S. HRG. 103-504

HEALTH REFORM AND U.S. BUSINESS COMPETITIVENESS

HEARING

BEFORE THE

SUBCOMMITTEE ON HEALTH
FOR FAMILIES AND THE UNINSURED

OF THE

COMMITTEE ON FINANCE
UNITED STATES SENATE

ONE HUNDRED THIRD CONGRESS

FIRST SESSION

JANUARY 12, 1994

Printed for the use of the Committee on Finance

U.S. GOVERNMENT PRINTING OFFICE

77-124—CC WASHINGTON : 1994

For sale by the U.S. Government Printing Office
Superintendent of Documents, Congressional Sales Office, Washington, DC 20402
ISBN 0-16-044220-6

COMMITTEE ON FINANCE

DANIEL PATRICK MOYNIHAN, New York, *Chairman*

MAX BAUCUS, Montana
DAVID L. BOREN, Oklahoma
BILL BRADLEY, New Jersey
GEORGE J. MITCHELL, Maine
DAVID PRYOR, Arkansas
DONALD W. RIEGLE, JR., Michigan
JOHN D. ROCKEFELLER IV, West Virginia
TOM DASCHLE, South Dakota
JOHN B. BREAUX, Louisiana
KENT CONRAD, North Dakota

BOB PACKWOOD, Oregon
BOB DOLE, Kansas
WILLIAM V. ROTH, JR., Delaware
JOHN C. DANFORTH, Missouri
JOHN H. CHAFEE, Rhode Island
DAVE DURENBERGER, Minnesota
CHARLES E. GRASSLEY, Iowa
ORRIN G. HATCH, Utah
MALCOLM WALLOP, Wyoming

LAWRENCE O'DONNELL, JR., *Staff Director*
LINDY L. PAULL, *Minority Staff Director and Chief Counsel*

SUBCOMMITTEE ON HEALTH FOR FAMILIES AND THE UNINSURED

DONALD W. RIEGLE, JR., Michigan, *Chairman*

BILL BRADLEY, New Jersey
GEORGE J. MITCHELL, Maine
JOHN D. ROCKEFELLER IV, West Virginia

JOHN H. CHAFEE, Rhode Island
WILLIAM V. ROTH, JR., Delaware
DAVE DURENBERGER, Minnesota
JOHN C. DANFORTH, Missouri

CONTENTS

OPENING STATEMENT

COMMITTEE PRESS RELEASE

PUBLIC WITNESSES

ALPHABETICAL LISTING AND APPENDIX MATERIAL SUBMITTED

COMMUNICATIONS

HEALTH REFORM AND U.S. BUSINESS COMPETITIVENESS

WEDNESDAY, JANUARY 12, 1994

U.S. SENATE,
SUBCOMMITTEE ON HEALTH FOR FAMILIES
AND THE UNINSURED,
COMMITTEE ON FINANCE,
Washington, DC.

The hearing was convened, pursuant to notice, at 10:10 a.m., in room SD–215, Dirksen Senate Office Building, Hon. Donald W. Riegle, Jr. (chairman of the subcommittee) presiding.

[The press release announcing the hearing follows:]

[Press Release No. H–1, January 8, 1994]

FINANCE SUBCOMMITTEE TO HOLD HEARING ON HEALTH REFORM AND U.S. BUSINESS COMPETITIVENESS

WASHINGTON, DC—Senator Donald W. Riegle (D–MI), Chairman of the Committee on Finance Subcommittee on Health for Families and the Uninsured, announced today that the Subcommittee will hold a hearing on the impact of health reform on the competitiveness of American businesses.

The hearing is scheduled for *10:00 A.M. on Wednesday, January 12, 1994,* and will be held in room SD–215 of the Dirksen Senate Office Building.

In announcing the hearing, Sen. Riegle stated: "American companies are having trouble competing in our global economy, partially because of their high health care costs. This hearing will explore the potential for health care reform to increase the ability of our companies to compete internationally."

OPENING STATEMENT OF HON. DONALD W. RIEGLE, JR., A U.S. SENATOR FROM MICHIGAN, CHAIRMAN OF THE SUBCOMMITTEE

Senator RIEGLE. The committee will come to order. Let me welcome all those in attendance this morning and particularly welcome our witnesses who are here today. The purpose of our hearing in the Health Subcommittee is to examine the affect that health care reform will have on American manufacturers who are competing directly in the international market.

For many years now American companies have been telling us that the high cost of providing health care for their workers is directly affecting their ability to compete in the international market economy.

Clearly, the U.S. automobile industry is one vivid example of this problem, as I obviously would know quite well, representing Michigan as I do. I was told 2 years ago by the then CEO of General Motors that General Motors alone, our largest industrial company, pays an estimated 1 percent of all the health care costs in America.

This is really kind of a staggering fact when you think about what a significant part of our economy health care is; 1 percent of 14 percent of our economy is a significant burden for one company to bear. And, of course, many who provide comprehensive health care insurance for their workers carry significant burdens as well.

I might also say, and it is important to add, that the high health care costs of many large manufacturers is a problem that is greatly compounded by the fact that they provide coverage for their retirees, in many cases early retirees. So as those retirees go out in time, those health care costs tend to become a rising figure because we tend to have more health problems that arise later in life. But that becomes an additional cost burden when workers are not on line producing every day because they are in retiree status.

In these days of global competition, it is clear to me that we cannot afford a health care system that penalizes the companies in strategic industries that are most directly affected by foreign competition. One of the claims that is often made about health reform is that universal coverage in a strong cost reduction program would improve the competitive position of American businesses.

Today we are here really to examine that issue in some detail. Today's hearing will focus on three studies, two of which are being discussed here for the first time today. Each of the studies conclude that the industries involved in international trade, including the manufacturing sector, will have cost savings as a result of comprehensive health care reform.

According to one of the studies, health reform could save our manufacturing sector over $2 billion in 1998. As one Senator, I have been a long-time supporter of health care reform because of the need to achieve universal coverage for all of our people and also to control costs and directly help with respect to the financial impact on American businesses that now provide health insurance to their work force, and in some cases, as I said, to their retirees.

So I have co-sponsored President Clinton's health care reform plan because it clearly has the potential to achieve these goals. We all know that in order for this plan to be enacted it is already undergoing a very careful scrutinization and evaluation and changes of various sorts will be made before a proposal is finally enacted.

But I think it is fair to say that there is now a growing consensus that we can and should and will enact health care reform this year. And as we work together to hammer this out, we have to make sure that as we achieve all the goals of health care reform and it is done in a fashion that helps and not hurts American businesses and workers.

I might also just add one other point, and that is this. I think it is very hard today to fully track through all the relationships in our economic system as we have known the American economy, particularly in this century, and then superimpose it in this very dynamic and ever changing world economy.

But in terms of the social structure of America, if you want to have a large middle class, which has a lot to do with how your society feels and functions and the openness of the society and the mobility within the society, you have to have jobs that can support a middle class standard of living.

I do not mean by that where you have both in a family situation—a husband and wife—both working two jobs or even in some cases three jobs each in order to generate enough aggregate income to generate a middle class standard of living.

I think increasingly the focus has to come around to the question of how can one or two bread winners in the family find work at a sufficiently productive value-added level that affords them to have a standard of living that for a family really works out to be a middle class standard of living in contemporary terms.

And to do that in the context of the burdens of health care costs on employers and on employees in keeping people healthy—keeping children, if they have asthma or something else able to be attended properly—is now a new imperative for our society.

We have been seeing the middle class shrink. We have been seeing a backwards slide of many people out of industries, like manufacturing, down the income scale and out of the work force, and that has been a real problem in our society. And if you take it down into the inner cities of America today where the unemployment rates are just incredibly high and you have in addition racial isolation problems. When young inner city youth today find it easier to get a gun than to get a job, that is really a prescription for the unraveling of your society.

We are seeing more and more of the manifestations of what several times I have called a clockwork-orange society where that happens. So not to get too far afield, these things nevertheless relate.

Unless we can find a way to resolve this health care quandary in terms of universal coverage in a fashion that makes the financial burden workable for our major employers, and particularly for those that provide middle class incomes through the work, we have to make sure that we are doing it properly and it will allow us to succeed in this international marketplace.

Not an easy matter. But if we do not connect all of these relationships to each other in forming our final judgment, we are likely to really veer off track. And veering off track, I think, can have enormous consequences, not just for the public health, but for the public well-being and general safety just in terms of the ability for our society to work together and hold itself together.

So having said that, let me now go to our witnesses who are here this morning. We are very fortunate to have some very distinguished people here today who have been working in this area, and guiding work in this area, and who can shed new and fresh and important light on this topic.

Our first two witnesses this morning are the authors of two of the studies that we are here to focus on. The first two studies were commissioned by the Competitiveness Policy Council as part of their ongoing studies of the economic competitiveness of the United States. We are going to begin with Dr. Fred Bergsten, who is chairman of the Competitiveness Policy Council, who will give us an overview of the Council's work in this area.

When he is finished, we will then turn directly to the authors of those studies to present their reports today. Paul Hogan is vice president and an economist at the consulting firm, Lewin-VHI and Dr. Henry Aaron is the Director of the Economic Studies Program at the Brookings Institute.

Dr. Aaron's report is available today for the first time, with his testimony. The Lewin-VHI study is also being discussed for the first time today in the testimony that is being presented.

And then finally we will turn to the third study done by the Economic Policy Institute by Dr. Edith Rasell, a Health Economist at EPI, who will testify on that study, which was, in fact, released just last November.

So let me thank you all for your work and for being here today and coming out through the downpour to join us and to help lay out this record for us to have as we march ahead on health care.

So, Dr. Bergsten, we are going to start with you. We are pleased to have you. Why do you not begin?

STATEMENT OF C. FRED BERGSTEN, PH.D., CHAIRMAN, COMPETITIVENESS POLICY COUNCIL, WASHINGTON, DC

Dr. BERGSTEN. Mr. Chairman, thank you very much. I will be uncharacteristically brief because I simply want to introduce the two studies, which were commissioned by the Competitiveness Policy Council.

As you may recall, when we testified on the Competitiveness Policy Council's first report in March 1992, before you wearing your Senate Banking Committee hat, we presented six major issues which we thought were the most important competitiveness issues potentially facing the United States. One of those issues was the cost of health care. The council established subcouncils on the other five topics and we immediately went to work developing recommendations. And as you know, as you hosted the release of our second report in March of 1993, we made a number of proposals in all of those areas. I am delighted to say that a number of those recommendations have now been pursued, have become policy or are becoming policy.

The one area that we did not pursue on our own at the outset was health care reform, since a lot of other work was already underway on that topic. A number of plans were at that time being formulated and we did not want to join the competition by developing another reform plan. But what we said then to you and your colleagues in the Congress, and to the administration, was that when the health care plans did come forth and were ready for serious consideration, we would analyze their competitiveness effects in two areas. First, the affect health care reform would have on the competitiveness of the country as a whole; and secondly, the differential impact on different industries.

The affect on the economy as a whole struck us as important because, for we observed in our first report, not only the level of health care costs are higher in the United States than in all of our other major competitors, but they are rising very rapidly.

So, a prime facie question had to be raised. Were health care costs diverting resources from other parts of the economy where they could be used more productively? If we are buying better health care, one might say it is a good deal, but as the aggregate numbers show, we are buying better health care. We are spending more of our national resources on health care. That raises the next question. Is the rising cost of health care hurting the overall competitiveness of the country?

The answer to the second question raises the differential impact among industries. As you mentioned, the auto industry pays a lot of money for health care. Has this been a big factor in its sectoral difficulties—competing both in world trade, and in the sense in which we mean competitiveness, promoting high and rising standards of living for the average American?

We, therefore, did not work on the issue in our first year. However, once the administration's and other proposals began emerging toward the end of last year, we commissioned not one, but two, studies to take a look at these issues. One study is by Henry Aaron and Barry Bosworth of the Brookings Institution. The other study is by the Lewis-VHI team.

We had a full meeting of our Competitiveness Policy Council a little over a month ago, at which we discussed the preliminary versions of both studies. The council has began thinking about its conclusions and recommendations, based on this research, and we will report them in our third annual report to you this spring.

I am delighted that you have called this hearing today so we can begin to ventilate to the Congress and to the public the important results of these studies.

So I will say nothing more. That is the framework. We look at it in the broader competitiveness context, as I know you do. I would commend very strongly to you both of these reports. I think they make major contributions to our understanding as we go about the effort during the course of this year of trying to improve American health care reform.

Our only concern would be to make sure that as this is done, the decisions be reached with concern as to how it affects the country's overall economic strength and competitiveness, in addition to the obvious sectoral needs of health care itself.

Senator RIEGLE. Very good. I appreciate that statement.

Let us move right into it. Paul Hogan, I think we will start with you this morning. Why do you not make your presentation at this time? We will make your full statement, of course, a part of the record.

STATEMENT OF PAUL F. HOGAN, VICE PRESIDENT AND ECONOMIST, LEWIS-VHI, FAIRFAX, VA

Mr. HOGAN. Thank you, Mr. Chairman. I also will be brief and try to summarize our findings in a succinct way.

I would consider first, because I think it is important, what generates savings for the economy. It is what is happening in the health sector.

Senator RIEGLE. I am going to have you pull the mike just a little closer and then I think people in the back of the room can hear you a little better.

Mr. HOGAN. And so we want to first look at kind of the big picture of the effect on resources in the health sector. There we found that if the assumptions regarding cost containment, which are crucial in the Health Security Act, are reasonable that by the year 2000, you could save roughly $57 billion in resources from the health care sector as a whole. This, as Dr. Bergsten mentioned, can be used in other parts of the economy.

On the other hand looking, at the effects of private employers as a whole, there will be a net increase in burden, certainly in the short run. Total expenditures for private employers will be roughly, according to our estimates, about $28.9 billion higher in 1998. That comes down a bit and it will be about $16 billion higher than they otherwise would be without health care reform by the year 2000.

Looking at the distributional effects across industries, the general conclusion I think is a fairly intuitive one. In those industries that by and large are providing good, solid health care coverage for their employees now health care costs are likely to fall.

On the other hand, those industries which on average are not providing health care coverage or providing less coverage, the health care costs are likely to rise. In particular, we find that firms in manufacturing, mining, wholesale trade, and communications, transportation and utilities will experience lower costs per worker on average.

On the other hand, firms in retail trade, services, construction, agriculture and finance will on average experience increases.

Now the per worker changes that we are talking about typically are not large. For those benefitting in terms of lower average costs, we are talking roughly around—this is averaged across all workers in the industry—under $300 per worker, both for the winners and for the losers.

The exception to that is in retail trade and services where the costs will rise more, primarily because they are going from a large portion of uncovered workers to having to cover those workers for the first time.

In terms of the tradable goods, those industries which are most exposed to foreign trade, both on the import and the export side, we find that by and large the news is good. That because those industries—manufacturing and mining in particular—tend to have very good coverage now, on average their costs per worker are going to decline.

This will mean for those industries that they will probably be able to expand output. There will be a sharing of these gains between expansion of output and increases in real wages to workers.

Senator RIEGLE. Let me just stop you there. If you were to take our trade deficit—let us take our merchandise trade deficit. The latest estimates that I have seen indicate that it has really ballooned this year. It is going to be up well over $100 billion. The largest single part of that—$60 billion plus probably—is just with Japan. This is a huge bilateral deficit with a very advanced country. That is $5 billion a month roughly if you figure our bilateral deficit, which again is $60 billion.

That is a lot of capital leaving our system and going to theirs. It helps them; it does not particularly help us. I think it hurts us. But when you think about it—you probably have not tailored this that way, and I would assume you have not.

But when you think about it, from your own knowledge or even intuitively, and if you were to take the merchandise trade deficit, where it is and what it is comprised of, and you were to superimpose the health care profile on top of those industries, sectors, product types, my intuition would tell me that most of the area where you are probably going to see the reduction in health care

costs will tend to overlay to quite an extent on those areas where our trade deficit now exists.

It does not mean it will eliminate the trade deficit, but it certainly will cut in favor of helping us, it seems to me, in the area where we know we are under water to start with. Would that not be accurate?

Mr. HOGAN. Yes, sir. I think certainly the tendency is in that direction. As you mentioned, we did not explicitly analyze the effects of the changes on the current count of deficits or surpluses.

But I think based on our analysis in those two major sectors, particularly in manufacturing, that that would be the direction of the effect.

I would like to mention that the way we think about these overall effects is that it is the case that the employee is always in a sense paying for these benefits. That firms make decisions based on the total costs of employing workers and without mandates there is a tendency on average to get towards kind of an optimal compensation package.

To the extent that the firms in the industries we are speaking of—manufacturing in particular—to the extent that they are able to provide the same or better health care benefits that they are currently providing at a lower real cost, that presents an opportunity for expanding employment. The effect on employment versus wages depends, among other things, upon labor supply conditions.

