DOES NOT screen for someone in the restaurant who may know the answers to these questions. In some cases, I am sure only the owner or the bookkeeper would be able to correctly answer such specific questions about employees' pay scales and when they receive raises.

A better way to screen for the proper person in the store to interview would have been to ask for the person who handles the payroll or the store's owner, if he or she works in the store. Or better yet, the interviews should have been conducted in person with the store's payroll manager, whoever that may be in each restaurant.

Opinion or Fact

Because the screener in this study is too loose, it allows interviewees who do not know the information they are being asked to participate in the study. The bottom line is that all you are getting is the manager's or assistant manager's opinion. Nothing more, nothing less.

A good example of this problem in this study is the question that reads, "How many (of these cash registers) do you usually have open at 11:00 a.m.?"

Again, this may sound like a very straight forward question. But if the interview was conducted in the afternoon or evening, it is quite likely the manager or assistant manager who qualified to be interviewed may not work in the morning. It is quite common for a manager to work only in the evening because managers may have another day-time job. I ask you, how could a person who only works evenings be able to tell you how many cash registers are open at 11:00 a.m. He or she can't do it with any accuracy.

And if a manager cannot tell you how many cash registers are open at 11:00 a.m., how could you expect the same person to know how much of an effect a raise in the minimum wage will have on the store's cost of doing business?

Conclusion

In summation, it is my professional opinion, that unless the questions I have raised about the methodology of the Card-Krueger, the results of the study should be investigated before they are used to write important legislation.

I am sure Mr. Card and Mr. Krueger had the best intentions in conducting their study. But as economists, they missed some standard survey research practices that would have made their data more reliable.

I cannot tell you unsubstantially that their findings are correct or incorrect. But their methodology leaves too many questions to be answered to use their study as conclusive evidence.

I want to thank the committee for your indulgence in this matter and if I can be of any other assistance, please do not hesitate to ask.

Thank you.

Representative SAXTON. Thank you very much.

Mr. Burtless, we would like to turn to you at this point.

**OPENING STATEMENT OF GARY BURTLESS, SENIOR FELLOW,
OF THE BROOKINGS INSTITUTION**

Mr. BURTLESS. Thank you.

I hadn't realized when I was invited that this would be an auto-da-fe for David Card and Alan Krueger. It is rather sad, I think.

I address the broader question of what is the advisability of raising the minimum wage. Most Americans think that the current minimum is too low. They think it should be raised to reflect raises to other workers or changes in the cost of living. The President has proposed lifting it in two stages to \$5.15, an idea that enjoys overwhelming public support.

Many people probably feel that an increase in the minimum can reduce poverty among low-wage workers without imposing extra burdens on taxpayers. Unlike other methods that help low-wage workers, a minimum wage hike actually increases the incentive for workers to become employed and raise their work effort.

The minimum wage is also a lot less expensive to administer than other redistribution policies. For example, there are many, many fewer people needed to enforce the minimum wage than to administer the food stamp program.

Finally, the minimum wage takes hourly wages out of competition for workers at the bottom of the wage distribution. Since all employers are obligated to pay workers no less than a certain minimum, they are prevented from competing with one another on the basis of setting extremely low wages.

The minimum wage has varied widely over time. No matter which way we measure it, it currently looks low in relationship to the postwar average.

Economists have traditionally viewed the minimum wage a lot less favorably than the general public. They recognize that if it is set high enough, a minimum wage can reduce job opportunities for less skilled workers. This could partly or wholly offset the intended effect of establishing a wage floor.

Some economists and policymakers fiercely oppose minimum wages but for a different reason. They think it is inefficient and perhaps immoral for government regulation to deny workers and employers the opportunity to create jobs that pay less than some fixed standard.

If employers create poorly paid jobs and workers can be recruited who are willing to fill those jobs, libertarians believe it is wrong for the government to interfere to make those voluntary transactions illegal. But if you check, you will find that very few Americans seem particularly bothered by this ideological concern.

As near as we can tell, the public overwhelmingly supports increasing the minimum wage, and they support having one. The practical issue for policymaking is then determining the consequences of having one minimum wage as opposed to another.

If the wage is raised, how many jobs will be lost, if any? Who will suffer the job loss? What is going to be the impact on the distribution of earnings and on family incomes?

My reading of the evidence is not really the same as that of Professor Neumark. Let me summarize it briefly.

If there will be employment losses from increasing the minimum wage to \$5.15 an hour, I think that the best evidence suggests that

they are likely to be very small. They will affect less than 65,000 workers, or about five one-hundredths of a percent of the currently employed.

The best recent research implies that a minimum wage hike will have an even smaller effect than the one I just mentioned. Some studies even suggest that employment may remain unchanged. Even if the new studies are ignored, however, it is hard to find recent credible studies suggesting the employment consequences of a hike in the minimum wage will be very large.

If job losses occur, they are likely to be concentrated among 16 to 19-year-olds. The evidence for employment loss among adults is much, much weaker than evidence for loss amongst teens. Economists have found surprisingly little data to support the common claim that teenage job losses are going to be concentrated amongst non-white teens.

Researchers who do find evidence of job loss after a minimum wage hike typically find losses among whites that are comparable to those among blacks. A hike in the minimum wage will moderately reduce overall earnings inequality, mainly by raising the weekly and the annual earnings of workers who are at the bottom of the pay scale.

Because very few workers suffer job loss, the primary effect of a minimum wage increase is to improve the relative earnings position of poorly paid workers and workers who are paid slightly more than the minimum wage.

A minimum wage hike to \$5.15 an hour will produce small improvements in family income inequality and poverty. Although minimum wage workers are disproportionately drawn from low-income families, their earnings gains are not likely to remove many families from poverty. An important fraction of earnings gains will be received by workers who are members of families that were neither poor nor near poor.

Like most other Americans, I favor a hike in the minimum wage. It would increase the reward to work for less skilled workers who might otherwise choose to remain jobless or collect public aid. The adverse employment effects, if any, are likely to be small and perhaps unnoticeable.

Minimum wage workers will receive sizable earnings gains. Many families of these workers depend on minimum wage earnings for an important fraction of their family income. A minimum wage hike would tend to reverse the discouraging trend toward wage inequality that has persisted since the late 1970's. A hike would disproportionately benefit workers in low-income families.

A minimum wage increase is not the best method to achieve these goals, but in the absence of other methods that command wide support in the public and in the Congress, it may be the best method within our reach.

Thank you.

[The prepared statement of Mr. Burtless follows:]

TESTIMONY OF GARY BURTLESS¹*Overview*

The minimum wage sets a floor on hourly wages paid to workers covered by the Fair Labor Standards Act. The minimum wage is now \$4.25, or less than 35 percent of the average manufacturing wage, substantially below its ratio during most of the post-war period.