Senator RIEGLE. Let me just ask you one other question, sort of in this general area that I think ought to be sort of injected into the discussion and debate. That is, every day we read in the newspaper about large companies that are shedding employees—1,500, 2,000, 5,000, 10,000 over 2 or 3 years. We are talking about the regional Bell companies. We are talking about IBM. We are talking about the auto companies and a host of others. It is pretty much across the top tier of Fortune 500 companies, certainly big companies.

Those companies tend to be ones that not only are large and they may have a certain kind of build up of arterial sclerosis as a result of being large organizations and so forth and need the trim in the face of international competition, but in almost every case they also have very good health care coverage for existing workers and also for retirees.

So the richest plans by in large would be in those areas of the private economy. And as I watch those companies shedding workers in large numbers—they are obviously not just shedding the direct wage costs, but they are also shedding the health care burden associated with those workers—and if you take that, just that accelerated pattern of layoffs—they are not layoffs, they are job discontinuations; they are phaseouts—there is this other trend of more and more companies going to temporary workers, figuring out how to hire somebody for half a week or two people for half a week each as a finesse around certain other costs, including health care costs.

I am just wondering if those things we are seeing and hearing in the news are not also likely to be directly connected at least in some significant part to these health care cost burdens. In other words, as they shave down to get rid of employees and get rid of

cost and widen our profit margins, a significant part of what they are getting rid of is the health care burden, is it not?

Mr. HOGAN. That certainly sounds reasonable, Senator.

Senator RIEGLE. It just strikes me that as I watch sort of the reconstruction of the American work force what I am seeing, just with my own eyes, in Michigan which is a heavily manufacturing oriented State, but other States as well, is that I am seeing the jobs disappear that have the good health care plans; and I am seeing the replacement jobs tending to be in many cases part-time work and no health care coverage.

So I am struck by the fact that while maybe that has not been the driving reason, why the company is downsizing, that is one of the big economic benefits that it is at least capturing in the short run.

Now I think there is a huge social cost of that over time. But would that square with what you have seen?

Mr. HOGAN. Yes, sir. You have kind of drawn a picture of a very complex health care system with some firms inadvertently subsidizing others to the extent that firms that provide poor coverage are in markets for perhaps second spouse employment, where the coverage is provided by the larger firm perhaps in a manufacturing industry.

I would hesitate to attribute downsizing and so forth, all the things that are going on to health care.

Senator RIEGLE. No, and I do not mean to make that point.

Mr. HOGAN. Certainly it contributes to that.

Senator RIEGLE. Right. Why do you not continue?

Mr. HOGAN. Finally, I would like to mention that there are other factors associated with the Health Security Act that should be considered for their effects on the competitiveness of the economy.

Again, the provision for subsidized early retirement is very attractive, but we must be concerned that it is going to affect the supply of older workers to the economy which means perhaps lower output, higher wages in that area. This works in the direction against expanding output.

Similarly, again, the shared employer costs provisions of the Health Security Act could under analysis have the affect of reducing the labor force participation of the second spouse that we were just talking about because of firms that typically would employ those would now pass, on in a sense, the increased health care costs they are going to face in terms of lower wages for those, who previously were obtaining their health coverage from their spouse.

And finally, I would like to mention the universal coverage provision, which again has the advantage in my opinion of increasing the labor mobility, which would generate better job matches for the economy as a whole. It is very difficult to quantify those affects, of course, at this point.

Thank you.

[The prepared statement of Mr. Hogan appears in the appendix.]

Senator RIEGLE. The job lock issue, which is one that Chairman Bentsen spoke about often when he sat in this chair as chairman of this committee is something we hope to solve with universal coverage so that you get that mobility through the labor force.

Dr. Aaron, we are pleased to have you with us today. We are a great admirer of the Brookings Institution and all the work that is done there. So we would like to have your comments now.

STATEMENT OF HENRY J. AARON, PH.D., DIRECTOR, ECONOMIC STUDIES PROGRAM, BROOKINGS INSTITUTION, WASHINGTON, DC

Dr. AARON. Thank you very much, Senator Riegle. I have a brief statement and a longer report to which you previously alluded. My remarks are based primarily on the longer report, although they are summarized in the shorter statement.

As you mentioned, the longer report was jointly prepared by me and by Barry Bosworth, my colleague at Brookings.

If there is one summary statement that I would want to leave you with, it is that the effect of health care reform and of rising health care costs on the competitiveness position of U.S. companies is a good deal more complicated than is commonly suggested by people who refer to it.

There are five basic points that in some ways seem hard to relate to one another, but I believe are consistent. The first point is that in the long run, the cost of employer financed health insurance is largely offset by lower real wages. In plain English, that means workers pay for their health insurance through reduced wages in the long run.

Second in the short run, unanticipated changes in employer financed health insurance can change the nominal compensation costs per worker that employers confront and cause a change in prices, profits, or both.

Third, how much a country spends on health care does not much affect its international competitiveness, whether health care is financed by businesses, individuals, or the government, unless it affects the balance of national saving and investment. The international trade balance is mathematically identical to the difference between national saving and investment.

Fourth the very rapid increase in health care costs—has undoubtedly added to the Federal Government deficit and has thereby contributed to some deterioration in the U.S. trade balance.

The reason is that the Federal budget balance is part of national savings and investment. When the government's deficit rises, national savings falls. And, therefore, we will tend to borrow more abroad. That means a higher trade deficit.

Fifth, quite apart from all of these effects, the change in health care costs from any source including health care reform can affect the relative competitive position of different firms in different ways.

In particular, if health care reform does not affect national saving, then some companies will gain competitiveness advantages and some will lose competitiveness advantages as a result of reform.

Now rather than go in detail into those statements which we try to elaborate in greater length in our report, I would like to focus on the two tables I attached to my remarks.

The single most important element in the health care reform proposals relevant to the issue of competitiveness is the movement

from experience rating to community rating—that is, a movement from a system in which each company pays costs that approximately equal the service costs for health care generated by its employees to one in which all companies pay essentially the same per capita cost for insurance.

Table 1 has four columns. You really need to look at the columns in pairs. They are perhaps not in the best order. Focus on the columns headed "Actuarial Value." Those two columns show, for single people and for families, the variation in health insurance costs for a population of given characteristics that arises from differences in the generosity of benefit coverage.

So this says, if you have the same sort of average population they all tend to use services the same degree, costs are the same in the community. The only source of variation in these two columns is from variation in the benefit package.

You can see that the plans down at the bottom of the generosity scale, the 10th percentile from the bottom in terms of generosity for a family policy, cost $4,222. Going to the other end of the scale, the 19th percentile plan, costs $5,890.

Now the column that is headed "Cost" simply shows the actual variation from least expensive to most expensive plans in the United States. The variation is enormous. The 10th percentile family's plan costs $2,760. The 19th percentile is almost three times that high—$7,670.

The message here is quite simple. Most of the variation in health insurance costs that companies experience arises not plan variations in coverage but from differences in age of the employees, local health care costs, usage rates, or other characteristics specific to their workers.

That is important because the major health care proposals, including the President's, would do away with most of those sources of variation in health care costs per employee.

Now in order to explore the implications of this move to community rating, Barry Bosworth and I made an extreme assumption, one that goes beyond those embodied in any of these specific plans. We assumed that health care reform would equalize across the United States the cost per full-time equivalent worker of health insurance paid for by employers.

So from a situation today in which actual costs differ enormously from one company to another, you would go to a situation in which, apart from retiree health care costs which we assumed remained with the company, other costs would be equalized across the United States.

What does that mean for major industry groups in the United States? That was the question we addressed. If you turn to Table 2——

Senator RIEGLE. Right.

Dr. AARON. I will say I was really staggered by some of the shifts embodied in this table. To start at the most extreme example, the coal mining industry, according to the estimates that we made would experience a decline in health insurance costs per full-time equivalent worker of $5,835 per year.

To pick another industry, not entirely at random, given the interests of the State of Michigan, transportation equipment, the costs

would decline $2,819 per worker. Other industries experience increases. Retail trade experiences a significant increase. Educational services. Social services.

Now I would like to qualify these findings which indicate large shifts, both up and down, in average costs in major industry groups. Some companies would receive subsidies under President Clinton's plan. So their costs would tend to be attenuated.

Some companies would probably form their own company health alliances. Those would be companies with lower than average costs.

The Clinton plan would not eliminate, at least initially, regional variations in health care costs, which are larger than some people realize. The costs in the State of Massachusetts, per capita, are twice those in the State of Idaho.

Fourth, many companies offer benefits beyond the Clinton package or they pay for more than the 80 percent of the cost of health insurance that the Clinton plan requires. Presumably some companies would continue to do so and would continue to shoulder those additional costs. I suspect the automobile industry may fall in that category.

And finally, we assume that the cost of retiree benefits would remain with companies. These costs differ within industry groups from one company to another.

In short, what we have done in the Table 2 is probably exaggerate the shift in health care costs among major industry groups. Paradoxically we have probably understated the magnitude of shifts among companies, because our statistics are averages over hundreds of companies within each of these groups.

Now the story here is that some industries are going to enjoy at least in the short run—and I think probably only in the short run—some competitive advantages as a result of health care reform in their competitiveness position. Those whose health care costs would fall by much more than average for the industries heavily involved in internationally trade would gain. That includes mining. It includes transportation equipment. It probably includes petroleum and related products. It includes the communications industry, to which you referred before.

Some other industries in which the cost of health care will rise as a result of reform or in which the fall will be really rather small may, in fact, suffer setbacks in their international competitiveness position. The bottom line though is——

Senator RIEGLE. What would some of those be?

Dr. AARON. Well, looking at Table 2, agriculture is one that would tend to suffer some setback. Lumber and wood products. Furniture and fixtures, their health insurance costs would go down a tiny bit relative to the national average, but not relative to industries that are heavily involved in international trade.

Apparel and textile products would be another industry where the extension of insurance on balance would probably boost costs. There are a few other industries. It is hard to pick them out on the fly. The finance, insurance and real estate industry is another. The effects are relatively modest in that industry.

The key point though is, if we do not change the balance of national saving and investment, then every gainer is matched by a loser. Health care reform does hold out the promise of affecting the

balance between national saving and investment to the extent that cost containment can contribute to Federal deficit reduction.

It is through that channel that the nation as a whole stands to gain in terms of its competitiveness from health care reform. But, of course, we stand to gain in terms of our competitiveness from any actions almost that will reduce the Federal deficit.

Thank you very much.

[The prepared statement of Mr. Aaron appears in the appendix.]

Senator RIEGLE. Let me ask you this. From an economic point of view, coming at it the way that you and Barry Bosworth did, if you imagine that we go into some reasonably well engineered universal health care system—we may not do it all in one jump, but over time we get that done—and so everybody is in an effective preventive care arrangement so that we are hopefully immunizing children properly, we are avoiding premature births in cases where they can be, we are detecting prostate cancer early rather than late, we are hopefully teaching good health habits so that we are persuading people to smoke less and to do other things that destroy health, from an economic point of view, is there an argument, a dollar argument, to be made that says that over time if you can actually create a healthier nation with earlier diagnosis, better prevention, that you can, in fact, save enough money from that kind of a system that it really has an economic impact, and that the economist can stand up and say, do this because there are significant economic benefits as well as sort of human or social benefits?

Dr. AARON. There are some things that are worth having, even if they do not save money. Preventive medical care improves our health, makes us more vigorous, enables us to meet the challenges of daily life more effectively.

A former colleague of mine at Brookings carefully examined the balance of costs and savings from a variety of preventive health interventions. Some do save money. Childhood immunizations save money. Most do not. They just make us feel better. They make us healthier. I think the gain in terms——

Senator RIEGLE. Does that make us more productive as a rule?

Dr. AARON. I was going to turn to that. The great glory of the American economy, relative to many other economies, has been the flexibility with which it has met the challenges of technical change and the ease with which we have been able to move workers from jobs in declining industries to jobs in expanding industries.

That occurs because workers are able to meet those challenges, because they have been well educated, because they have been healthier on the average than workers in other countries, because they have had a degree of security personally. They did not have to feel that if they were moving to another job they would lose coverage for their wife's cancer or their husband's mental illness or some other malady that was covered under the previous health insurance.

Therefore, improving the health of American workers, and in particular assuring coverage, I believe is an essential input into maintaining and even strengthening that flexibility which is so important to our capacity to meet competitive challenges from abroad.

Senator RIEGLE. Well, I sort of felt like you were halfway through an answer and I was hoping there was going to be another

half. And maybe we are not there. Maybe econometric studies and analysis in a sense cannot take us the next leg of the journey. But I am, in my own mind, just in everything that I have seen in the time I have been in the Congress and the committees I have served on and so forth, I have come to the view that good health does have a big economic payoff and bad health, either problems not found early, problems, you know, dealt with at the high cost end, really sort of drain you dry.

I do not know how to back that through the analysis. Because in the long run models, economic models, sort of everything balances out. So it all gets sort of washed out and it is very comfortable. It is very orderly and it is very neat. With all respect intended, the keepers of the models, you know, it all works very nicely.

The problem is that I see all these storm-tossed citizens out there, not just in my State, and I am worried about the economy. I think this balance of trade problem, the notion that everything sort of nets out in the end I frankly do not agree with.

I mean, I think we hurt ourselves badly if we do not understand the fact that when we have got big imbalances in certain areas we better figure out what is causing them and try to fix it. Now I am not saying from that that health care, per se, is driving that problem.

But let us just take the case of Japan. The latest numbers that I have seen indicate there are a lot of things going on—currency valuations and productivity. Just take cars and trucks though, all these factors together.

We have at least a $500 per vehicle car and truck premium just on health care costs—American producers versus Japan. Now I do not know how long any industry can eat that kind of a cost differential—even if they get a break on other things such as currency valuation swings—without suffering a serious economic impairment to that sector and eventually and through that to your balance of trade and a lot of other things.

I think that is happening. I mean, I see that happening. The industry tells me it is happening. But even if they did not, I see the numbers. I mean, react to that. I mean, am I making too much out of it, or is that not a real problem we ought to try to do something about?

Dr. AARON. First of all, I think the automobile industry has been doing an extremely effective comeback job. It is important to recognize the achievements that they have made in terms of recapturing some market share and in dramatically improving their products.

Senator RIEGLE. I fully agree with that. I just left the auto show in Detroit 2 days ago. It is wonderful to see all the crowds buzzing around the American models of all three domestic companies and the Japanese section sort of barren because they are sort of not——

Dr. AARON. And they are enjoying now a big price advantage as well.

Senator RIEGLE. Exactly.

Dr. AARON. I think the primary losers from the excess expenditures on health care in the United States are the American workers who, partly as a result of sharply rising health care costs over the last decade have had no growth in real earnings.

Health insurance is a tax on workers. It reduces the take-home pay of American workers. For that reason I have, to be quite frank, more sympathy and more concern about the auto workers than I do about the shareholders of GM, Chrysler and Ford as losers from excessively rising health care costs.

The problem with spending 14 percent of our gross domestic product and still having widespread, very serious health problems and 38 million people uninsured and many people untreated is that we are not using our resources effectively to maintain our standard of living and to help it to grow.

Let us just imagine that we spent as much as Canada did and got as much as Canada does from health care. Now in many respects Canada gets much less than we do. If you are seriously ill and want high-quality advanced medicine, come here, do not go north. But if you want routine care and you currently uninsured in the United States, Canada looks awfully good.

If we had that 4 percentage points of GDP that is the difference between the United States and Canada, we could use that or any number of domestic purposes, to raise the standards of living of American workers, to save so that we could invest more and capture the benefits from that investment as future income flows to Americans rather than to dividend and interest payments to foreign asset holders of capital located in the United States.

The stakes in health care reform and in cost containment are enormous. And, therefore, we have a lot to gain. But the group that stands to gain most, I suggest, are American workers for whom rising health care costs are a hidden tax on their ability to see their earnings grow.

Dr. BERGSTEN. Mr. Chairman?

Senator RIEGLE. Yes.

Dr. BERGSTEN. Could I just make a couple of comments on your question about the trade side?

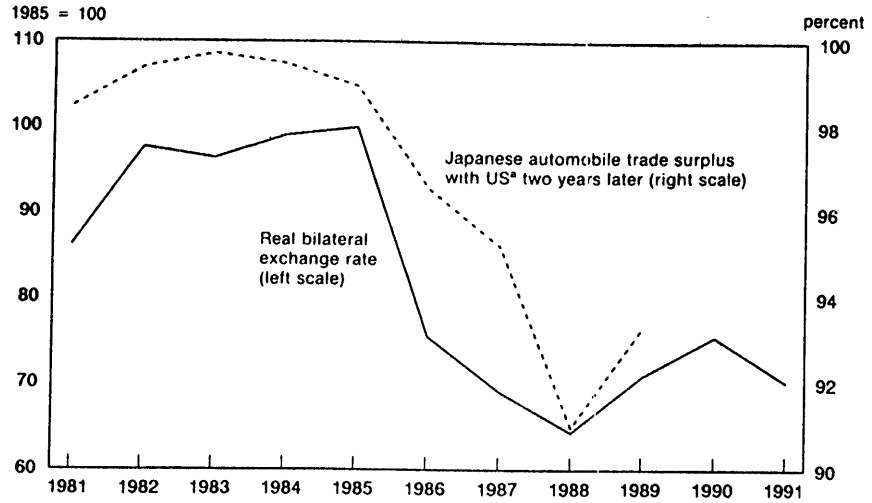
Senator RIEGLE. By all means.