Most Americans think the current minimum wage is too low. They believe it should be raised to reflect pay increases received by other workers or changes in the cost of living. The President has proposed lifting the minimum wage in two steps to \$5.15 an hour, an idea that enjoys wide public support.

Economists have traditionally viewed minimum wages with less enthusiasm than the general public. They recognize that, if set high enough, a minimum wage will almost certainly reduce job opportunities for less-skilled workers, partly or wholly offsetting the intended effect of establishing a wage floor. Some economists and policymakers fiercely oppose minimum wages for another reason. They think it is inefficient and even immoral for government regulation to deny workers and employers the opportunity to create jobs paying less than a specified standard. If employers create poorly paid jobs, and workers can be recruited who are willing to hold them, libertarians oppose public interference that would make these voluntary transactions unlawful.

Few in the general public seem bothered by this ideological concern. On the whole, the public approves of a minimum wage and thinks the current one should be raised. A practical issue for policymakers is determining the consequences of a minimum-wage hike. If the wage floor is lifted, how many (if any) job opportunities will be lost? Who will suffer employment loss? What will be the net impact on the distribution of earnings and family incomes? The best evidence on these questions can be summarized briefly.

- Employment losses from an increase in the minimum wage to \$5.15 per hour are likely to be very small, involving less than 65,000 workers (or 0.05 percent of the currently employed). The best recent research implies that a minimum-wage hike will have an even smaller effect. Several studies suggest employment may remain unchanged or possibly rise.

- If job losses occur, they will be concentrated among 16–19-year-olds. The evidence for employment loss among adults is much weaker than the evidence for loss among teenagers. Economists have found surprisingly little data supporting the common claim that job losses among teenagers will be concentrated among nonwhites. Researchers who find evidence of job loss after a minimum-wage hike typically find losses among white teenagers that are at least as large as those found among nonwhite teenagers.

- A hike in the minimum wage will moderately reduce overall earnings inequality, mainly by raising the weekly and annual earnings of workers who receive the lowest hourly pay. Because very few workers suffer job loss, the primary effect of a minimum-wage increase is to improve the relative earnings position of covered workers who are paid the minimum wage or slightly more than the minimum wage. A minimum-wage hike to \$5.15 per hour will produce small improvements in family income inequality and poverty. Although minimum-wage workers are disproportionately drawn from low-income families, their earnings gains are not likely to remove many families from poverty. A substantial fraction of earnings gains will be received by workers who are members of families that are neither poor nor near-poor.

Like many other Americans, I favor a hike in the minimum wage. It would increase the reward to work for less-skilled workers who might otherwise choose to remain jobless or collect public aid. The adverse employment effects, if any, are likely to be small and unnoticeable. Minimum-wage workers can receive sizable earnings gains. Many families of these workers depend on minimum-wage earnings for an important fraction of their annual incomes. A minimum-wage hike would tend to reverse the massive trend toward earnings inequality that occurred after the late 1970's. It would disproportionately benefit workers in low-income families. The minimum wage is not a perfect or efficient tool for achieving this goal, but it is a policy that has only small adverse consequences and one that enjoys wide public support. Because the Nation seems unwilling to adopt other policies aimed at improving the incomes of low-income working families, an increase in the minimum wage seems to me desirable.

¹ Senior Fellow, the Brookings Institution, Washington, DC. The views expressed are solely my own and should not be ascribed to the staff or trustees of the Brookings Institution.

Effects of Raising the Minimum Wage on Employment

The minimum wage provision of the Fair Labor Standards Act is intended to establish a floor on hourly wages for employees who work in jobs covered by the Act. When the national minimum wage was enacted in 1938 it covered 43 percent of all nonsupervisory employees and established a wage floor of \$0.25 an hour—roughly 40 percent of the average wage in manufacturing. Congress has extended minimum-wage protection to additional industries and firms so that more than 85 percent of employees are now covered by the minimum. The minimum wage is currently \$4.25 an hour, or roughly a third of the average manufacturing wage—a substantially lower ratio than the one that prevailed over most of the post-war period.

Many people favor a minimum wage because they believe it can help reduce poverty among low-wage workers without imposing extra burdens on taxpayers. Moreover, unlike other methods of helping low-wage workers, a minimum wage actually increases the incentive for workers to become employed and boost their work effort. The minimum wage is also much less expensive to administer than other redistribution schemes, which ordinarily require the government to collect information about individual wages or family incomes. Far fewer public employees are needed to enforce the minimum wage than to administer the food stamp program, for example. Finally, the minimum wage takes hourly wages “out of competition” for workers at the bottom of the earnings distribution. Since all employers are obligated to pay workers no less than the minimum, they are prevented from competing with one another on the basis of extremely low wages.

Partly or wholly offsetting the advantages of a minimum wage may be a loss of employment opportunities. Since employers cannot lawfully pay a wage below the minimum, they will be prevented from offering jobs whose productivity is less than the minimum. Some workers, of course, may be willing to accept jobs that pay less than the minimum, but they will be prevented from doing so if the minimum wage is rigorously enforced. Wage bargains that would be reached in the absence of a minimum wage will not occur, and the number of available jobs in the economy may shrink.

Some people believe this kind of government interference is wrong, regardless of its consequences for employment or the distribution of earnings. They are ideologically opposed to minimum wages as a matter of principle. However, most people do not hold such strong convictions about the perils of public regulation. They might be persuaded that the minimum wage is undesirable if it could be shown that its adverse consequences were sufficiently large or odious. But if the adverse effects were known to be small and the distributional consequences agreeable, most people would regard the minimum wage as a sensible restriction on employer behavior.

Americans seem to believe the minimum wage meets these tests. The following table shows results from recent opinion surveys asking adults whether they favor or oppose increasing the current minimum wage. By lopsided majorities, respondents favor a minimum wage-hike. When the survey question specifically asks about the two-step jump in the minimum proposed by President Clinton, respondents who favor the proposal are found to outnumber opponents by slightly less than four-to-one. (The Gallup/CNN/USA Today poll conducted on February 3–5, 1995, described the President's proposal to respondents and then asked whether they favored or opposed it.)

Some observers believe Americans' support of the minimum wage is very fragile and rests on ignorance about the adverse employment consequences of a minimum-wage hike. This interpretation is not very plausible. Many respondents believe a minimum-wage hike would not cause any reductions in employment. As described below, this view is consistent with much of the recent statistical evidence about the effects of past increases in the minimum wage. Other respondents, who may have little knowledge about the employment consequences of a minimum-wage hike, do not change their opinion about the desirability of an increase when informed that it might reduce employment. For example, in the January 1992, 1995, survey conducted for the *Los Angeles Times*, respondents who favored an increase in the minimum wage were asked a follow-up question: “Those who oppose raising the minimum wage say increasing it will cause low-wage earners to lose jobs because some employers will be unable to afford the higher salaries. Given that argument, do you feel the minimum wage should be increased or not?” Among respondents who were asked this follow-up question, 83 percent continued to favor an increase in the minimum wage. By implication, 60 percent of adults would favor increasing the minimum wage even if informed that hikes in the minimum wage can eliminate some low-wage jobs.