Dr. BERGSTEN. First is to echo something Dr. Aaron said. I think it is fair to say that in the recent past American auto companies have not only improved output and productivity, but they have achieved a very substantial cost advantage relative to the Japanese competition; they have significantly increased their market share over the last several years. The relative cost position of U.S. firms is quite good. One important reason for that, is what I would consider the correction of the earlier inappropriate exchange rate relationship. Auto companies themselves say very clearly that the yen dollar exchange rate is absolutely central to their competitive position.

I published a book last summer on United States-Japan economic relations in the aggregate. There is one chart I would like to put in the record of this hearing, which correlates the market shares between the United States and Japanese companies in the U.S. market with the yen-dollar exchange rate. You find a very close parallel. Many auto companies themselves have picked that up. They make the point.

[The chart follows:]

Figure 4.1 United States and Japan: trade in automobiles and the real dollar yen exchange rate, 1981–91



a. As a share of total US-Japan bilateral trade in automobiles.

Source: Bergster, C. Fiel and Marcus Noland, "Reconcilable Differences?" United States-Japan Economic Conflict, Washington, DC: Institute ror International Economics, 1993.

Dr. BERGSTEN. The reason I mentioned it here is because it is very important for the Senate Finance Committee to make sure that the U.S. Treasury does not "fritter" away that improvement.

The yen rose substantially through last summer. It got to almost 100 to 1 against the dollar.

Senator RIEGLE. That is why we sent our former chairman down there.

Dr. BERGSTEN. Well, you talk to your former chairman, because at that point the U.S. Government intervened to keep the yen from strengthening further, even though that would have further improved our competitive position.

But now the yen has weakened by over 12 percent since that time. The market participants expect it to weaken more, frittering away a lot of the competitive gain that had been achieved. I think it is very important for this committee to work with the Treasury Department, so that they work with the Japanese to make sure that gain is not frittered away.

Let's refer back to Mr. Aaron's table which shows a very substantial reduction in the costs of health care to the transportation sector as a whole—and I take it a lot of that is autos—and is almost $3,000 per worker.

Senator RIEGLE. Right.

Dr. BERGSTEN. This would be an enormous difference. It would more than offset the adverse differential that you talked about coming out of this sector. So that, too, would be moving in the right direction. I would submit, if we could make sure the Treasury Department keeps working on the exchange rate in the right direction, do the kind of health care reform that is postulated here, we

would further improve the competitive outlook for our auto sector, thereby strongly improving the prospects for our trade balance with Japan, of which that, of course, is a big component.

Senator RIEGLE. You know, it is interesting. I bet you that in the $3,000 rough average in that high end manufacturing, probably half of that, just as a guess, would be cost shifting, which is where the more encompassing, richer health plans are sort of taking this indirect hit—cost shifting through the hospital system, through the medical system generally.

So a lot of that cost is not cost that goes to really meet the needs directly of the automobile worker and his family if they happen to be covered, but it is to pick up the uninsured and others whose costs are being off loaded into these other policies.

When I look at the prospect of China, mainland China, really coming on line as they are increasingly doing, it is interesting the number of times when you go into a store these days if you look at the label on the box or whatever where it has been made, more and more it says made in China and the quality is, you know, measurably changing and improving as it did over the years with Japan after World War II.

When I think about the United States really coming into the new world economy where previous large blocks of people who were out of the international competition now come into it, these issues, I think, become highly relevant a lot faster than we are able to sort of process the data intellectually.

I mean, I think the rate of change is so much faster than we are accustomed to. As it works through macro economics and down through micro economics, that we are not attuned, I do not think, to adjusting as rapidly as the world is changing on us.

I have a call that I have to take from the Leader just now on another matter. If I can just put the committee into recess for one minute or a short period of time and then I will be right back with you.

The committee stands in recess just briefly here.

[Whereupon, at 11:07 a.m., the hearing was recessed, to resume at 11:16 a.m.]

Senator RIEGLE. The committee would like to thank the last witness for her patience. Even during recess periods there are a number of things happening simultaneously that have to be dealt with.

I wanted to just attempt to finish the point I was making and then I want to go and get you into this discussion, get your material on the table. As the world economy is changing and as, you know, low-cost producers really start to come on line—we have lived now for some time with the transfer of technology and what have you—and now we have mainland China coming on line with an awful lot of people who are productive and skillful.

One of these days, after the sorting out of the old Soviet Union they will be back on line. So we are going to have an awful lot of people who want to do things and who unnecessarily work for less than do workers in our society.

I am not sure I see any way, forget the long run, but over the next 10 years for the United States to eat cost premiums in any areas where we are meeting stiff international competition that are

cross premiums that we can eliminate or should eliminate, try to work down by one means or another.

I am not sure that the international marketplace will allow us that luxury any longer. Now NAFTA is in place and the GATT agreement has been worked out. It does not cover everything, but a lot of things. And it seems to me that the nature of things that will now demand that any unusual cost burdens that we carry in highly vulnerable internationally traded sectors are just going to be under relentless pressure. I, frankly, do not know where the jobs are going to turn up if we keep grinding down the job base in certain places.

Now I realize my own economics training that you can argue that everything moves around, and if somebody cannot find work here at this, they will find work over here at this. Maybe it is lower and they will finally get to an equilibrium. I do not know how you get to an equilibrium under these conditions and still maintain the middle class in the United States. I think that is a very important social value and almost a requirement to the orderly functioning of our society.

It is one thing if you never had a middle class and so you are striving to get there, and you do not know what it is that you used to have that you do not have anymore. It is another thing if a large part of the country is sliding out of the middle class, as you talked about in terms of treading water.

That is the problem that we are in right now. I do not quite know how to inject it into the economic models, because the models were not constructed with that kind of elegance to get outside of the working of the mathematics in effect. But that is the new issue. I mean, it seems to me that is the real challenge facing the country.

I sort of abstracted down to this point. That is, that our private sector job base is the single most critical asset that we have in the country when all is said and done. And if you have a robust private sector job base that is going to hold up in the face of international competition that can support your country in its basic needs, public and private, you are going to do all right. And if you do not, then God help us, because we are going to be storm tossed.

And so it is in that context that I am trying to sort of think through the question of 14 percent of GNP and the rates of increase and how we rationalize it. And as you say, you make a very good point with respect to Canada.

If you want a very exotic, high-end medical procedure in some very delicate heart operation, you probably want to do that here. For maybe other things that are not quite in that category, cost effectiveness and the treatments and so forth may, in fact, be just as attractive to rank in file people in Canada as they are here in the United States. So that is all part of the dilemma.

Anyway, that is the larger context in which I think we have to try to sort out and rationalize our way through these kinds of issues. I know you may want to make a comment on that, Dr. Aaron, before I go to Dr. Rasell.

Dr. AARON. Well, the issues you are raising are of far greater importance even than health care reform. We have experienced in the United States two very bad pieces of news over the past couple of

decades. One is a sharp retardation, slow down, in the rate of growth. That translates into very little growth in earnings that people take home, on the average.

The second thing that has happened is a dramatic increase in economic inequality. At the very top of the income distribution people have done very well, thank you very much. The bottom 60 percent of the earnings distribution has experienced no gain at all.

The definition of being middle class is receiving a middle class wage. It is an expectation that next year I will earn a little bit more than I did last year. It is an expectation that if I lose my job I can find another job that may not pay quite as much immediately as the job I lost, but overall economic growth will assure me that I can recover my position in a few years. I am not permanently destroyed if I have to change jobs at age 40 or 45. That is the definition, I think, of being in the middle class.

All of those assumptions are now in jeopardy. They are in jeopardy because economic growth is slow, because inequality is increasing, and because what little increase in productivity we are enjoying is, to a distressing degree, being siphoned off by rising health care costs.

So I could not agree with you more fully on the vital important for the well-being of the nation, for our international competitive position of trying to regain some of the productivity growth we enjoyed in the past. That is going to mean improving the skill levels of our workers so that they do not lose out to others who are perhaps less skilled but very diligent. They can use their brains and their knowledge and their education and their training.

It means getting our health care costs under control so that we can use those resources both to support higher living standards for workers and more investment here at home.

Senator RIEGLE. You know, just one other point. With that very troubling problem in income distribution which we have especially seen over the last decade—we have gone over and over those numbers in the Joint Economic Committee. I am not a member, but Paul Sarbanes is. He has run that. I have participated with him in many instances.

As I watch investment flows, and as I watch both private or corporate investment patterns as well as private investment patterns, and I watch more and more of the money that is available for investment being invested outside the country—and understandably because there are attractive options out there and, there are ways to make money doing that all around the world and so forth.

In fact, today, lots and lots of people are investing their mutual fund money in the Shang Hai Fund or the Hong Kong Fund or whatever it happens to be that sort of works that whole side of the puzzle.

When you wonder what it takes to channel sufficient investment back in the United States to accomplish the very things you are speaking about—the upgrading of educational skills, infrastructure clearly has to listed—but also, even just in the private sector—the reinvestment in technology and critical sectors—to keep it moving, keep it in sufficient amount, keep it hopefully in some sense in the right places. That gets into complicated questions of industrial policy and national goal setting, et cetera.

But I am struck by the fact that health care in a sense unlocks this whole set of issues. I mean, it is one way into a set of complexities that is bigger than just health care, although health care by its sheer size is now one of those items that is worthy and necessarily must be treated in and of itself. But it does not in a sense relieve us from the burden of sort of looking at how all of these things are sort of working at the same time together.

The greatest concern I have is the question of whether or not we are going to have an adequate private sector job base at a high enough income skill and output level to meet our needs as a society. Right now I think there is a gap. I am not sure that we have though through the question of what has to be done to close that gap.

It poses all kinds of fundamental philosophic questions, many of which we do not even want to ask because they touch off, you know, sort of nuclear exchanges of idea logs on both sides and all sides.

Dr. Rasell, why do you not bat cleanup here today for us now and give us your comments, if you would.

STATEMENT OF M. EDITH RASELL, M.D., HEALTH ECONOMIST, ECONOMIC POLICY INSTITUTE, WASHINGTON, DC, ACCOMPANIED BY DEAN BAKER, PH.D., MACRO ECONOMIST, ECONOMIC POLICY INSTITUTE

Dr. RASELL. Thank you for the opportunity to testify. I am going to focus my remarks on the manufacturing sector, since most of our internationally traded goods and services are manufactured goods. I am going to begin by describing a few reasons why costs in manufacturing are so high and then speak about how various aspects of health care reform would affect these factors that make manufacturing health costs so high.

Then finally I am going to describe some of the findings of a report that we did a month or so ago that looked at health care costs and competitiveness. I want to just briefly introduce my co-author, Dean Baker, who is also here.

Senator RIEGLE. Dean, do you want to come on up and sit here? We have an empty chair and you are welcome.

Dr. RASELL. Health costs in manufacturing are higher than average. In fact, per hour worked they are about 76 percent higher than health costs are in the non-manufacturing sector. One reason is the high rate of coverage. Seventy-five percent of all manufacturing workers are covered by their own employer. This is higher than in any other industry except for mining.

As you mentioned, uncompensated care is a big factor. Hospital costs to private payers are estimated to be 30 percent higher because of uncompensated care. Costs in ambulatory care are probably comparably increased.

As was mentioned, manufacturers are often self-insured, which means that they pay not community rates but more or less experience rates. And due to the higher than average age of their work force this would also raise their costs. They have large numbers of retirees, and many early retirees, who are expensive to cover, and they also cover large numbers of working spouses that are not covered under their own employer.

So then we can think about health care reform and the elements that would benefit manufacturers—we can just run down the list. Certainly community rating would eliminate the cost differences based on age and health status and would be beneficial to manufacturers. Relief from the costs of early retirees as proposed in the Clinton plan would be beneficial. We estimated that the cost of covering retirees, both the under 65 and the over 65 in the manufacturing sector in 1994 would be about $15 billion. So some of those costs would be taken away if the Federal Government picked up early retiree costs or some of those costs.

Universal coverage, however delivered, would decrease uncompensated care and help manufacturers. If there were an employer mandate, because most manufacturing workers are already covered, it would not on average raise costs to manufacturers. Instead, due to the reductions in uncompensated care, due to the fact that working spouses would have their own coverage, and due to the fact that probably half the people currently on Medicaid would be covered through the private health insurance sector, further reducing uncompensated care, an employer mandate definitely would be a beneficial element for the manufacturing sector.

Caps on small firms, because of the large size of most manufacturers making them ineligible for these caps, would not directly benefit most of them. To learn whether these caps would be beneficial to manufactures, you would have compare the small benefits manufacturers might get versus the down side, which would be possibly higher taxes or funds diverted from other uses to pay for these subsidies. We could not say for sure what the net effect would be on manufacturing. There could be a negative effect.

The effects of caps for all firms on health costs such as Clinton's cap of 7.9 percent of payroll are also difficult to predict. We have no reason to think that if the other reforms were done that health costs as a share of payroll would be particularly high for manufacturers. Here again, the benefits that manufacturers might receive must be compared with the costs that would be imposed either through extra taxes or because things that are currently being done with public money would no longer be done, the money instead being used for the subsidies. So I think the 7.9 percent payroll cap or any similar cap is not an unambiguous benefit for manufacturers.

Cost containment that would reduce costs for all firms would be beneficial. The individual mandate would decrease uncompensated care. Reform of the small group insurance market, to the extent that it reduced uncompensated care, would be good, but the specific focus of the reform would not be too applicable to the large manufacturers.

I think it is clear that there are many elements of health care reform that would benefit manufacturing, and would save them money. We estimated that under the Clinton plan in 1994 manufacturers would save about $18 billion.

The question that we should address today is: are these cost reductions, are these savings, going to enhance their competitiveness? The answer to this question depends upon how the money is.

There are basically three ways they can use the money. They can pass it all into higher wages for workers. They can pass it all into

higher profits, either to be given to their shareholders or to be invested, or they can lower their prices.

Many economists would argue that most of this money would end up in wages. Dr. Aaron mentioned the fact that you can make the assumption that health costs are completely borne by workers, meaning that wages are reduced dollar-for-dollar for every dollar that you spent on health insurance. That happens in the long run and in the short run you do not know what is happening. You cannot say for sure that is happening.

I would argue that right now with high health costs that are rising rapidly, with stagnant wages, with actually falling wages for many people, with falling total compensation for many people, and with the difficulty an employer would have in reducing wages or in cutting benefits for that matter, that we could well be in a period when employees are not bearing the full costs of their health insurance.

And, therefore, when savings were achieved there is no reason to think all that money would be passed into wages. So, in fact, some would probably go into lowering prices and some into raising investment.

In the study that we did a month or two ago, using an estimated $18 billion in savings for manufacturers in 1994, we estimated a scenario in which a third of the savings went into higher wages for workers, a third of the money was used to raise investment, and the other third was used to lower prices. We estimated an increase in net exports of $54 billion, cumulative, over 10 years and an increase in investment of about $31 billion cumulative over 10 years in 1994 dollars.

So the bottom line is, these are not big effects. They are definitely positive. I think that health care reform would have a positive impact on the competitiveness of manufacturers, although the effects would be fairly small.

Thanks.

Senator RIEGLE. Thank you very much.

[The prepared statement of Dr. Rasell appears in the appendix.]

Senator RIEGLE. Let me propose a couple of general questions to all of you that will sort of cut across what we have been discussing here. What you have said, what I have also been saying.

Is it not clear that no matter how you sort of slice it here, coming through the economics and our competitiveness and how it works, that a comprehensive reform of the health care system does a better job of controlling costs and hopefully gives us a better health profile too in terms of the health of our people? But just looking at the cost side of it, does not the data that we have and the analysis that has been done here show that that will help us here and that we really need to do it in part for that reason? Would you agree with that, Dr. Rasell?

Dr. RASELL. Yes. For competitiveness effects?

Senator RIEGLE. Yes.

Dr. RASELL. That would be one reason, yes.

Senator RIEGLE. Dr. Aaron?

Dr. AARON. I think any beneficial effects on competitiveness would be a welcome windfall. I want to see health care reform be-

cause I think we are wasting resources and we are at the same time leaving a lot of people out in the cold.

Senator RIEGLE. Right.

Mr. Hogan?

Mr. HOGAN. Certainly to the extent that you are able to lower the real costs of providing adequate or very good health care, I certainly agree. My one concern would be that the cost containment not turn into price controls. We are all familiar with stories of the adverse effects of price controls.

Senator RIEGLE. How important do you think it is that we try to do this now, say this year, as opposed to, you know, let the debate sort of spin around here for whatever length of time? Is it a significant enough issue in this context as you each see it to say that we ought to set a legislative target of getting something done this year, this calendar year? Would you agree with that?