TABLE.—POLLING DATA ON PUBLIC ATTITUDES TOWARD INCREASING THE MINIMUM WAGE

[December 1994—February 1995]

Organization	Date	No. polled	Increase the minimum wage		
			Favor (percent)	Oppose (percent)	Other (percent)
NBC/Wall Street Journal	12/10/94	1,000	75	20	5
L.A. Times	1/19/95	1,353	72	26	2
ABC News	1/24/95	507	76	22	2
NBC News	1/25/95	851	78	18	5
Time/CNN/Yankelovich	1/25/95	800	78	20	2
Gallup/CNN/USA Today	2/03/95	1,010	78	21	2
Times Mirror	2/09/95	1,209	79	18	3

Source: Roper Center for Public Opinion Research.

An important question about a minimum-wage hike is the size of the employment response. If many jobs are lost, low-wage workers may actually experience a loss of net earnings. Almost none of the voluminous research on the effects of the U.S. minimum wage finds an employment response that is this large. Nearly all the research finds that minimum-wage workers are better off after the wage hike than before. That is, a 10-percent boost in the minimum wage is almost always found to reduce minimum-wage employment by substantially less than 10 percent, leaving poorly paid workers with higher net earnings after the hike than before. Much of the most recent research finds that the employment response will be close to zero and may even be positive.

Time-series evidence. Researchers have used two kinds of evidence to determine the employment response to a minimum-wage hike. The type of evidence that has typically yielded the largest estimates of effect is based on time-series movements in the minimum wage. The trend in the minimum wage since 1950 is shown in the Figure 1. The upper line represents the mid-year minimum wage as a percentage of average hourly earnings received by production or nonsupervisory workers in private, nonagricultural industries. The lower line represents the trend in the minimum wage measured in constant 1994 prices. (I use the personal consumption expenditure deflator to convert nominal minimum wages into constant dollars.)

The figure shows large movements in the level of the minimum wage, whether the trend is measured relative to average economy-wide wages or the price level. The minimum wage fluctuated around 50 percent of the average wage during the 1950's and 1960's. It fell to just over 45 percent of average wages in the 1970's and has declined to less than 40 percent of the average wage since the early 1980's. As a percentage of the average wage paid to manufacturing employees, the minimum wage has declined even further. Measured in constant dollars, the \$4.25-an-hour minimum wage is now back at its level in the early 1950's after reaching a peak of over \$6.00 an hour in the middle and late 1960's.

A good early survey of the time-series evidence was produced by Charles Brown, Curtis Gilroy, and Andrew Kohen back in 1982.² They found little evidence of an employment effect on older adults, evidence for an extremely small effect on young adults (aged 20 to 34 years old), and better evidence for an effect on the employment-to-population ratio of teenagers (workers aged 16 to 19). They summarized the early literature to show

... a reduction of between one and 3 percent in teenage employment as a result of a 10 percent increase in the Federal minimum wage. We regard the lower part of this range as most plausible because this is what most studies, which include the experience of the 1970's and deal carefully with minimum-wage coverage, tend to find.

However, the literature summarized by Brown, Gilroy, and Kohen did not include research on the effects of minimum-wage changes in the 1980's and 1990's, when the minimum wage fell to its lowest post-war levels. The first researcher to extend the analysis to include the 1980's was Allison Wellington, whose research covers the period through 1986.³ When the effects of the large decline in the minimum wage during the early 1980's were taken into account, Wellington concludes "... a 10 percent increase in the minimum wage is found to reduce teen employment by less

² C. Brown, C. Gilroy, and A. Kohen, "The Effect of the Minimum Wage on Employment and Unemployment," *Journal of Economic Literature*, June 1982, pp. 487-528.

³ A. Wellington, "Effects of the Minimum Wage on the Employment Status of Youths: An Update," *Journal of Human Resources*, Winter 1991, pp. 27-46.

than 1 percent—the lower end of the range of previous estimates. . . . The study also finds no apparent effect of the minimum wage on the employment of young adults aged 20–24.” (p. 27) Wellington’s conclusion was confined in later analyses of the time-series evidence by Jacob Klerman (analyzing data through 1988) and David Card and Alan Krueger (analyzing data through 1993).⁴

Once the experience of the 1980’s and 1990’s is taken into account, the time-series evidence suggests the best estimate of effect of a minimum-wage hike lies below the lower end of the range suggested by Brown, Gilroy, and Kohen in 1982. Even the largest plausible response reported by Jacob Klerman implies that a 20-percent minimum-wage hike would only involve the loss of 65,000 teenage jobs—about 1 percent of jobs currently held by teenagers and 0.05 percent of all jobs in the economy. Most of his time-series estimates and those reported by Card and Krueger imply a smaller response. Indeed, most of the reported responses cannot be statistically distinguished from a zero effect on employment.

Quasi-experimental evidence. Another way to detect possible effects of a minimum-wage hike on employment is to examine episodes in which the minimum is increased for some classes of employers but is left largely or wholly unchanged for other classes of employers. For example, some States may raise their own minimum wage while nearby States leave the minimum unchanged at the Federal minimum-wage level. Alternatively, the statewide minimum may be raised, boosting the lowest wages that some employers must pay but leaving the pay scales of other employers unchanged, because they already offer wages that exceed the new minimum.

In a series of well-known studies, David Card, Larry Katz, and Alan Krueger have investigated a number of episodes in which the minimum wage has been increased for some classes of employers but left unchanged for others. (These studies are summarized in the new book by Card and Krueger that is cited in note 4.) The best known of these studies is Card and Krueger’s analysis of the effects of New Jersey’s 80-cent hike in the minimum wage (to \$5.05) in April 1992. This episode is interesting because (a) the size of the increase was relatively large (19 percent of the previous minimum wage); and (b) nearby States did not follow the New Jersey example, but instead left their minimum wages at the Federal level. Card and Krueger collected information on employment and pay levels in 410 fast-food establishments in New Jersey and eastern Pennsylvania, where the minimum wage remained at the federally mandated level. The information was collected a few months before and again about 8 months after the minimum wage was increased in New Jersey.

As one would expect, the researchers found that average fast-food wages increased in New Jersey after the minimum-wage hike, rising about 10 percent relative to wages in eastern Pennsylvania. However, fast-food employment did not fall in New Jersey; it rose in comparison with employment in eastern Pennsylvania. The findings from this study can be faulted because they reflect the employment response in only one industry upon one occasion in which the minimum wage was lifted. However, Card, Katz, and Krueger have examined a number of other episodes in which the minimum was raised, and in none of these episodes do they find reliable evidence that employment levels declined as a result of the higher minimum. In several instances the data suggest employment levels may have climbed after the minimum-wage increase.

The new, quasi-experimental research findings have been criticized for two main reasons. The first is that some analysts believe the data are unreliable or the Card-Katz-Krueger research methods are suspect. I don’t think these criticisms have much merit. The data have faults, but so do data used in all other studies of the minimum wage. None of the faults has been shown to yield a statistical bias in the authors’ findings, though some of them may increase the confidence bounds (that is, the uncertainty) around the statistical estimates. Moreover, compared with other researchers, I believe Card, Katz, and Krueger have taken unusual care in collecting their data and showing readers the consequences of using alternative analytical methods to interpret the evidence. Their findings appear to me relatively robust. That is, it is hard to make the case, in the episodes they examine, that employment actually fell by a statistically measurable amount. Their conclusion of “no change” or “a small rise” in employment following a minimum-wage hike seems to me the most plausible interpretation of their evidence.

The second reason for criticism is that many people believe it is wrong on theoretical grounds to conclude that a minimum-wage hike could lead to no loss or a

⁴J. Klerman, “Employment Effects of Mandated Health Benefits,” in *Health Benefits and the Workforce*, U.S. Department of Labor, Pension and Welfare Benefits Administration (Washington, DC: U.S. Government Printing Office, 1992); and D. Card and A. Krueger, *Myth and Measurement: The New Economics of the Minimum Wage*, Chapter 6 (Princeton, NJ: Princeton University Press, 1995).

small gain in employment. If employers are compelled to offer a higher wage to their most poorly paid workers, many economists and business managers think it is inconceivable that employment levels could fail to fall. Even if this were true for a sufficiently large increase in the minimum wage, it does not follow that moderate increases in the minimum wage will produce the same effect. Turnover in low-wage employment is so rapid that even small increases in workers' average tenure could lead to increases in average weekly employment. If turnover is reduced following a minimum-wage increase, low-wage employers will have fewer vacancies to fill at any particular point in time. The greater willingness of workers to hold on to minimum-wage jobs could then offset employers' greater reluctance to offer jobs, leaving employment unchanged or even slightly higher.

The main problem with the theoretical argument against the new research findings is that it overlooks the pattern of evidence that has been accumulated in recent years. The timeseries evidence, including the experience of the 1980's and 1990's, shows at most a small—and usually statistically insignificant—effect of minimum-wage increases. The quasi-experimental evidence shows a fairly consistent pattern of zero changes or small increases in employment after minimum-wage hikes. The implications of economic theory, though certainly tending to favor the prediction of an employment decline after a minimum-wage increase, do not uniformly suggest that a decline will occur. Special characteristics of the environment occasionally nullify the predictions of simple economic theories.

Evidence from true classical experiments. An example from a pair of genuine randomized trials can illustrate this point. The two experiments were independently conducted during the early 1980's to see whether employers could be induced to hire low-wage workers if they were offered a generous earnings subsidy for doing so. The first and smaller of the two was carried out in Eau Claire and Racine, Wisconsin, and evaluated by the Institute for Research on Poverty.⁵ About 330 job seekers were enrolled in the experiment. The sample was randomly divided into two groups. Members of the treatment group were informed that they were eligible for the Targeted Jobs Tax Credit (TJTC), which was then worth \$4,500-per-eligible-worker to employers who claimed the credit. For workers who would otherwise receive the minimum wage, notice that this is equivalent to a substantial redgston in the minimum wage. Job seekers were encouraged to supply this information to prospective employers when applying for jobs. Members of the control group were not informed or their eligibility for the tax credit or trained how to use the credit in their job search.

Results of the Wisconsin experiment were surprising. Members of the treatment group were only about half as likely to obtain jobs as members of the control group. That is, people using the tax credit to find a job were less likely to get hired than people who were not told they were eligible for the credit. Puzzled by this outcome, the experimenters asked members of the sample whether they had informed prospective employers of their eligibility for the TJTC. Only 6 percent of the people who told employers they were covered by the credit got jobs, while 22 percent of the people who didn't mention their eligibility found employment. The authors of the evaluation concluded that the act of telling employers about one's eligibility for the tax credit caused a sizable drop in a worker's chances of landing a job.

This conclusion from the Wisconsin experiment was reinforced in a later experiment conducted for the U.S. Department of Labor in Dayton, Ohio.⁶ The experiment was designed and conducted without any knowledge of the findings from the smaller experiment in Wisconsin. The design of the Dayton experiment was very simple. A job-search and job-training agency in Dayton recruited job seekers who were eligible for the TJTC. Slightly more than 800 eligible job applicants were enrolled in the experiment and were then randomly assigned to three different groups.

The first group was informed of its eligibility for TJTC and given written material describing the tax advantages to employers if TJTC-eligible workers were hired. This group was strongly encouraged to advertise its eligibility for the tax credit and to give explanatory material about the program to prospective employers. The credit reimbursed employers for 50 percent of first-year wages and 25 percent of second-year wages up to a maximum 2-year credit of \$4,500.

The second treatment group was offered a similar hiring subsidy. The subsidy was equal in value to the TJTC, but it did not work through the tax system. Employers hiring eligible workers from this group were sent direct cash subsidy payments in-

⁵ Stanley Masters *et al.*, "Jobs Tax Credits: The Report of the Wage Bill Subsidy Research Project, Phase II" (mimeo), Wisconsin Department of Health and Social Services and The Institute for Research on Poverty, University of Wisconsin, Madison, WI (January 1982).

⁶ G. Burtless, "Are Targeted Wage Subsidies Harmful? Evidence from a Wage Voucher Experiment," *Industrial and Labor Relations Review*, October 1985, pp. 105-14.

stead of tax credits to encourage them to hire the target-group workers. It was thought that employers who earned no taxable profits or who feared entanglement with the tax system might find cash hiring subsidies more attractive than a tax credit. However, for firms with positive tax liabilities, the cash subsidy had the same value as the TJTC. People enrolled in this group were given job-search training and written material that was similar to that given to the TJTC group. They were also encouraged to mention their eligibility for special subsidies when contacting prospective employers.

The third group of people enrolled in the experiment was not told about its eligibility for TJTC and was not encouraged to use TJTC in its job finding. Few members of this group even knew they were eligible. In other respects, however, these people received the same training and job search help as members of the other two groups.

Results obtained in the Dayton experiment mirror those from the Wisconsin experiment. Job seekers from the two groups enrolled in the hiring subsidy plans were much less likely to find jobs than job seekers in the control group. The two groups encouraged to advertise their eligibility for hiring subsidies achieved a significantly lower average placement rate than did the control group (only 13 percent found jobs versus 21 percent in the control group).