Dr. RASELL. I would say the sooner the better, just given the fact that costs are rising so rapidly. And once they are up there, it is almost impossible to actually bring them down. The most we can hope for is to slow the rate of growth. So it makes a difference what your base line is, what your starting point is. So I think the sooner we get on to this the better.

Mr. BAKER. One thing you will get probably just about have unanimous agreement on by economists is that uncertainty is a bad thing. And if nothing else, the fact that we now have a program out there and we do not know exactly what is going to come about, I think that creates a lot of uncertainty. The sooner that can be resolved, that in and of itself has to be seen clearly as a positive thing.

Senator RIEGLE. It does not seem to be holding back the stock market at the moment, does it? Of course, I mean, that is not one dimensional either. But I agree with your point. I think the sooner the uncertainty goes away the better it is.

But it seems whatever the overhang of the uncertainty is at the moment does not seem to be undercutting the enthusiasm for common stocks.

Mr. BAKER. Well, the stock market did well through the recession, too.

Senator RIEGLE. Yes?

Dr. AARON. I am old enough to remember when Representative Dingle's father co-sponsored national health insurance legislation in the late 1940's. This issue has been around for pushing 50 years. At the time that proposal came forward half a century ago health care was claiming less than 4 percent of our gross domestic product. We are now up to 14.

A lot of miracles have occurred in the health care area, but one of them seems to be the capacity for costs to increase. If with the enthusiastic support of a newly elected President we are not able to mobilize some degree of action, if not now, when.

Senator RIEGLE. Mr. Hogan?

Mr. HOGAN. Other things equal, the sooner the better. But we ought to recognize that we are pushing 14 percent of the economy into a new regime and we ought to get it right.

Senator RIEGLE. Well, you know, that is true. Although, you know, it is not as if we have a freeze frame here either way. If we

do not do it and get it right or close to right, it is going to continue to do what it is doing.

So, you know, there is an effect if we do not act, too, is there not?

Mr. HOGAN. Certainly.

Senator RIEGLE. It seems to me, you know, that is part of our problem now. And that is that this problem is loose and there is a dynamic that plays itself out, as Dr. Rasell says. It seems to me if we do not act now, it does not get any easier to solve. I think it is harder to solve.

I think if we had tackled it earlier in time, as difficult as it is, you know, it probably was more manageable. I think every day we wait makes it harder to manage. I am concerned that if we go beyond this year, you sort of now superimpose the political time table and we miss this window. Then you have a Congressional election this fall, and then you have a new Congress come in and you have the presidential election in the next offering, and all the things that will be swirling around.

I am not quite sure when the next appropriate and feasible legislative window will present itself. I think we have one now and I think we ought to cease it. It seems to me you have all given very important testimony and analysis today as to why we should try to do it now and what might be gained by it in terms of some help to our economy generally.

Let me thank you all. I appreciate very much your appearance here today. It is helpful to the committee and will be widely shared with committee members when they all return. Thank you. The committee stands in recess.

[Whereupon, at 11:38 a.m., the hearing was adjourned.]

APPENDIX

ADDITIONAL MATERIAL SUBMITTED

PREPARED STATEMENT OF HENRY J. AARON [1]

Reform of health care financing is important for U.S. competitiveness, but in ways that are more complex and interesting than those commonly advanced in popular discussions.[2]

MAJOR CONCLUSIONS

- In the long-run, the cost of employer-financed health insurance is largely offset by lower *real* wage rates or other fringe benefits paid to workers.
- In the short run, unanticipated increases in employer-financed health insurance costs may boost *nominal* compensation costs per worker and cause a rise in prices or a drop in profits or both.
- The *level* of a nation's spending on health care will not affect its international competitive position, whether financed by government, business or individuals, *unless it affects the balance of national saving and investment.*
- The very rapid increase in health care costs in the United States undoubtedly added to the federal government deficit, thereby contributing to some aggregate deterioration in the U.S. trade balance. These effects on trade, however, in no way differ from the effects caused by a host of other, more important determinants of saving.
- Apart from these macroeconomic effects, changes in health care costs can alter the composition of trade. Variations in costs across industries hinder the international competitive position of some U.S. companies and help the international competitive position of others; *and the effects are offsetting.*

The basis for each of these statements is set forth at some length in the attached report. Rather than explore each of them, I want to use my time to expand on the second general conclusion. President Clinton's plan, as well as many others, call for the replacement of experience rating of health insurance by community rating.

THE EFFECTS OF COMMUNITY RATING

The consequences of this shift for individual companies are enormous. Table 1 indicates the reason why. Columns 2 and 4 show the variations in health insurance costs for a given population based on differences in benefits. The 90th percentile plan costs 40 percent more than the 10th percentile plan. Columns 1 and 3 show the actual difference in costs for actual plans, taking into account both plan differences and population differences, including age, local health costs, utilization rates. The 90th percentile plan for individuals costs 164 percent more than the 10th

[1] Director of the Economic Studies Program, The Brookings Institution. The views expressed in this statement do not necessarily reflect those of staff members, officers, or trustees of The Brookings Institution. This statement briefly summarizes the conclusions of a study entitled "Health Care Financing and International Competitiveness," prepared by me and Barry Bosworth. That study is attached.

[2] The term "competitiveness" always refers to the capacity of U.S. companies to sell abroad or to meet foreign competition in the United States. It is sometimes used more broadly to encompass the rate at which U.S. productivity increases compared to that abroad. Throughout my testimony I use the term "competitiveness" only with the former meaning. Whether the U.S. economy grows quickly or slowly and whether it grows more or less rapidly than do economies elsewhere are important for U.S. standards of living and self-confidence. But in a world of flexible exchange rates growth rates are not relevant to the balance of trade, which is determined largely by the balance between domestic saving and investment and between government revenues and expenditures. The attached report follows the same definition.

percentile plan. The 90th percentile family plan costs 178 percent more than the 10th percentile family plan.

Table 1 shows that the major factors accounting for variations in health care spending among companies arise not from differences in benefit packages but from differences in demographic characteristics, economic factors, and use of health care services.

Community rating will largely eliminate most cost differences caused both by demographic, economic factors, or differences in use of medical services and by plan variations. Geographically based differences will remain, at least initially, under the Clinton plan. A mandated benefit package will largely eliminate cost differences that arise from plan variation, although some of these differences will remain because some companies now provide benefits in excess of the mandated packages and will continue to do so. Within each community, however, the standard benefit package will cost all companies the same amount.

Table 2 shows an approximation to the consequences of the shift to community rating for broad industry groups. Table 2 is based on data on employer payments for health insurance for two-digit SIC industries. Column 2 shows the health insurance expenditures per full-time-equivalent worker (FTE) in 1992. The numbers in column 2 vary enormously for at least four reasons.

- The proportion of workers for whose insurance employers pay differs widely among companies and industries.
- The range of benefits varies widely among companies and industries.
- The cost of a given set of benefits differs among companies and industries based on the riskiness of the activity, the age and other demographic characteristics of the labor force, and the location of the industry (since health costs vary regionally).
- The ratio of retirees for whom employers provide benefits to active workers differs among companies and industries.[3]

Despite these qualifications, the numbers in column 2 indicate roughly the burden of current health care benefits. As noted earlier, most of the burden falls on workers. In the case of retiree benefits, which are more or less a fixed liability of the company that is independent of employment, the burden probably falls on shareholders.[4] But a sudden equalization of costs or a move in that direction will initially accrue as a change in costs to businesses, and these windfall gains and losses may last for some time (if responsibility for retiree benefits is shifted from companies, shareholders are likely to experience a one-time permanent increase in share values).

Column 4 shows the cost per FTE of a system in which coverage is expanded to all workers, and employers pay 80 percent of the insurance premium.[5] The cost for current employees is assumed to be uniform across all plans. It is assumed that the net cost of providing insurance for the 26 percent of the private work force currently uninsured would be half that of an insured worker. It was calculated at the level of the total private economy after excluding the cost of retirees. The costs vary among industries only because of differences in the costs of retiree health insurance.[6] In contrast, the employer cost under President Clinton's plan will not be uniform for at least five reasons.

- Some companies would receive subsidies under the Clinton plan.
- Some companies would form their own company health alliances.
- The Clinton plan, at least initially, would not eliminate regional variations in health costs.[7]
- Many companies now offer benefits beyond those in the Clinton benefit package and payments beyond 80 percent of total insurance cost. While companies would

[3] Data do not permit adjustments for variations in the proportion of current employees who are covered by insurance at the level of industry detail shown in the table. Information on retiree health insurance costs at the level of individual industries is also very limited.

[4] This point is of some significance, as retiree benefits are independent, within some range, of current employment; in contrast, benefits for current workers vary with employment. Economic analysis suggests that fixed costs have less effect on current pricing decisions than do variable costs, although both costs must eventually be covered if the business is to survive.

[5] The 80 percent is close to the average of current practice.

[6] The estimates of retiree costs are very approximate. They are based on estimates from Lewin-VHI on costs at the level of the major industrial sectors, and assigned those costs to the underlying two-digit industries as a common share of their health care spending.

[7] In 1990, per capita health care spending varied from an estimated $1,726 in Idaho to $3,031 in Massachusetts. The average for the United States was $2,425 per capita. (Families USA, 1990)

not be required to continue offering such benefits, some almost certainly would do so.

- The costs of retiree benefits would initially remain with companies. While the Clinton plan would shift these costs to regional alliances completely by the end of four years, we think it unlikely that this proposal will survive.

Column 5 shows the change in health care costs per FTE between the current system (column 2) and the extreme version of community rating (column 3). The differences are expressed as a percent of wages in column 6. It is obvious that there would be very large changes in the industrial distribution of health care costs under such a system. The largest gainers would be in mining and manufacturing, while retail trade and most service industries would pay substantially more.

Column 7 shows the share of trade—imports plus exports—to total industry sales for each industry. The trade-weighted percentage change in health expenditures per FTE is −28 percent,[8] indicating that companies in traded goods industries sectors would experience *on the average* a drop in direct health care costs from a complete equalization of health care spending per worker. As emphasized earlier, this percentage change in health insurance per FTE does not correspond to the effect of the Clinton reform.

These estimates of changes in health care costs are far from the types of measures required to infer the effects of reform on international competitiveness. There are ambiguities about the extent of backward-shifting of the costs through adjustment of nominal wages. Furthermore, a change in the exchange rate would be expected to neutralize the effects of any change in the average price of tradables. Thus, only companies with the larger falls in prices would gain a competitive advantage. Companies with smaller falls in prices or price increases would suffer a loss of international competitiveness. A company may experience reduced health care outlays from reform, but suffer a loss of competitiveness if the costs of its major suppliers are increased. Perhaps more importantly, a company may experience increased costs from reform, but enjoy increased competitiveness if reform reduces public spending, lowers the deficit, increases national saving, leads to lower real interest rates, and causes a decline in the exchange value of the dollar.

Attachment.

[8] The trade-weighted change in health care costs per FTE equals the percentage change in FTE costs (column 4) multiplied by each industry's share of total trade.

Table 1.Cost and Actuarial Value of Insurance Policies

	Single Policy		Family Policy	
Percentile	Cost	Actuarial Value	Cost	Actuarial Value
10	$1,220	$1,742	$2,760	$4,222
25	1,670	1,905	3,950	4,603
50	2,100	2,100	5,070	5,070
75	2,620	2,261	6,090	5,459
90	3,220	2,440	7,670	5,890

Source: Urban Institute and Actuarial Research Corporation.
The actuarial value is the cost of different benefit packages if the set of people receiving the package were the same in each case. The actuarial value distribution is shown with the same median as the premium distribution. Each column is sorted by that variable. Thus, the plan at the 75th percentile of the cost distribution is not the plan at the 75th percentile of the actuarial value distribution.

Table 2. Private Employer Health Insurance Costs by Industry, 1992

	(billions of dollars)
Total Health Insurance	171
Retirees	18
Current Employees	153
Cost of uninsured workers	20

Industry	Current employer contributions for health insurance ($ per FTE)	(% of wages)	Adjusted employer contributions for health insurance [a] ($ per FTE)	Difference between current and adjusted contributions ($ per FTE)	(% of wages)	Imports and exports as a share of domestic shipments [b] (percent)
Total	2,017	7.2	2,253	(236)	-0.8	
Agriculture, forestries, and fishing	394	2.5	2,041	(1,647)	-10.3	
Farms	485	3.5	2,041	(1,555)	-11.4	10.0
Agricultural services, forestry, & fisheries	312	1.7	2,041	(1,729)	-9.6	14.9
Mining	4,776	11.4	3,048	1,728	4.1	
Metal mining	5,327	12.9	3,165	2,163	5.3	28.2
Coal mining	9,982	23.3	4,146	5,835	13.6	9.2
Oil and gas extraction	3,240	7.3	2,724	516	1.2	41.9
Nonmetallic minerals, except fuels	3,341	10.2	2,746	596	1.8	11.1
Construction	1,572	5.4	2,373	(800)	-2.7	
Manufacturing	3,466	10.7	2,416	1,050	3.2	28.2
Durable goods	3,801	11.2	2,452	1,349	4.0	38.8
Lumber and wood products	1,705	7.4	2,225	(520)	-2.3	17.9
Furniture and fixtures	2,296	10.0	2,289	7	0.0	18.8
Stone, clay, and glass products	3,224	10.6	2,390	834	2.8	14.7
Primary metal industries	5,108	14.3	2,593	2,515	7.0	27.9
Fabricated metal products	3,431	11.4	2,412	1,019	3.4	16.0
Industrial machinery and equipment	3,838	10.5	2,456	1,382	3.8	51.6
Electronic & other electric equipment	3,451	10.2	2,414	1,037	3.1	53.3
Transport equipment	5,449	13.5	2,630	2,819	7.0	44.9
Instruments and related products	3,958	10.1	2,469	1,489	3.8	33.9
Misc. manufacturing industries	1,923	7.5	2,249	(325)	-1.3	65.8
Nondurable goods	3,017	10.0	2,367	649	2.2	16.3
Food and kindred products	3,238	11.6	2,391	847	3.0	9.4
Tobacco manufactures	7,653	17.3	2,869	4,785	10.8	14.5
Textile mill products	1,759	7.9	2,231	(472)	-2.1	17.6
Apparel and other textile products	1,480	8.5	2,201	(721)	-4.1	32.9
Paper and allied products	3,506	9.8	2,420	1,086	3.0	15.5
Printing and publishing	2,607	8.3	2,323	284	0.9	4.8
Chemicals and allied products	4,267	9.5	2,502	1,765	3.9	22.5
Petroleum and coal products	6,800	14.2	2,776	4,024	8.4	10.9
Rubber and misc. plastics products	3,328	12.1	2,401	927	3.4	18.5
Leather and leather products	1,365	6.8	2,189	(823)	-4.1	118.6

Industry	Current employer contributions for health insurance ($ per FTE)	Current employer contributions for health insurance (% of wages)	Adjusted employer contributions for health insurance ($ per FTE)	Difference between current and adjusted contributions ($ per FTE)	Difference between current and adjusted contributions (% of wages)	Imports and exports as a share of domestic shipments (percent)
Transportation and public utilities	3,615	10.1	2,621	994	2.8	
Transportation	2,221	7.1	2,412	(191)	-0.6	11.7
Railroad transportation	1,622	3.3	2,295	(673)	-1.4	
Local & interurban passenger transit	559	2.7	2,128	(1,569)	-7.6	
Trucking and warehousing	1,761	6.3	2,317	(555)	-2.0	
Water transportation	5,230	14.5	2,860	2,370	6.6	
Transportation by air	4,293	11.3	2,713	1,580	4.1	
Pipelines, except natural gas	2,697	5.3	2,463	234	0.5	
Transportation services	2,201	7.8	2,386	(185)	-0.7	
Communications	6,572	15.6	3,070	3,502	8.3	1.9
Electric, gas, and sanitary services	4,871	11.3	2,804	2,067	4.8	0.8
Wholesale trade	2,426	7.1	2,177	249	0.7	4.8 [c]
Retail trade	788	4.5	2,090	(1,303)	-7.5	
Finance, insurance, and real estate	2,123	5.9	2,190	(67)	-0.2	2.5
Depository institutions	3,002	10.3	2,252	750	2.6	
Nondepository institutions	1,593	4.2	2,153	(560)	-1.5	
Security and commodity brokers	2,864	3.3	2,242	622	0.7	
Insurance carriers	2,180	6.0	2,194	(14)	-0.0	
Insurance agents, brokers, and service	1,216	3.4	2,126	(910)	-2.6	
Real estate	716	2.8	2,091	(1,375)	-5.3	
Holding and other investment offices	4,106	6.7	2,329	1,777	2.9	
Services	1,480	5.5	2,177	(697)	-2.6	
Hotels and other lodging places	1,784	9.3	2,205	(421)	-2.2	0.1
Personal services	583	3.4	2,095	(1,511)	-8.8	
Business services	1,406	6.0	2,170	(764)	-3.2	1.2
Auto repair, services, and parking	754	3.6	2,110	(1,357)	-6.5	
Miscellaneous repair services	1,821	6.9	2,209	(387)	-1.5	
Motion pictures	2,469	7.5	2,268	201	0.6	
Amusement and recreation services	1,264	5.6	2,157	(894)	-4.0	1.7
Health services	2,449	7.8	2,266	183	0.6	
Legal services	2,177	4.4	2,241	(64)	-0.1	
Educational services	296	1.3	2,068	(1,772)	-7.7	
Social services	139	0.8	2,054	(1,915)	-11.5	
Membership organizations	68	0.4	2,047	(1,979)	-10.6	
Other services [d]	1,791	4.3	2,206	(415)	-1.0	
Private households	0	0.0	2,041	(2,041)	-16.5	

Sources: Current and adjusted employer contributions computed by the authors from unpublished data of the Bureau of Economic Analysis and Lewin-VHI. The industrial distribution of total employer payments is estimated for census years by the Bureau of Economic Analysis. These ratios have been held constant since the last census year, 1987, and applied to total employer contributions of each year. Imports, exports, and shipments are from the 1987 Input-Output table (BEA), the December 1992 Merchandise Trade supplement, and tabulated from "U.S. Commodity Exports and Imports as Related to Output: 1982 and 1981" (Census Bureau, 1986).