The findings from these two classical experiments are exactly the opposite of what simple economic theory predicts. When employers learned that job applicants were covered by a hiring subsidy they tended to discriminate against them in hiring. They did not place additional subsidized workers on their payrolls, as simple economic theory would suggest. Some employers may have reasoned that if the job applicants were so disadvantaged that they required a wage subsidy to find work, they were poor prospects for hiring and training. The employers evidently used the information contained in the subsidy voucher to eliminate some subsidized job applicants from their hiring pool.

The failure of simple economic theory to explain the results of these two experiments has led economists to extend that theory to take account of persuasive new evidence. A sensible extension of basic theory, for example, would take account of the possible effects of stigma on the chances a worker will be offered a job. The failure of the simple economic model did not lead economists to reject the new evidence out of hand. The response of many people to the new research findings on the minimum wage is puzzling. I see a tendency for observers to reject persuasive new evidence because it does not conform to their strong convictions about theory. This is a poor foundation for good policymaking.

Income Distributional Effects of a Higher Minimum Wage

Workers who are paid the minimum wage, naturally, are found near the bottom of the earnings distribution. Not surprisingly, many of them also can be found in families with low annual incomes. In their new study of the effects of the minimum wage, David Card and Alan Krueger analyzed the effects of the minimum-wage increase on earnings and incomes of families who were affected by the wage hikes in 1990 and 1991. Although many of the affected workers came from families whose incomes placed them comfortably above the official poverty line, a disproportionate share of affected workers were members of families with incomes that were below the poverty line or within 50 percent of the poverty line. Card and Krueger's results generally conform with those found by Edward Gramlich in a 1976 study of the minimum wage.⁷ However, the concentration of minimum-wage workers in low-income families has increased somewhat since the mid-1970's.

Figure 2 shows the percentage of working individuals within each decile of the 1989 income distribution who were affected by the increase in the minimum wage that went into effect on April 1, 1990. Card and Krueger ranked all persons age 16 and older on the basis of their total family incomes, and then divided individuals into 10 equal-sized groups. For individuals who were found to be working in each decile, the researchers then calculated the percentage whose wage would be affected by the 1990 increase in the minimum wage. Not surprisingly, a far higher percentage of workers in the poorest families was affected by the wage hike. About 29 percent of workers in the lowest-income decile saw a wage increase as a result of the hike, whereas less than 5 percent of workers in the highest-income decile were affected. Overall, about 7 percent of workers may have obtained a wage increase.

Although workers in the poorest families disproportionately benefit from a minimum-wage hike, the wage increase is usually found to have a comparatively small effect on poverty. The main reason for the modest effect is that only a small percent-

⁷E. Gramlich, "Impact of Minimum Wages on Other Wages, Employment, and Family Incomes," *Brookings Papers on Economic Activity*, 1976:2, pp. 409-51.

age of the poorest families contains an active worker. Card and Krueger's tabulations suggest that less than 30 percent of adults in the lowest-income decile families are working, while about three-quarters of adults in the top four quintiles hold a job. Nonetheless, because so many workers in low-income families receive a very low wage, a hike in the minimum wage has a disproportionate effect on the incomes of poorer families.

If the sole goal of redistributive policy is to improve the incomes of the poorest families, a minimum-wage hike is not the most carefully targeted policy instrument. It would be more "efficient" to target benefits on families without workers or on families with very low incomes. Many taxpayers object to these methods of targeting benefits, however, because they provide declining benefits to people as they increase their work effort. In contrast, a higher minimum wage offers greater rewards to low-wage workers as they work longer hours.

A minimum-wage increase is not the best method to improve the distribution of U.S. income. But in the absence of other methods that command wide support in the public and Congress, it may be the best method within our reach.

Figure 1.
Trend in Minimum Wage, 1950-1994

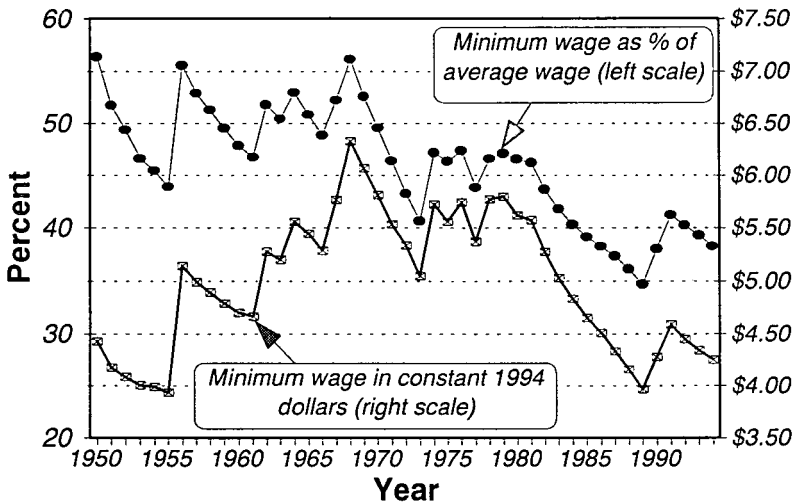
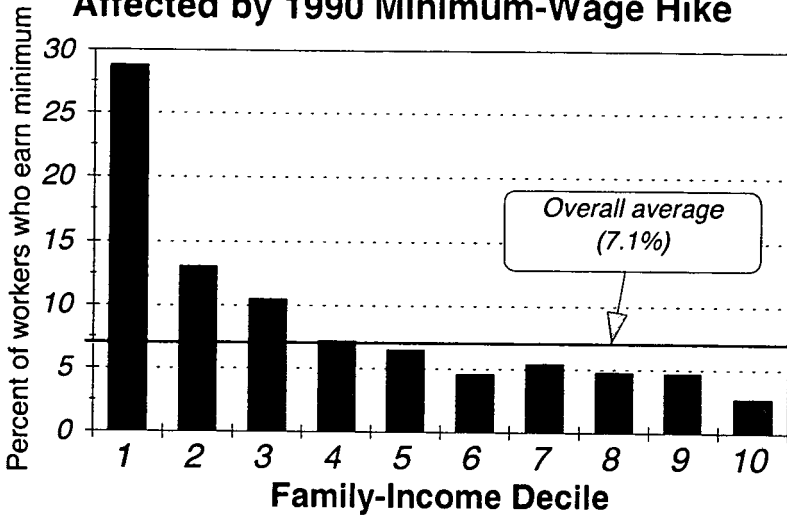


Figure 2.

Percentage of Earners in Income Decile Affected by 1990 Minimum-Wage Hike



Source: Card and Krueger, "Myth and Measurement" (1995), p. 285.

Representative SAXTON. Thank you very much, Mr. Burtless.
Mr. HAMERMESH.

OPENING STATEMENT OF DANIEL S. HAMERMESH, PROFESSOR, DEPARTMENT OF ECONOMICS, UNIVERSITY OF TEXAS

Mr. HAMERMESH. Thank you, Mr. Chairman.

I have a four-page statement which I would like to have introduced into the record, if you will.

Representative SAXTON. Dr. Hamermesh, excuse me.

Mr. HAMERMESH. It is okay. I would like this introduced into the record.

Representative SAXTON. Without objection.

Mr. HAMERMESH. Thank you.

Let me state my bona fides to be here today since I have not done any work on the minimum wage recently. I have, over what is now a quite long career, been involved in minimum wage research and study, including discussing in 1974 the original Welch paper, which I gather was referred to at your last hearing.

I did one of the studies of the employment effect of the minimum wage for the Minimum Wage Study Commission in 1979, and have written a book recently on labor demand which includes a large section on the minimum wage and research on the minimum wage. I am quite proud to say the book is universally acknowledged to be the best book on labor demand in the profession, the reason being that it is the only one. So for that reason, I think I have some bona fides in talking about this.

One of the gentlemen quoted Laura Tyson as saying this is the most sophisticated technique to be used in studying the minimum wage research. I would like to comment on that technique, because if I were Alan Krueger—I think this is something he will say—I would listen to all of what has gone on today and say the following. You have criticized my New Jersey study and yet in fact we have done three or four other studies which deal with the same issue and used the same technique and you have not said a word about those. And therefore I think our results still stand. I think that is what Alan would say if he were here. That is what I would say if I were in his position.

For that reason, I would like to go into the methodology he used, and this gets to the question Mr. Stark and Mr. Thornberry asked of David Neumark, whether in fact the methodology makes sense. And to do that I would like to illustrate precisely what their methodology is with a visual, if I could, to describe the so-called natural experiments which in fact is the idea which won David Card a very prestigious award recently.

What I am going to do is illustrate how a true scientific experiment goes on, then illustrate what a natural experiment does, and then illustrate with that the problems with David and Alan's research. So as you see here, I have two jars, identical jars, as you can see, and in each of which I have three roaches. These are big roaches. These are Texas-style roaches.

Representative SAXTON. From a restaurant? These are roaches as in bugs?

Mr. HAMERMESH. These are roaches. They could be from a restaurant but at this point they are just bugs in jars. In a true exper-

iment, what happens is we have a control group and a treatment group. And what we do is we spray—these are identical jars, identical bugs—we spray the treatment group with a vaccine or a virus. We wait a bit and we then ask the question, how many of the bugs in this treatment jar are still alive compared to how many of the bugs in the control jar are alive.

To the extent fewer bugs are alive here, we can say that our treatment had some effect. That is a true scientific experiment. These are controlled, identical bugs and jars and the treatment is specified.

Unfortunately, in the social science business we can't do that. We haven't got controlled situations and we haven't got identical bugs.

The innovation of David and Alan's research, including David's research in another context, Alan's to a lesser extent, is to create what they call natural experiments. Namely, we have two different jars here. We might call them control jar Pennsylvania, or U.S., or treatment jar New Jersey, in the case of the study we are talking about today, or Texas, as one of their studies was, or California, as one of their other studies was. They have done three of these.

And then we look at these jars before anything happens and ask the question, what is the employment in these two jars and measure that difference. That is a difference before.

Let's then treat the jar again with a minimum wage increase and then ask the question after that minimum wage increase has occurred, what has happened to employment in the two jars. If we find that employment in the two jars is now different relative to each other compared to what it was beforehand, if in fact there are fewer jobs now compared to Pennsylvania than there were beforehand, we can say that minimum wage killed off jobs in Pennsylvania, just as in my minimum wage jar, as you can see, we killed off bugs.

So the methodology is to compare the difference after to the difference before. To the extent we find a change in the difference, we can infer that the minimum wage reduced employment.

Now, that is the methodology. And it is a very clever methodology. David Card applied it evaluating the impact of the Mariel boatlift on Florida. Alan Krueger applied it to looking at the effect of compulsory schooling laws. It is a clever idea.

Unfortunately, in this case and this particular application, it is simply wrong. Thus even if all their numbers were right, even if none of the stuff we had heard before this was correct, their study still should be paid relatively little attention despite the fact that it is very clever. Let me explain why.

There are three problems with the particular methodology they used. First, not the only thing that happens between the before and the after is the spraying of the minimum wage that might reduce jobs, okay. In particular, if I shake the Pennsylvania U.S. bottle, a lot of these bugs, as you can see, are now on their backs. They are dead. It is very hard to hold constant for all the other things that would differentially affect these two jars. They don't hold constant for any of them. They simply say: Well, employment was the same in the two States beforehand, and therefore we can ignore any changes that occurred other than the minimum wage. That is simply wrong. It is especially wrong in this particular case.

We know from looking at labor demand, which is my specialty, that changes in labor costs are one of the smaller things affecting employment. Most changes in employment are caused by shocks to demand, by the macro economy, by other things that go on. Indeed, David Neumark had one of his charts showing how small the minimum wage effects would be compared to the effects of a recession, even taking his estimates. So the biggest problem with their study is they simply don't account for other things that would affect these two jars differentially.

Let's say that they did, though. That still leaves them with two other problems. In this industry you don't just build fast-food restaurants overnight. You don't just change the cash register and check-out style overnight. You don't just put in new burners and fry over night. It takes time. That wouldn't be a problem if my spraying a minimum wage increase into New Jersey or Texas or California were a surprise, but it is not a surprise.

The amendments were passed in the summer of 1989, I believe. The experiment that they are evaluating is an increase in the minimum wage in Texas in April 1991. In other words, there is a very, very long time over which employers can anticipate this minimum wage increase and respond accordingly. Thus, if—this wouldn't happen in Texas certainly, but if the New Jersey bugs were wimps and cowards—then a lot of them in anticipation to being sprayed would have died already.

Therefore, when you measure things beforehand, the impact of the minimum wage would have been felt even before that. To look afterwards compared to before, there will not be any observed difference because the difference has already been felt.

The obverse of that problem is that it takes time for these effects to be felt. If this is Texas, please believe me from my 2 years living in central Texas, these are super-strong roaches. Spraying them and waiting just 3 months, you are not going to see the full effects of the minimum wage. In other words, it takes employers time to adjust to a minimum wage increase.

If we look, as David and Alan did, 3 months before minimum wage increase and 3 months after, we will be missing most of the effects of the minimum wage.

These two additional problems are the obverse sides of the same coin. Ignoring problems with the data, their methodology in this particular application, or rather in these applications, these three experiments, is simply not to be believed.

What do we know about all of this? My answer on that is that I have not changed my views one iota from where they were after reading the research summarized by Charlie Brown and others for the Minimum Wage Study Commission in 1982.

If you ask me what the impact of a minimum wage increase currently is on the employment of teenagers, I would say that about every 10 percent increase in the minimum wage cuts jobs by about 1 percent. That is a smaller effect than it would have been 15, 20 years ago when the minimum wage was, as Gary Burtless noted, higher relative to the average. On the other hand, I am sure we could increase that elasticity if we raise the minimum wage up even higher.