[a] Adjusted premium includes a 13 percent increase in average costs to cover uninsured workers and assumes uniform costs for non-retirees (community rating).

[b] Data for imports, exports, and shipments for all industries except manufacturing are from the 1987 Import-Output table, BEA.

[c] This figure includes both wholesale and retail trade.

[d] Other services include museums, botanical, zoological gardens; engineering and management services; and services not classified elsewhere.

Attachment.

HEALTH CARE FINANCING AND INTERNATIONAL COMPETITIVENESS

By Henry Aaron and Barry Bosworth *

American business executives often blame rapidly rising health care costs for hampering their capacity to compete with foreign companies. Two characteristics of the U.S. system create a *prima facie* case supporting this claim. The United States spends more of its gross domestic product on health care than does any other country, and employers shoulder a larger share of the direct cost than do employers in most other countries. To make matters worse, health care cost increases are unpredictable and seemingly uncontrollable. Employers see these expenditures as adding to employment costs and pushing up the price of American products.

Economists typically see the problem rather differently. Noting that health care costs are just one component of the price of hiring workers, they argue that employers' decisions will be based on total compensation, while it is the employee who is interested in its composition. Employer-provided health plans are attractive because they provide group discounts and are excluded from personal income taxation. If health care costs rise, economists argue, the growth of other forms of compensation will be slowed, leaving total costs of compensation unchanged. Through reductions in other fringe benefits or lower take-home pay, employees pay for their own health care costs. However, empirical studies that have examined the incidence of employer-provided benefits have found the issue of incidence—who ultimately pays the

* Senior Fellows, The Brookings Institution. The authors wish to thank Lewin-VHI for providing useful statistical information and Kristin Klingenberg and Cagla Baykan for valuable research assistance.

cost of the benefit—to be far more complex than this line of reasoning suggests. The question becomes even more difficult when one considers how health benefits affect employment and the competitive position of individual companies and industries.

This report is divided into four parts. Part I describes broad trends in health care spending, insurance coverage, and retiree health care costs. Part II presents data on the financing of private health care. It documents the importance of employer payments for health care as a component of employee compensation and presents international comparisons. Part III lays out the reasoning economists use to explain the extent to which rising costs of health care influence the international competitiveness of U.S. companies. This part emphasizes the importance of four underlying economic conditions: whether and how actual labor markets deviate from the competitive norm, how workers value the health care benefits that employers offer, whether exchange rates are fixed or flexible, and how health care costs vary among companies. Part IV lays out the plan presented by President Clinton and presents conclusions on the likely effect of this reform on U.S. international competitiveness.

I. HISTORICAL TRENDS—HEALTH CARE COSTS AND FINANCING

The United States spends far more per capita and devotes a larger share of income to health care than does any other country. While growth rates of health care spending in some other countries (Canada, for example) approach that in the United States, growth rates in major competitors (Germany, for example) are far lower. In any event, the U.S. level of spending is so much higher that the absolute increase in costs is far larger here than elsewhere.

Furthermore, the U.S. system for financing health care is unusually complex. It combines elements of government-provided insurance for the elderly and very poor with an employment-based system to pay for most privately financed health care. Costs vary enormously among companies. Some companies face per worker costs several times those confronting other companies that provide insurance, and some companies pay none of the costs at all. Furthermore, some individuals purchase their own health insurance, and a substantial number have no insurance at all.

Total Health Care Spending

Over the past three decades, health care costs[1] have consistently increased at more than twice the rate of total income, rising from 5 percent of GDP in 1960 to 14 percent in 1993 (figure 1). The two largest components, hospital charges and professional services (mostly physician fees), show nearly equal increases relative to the growth in GDP. The proportion of each medical care dollar devoted to drugs and other goods fell, but was offset by a substantial rise in the share devoted to nursing home care (figure 2). The residual category includes program administration, research, and construction costs.

Several factors have contributed to the rapid growth in health care costs. The most important is new technology, in particular the growing capacity of the medical profession to respond to catastrophic illnesses. Within just a few decades, organ transplants, bypass surgery, bone marrow transplants and other major medical interventions have become commonplace. Expensive new diagnostic tests such as magnetic resonance imaging, because they are non-invasive, have led to a vastly increased number of tests. The importance of high-tech, high-cost treatments is reflected in the fact that a tiny minority of the population accounts for most health care outlays, and some evidence suggests that this extreme concentration of medical care outlays is intensifying. One percent of the population accounts for 30 percent of all outlays, 10 percent for 70 percent. At the other end of the scale, half the population accounts for only 3 percent of costs.[2] In examining the claims experience of two health insurance companies we found that half of all payments in 1992 were accounted for by one percent of the insured population at an average per capita cost

[1] Throughout this paper, we deflate health care spending by the GDP deflator, rather than by any health care index. Our reason is that no well-defined unit of output for health care exists. Accordingly, the meaning of any health care price index is obscure, particularly since the nature of health care is undergoing rapid change with the introduction of new medical techniques, devices, and drugs. U.S. health care price indices, especially the widely cited monthly consumer price index for health contain many additional characteristics that make them essentially worthless as a guide to medical prices. See Newhouse (1989) and Aaron (1991).

[2] Berk and Monheit (1992). This pattern is not unique to the United States. Other countries exhibit similar concentration. To a large extent, such concentration is a mere artifact, as most people are not seriously ill in any given year; one expects sick people to use medical services and healthy people not to do so. Even if the period over which outlays are measured is as long as a decade, however, considerable concentration remains (Aaron, 1991).

of $25,000.[3] This concentration of health care outlays creates enormous incentives for private insurers to screen out potentially high-cost users. Furthermore, because the costs of catastrophic care are so large, changes in the incentives to individuals to seek medical care or to shop more wisely are likely to have only small effects on total costs.

To date, the aging of the population has pushed up health care costs only slightly. Health care spending does vary dramatically among age groups: costs for the average person over age 65 exceed those of persons aged 19–64 by a factor of 3.5, and per capita spending on children under 19 years of age is only half that for persons aged 19–64.[4] There has been very little net change in the average age of the population, however. This pattern will continue for some time into the future. By itself, population aging will push up acute care health spending *at most* by less than 2 percent of gross domestic product over the next three decades.

The cost of malpractice insurance is a third factor often mentioned as responsible for rising costs. Direct expenditures on malpractice insurance are a small part of total health care costs, less than one percent; but the tort system does reinforce the pressures on healthcare providers to exhaust all options, even those that involve high costs and low probabilities of success. Studies suggest that defensive medicine may boost health care spending by a total of roughly 3 percent.

Financing

The financing of health care has changed in important ways over the past three decades (figure 3). The share of costs paid out-of-pocket by consumers has fallen and the share financed through employer-provided health plans has risen. Also, beginning in the mid-1960s, government assumed a major role in providing health care for the elderly and disabled through Medicare and for the poor through Medicaid. Medicare hospital benefits are largely financed through earmarked payroll taxes, while Medicaid and Medicare physician benefits are financed mostly through the general funds of the federal and state governments.

The complexity of the financing system is reflected in table 1 which shows the proportion of the total population obtaining insurance from the different sources. Employment-related group plans cover 140 million people, slightly over half of the population. Another 10 million are retired, but receive insurance coverage through a prior employer. Medicare and Medicaid cover another 60 million, and 10 million receive military benefits. About 12 percent of the population, 31 million, purchase insurance outside of any group plan.

The wide variety of alternative funding sources in an industry dominated by high fixed costs creates opportunities for substantial cost shifting among client groups. Hospitals can provide care at a reimbursement rate above direct costs, but below full unit costs, as long as they can charge others more than variable costs. For example, Medicaid and Medicare pay hospitals less than full costs generated by Medicare and Medicaid patients because Congress has restricted reimbursement rates. As a result, private payers must pay more than the full costs of hospital care for privately financed patients. Medicaid payments are estimated to cover about 80 percent, Medicare about 90 percent, and private payers about 130 percent of full costs. This shifting of costs from private to public budgets represents a hidden tax in addition to payroll and other taxes explicitly imposed to finance Medicare and Medicaid. The tax is paid by whomever in the private sector bears the burden of paying for health care.[5] Since the mid-1970s *total* public and *total* private heath care spending have increased at similar rates.

THE UNINSURED

In March 1992, the Current Population Survey found 35 million Americans, or about 14 percent of the total population, did not have health insurance. The number who lacked insurance for the full year was considerably smaller, the number without insurance at some time during the year, far larger. Nearly all of the aged are covered by Medicare. Most of the poor are covered by Medicaid. Hence, 80 percent of the uninsured, or 28 million people, were in households in which the head or spouse was employed (see table 2). In some cases, the employer did not provide an insurance plan; in others employees were not eligible, chose not to enroll, or refused

[3] If one percent of the population accounts for 30 percent of total physician, hospital, and pharmaceutical outlays, the per capita cost of these services in 1992 exceeded $60,000. The discrepancy between these two estimates arises in large part because private insurance companies typically do not provide for most of the costs of the elderly and disabled, who are covered by Medicare.

[4] Waldo and others (1989).

[5] See section II on the incidence of health care costs.

dependent coverage. A significant number, 7.7 million were in families, but, because they were neither children under 21 years of age nor spouses, they were not eligible for traditional family insurance plans. The incidence of being uninsured is also high among unrelated individuals. On a cyclically adjusted basis, the proportion of the total population uninsured has risen gradually over the last decade—the uninsured population tends to rise during recessions. The increase has occurred despite liberalizations in Medicaid coverage, indicating a perceptible drop in the proportion of the employed covered by private insurance.

Some further characteristics of workers by health insurance status are provided in table 3. About 28 percent of workers do not have employer-provided insurance either through' their own job or that of their spouse. The proportion is particularly high for workers in very small companies, part-time workers, the self-employed, and those earning less than $250 per week. Furthermore, 86 percent of part-time workers and 77 percent of workers employed by companies with fewer than 10 employees do not receive insurance through their own employer.

Small companies are particularly unlikely to offer health insurance. A 1990 survey by the Health Insurance Association of America found that 73 percent of companies with fewer than ten employees did not provide a health insurance plan compared to 2 percent of companies employing more than 100 workers.[6] In part, these differences can be explained by the fact that the variation in expected premium costs is far larger for small than for large companies. If insurers quote a single rate, they must price plans for small companies above prices for large companies to offset adverse selection and cover greater administrative costs. Insurance premiums for groups of fewer than ten people are commonly 25 to 30 percent above those for groups of fifty or more. In addition, competition in the small group market is also considerably weaker and profit margins higher than in the large group market.

However, an explanation of the large differences in coverage rates among companies based solely on prices would require implausibly high assumptions about the sensitivity of insurance to its price.[7] Instead, small companies seem to attract those workers who place a relatively low value on health insurance and prefer a higher take-home wage, because they are covered through another family member or are willing to risk being uninsured. Small companies employ a disproportionate number of low-wage and part-time workers, and they are less likely than large companies to offer other fringe benefits, such as pensions. The demographic composition of the work force at small companies is similar to that of workers who do not take insurance when it is offered by their employer.[8] Additional factors behind the low rate of insurance in small companies are related to their high turnover and that of their employees, and their low rate of unionization.

The differences in the composition of the work force would seem to be an important factor behind the success of small businesses in the United States. They obtain a labor cost advantage over large companies by seeking out those workers with a low preference for fringe benefits.

II. HEALTH CARE AND EMPLOYMENT COSTS

The United States relies on employment-based financing to pay for a large portion of health care. Private health care insurance has become a large and rapidly growing cost of employment. The Medicare hospitalization program for the elderly is also financed by a 2.9 percent payroll tax collected half from employers and half from employees. The cost of health insurance is not only high on the average, but varies widely among companies and industries.

AGGREGATE TRENDS

Total employer payments for health care now equal employer tax payments for social insurance. While all companies pay social security taxes, however, many pay nothing for health insurance. Among companies that provide health insurance, premiums substantially exceed payroll taxes. Even after adjusting for general inflation, health insurance costs for the nonfarm business sector have increased from $0.18 per hour in 1960 to $1.27 in 1992 (1992 prices), a seven fold rise. The structure of hourly compensation for the nonfarm business sector is shown below.[9]

---

[6] Health Insurance Association of America (1991), p. 27.

[7] The decisions of companies on whether to offer insurance appear to be quite insensitive to price. See Jonathan Gruber (1992).

[8] Department of Labor (1991) and Long and Marquis (1993).

[9] Two sources provide information on employee compensation. The data in this section come from the national accounts. The wage rate is reported on the basis of hours paid—paid leave and supplemental pay are included in wages—and the cost of retiree medical benefits is included in supplements. The Employment Cost Index provides a measure of compensation of cur-

HOURLY EMPLOYMENT COSTS, 1992 NONFARM BUSINESS

Wages	$15.71	
Supplements	3.17	
Employment Taxes		*1.25*
Health Care		*1.27*
Pensions		*0.33*
Workers' Compensation		*0.25*
Other		*0.07*
Total Compensation	$18.88	

All forms of employer supplements grew rapidly during the 1960s and 1970s (figure 5). Over the last decade, however, sharp declines in aggregate employer contributions to private pension programs largely offset increased health care costs (figure 6). In fact, adjusted for general inflation, total wage supplements have remained nearly constant since 1984, and they have remained constant as share of total compensation since the early 1980s.

Employer health care costs have increased despite a decline in the proportion of workers covered by health plans and a shift toward requiring employees to pay an increased share of the costs. According to surveys of the Department of Labor, the proportion of full-time workers in medium and large companies (100 or more employees) who did not participate in the health care plan rose from 3 percent in 1980 to 17 percent in 1991.[10] In 1991, 41 percent of the participating workers were in plans wholly financed by the employer compared with 72 percent in 1980.

The average health care premium was $1,750 for single coverage in 1991 and $4,250 for family coverage.[11] Adjusted for inflation, the corresponding premiums for single and family coverage in 1993 would be approximately $2,100 and $5,100, respectively. The average employer paid 85–90 percent of single and 70–75 percent of family coverage. In recent years premiums have been rising at a 15 percent annual rate, 3–4 times that of wages. This rate exceeds the growth of total health care spending, in large measure because of increased cost shifting from Medicare and Medicaid to the private sector.

RETIREE HEALTH CARE COSTS

According to the Current Population Survey of 1992, 10.2 million retired workers received health care benefits through their former employers' programs.[12] These benefit programs cost an estimated $25 billion per year. However, the most striking feature of these programs is not their total, but their wide variation across companies. They are a major expense for some older companies, mostly heavily unionized with early, contractual retirement ages. Retiree benefits have taken on added importance in recent years because of both the increased frequency of early retirement and a newly implemented accounting standard that now requires companies to show future post-retirement health costs on balance sheets as liabilities; in the past, such obligations were normally not recognized on official accounts until paid.[13]

Post-retirement health insurance is a fairly common employee benefit among large companies. Among current retirees with health insurance from companies with more than 1,000 employees, 90 percent receive it from their former employers. Of all full-time participants in health plans of medium and large companies in 1991, 45 percent were promised continued benefits in retirement, fully or partially financed by the employer, down from 56 percent in 1986. Small companies promise post-retirement benefits to only 15 percent of full-time workers participating in a company health plan. This rate parallels the lower rate of coverage for current workers. Employees in companies with retiree health coverage retire an average of

---

rent employees per hour worked—paid leave and shift pay are included in supplements, rather than wages, and the cost of retiree medical benefits is excluded.

[10] Department of Labor (1993). Most of the decline in coverage appears to reflect decisions of workers not to participate since there is little change in the proportion of employers offering a health care plan.

[11] Sullivan and others (1992).

[12] The Consolidated Omnibus Budget Reconciliation Act of 1985 required employers to continue health care benefits for retired workers for up to 18 months, but the workers can be changed all of the premium at the group rate.

[13] The Employee Benefit Research Institute estimated the unfunded liability for private firms at $240 billion in 1988.

two years earlier than do workers in companies without retiree coverage; whether the retiree health benefits cause or reflect the earlier retirement is unknown.[14]

Until recently, the benefit package offered retirees resembled that for current employees at the same company, and employers paid a similar share of the cost. This situation is beginning to change, however, with the new accounting treatment of future retiree costs. Greater awareness of the future implications has led many companies to scale back the benefits and increase the share of the premium paid by retirees.

Information on the costs of retiree health programs is limited because many companies include retirees in the same insurance group as employees. For companies that separate costs for retirees from those for active workers, costs averaged about $2,500 per retiree in 1991.[15] The costs also depend on the age structure of the retiree population since most programs are coordinated with provisions of Medicare. For example, the cost *to employers* of a 65-year-old drops to only about 25 percent of a 64-year old, but rises steadily in later years.[16] Many companies also have a length-of-service requirement similar to that of their pension program. For companies that offer retiree benefits, the costs average about 15 percent of total health care, but reach 20 percent for a few companies with an older work force.

Variation in Health Care Costs by Industry

Unlike standard employment taxes such as that for social security, costs for employment-based health care vary dramatically among companies and industries as a share of compensation. This variation results because the proportion of workers covered by insurance differs, because health care costs per worker do not vary systematically with wages, and because the cost of insurance differs based on work force age, use of health care, and local costs of care.

Many Americans favor a system of insurance in which rates would not vary among individuals on the basis of their expected health care costs—community rating—presumably because they believe that most of the variation in the need for health care is beyond the control of the individual, or at least beyond practicable influence. However, while health care costs may not be controllable, they are predictable on the basis of demographic and geographic characteristics. Insurance companies are forced to reflect these differences in setting their premiums to prevent their competitors from picking off the low cost groups. Most large companies now do not buy insurance but self-insure, hiring insurance companies or others simply to process claims. In both cases, companies face substantially different costs for health coverage depending on the characteristics of their work force. As health care costs rise, companies have increased incentives to use factors related to expected health care costs to discriminate in hiring. Their capacity to do so legally is sharply constrained by legislated prohibitions against basing hiring decisions on age, sex, race, or disability status.

Some of this variation is evident in figure 7 which shows employer costs for health insurance per full-time-equivalent employee (FTE) by major industry groups. The costs vary from a high of $6,000 per FTE in communications to $800 in retail trade and even less in some service industries.[17] In part, the differences are due to variations in the proportion of workers covered by insurance. The costs per insured worker are shown in figure 8 where the differences are still very large. They reflect differences in the number of retirees per active worker, the average age of the work force, regional variations in health care costs, and specific industry health effects. Variations across firms are undoubtedly even larger as some of the sources of diversity are largely lost in industry averages.

To illustrate more clearly the effects of age and other factors on insurance premiums, we obtained the rating factors used by two health insurance companies, A and B. A is a small national insurance company. B is a regional Blue Cross/Blue Shield company. In both cases premiums vary substantially among different groups of the population.

Premiums rise particularly sharply with age. The premium for males aged 45 to 50 is twice that of 20 to 29 year-olds, and more than four times higher for workers aged 60 to 64. The differences for women are muted, particularly if maternity benefits are included,[18] as they are under most plans today and probably would be under all plausible national plans. Both companies also charge substantially higher pre-

[14] Companies that provide retiree health care benefits are also more likely to provide pension programs. (Foster-Higgins, 1991)

[15] Foster-Higgins (1991).

[16] Warshawsky (1992).

[17] Further detail is provided in table 7.

[18] The degree of adjustment for maternity benefits differs radically between the two companies.

miums for small groups, as much as 25 percent more for groups of 10 or fewer people, but rates vary little for groups of 25 or more. The national company makes striking adjustments for geographical differences, with high-cost areas facing premiums three times those charged low-cost areas. Even for the regional company, rates differed within one state among counties by as much as 40 percent. Both companies also made significant adjustments for some high-risk industries.

Because these characteristics are easily identified and strongly associated with health care costs, devising effective schemes for community rating within a system of multiple competing insurance companies is difficult. Discrimination pays. It is naive to think that, if given the chance, insurers and providers will forebear from seeking low-cost groups. While community rating may be a desirable goal, it is difficult to implement within a system of competing insurance companies or health providers. In fact, the number of discriminatory factors incorporated in insurance premiums has been increasing over time.

International Comparisons

The U.S. health care system is far more costly than that of any other country. Measured of a share of GDP, U.S. health care spending is one-third higher than that of the closest country, Canada, and more than twice that of Japan and the United Kingdom (table 4). The disparities on a per capita basis are even more pronounced. Using purchasing power exchange rates, U.S. spending is twice the average of the other G–7 countries, and 50 percent higher than Canada (table 5). The differences have widened. In 1960 U.S. spending as a share of gross domestic product was actually below Canada's and only a shade higher than that of Germany, Sweden, and Switzerland. Health care spending is positively associated with per capita income, but U.S. health expenditures are about one-fourth higher than the statistical relationship between income and health care spending can explain.

High expenditures in the United States result from both high prices and high use of medical services. US physicians earn more relative to the average worker than physicians in other countries, 5.4 times the average wage compared to 2 to 4 times in other large OECD countries. The fees charged for common medical procedures are also much higher in the United States. Surgery and high-technology diagnostic and therapeutic procedures are more common as well as more expensive than elsewhere. But the United States has only an average number of physicians per capita, fewer hospital beds than average and a below-average hospital bed occupancy rate. Hospital stays in the United States are the shortest and most costly in the world. The latter and perhaps the former are traceable to the lavish use of costly therapeutic and diagnostic equipment and high levels of staffing per patient.

Many people conclude that the large per capita U.S. health care expenditures must be misallocated because they are not associated with superior health outcomes. The U.S. infant mortality rate is higher than average and life expectancy at birth only average. This seeming paradox reflects a variety of factors. Much health care spending is devoted to speeding cures and reducing disabling side effects of illness—factors that are not easily captured in the international comparisons. Prices of health care services are higher in the United States, even when compared with average incomes, than they are elsewhere, making it necessary to spend more to buy the same quantity of services. Primary care and community medicine are relatively neglected in the United States. Certain health hazards, notably violence, lower U.S. average life expectancy.

Finally, the United States finances most acute care health spending through explicit and implicit taxes on employment. This method of payment underlies the concern that increased health care spending adds to the cost of producing American products, and, thereby, hobbles U.S. international competitiveness. While health care is financed largely out of employment-based contributions, the United States does not stand out in terms of the proportion of employment costs devoted to wage supplements (table 6). At 17 percent of compensation, U.S. wage supplements are well above those in Canada, which uses general taxes to finance health care and limits employment-based taxes to the financing of retirement income. On the other hand, employment taxes to finance general government programs and wage supplements are higher in many countries than in the United States. In France and Germany, for example, wage supplements stood at 28 and 19 percent of compensation, respectively in 1991.

III. HEALTH CARE FINANCING AND AMERICAN COMPETITIVENESS

The economic effects of increases in the cost of employer-provided health insurance are surprisingly complex and controversial. They can best be understood by clearly distinguishing between two issues. The first is who pays for health care, workers or their employers. Most economists argue that workers will bear the ulti-

mate incidence, reasoning from prior studies of the incidence of general employment taxes. Empirical studies find that the quantity of labor supplied varies little with changes in the real wage, although the response of married women is greater than that of men and single women. Thus, workers will not avoid a tax by withdrawing from the work force. The demand for labor, on the other hand, is often found to be quite sensitive to its cost because companies have more options for avoiding increased labor expenses. They may choose to adopt more capital-intensive production methods or to shift production facilities overseas; and consumers may shift their spending away from those labor-intensive products with the largest price increases. Because the quantity of labor demanded is far more elastic or sensitive to changes in employment costs than is the supply of labor, most economists hold that the burden of general employment taxes is largely born by labor in the form of lower wages.[19]

There is considerable empirical support for the above view of the ultimate incidence of employment taxes, but studies of the tradeoff between fringe benefits (e.g. health insurance and pensions) and wages reach more mixed conclusions. The early studies found a positive association higher wages are associated with higher benefits.[20] These studies were severely flawed, however, by the difficulty of accounting for differences in workers' skills. The demand for these benefits rises sharply with income, partly because the value of the tax benefits from personal income tax exclusion of fringe benefits rises with income and marginal tax rates. Thus, one would expect high-skill, high-wage workers to receive more of their compensation in the form of fringe benefits than low-wage workers do. In any empirical comparison of wages and fringes among individual workers it is difficult to adjust for all the other determinants of differences in basic wage payments.

Several recent studies have used innovative methods of resolving some of the data problems and they find an inverse relationship between wages and some fringe benefit costs.[21] Furthermore, in a 1991 study Woodbury and Huang found that the demand for employer-provided health and pension benefits is sensitive to both the level of workers' incomes and relative costs, and it is strongly motivated by the programs' preferential tax treatment. They conclude that a large portion, about 80 percent, of an increase in the cost of health insurance is passed backward in the form of lower wages. In a recent summary of evidence on this issue, Krueger reaches a similar conclusion.[22]

Even if workers do bear the ultimate burden of paying for their health care in the form of lower wages, there is still a second issue of the mechanism by which the adjustment occurs. This issue has been only an infrequently explored issue of empirical research; but it is of considerable importance in the present context. It can be illustrated by two extreme views of the adjustment process. In the first instance, the adjustment of wages occurs in nominal terms: a direct backward shifting of the costs of all fringe benefits through lower take-home wages. On this view, employer-financed health care spending has no effect on product prices or, therefore, on the ability of U.S. exporters to compete abroad or of U.S.-based companies to compete against imports.

On the second view, employer health insurance payments are viewed as similar to a general employment tax that initially leaves money wages unchanged. Employers try to pass the increased labor costs forward in higher prices. Because they result in higher prices, costs of health care *may* affect the competitiveness of American products in global markets.

In both cases, workers pay for most of their own health care. In the first, they pay directly in lower *nominal* wages. In the second, nominal wages are unchanged, but prices rise, thereby cutting *real* wages. Contrary to views widely held in the business community, health outlays have little effect on *total* trade flows even in the second case; but the price effects may alter the *composition* of trade, putting some companies and industries at a disadvantage. The two cases also can be distinguished in terms of their assumptions about the response of monetary policy which would have to accommodate the price increases in the second case. Without such accommodation, the effort to pass a large increase in employment costs forward into prices would lead to higher interest rates, reduced demand, and unemployment.

---

[19] Burtless (1986) and Hamermesh (1993). There are wide differences in estimates of the elasticities of labor supply and demand, but average values would be 0.1–0.2 for labor supply and 0.5 to 0.8 for labor demand.

[20] Smith and Ehrenberg (1983).

[21] In particular, Gruber and Krueger (1991) found evidence of lower money wages in states with high worker compensations costs, and Gruber (1992a) found that wages declined for affected workers in states that mandated maternity benefits. Montgomery, Shaw and Benedict (1990) found an inverse relationship between pension costs and money wages.

[22] Krueger (1993).

Lower Nominal Wages

We begin with a view of labor markets as highly competitive and atomistic:

- Individual employers and employees can negotiate freely over the terms of the compensation package, and employers base their hiring decisions on a comparison of the cost of the total compensation package relative to the productivity or value to the company of the individual worker—they are indifferent about its composition.
- Workers understand the value of every element of the compensation package they receive.
- The premium employers pay for health insurance for each worker is the actual expected value of the insured health care services for that worker—and for the worker's family if they are included in the plan.
- Employers can offer health insurance to some workers, but not to others without having to pay anything extra for this selectivity.
- The supply of labor does not vary with total compensation. This assumption matches closely, but not perfectly, with empirical estimates of labor supply.[23]

Under these conditions, employers would determine exactly how much in total compensation they would pay to each individual worker. Workers would decide whether the value of insurance, allowing for the tax advantages and lower group premium, was high enough for them to choose to receive part of their compensation in employer-financed insurance. If so, the employer would include these workers in the company insurance plan. If workers chose to remain outside the plan, their wages would be higher by the exact amount the employer saved by not having to pay the premium. Since wages would be reduced by exactly the cost of whatever plan the employee chose, the choice of plan would have no effect on compensation costs of workers individually or in the aggregate.

The exclusion of employer-financed health insurance from personal income tax would shift demand to health insurance from other goods, but employees would pay the full cost of this insurance in reduced wages. Similarly, increases in the costs of existing fringe benefit programs would be shifted backward onto workers in the form of lower take-home pay. For the same reasons, health insurance would have no effect on commodity prices. The ability of individual companies or of the U.S. economy as a whole to compete with foreigners would be substantially unchanged.

While this model is relevant to some situations, such as the compensation of top executives, it has some problems as a description of wage determination for the average worker. Many, perhaps most, workers have a poor understanding of the total cost of their compensation package. Furthermore, most companies set their benefit packages unilaterally, perhaps with the preferences of their average employee in mind; and employees are faced with a take-it or leave-it choice. Since health insurance premiums are averaged over the employee group, the cost of insurance for individual workers is not known, and wages for individual workers cannot be adjusted for variations in insurance costs. Although individual workers value health insurance differently and would not buy identical coverage, most plans permit little or no variation. Nor is it easy to explain within such a model why employers would subsidize a large portion of family insurance coverage in addition to that of the individual without adjusting wage rates. Accordingly, the cost of health insurance may bear little relation to the value individual workers attach to coverage: it will be too much for some and too little for others.[24]

Finally, health insurance costs change often and by unpredictable amounts. As a result, even if workers initially chose an optimal compensation package, the burden of unforeseen adjustments in premiums falls on employers, at least until wages can adjust. This period may be short or long, depending on the duration of labor contracts and on whether workers are in abundant or short supply.

Higher Prices

Under the alternative perspective, increases in health insurance costs add to the cost of total compensation. Companies pass those costs forward in higher prices.

---

[23] Gruber and Krueger (1991) provide a clear presentation of the basic conceptual model as well as empirical evidence that the costs of the workers' compensation program are shifted back onto workers.

[24] Experience-rated and self-insured companies do bear the actual cost of health insurance per worker, but they also do not vary other elements of compensation on a worker-by-worker basis to offset the expected costs of health insurance. "Cafeteria plans," where the employer provides a fixed budget for fringe benefits and allows each worker to choose the specific mix, does provide a means of more direct tradeoff between alternative benefits; but such plans still cover a relatively small number of workers.

This interpretation is supported by evidence on the reaction to past increases in the employer portion of employment taxes, such as those for Social Security and Medicare. Direct backward shifting of increased health insurance costs may be inhibited by minimum wage legislation, existing labor contracts, and informal taboos against wage reductions. Where explicit agreements or practices assign most of the cost of health care to employers, most of any unanticipated increases in health care costs will be reflected in total compensation costs, at least temporarily.

Past studies indicate that increases in the employer portion of general employment taxes are initially reflected largely in higher unit labor costs that are then passed forward in higher prices to consumers, rather than being passed backward in lower nominal wage rates.[25] Companies can pass higher employment costs forward in higher prices with little loss of sales when competitors have experienced parallel increases in costs. That is not the end of the story, however, as subsequent reactions of employers to the higher real compensation, adoption of more capital-intensive techniques, ultimately leads to a shifting of a larger portion of the burden of employment taxes backward onto workers in the form of a lower real wage.

Under the first model the cost of benefits is passed directly back to workers in lower nominal wages. In the second, workers still pay, because price increases reduce real wages. The mechanism by which workers bear the burden of employer-financed health care differs. The end result is almost the same in the aggregate. But the effects for individual companies and workers can be quite different under the two views. Unfortunately, while numerous studies have investigated the issue of who ultimately pays for fringe benefits, very few have attempted to distinguish between nominal and real wage adjustments.

The fact that the return to capital has not declined in the United States and other industrial countries despite large increases in employment taxes and other fringe benefits in past decades further supports the view that labor pays for employer-financed fringe benefits. The increased share of nonfinancial corporate GDP devoted to wage supplements has been reflected in a decline in the share of income going to wages, not capital (figure 9). It is hourly compensation, not wages, that closely follows changes in labor productivity (figure 10). Instead, the debate over the incidence of employment taxes has centered around the mechanism by which the burdens fall on labor—by price increases that erode the purchasing power of wages, or directly through lower (or less rapidly growing) money wages. Few have alleged that much of the burden of employer-financed fringe benefits falls on capital income.

Employer-provided health insurance differs from a general wage tax in several important respects, however. Health insurance coverage confers a direct benefit to covered workers. Unlike a pure tax, payment of the insurance premium is linked to benefits workers receive.[26] Thus, while health insurance certainly adds to the cost of employment, reducing the demand for labor, there is an offsetting increase in the supply of labor to the extent that workers value the insurance. Even if some workers do not value the insurance at the full cost to the employer, this feature increases the portion of the cost increase that is ultimately reflected in lower real wages. It is also an important mitigating factor reducing the magnitude of employment loss for an increase in health care costs relative to an increase in a pure employment tax.