So for that reason, I don't think that we should pay much attention to these studies. Congressman Stark quoted me as saying that raising the minimum wage would not make a big difference. I agree completely. It wouldn't make a big difference.

Would it make some difference and cut employment? Yes, it would.

I would be happy to answer any questions.

[The prepared statement of Mr. Hamermesh follows:]

TESTIMONY OF DANIEL S. HAMERMESH

I am pleased to comment today on proposals to increase the minimum wage under the Fair Labor Standards Act of 1938 and in particular on the evidence provided in a series of recent scholarly papers by David Card and Alan Kreueger (CK), two of the best younger applied economists in the world. My comments on these papers are based on my very careful study of their book that compiles and expands these studies, on my own analysis of the minimum wage during my nearly 30-year professional career, and on my specialization in the study of labor demand.

The major socioeconomic problem facing the United States in the past 15 years has been the widening of earnings differentials, which has been especially severe at the lower end of the distribution. It would be wonderful to ameliorate this problem at a stroke by raising the minimum wage and increasing wage rates of low-wage workers without reducing their employment. Based on CK's "natural experiments" (NEs) that form their original work, one might infer that this is possible. I wish it were; unfortunately, at least if one relies on CK's results, there is no basis for drawing this conclusion. The work is wrong for a variety of reasons.

I. How Natural Were Their Experiments?

Research on labor-market programs would be easier if we could perform true socioeconomic experiments; and despite their expense some have been possible (e.g., Woodbury and Spiegelman, 1987). They allow us to measure the impact of a treatment on an outcome Y by calculating the difference $Y_T - Y_C$, where T denotes a treatment group and C denotes a control group (usually of individuals, but perhaps of firms, industries, or geographical areas). Since the members of the two groups are chosen randomly they are presumably statistically identical in all respects that might affect Y . Thus any difference we observe between the groups after the treatment can be attributed to it.

The mainstay (CK's term) of their work is their series of NEs. An NE recognizes that we usually do not have the funding or the access to randomized subjects that would allow us to evaluate the impact of a (policy) treatment. Instead, it proposes calculating the following "difference-in-differences" between groups T and C before (Time 1) and (Time 2) the treatment is administered at Time P (the time of Policy intervention or the occurrence of some other event):

$$D^2 = [Y_{T2} - Y_{C2}] - [Y_{T1} - Y_{C1}]$$

Two assumptions are implicit throughout the evaluation of the NE: (1) D^2 would be zero if the treatment had not occurred, so that a nonzero D^2 indicates the effect of the treatment (i.e., nothing else could have caused the difference in the outcomes to change), and (2) Time P follows Time 1 (the intervention occurs after we measure the initial outcomes in the two groups).

A large variety of issues with this approach should be considered. I limit myself to those that do not seem to have been raised before and that appear central to evaluating CK's claims of a nonnegative employment effect of a higher minimum wage. Three conditions are particularly relevant in interpreting CK's work: (1) Time 1 must be sufficiently before Time P that group T did not adjust to the treatment before Time 1. Otherwise $[Y_{T1} - Y_{C1}]$ will reflect the impact of the treatment; (2) Time 2 must be sufficiently after Time P allow the treatment's effects to be fully felt; and (3) We must be sure that the same difference $[Y_{T1} - Y_{C1}]$ would have been observed at Time 2 if the treatment had not been imposed, i.e., C must be such a good control that there is no need to adjust the differences for factors other than the treatment that might have caused them to change.

Condition 1 is especially important in studying the impact of legislation. Laws do not just happen, especially in our presidential system. As this hearing illustrates perfectly, they are discussed at great length prior to their enactment and are often preprogrammed years in advance of their effective dates. Most interested observers know the likelihood of the change long before the date of enactment (and even

longer before its effective date). In their study of the fast-food industry in New Jersey (T) and Pennsylvania (C) CK examine the impact of an increase in the state minimum wage in New Jersey in April 1992 (Time P). Time 1 is February 1992, Time 2 is November 1992. But the minimum was enacted in 1990, long before Time 1; and Time 2 is only 7 months after the effective date. One can justifiably argue that the policy intervention really occurred long before Time 1.

Conditions 1 and 2 are clearly not met in this "experiment" *unless* one can argue that employers will not preadjust to the policy change and will adjust very quickly at the time the law becomes effective. This is CK's claim, which they base on the high quit rates of teenage and other low-wage labor. If labor were the only productive input their claim would be valid, since adjustment of employment demand would be rapid. Yet as they note elsewhere (p. 367), "Over the short run . . . nonlabor inputs may be costly to adjust or may be 'sunk' (an example is the physical structure of a fast-food restaurant)." We do know (Hamermesh, 1993) that firms adjust capital slowly. We also believe that labor and machinery adjust together—if one input is adjusted slowly the adjustment of the other is slowed. The full effect on employment of a rise in the minimum wage will not be felt as quickly as is necessary for Time 2 to be sufficiently after Time P in this NE. This difficulty also means that for evaluating firms' eventual employment response Time 1 is not sufficiently before the treatment.

In CK's second NE study, an examination of fast-food outlets in Texas, Time 1 is December 1990 and Time 2 is July-August 1991. CK view Time P for this increase in the federal minimum wage as April 1, 1991, but the change was enacted well before Time 1 (in 1989). Their study in this genre, of the increase in the California state minimum in January 1988, compares California to the rest of the United States (or selected comparison areas) in 1987 (Time 1) and 1989 (Time 2). Yet the treatment had been recommended by the state Labor and Employment Commission in May 1987. It was in the air during much of Time 1, and was thus hardly a policy surprise at Time P (January 1988). Like the New Jersey-Pennsylvania study these two efforts are plagued by the problems that Time P precedes Time 1, while Time 2 follows much too closely upon even CK's dating of the treatment to allow measuring treatment effects.

Even if CK had no difficulties with Conditions 1 and 2, Condition 3 would cast grave doubt on their approach. The propinquity of New Jersey and Pennsylvania and their similar Y_1 are not reasons to expect that their Y_2 would have been similar absent the treatment. To make such a claim is to argue that *any* two economic outcomes that are similar at one time will be similar at some other. That is nonsense on its face; and it is what requires us to discover what other factors determine Y_{T1} - Y_{C1} . If, as in this case, Y represents employment and we are interested in the impact of shocks to wages in unit T, this difficulty becomes especially important. We know (e.g., Freeman, 1977) that the large majority of the variation in employment that we observe over time is caused by demand shocks (perhaps measured by shocks to product demand). Changes in employment engendered by supply shocks (movements along the labor demand curve) appear to account for a much smaller fraction. Unless CK are certain that relative demand shocks are the same at Times 1 and 2 between groups T and C, any changes in the relative shocks will swamp the impact of a higher minimum wage that moves employers up their demand curves for low-skilled labor in group T.