Furthermore, not all companies provide health insurance; and even among those that do, the costs of insurance vary sharply across industries and differ based on the demographic characteristics of their work forces, and local patterns of medical practice. Thus, the cost of health insurance is not a uniform tax, and one cannot so easily assume, at least in the short run, that the costs are passed forward into prices. Companies that experience large increases in health insurance costs when domestic competitors do not face a nasty choice. They can seek give-backs from labor, thereby risking strikes or damage to workers' morale, or accepting reduced profits. Or they can boost prices anyway, risking loss of market share. The lack of uniformity suggests that a larger portion of health care costs would have to be offset directly through lower nominal wages or reduced profits than in the case of a general employment tax. Companies with below-average costs would enjoy a corresponding advantage. Thus, health care costs can be of legitimate interest to businesses in their quest for profits, even if health insurance costs on the *average* are shifted forward in higher prices (or backward in lower wages). Also, workers have

[25] Robert Gordon (1977).

[26] This argument has been made regarding social security taxes. In that case, however, the benefit the worker receives as well as taxes are linked to earnings (Burkhauser and Turner, 1985). Thus, the Medicare tax is probably a more relevant example of a general wage tax. See Summers (1989) for a useful discussion of the distinctions between a pure wage tax, voluntary benefit programs, and mandated benefits.

significantly greater options for avoiding the incidence of the tax if they attach little or no value to health insurance.

In practice, rather than observing variation in the mix of compensation packages offered individual workers within a given company, the disparities emerge in the combinations of fringe benefits and wages offered by different companies. It is easier and more socially acceptable to adopt employment practices that differentiate among workers by age and other indicators of insurance cost among, rather than within, companies. Differences in worker preferences for fringe benefits are then reflected in their choice of employers. Current labor markets are rife with "clientele effects." Workers with weak "taste's for health insurance" are attracted to companies that offer relatively generous cash wages but no health coverage. Such workers include some who are young and healthy, spouses or other dependents of insured workers, and those with relatively strong tastes for the things other than health insurance that money can buy. It is not surprising that larger companies that provide health insurance blame the current system of financing insurance through employment-based plans for creating a highly unlevel playing field.

The tendency for companies with and without health insurance to compete in the same market intensifies the pressures on companies that provide insurance plans to devise payment systems that force workers who receive the benefit to pay directly for such insurance and to eliminate the cross-subsidies implicit in current arrangements. It is reflected in the growth of cafeteria-plan benefit programs, outsourcing to small companies without health insurance, and the increased use of part-time labor.

The automobile industry is a particularly pertinent example of these pressures. The work force in that industry is represented by a strong union that has maintained higher wages than those received by workers with similar characteristics elsewhere in the economy.[27] The industry also provides generous health care benefits. However, new foreign-owned plants have sought out younger workers with lower health care costs, and a substantial portion of the automobile parts industry offers no health insurance. Faced with these competitive pressures, auto companies seek to shift a larger share of health care costs backward in the form of lower wages. The union resists any such adjustment. Both sides find the issue divisive and wish it would go away. It is, however, naive and misleading to cite such statistics as the cost of health insurance per car as a measure of the effect of health insurance on the price of automobiles.

Aggregate Effects on Trade

Health care costs can affect trade flows directly only by adding to total employment costs. If fringe benefit costs are shifted backward in nominal terms, health insurance costs have no major implications for trade.

Even if health insurance costs boost prices, the effects on aggregate trade flows will be very small. Under flexible exchange rates, differences among countries in rates of average price change for tradable goods, regardless of their source, are quickly offset by changes in nominal exchange rates. Thus, changes in the average price level have few implications for the overall trade balance regardless of their source.

While exchange rates may change for a variety of reasons, the most fundamental determinant is the pressure of identical products to sell at similar prices in a given market. Thus, an increase in the average price level in excess of a country's trading partners, normally is quickly reflected in the nominal exchange rate. While economists generally reject the extreme view that purchasing power parity rigidly determines nominal exchange rates, they agree that price changes are the most important factor.

The link between nominal exchange rates and relative rates of price change are illustrated for four countries in figure 11. Germany and Japan have been low-inflation countries, Italy a high-inflation country. U.S. price inflation is close to the average of its trading partners.[28] The correlation between changes in the nominal exchange rate and relative prices is particularly close for the two countries, Germany and Italy, whose inflation rates have deviated widely from the average of their trading partners. The exchange rates of the United States and Japan reflect relative prices over the long term, but also indicate the importance of additional factors. The U.S. real exchange rate rose sharply in the early 1980s when the collapse of domes-

[27] Summers and Katz (1989).

[28] The nominal exchange rates are trade-weighted averages using data from 15 industrial countries, and the price indexes are relative wholesale prices exclusive of food and fuel. Both measures are compiled and published by Morgan-Guaranty Trust.

tic saving and strong investment demands drove up interest rates and the exchange rate to facilitate foreign borrowing.[29]

Under flexible exchange rates, it is a mistake to believe that a country's aggregate trade flows are determined by changes in the price level. Instead, a country's net trade balance will largely reflect the balance between domestic saving and domestic investment. Simply put, domestic real interest rates will be higher in countries with low saving relative to investment than in countries with saving surpluses. The higher interest rates will attract foreign financial capital, driving up the exchange rate. The high real exchange rate will, in turn, reduce exports and raise imports.

Variations in domestic rates of spending on health care will affect this process only to the extent that they alter domestic saving or investment. It is possible to argue that increases in public sector health care spending will translate into larger budget deficits, thus reducing national saving. These costs to "competitiveness," however, would result from any increase in government outlays that is not financed through tax receipts. There is nothing special about health care.

Composition of Trade

Variations in the distribution across industries in the increase of health care costs can change the *composition* of trade. Adjustments of the exchange rate will only offset changes in the average price of tradable goods. Since an increase in health care costs will push up prices of some companies more—and others less—than average, the effects on trade flows for particular industries and companies will vary. The extent of this variation will depend on the size of the change in health insurance costs, the level of employee compensation, the share of production cost represented by employee compensation, the elasticity of demand for each exported or import-competing good, and the elasticity of supply of imports and of foreign-produced goods that compete abroad with U.S. exports.[30]

The potential importance of such effects is illustrated in table 7, which provides a comparison of the industrial distribution of health insurance costs relative to wage costs with the industrial distribution of exports and imports. Heath care costs are significantly higher in those industries, such as manufacturing that are engaged in trade. Nonetheless, among the tradable goods industries, we could not find any association between the magnitude of health care costs and the extent of exposure to trade.[31] It is important to remember, however, that an industry's sales include a large component of materials purchased from other industries, and the diversity of those material inputs results in a substantial smoothing of differences in the health care content of different products.

The table does not reveal many of the most important trade effects, because the sectors are broad and contain companies with widely varying health insurance experience. Manufacturing, for example, includes not only the auto industry, but also Kodak and Xerox, two companies that have vigorously and successfully worked together in Rochester to hold down the level and growth of health care spending.

If one company's export prices (stated in foreign currency) rise because health care costs increase proportionately more than the exchange value of the U.S. dollar falls, it is likely to lose export sales. If an import-competing company must raise domestic prices because of rising health costs by more than decreases in the exchange value of the dollar boost import prices, it will likely lose sales to imports. The corollary of these losses, however, is that other industries or companies—those that raise prices proportionately less than the fall in the exchange value of the dollar—enjoy increased exports or face decreased competition from imports.

The preceding review leads to several qualitative conclusions.

Conclusion 1. In the long-run, the cost of employer-financed health insurance is largely offset by lower *real* wage rates or other fringe benefits paid to workers.

Conclusion 2. In the short run, unanticipated increases in employer-financed health insurance costs will boost *nominal* compensation costs per worker and cause a rise in prices or a drop in profits or both.

---

[29] Citations to the literature on exchange rate determination and the role of relative price levels is provided in Bosworth (1993).

[30] The full story is even more complicated. Within limits, companies can substitute capital, labor, and purchased inputs for one another in production. Similarly, consumers can substitute one consumption good for another in consumption. Thus the effects depend on the degree to which these substitutions can occur for different goods—the elasticities of substitution in production and consumption.

[31] Trade exposure was measured as the ratio of exports plus imports to domestic shipments.

Conclusion 3. The *level* of a nation's spending on health care will not affect its international competitive position, whether financed by government, business or individuals, *unless it affects the balance of national saving and investment.*

Conclusion 4. The rapid increase in health care costs in the United States undoubtedly added to the federal government deficit, thereby contributing to some aggregate deterioration in the U.S. trade balance. These effects on trade, however, in no way differ from the effects caused by a host of other, more important determinants of saving.

Conclusion 5. Apart from these macroeconomic effects, changes in health care costs can alter the composition of trade. Variations in costs across industries hinder the international competitive position of some U.S. companies and help the international competitive position of others; *and the effects are offsetting.*

IV. Health Reform and Its Effects on Business

Extending access to the uninsured and reducing costs have been the central themes of health care reform. How those reforms are achieved will have a major effect on business, if for no other reason than the importance of employer-based financing within the current system. Politically, the constituency for cost reduction has been relatively limited because most Americans believe, despite the arguments of the prior section, that their employer pays for their health care. The issue of cost containment has taken on greater importance, however, as advocates of extending insurance coverage recognized that they would be unable to expand access without providing some form of public subsidy to small firms and low-income individuals. Reluctant to propose new taxes, they have sought to finance the added payments through savings on the cost for the currently insured.

A third issue, of equal or greater importance for business, will attract increasing attention as the debate proceeds. Most reform proposals call for equalization of health insurance premium for all individuals and families regardless of expected health care costs—community rating. Community rating will have major effects on the distribution of health care costs among companies and industries, creating both winners and losers from health reform. To the extent that these changes in costs become reflected in prices, they will cause a realignment of relative prices and thus alter the composition of traded goods and services.

These three issues—increased access, cost reduction, and community rating—are central features of President Clinton's health plan but must be addressed in any future reform. Because it provides a useful basis for discussion, we provide a brief summary of the Clinton plan before examining the above three issues in greater detail.

The Clinton Plan

President Clinton has proposed a plan based on the requirement that employers pay for most of the cost of health insurance for most of their employees. His plan has several key elements:

- All legal U.S. residents, other than the elderly or employees of companies with more than 5,000 employees, would be required to buy insurance from regional health alliances. Companies with more than 5,000 employees would be permitted to form health alliances of their own.
- The states would be required to approve health plans that meet certain regulatory standards, including at least one plan that assures free choice of physicians. The alliances would act as the point of purchase for health insurance and pay "risk-rated" premiums to hospitals, physicians, and other providers. The alliances would be the conduit for subsidies to small businesses and households, tasks that would require the alliances to review business accounts and verify household income.
- Employers would be required to pay 80 percent of the average insurance premium in an alliance area for each of four community-rated family types: single persons, single parents and their children, childless couples, and couples with children. These payments would be capped at 7.9 percent of total payroll.
- Employees would be responsible for the balance of the premium; but employers would be permitted to pay the employees' share as a fringe benefit. Exclusion from personal income tax of employer-financed premiums would continue for ten years.
- Various explicit subsidies would be paid to employers with fewer than 75 employees and average wage payments below $24,000 annually per worker and to households with incomes below 150 percent of poverty.
- Regional health alliances would administer tight limits on the rate at which premiums for health insurance can increase annually. These limits would be designed to achieve spending targets established nationally and allocated to each

regional alliance by a national health board. Real growth of private—health care spending would be drastically curtailed, falling to zero six years following enactment.

- Long-term growth of spending would be set annually by Congress on recommendation of the National Health Board. If Congress fails to act, the spending limit, set in statute, would hold growth to the growth of health care outlays to the growth of gross domestic product.

Enactment and full implementation of the Clinton program as proposed is doubtful. Accordingly, the following discussion also considers some options that may emerge in a less comprehensive reform.

Access

A broad consensus is emerging that health care reform should assure universal financial access to care. Despite some administrative problems, achieving near universal coverage is technically quite easy. Finding a way to pay for it is very difficult. Plans to achieve universal coverage fall into three basic categories.

Employer Mandates would achieve universal coverage by requiring employers to pay for most of the cost of health insurance for all employees and their families; but, as we have seen, employees will actually pay most of the costs. Other devices will be used to cover those not connected to the work force.

Individual Mandates would achieve universal coverage by requiring each unrelated individual or family to carry health insurance. To make such insurance affordable, subsidies would be provided to low-income households.

National Health Insurance plans would require the government (or state governments under federal guidelines) to pay for the health care of the population. The plan would be financed by added taxes.

All three of these options entail administrative problems. Replacing the current system with government-sponsored insurance would be disruptive. An individual mandate would require techniques to compel the participation of reluctant households, particularly those who do not pay taxes, claim welfare, or collect food stamps. An individual mandate is enforceable only if accompanied by subsidies to enable the poor to afford coverage. Assuring that subsidies go to the eligible but not to the ineligible is always a costly administrative headache. Enforcing an employer mandate would raise a host of enforcement problems particularly regarding new and small companies, part-time workers, job changers, and members of families with two or more earners. And since people in households without a member in the labor force can be covered only by an individual mandate or government sponsored insurance, employer-mandate plans are bedeviled not only by their own complexities but also by those of at least one of the other two approaches.[32] While vexing, these problems are solvable, as other countries have demonstrated.

Surprisingly, universal coverage is also relatively inexpensive. The uninsured, now including approximately 15 percent of the population, already consume significant amounts of care, financed through cross-subsidies collected from the insured. Furthermore, the uninsured as a group are younger than the rest of the population and therefore are likely to consume less care per person than the insured. On the other hand, some of the uninsured and under-insured no doubt harbor untreated chronic illnesses. "Catch-up" in the treatment of these conditions might boost spending for a time. No solid estimates are available of how much universal coverage will boost acute care spending. If approximations that place the per capita cost of universal coverage at no more than half of average per capita expenditures on the insured are correct, a one-time increase in total spending of roughly 5 to 8 percent would result from universal coverage. This increase can be compared with annual growth of real per capita health care spending since 1990 of 6 percent.

The issue of who should pay, however, is far more controversial. Because almost all of the disabled and the elderly are already covered by government programs, workers and their families constitute most of the uninsured. An employer mandate would increase the number of insured workers in the private sector by 26 percent (table 3). Most currently uninsured workers are employed in small firms whose owners have strongly resisted such a mandate even with large subsidy payments by gov-

[32] The Clinton proposal actually links all three approaches to universal coverage: an employer mandate for most households; an individual mandate for most nonelderly households with no member in the labor force; and government-sponsored acute care insurance for the elderly and disabled (Medicare) and government-sponsored long-term care coverage for the poor (Medicaid). Much of the complexity critics have found in the Clinton plan flows from the simple fact that it employs all three of the available methods of achieving universal coverage instead of relying on one or even two of them.

ernment. Thus, the costs of expanded coverage tend to be pushed into the public sector. Some of those subsidies would be paid for workers who already have insurance, further raising the budget costs. The government would also need to provide subsidies to assure coverage for those who are not employed. In the Clinton plan subsidies to employers and households add nearly $90 billion annually to the Federal budget by the end of the decade.[33]

An expansion of coverage through an employment mandate would also have some effects on the structure of business. Those businesses, predominantly small firms, that cater to employees with a low preference for health insurance would lose some of their competitive advantage. However, these effects would be muted by the provision of a public subsidy. Furthermore, under the Clinton plan, small companies would gain an ability to attract workers because they could provide them with health insurance at significantly lower costs than can large companies.[34] Businesses in the tradable goods industries would be relatively unaffected because, with a few exceptions, workers in these industries already have health insurance. They would experience some gains from reduced costs of uncompensated care. Uninsured workers are most common in retail trade and the service sectors.

The competitive effects would depend to some extent on the method of implementing the mandate. At present, 15 percent of workers have health insurance provided through their spouse. If workers are only required to show that they have insurance, there would still be a category of workers seeking jobs that do not provide insurance. However, if, as under the Clinton program, each job must contribute a share of the household's insurance costs, there would be a much larger redistribution of health insurance costs among employers.

Cost Containment

Adjusted for general inflation, per capita health care spending has been rising for the past two decades at a 4.5 percent rate, compared to 1.5 percent for GDP per capita. The Administration proposes to eliminate this differential by the end of the decade. This is an extraordinarily ambitious goal, but it is critical to the Clinton plan because the Administration proposes to use those savings to finance the subsidies required to achieve universal coverage and additional benefits promised to the currently insured. Projected expenditure caps, based on this target, are used to develop estimates of the program's cost.

The Administration has proposed to control growth in total costs through tight limits on the rate of increase in insurance premiums. However, very little has been said about how insurance companies are expected to allocate payments to providers so as to stay within those limits. They are specifically prevented from cutting elements of the basic insurance package.