An NE is not a panacea for research, though under certain conditions (including my Conditions 1 and 2) it is a useful tool for evaluation. It is more powerful when substantial effort is made to control for the changing determinants of the outcome (Condition 3). One better use of this approach, Card's (1990) study of the Mariel boatlift, a true policy shock to the Miami labor market, meets the first two conditions but not the third. CK's research on minimum wages meets none of them. Their cases are *neither natural nor experiments*.

II. Time-Series Results

CK have spent a lot of time trying to debunk previous work, and Chapters 6-8 of their new book are designed "to probe the robustness of past estimates" (p. 236). Their probe convinces them that the previous results are, as they state on p. 240, p. 242, p. 271, and p. 355, "surprisingly fragile." Their general conclusion is that this evidence "is consistent with . . . if anything . . . a small, positive effect on employment" (p. 236). This is an astounding conclusion based on their evidence, especially for the U.S. time series. *Every* estimate that they cite or generate is negative, though not all are significantly so. No unbiased reader could conclude from Chapter 6 anything other than that the effect is small and negative and thus inconsistent with results from their NEs. That inconsistency is yet another reason to question their NE results.

There is no doubt that the overwhelming majority of studies of the minimum wage show a small negative effect on employment. It is very likely that this effect was smaller still the late 1980's that it was in the mid-1970's, and that it rose a bit after the 1989 Amendments became effective. Indeed, one of the "12 studies that show no effect on employment," to quote Secretary Reich, actually shows precisely this smaller negative effect.

III. Theoretical Explanations

The simplest theoretical rationalization for CK's results (especially their central NE results) is that they are observing very short-run responses. No one would expect the minimum wage to reduce low-skilled workers' employment immediately; and immediately (or several months) is the difference between Times P and 2 in their NEs. Even ignoring the other severe problems with their results, they are perfectly consistent with standard economic analysis in the presence of adjustment costs in factor demand.

Without a theoretical justification for their results we would have to rely on CK's claims that their data are superior to those used by other researchers. They do, however, offer two theoretical justifications for their findings. The first is that firms must pay higher wages to attract new workers to replace the flow of quits. Of course this is true (though probably very minor in the fast-food industry, given the evidence that hiring costs are very low for low-skilled workers); but it speaks only to short-run monopsony, not to static monopsony. Thus their book's subtitled "new economics" explains the possible short-run absence of negative employment effects of higher minima, but so does the standard theory of dynamic factor demand. Even CK, however, would not argue that this can be a long-run effect, especially in low-wage and densely populated labor markets.

The only argument for the long-run positive effects that CK appear to believe is the hoary idea often referred to as shock theory, presented here in the discussion of some early results for Puerto Rico (p. 247): ". . . turnover and absenteeism declined, the screening of job applicants improved and 'managerial effort' improved." If shock theory were valid, we would expect CK's studies of the impact of news that minimum wage increases have become more likely (Chapter 10) to demonstrate that their possible enactment raises stock prices, because the theory implies that the shock will raise the affected firms' profits. Their results show no such effect. In reality, however, no one should expect any shock effect resulting from altering our nearly 60-year-old minimum wage policy, as an application of the following argument *mutatis mutandis* should make clear:

"Shock theory is most plausible as applied to the unionization of a previously nonunion enterprise. . . . It is much harder to imagine repeated waves of successful innovation in response to annual wage increases negotiated with an established union." Rees (1973, p. 83)

IV. Conclusion

CK's arguments on the employment effects of the minimum wage are in the same vein as those of the losing side in the old antimarginalist controversy. They challenge economic notions the make logical sense with new evidence; but they never offer a convicting theoretical explanation for why the old logic fails. Lacking that, once should examine their evidence very carefully. That examination yields the inescapable conclusion that, even on its own grounds, CK's strongest evidence—their set of so-called natural experiments—is fatally flawed. A fair interpretation is that they have shown that employers plan in part for minimum wage increases and that the part they do not plan for leads them to adjust slowly (and us to fail initially to observe reduced employment).

One can reasonably believe that it is wrong for a society to allow jobs to pay as little as \$4.25 per hour, and that we should be willing to aid the increased number of people who are not employed when the minimum is raised above that level. Aid would include well-funded training subsidies and direct training programs, as well as efforts to ease school-to-job transitions. A wonderful world of reduced inequality through higher wage minima with no loss of jobs is not an option. I am regrettably reminded of the book by Rabbi Harold Kushner, *When Bad Things Happen to Good People*. CK's work might analogously be entitled, *When Good Economics Do Bad Work*. Their results should not change any reasonable person's conclusions about how the minimum wage affects employment. But, despite their mistakes and despite the uses to which these mistakes have been put by sloppy, thrill-seeking journalists and by issue-mongering politicians, CK have done performed a professional and public service by forcing us to confront our beliefs and retest them more carefully.

Representative SAXTON. Thank you.

We have a vote, as you know, as you can tell by all the bells that are ringing. We also both have other commitments after this vote so we are going to try to finish up here as quickly as we can.

Mr. Stark.

Representative STARK. Thank you, Mr. Chairman.

I wanted to thank Dr. Burtless with whom I agree but whom I also asked to come and testify, or through our staff. And I disagree with Mr. Blakeman, but I suspect he represents mostly Republican clients who have the same viewpoint that he does.

I guess, Dr. Hamermesh, I would ask you this. I think probably know the answers from Drs. Blakeman and Burtless, whether or not they think it would be good for the country to raise the minimum wage at this point, and I would be interested in whether you think that or not. Would it make any difference to you what you thought about the Card-Krueger study at this point in arriving at your decision whether or not we should raise the minimum wage?

Mr. HAMERMESH. I think what you are asking is, am I intellectually honest, sir.

Representative STARK. I just want—

Mr. HAMERMESH. The answer is yes, it would. If I had been convinced by this long line of research, my answer to your question would be somewhat different. I would be enthusiastically in favor of raising the minimum wage. I am not convinced by it.

On the other hand, I find it rather disturbing that people with your commitments and given the problems of this country have to spend time dealing with what is truly a minor issue in the overall panoply of economic problems. That is why I have argued in the press that I would be happy to see the minimum wage raised by a small amount and then indexed forever, so in the future you and your successors haven't got to waste your time and the public doesn't have to waste its time worrying about this issue.

Representative STARK. How much is a small amount?

Mr. HAMERMESH. How much is a small amount? Less than the \$5.15, more than \$4.25; \$4.75, \$4.80, then get it out of the public debate. It is too small a thing. It takes up too much time.

Representative STARK. Thank you.

Representative SAXTON. Thank you very much.

We were up against a time barrier here and we are going to have to stop at this point. So I want to thank each of you for being here. We appreciate it very much. And inasmuch as there are differences of opinion on this issue, as there are on others, we would do our best to try to sort them out.

Thank you very much.

[Whereupon, at 11:12 a.m., the joint committee was adjourned.]



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