The reasonableness of the Administration's projections depends, as indicated in the introduction, upon the source of the rapid cost increases. The program reflects the view that the increases are due to growing waste and inefficiency, including unnecessary treatments. If this view is accurate, costs can be dramatically reduced without loss of medical benefit. Alternatively, if the increases reflect technological advances that expand the ability of the medical profession to respond to catastrophic illnesses, cost savings of the magnitude envisioned by the Administration could only be achieved through reductions in access to beneficial care, an outcome the Administration opposes. In either case, the speed with which the savings are to be realized seems highly questionable.

---

[33] A full analysis of the effects of reforming health care financing on the international competitiveness of companies and industries requires several steps. (1) Calculate how reform changes the cost to a company of a given set of health benefits. (2) Calculate the change in the cost of inputs purchased from other companies attributable to health care reform. (3) Based on initial exchange rates, calculate how these price changes will affect exports (for export industries) and imports (for industries subject to import competition). (4) Calculate by how much the exchange rate must change to reestablish a trade balance consistent with the balance between domestic saving and investment. (5) Industry by industry, and company by company, calculate whether the combination of changes in own-company costs, changes in costs of purchased inputs, and changes in exchange rates affects capacities to sell abroad and resist import competition domestically.

Even after performing these five analytical steps, one ideally would want to know how companies would alter the health insurance packages they offer, how such changes would affect total compensation, and whether monetary and fiscal authorities would alter policies because of health reform.

[34] Companies with fewer than seventy-five employees are eligible for subsidies if average earnings are less than $24,000 annually. Large companies are not eligible for such subsidies. Thus, large companies have strong incentives to create subsidiaries that employ only low wage workers. This incentive led one observer to remark archly that the Clinton plan would be very good for small business formation.

If the cost control targets cannot be met, but the timetable for universal coverage is sustained, much of the incremental cost of universal coverage spills over into the public sector. If health care cost increases outpace the rise in incomes, an increasing proportion of businesses would be subject to the limitation on their payments to 7.9 percent of payroll. The government would finance the excess. The size of subsidies payable to households whose income is less than 150 percent of official poverty thresholds would increase. Reform greatly expands the government's exposure to unanticipated cost increases. Such cost increases, if not foreseen, could easily spill over into an increased budget deficit, higher interest rates, an appreciation of the exchange rate, and a larger trade deficit. This is the most important means through which health reform might influence aggregate trade flows.

Community Rating

One major objective of health care reform, in addition to covering the uninsured, is community-rating in which premiums do not vary with expected health care costs. Blue Cross/Blue Shield originally used community rating, but commercial insurers entered the market and began to set premiums based on predictable risk characteristics. The BC/BS plans had to match commercial rates to avoid being left with the high-cost residual. Rates now vary based on numerous characteristics—including age, sex, region, industry of employment, and preexisting conditions—that are indicative of future costs. Insurance firms charge small groups, less than 10, about 25 percent more than large groups largely because of concerns about adverse selection. The health care system of the United States is unique in the extent to which it relies on experience rating to price health insurance to individuals and groups.

The extreme form of this approach is self-insurance, the practice now employed by most medium and large companies. Under this arrangement the company pays the actual costs of care consumed by its employees plus a charge for administration by an insurance company or other agent. Self-insurance became appealing after the Employee Retirement Income Security Act of 1974 exempted self-insured plans from state regulation and, in particular, from state-mandated benefits. Currently, more than half of insured workers are covered by self-insured plans.

The current reliance on experience rating is incompatible with a commitment to universal coverage: the commitment is meaningless without specifying the terms on which the coverage will be available. The usual argument of economists that experience-rating improves efficiency by relating price more closely to cost loses much of its appeal when it is remembered that individuals are combined into groups through their employment. Furthermore, much of the predictable component relates to characteristics over which individuals have no control, and which are illegal—to use as a basis for pricing in other economic transactions.

It is not surprising that community-rating has substantial public support on the basis of equity arguments. What is less evident is that the shift from experience-rating to community-rating will result in a very large reallocation of health care costs among employers. It may also prove to be far more difficult to implement a system of community rating than its advocates currently anticipate.

We shall use the data on employer payments for health insurance at the level of two-digit SIC industries shown in table 7 to illustrate some of these points. Column 2 shows the health insurance expenditures per full-time-equivalent worker (FTE) in 1992. The numbers in column 2 vary enormously for at least four reasons.

- The proportion of workers for whose insurance employers pay differs widely among companies and industries.
- The range of benefits varies widely among companies and industries.
- The cost of a given set of benefits differs among companies and industries based on the riskiness of the activity, the age and other demographic characteristics of the labor force, and the location of the industry (since health costs vary regionally).
- The ratio of retirees for whom employers provide benefits to active workers differs among companies and industries.[35]

Despite these qualifications, the numbers in column 2 indicate roughly the burden of current health care benefits. As noted earlier, most of the burden falls on workers. In the case of retiree benefits, which are more or less a fixed liability of the company that is independent of employment, the burden probably falls on share-

[35] Data do not exist that would allow us to adjust for variations in the proportion of current employees who' are covered by insurance at the level of industry detail shown in the table. Information on retiree health insurance costs at the level of individual industries is also very limited.

holders.[36] But a sudden equalization of costs or a move in that direction will initially accrue as a change in costs to businesses, and these windfall gains and losses may last for some time (if responsibility for retiree benefits is shifted from companies, shareholders are likely to experience a one-time permanent increase in share values).

Column 4 shows the cost per FTE of a system in which coverage is expanded to all workers, and employers pay 80 percent of the insurance premium.[37] The cost for current employees is assumed to be uniform across all plans. It is assumed that the net cost of providing insurance for the 26 percent of the private work force currently uninsured would be half that of an insured worker. It was calculated at the level of the total private economy after excluding the cost of retirees. The costs vary among industries only because of differences in the costs of retiree health insurance.[38] In contrast, the employer cost under President Clinton's plan will not be uniform for at least five reasons.

- Some companies would receive subsidies under the Clinton plan.
- Some companies would form their own company health alliances.
- The Clinton plan, at least initially, would not eliminate regional variations in health costs.[39]
- Many companies now offer benefits beyond those in the Clinton benefit package and payments beyond 80 percent of total insurance cost. While companies would not be required to continue offering such benefits, some almost certainly would do so.
- The costs of retiree benefits would initially remain with companies. While the Clinton plan would shift these costs to regional alliances completely by the end of four years, we think it unlikely that this proposal will survive.

Column 5 shows the change in health costs per FTE between the current system (column 2) and the extreme version of community rating (column 3). The differences are expressed as a percent of wages in column 6. It is obvious that there would be very large changes in the industrial distribution of health care costs under such a system. The largest gainers would be in mining and manufacturing, while retail trade and most service industries would pay substantially more.

Column 7 shows the share of trade—imports plus exports—to total industry sales for each industry. The trade-weighted percentage change in health expenditures per FTE is −28 percent,[40] indicating that companies in traded goods industries sectors would experience *on the average* a drop in direct health care costs from a complete equalization of health care spending per worker. As emphasized earlier, this percentage change in health insurance per FTE does not correspond to the effect of the Clinton reform.

These estimates of changes in health care costs are far from the types of measures required to infer the effects of reform on international competitiveness. There are the previously discussed ambiguities about the extent of backward-shifting of the costs through adjustment of nominal wages. Furthermore, a change in the exchange rate would be expected to neutralize the effects of any change in the average price of tradables. Thus, only companies with larger falls in prices would gain a competitive advantage. Companies with smaller falls in prices or price increases would suffer a loss of international competitiveness. A company may experience reduced health care outlays from reform, but suffer a loss of competitiveness if the costs of its major suppliers are increased. Perhaps more importantly, a company may experience increased costs from reform, but enjoy increased competitiveness if reform reduces public spending, lowers the deficit, increases national saving, leads to lower real interest rates, and causes a decline in the exchange value of the dollar.

The Administration plan rests on competition among approved health plans. Each plan would receive a risk-adjusted capitation payment for every enrollee. Such a system creates strong incentives for providers to select patients whose costs will be

---

[36] This point is of some significance, as retiree benefits are independent, within. some range, of current employment, in contrast, benefits for current workers vary with employment. Economic analysis suggests that fixed costs have less effect on current pricing decisions than do variable costs, although both costs must eventually be covered if the business is to survive.

[37] The 80 percent is close to the average of current practice.

[38] The estimates of retiree costs are very approximate. We used estimates from Lewin-VHI on costs at the level of the major industrial sectors, and assigned those costs to the underlying two-digit industries as a common share of their health care spending.

[39] In 1990, per capita health care spending varied from an estimated $1,726 in Idaho to $3,031 in Massachusetts. The average for the United States was $2,425 per capita. (Families USA, 1990)

[40] We calculate the trade-weighted change in health care costs per FTE by multiplying the percentage change in FTE costs (column 4) by the each industry's share of total trade.

less than their capitation payment, and to keep out or eject patients whose costs are expected to exceed their capitation payment.

Providers can influence individuals' choice of a specific plan in many subtle and not-so-subtle ways. Patients with long and established relationships with physicians, presumably because of health problems, are less willing to switch to newly created health maintenance organizations, thereby contributing to risk selection.[41] It is extremely doubtful that any system of risk-adjustment on the basis of identifiable and socially acceptable characteristics could completely control selection bias. This is particularly true with hospitals where the high level of fixed costs and joint costs makes it very difficult to accurately measure the costs of individual treatment.

If states are given authority to draw boundaries defining regional health alliances and the alliances have the powers proposed by President Clinton, one can confidently predict fierce battles at the state level over just how the boundaries should be drawn among health alliances. Low-cost areas, such as the suburbs, are certain to try to exclude the high cost communities, especially inner cities.

Concerns about selection bias have been a major factor limiting capitation arrangements between insurance companies and providers under the present system. Whether community rating and competing, capitated health plans can co-exist remains in doubt. Until these doubts are resolved, it is not possible to know whether uniform insurance premiums require a monopoly on the provision of insurance.

CONCLUSION

We endorse the consensus among economists that the costs of health care are borne principally by workers. This conclusion does not mean that rising health care costs are or should be of little concern to individual companies. Companies that succeed in controlling growth of health care spending achieve a cost advantage over companies that do not. This advantage, like the discovery of ways to produce more efficiently, generates a surplus that can be used to "buy" better workers with higher wages or other fringe benefits, or "buy" increased market share at home or abroad with lower prices, more research, or increased advertising. Thus, each company behaves rationally when it tries to control health care spending and treats rising costs as a serious problem. The effort to hold down health care costs, like the effort to hold down production costs, arises from the competitive engine that underlies the productivity of market capitalism.

But the advantages that individual companies can gain from efficient operation do not translate into increased competitiveness for U.S. companies as a group. If one company succeeds in selling more abroad, the value of the U.S. dollar is increased. As a result, other companies will have a harder time selling abroad or competing against imports.

The largest potential gainers from controlling the growth of health care spending are U.S. workers. To the extent that Americans consume health care that provides few benefits or none at all, to the extent that administrative costs of health insurance and providers are needlessly high, and to the extent that health care is inefficiently produced, U.S. households could achieve an increase in welfare from reform of health care financing and delivery.

In the process of achieving such reforms, individual companies will find their competitive positions improved or damaged. We conclude with this paradox: health care reform matters very little for the competitive position of the United States as a whole, but it matters considerably for individual companies. Some companies should care about reform because their international competitiveness will improve. Some should care about reform because their international competitiveness will decline. For all companies, including those that face foreign competition neither at home nor abroad, health care reform carries the promise of slowing and rendering predictable a cost they can neither predict nor control.

[41] Newhouse (1993).

REFERENCES

Aaron, Henry J. 1991. *Serious and Unstable Condition: Financing America's Health Care* (Washington: The Brookings Institution).

Berk, and Monheit. 1992 "The Concentration of Health Expenditures: An Update," *Health Affairs* (Winter), pp.145–49.

Bosworth, Barry P. 1993. *Saving and Investment in a Global Economy* (Washington: The Brookings Institution)

Burkhauser, Richard V., and John A. Turner. 1985. "Is the Social Security Payroll Tax a Tax?," *Public Finance Quarterly,* 13(3), pp. 253–67f.

Burtless, Gary. 1986. "The Work Response to a Guaranteed Income: A Survey of Experimental Evidence," in Alicia Munnell (ed.), *Lessons From the Income Maintenance Experiments,* Conference Series No. 30 (Boston: Federal Reserve Bank of Boston), pp 22–59.

Families USA, "Emergency: Rising Health Costs in America: 1980–1990–2000," 1990.

Foster Higgins. 1991. *Health Care Benefits Survey, Report 4: Retiree Health Care.* (Princeton, N.J: Foster Higgins).

Fullerton, Don, and Diane Lim Rogers. 1993. *Who Bears the Lifetime Tax Burden?* (Washington: The Brookings Institution)

Gordon, Robert J. 1977. "Can the Inflation of the 1970s Be Explained?" *Brookings Papers on Economic Activity, 1977:1 pp. 253–77.*

Gruber, Jonathan. 1992a. "The Efficiency of a Group-Specific Mandated Benefit: Evidence From Heath Insurance Benefits for Maternity." NBER Working Paper 4157 (Cambridge, Mass: National Bureau of Economic Research).

———. 1992b. "State Mandated Benefits and Employer Provided Health Insurance." NBER Working paper 4239 (Cambridge, Mass.: National Bureau of Economic Research).

———, and Alan B. Krueger. 1990. "The Incidence of Mandated Employer-Provided Insurance: Lessons from Workers' Compensation Insurance." in David Bradford (ed.) *Tax Policy and the Economy* (Cambridge, Mass: National Bureau of Economic Research), pp. 111–43.

———, and James M. Poterba. 1993. "Tax Incentives and the Decision to Purchase Health Insurance: Evidence from the Self-Employed." NBER Working Paper 4435. (Cambridge, Mass: National Bureau of Economic Research).

Hamermesh, Daniel S. 1993. *Labor Demand* (Princeton: Princeton University Press)

Hamermesh, Daniel S., and Stephen A. Woodbury. 1990. "Taxes, Fringe Benefits and Faculty." NBER Working Paper 3455 (Cambridge, Mass: National Bureau of Economic Research)

Health Insurance Association of America. 1991. *Source Book of Health Insurance Data 1991.* (Washington, D.C.: Health Insurance Association of America).

Krueger, Alan B. 1993. "Observations of Employment-Based Government Mandates, With Particular Reference to Health Insurance," mimeo (Princeton: Princeton University).

Long, Stephen H., and M. Susan Marquis. 1993. "Gaps in Employer Coverage: Lack of Supply or Lack of Demand?" *Health Affairs,* 12 (supplement): 282–93.

McDonnell, Ken. 1993. "BLS Survey Shows Decline in Group Health and Retirement Plan Participation." *Employee Benefit Research Institute Notes* 14(8):6–8.

Mendelson, Daniel N., and William B. Schwartz. 1993. "The Effects of Aging and Population Growth on Health Care Costs." *Health Affairs,* 12(1):119–25.

Montgomery, Shaw, and Benedict. 1992. "Pensions and Wages: An Hedonic Price Theory Approach," *International Economic Review,* 33(1), pp. 111–28.

Newhouse, Joseph P. 1989. "Measuring Medical Prices and Understanding Their Effects: The Baxter Foundation Prize Address," *Journal of Health Administration Education,* vol. 7 (Winter), pp. 19–26.

———. 1993. "Patients at Risk: Health Reform and Risk Adjustment," mimeo (Cambridge: Harvard University).

Schieber, George J., Jean-Pierre Poullier, and Leslie M. Greenwald. 1993. "Health Spending, Delivery, and Outcomes in OECD Countries." *Health Affairs* 12(2): 120–29.

Smith, Robert S. and Ronald G. Ehrenberg. 1983. "Estimating Wage-Fringe Trade-Offs: Some Data Problems." In Jack Triplett (ed.) *The Measurement of Labor Cost* (Chicago: University of Chicago Press), pp.@.

Sullivan, Cynthia B., Marianne Miller, and Claudia C. Johnson. 1992. *Employer-Sponsored Health Insurance in 1991.* (Washington, D.C.: Health Insurance Association of America.

Summers, Lawrence H. 1989. "What Can Economics Contribute to Social Policy? Some Simple Economics of Mandated Benefits." *American Economic Review, Papers and Proceedings 79(2):177–83.*

Summers, Lawrence H. and Lawrence Katz. "Industry Rents: Evidence and Implications," *Brookings Papers on Economic Activity, Microeconomics, 1989,* pp. 209–75.

U.S. Department of Commerce, Bureau of the Census. 1986. *U.S. Commodity Exports and Imports as Related to Output: 1982 and 1981* (Washington, D.C.: U.S. Government Printing Office).

U.S. Department of Labor, Bureau of Labor Statistics. 1993. *Employee Benefits in Medium and Large Private Establishments, 1991,* Bulletin 2422 (Washington, D.C.: U.S. Government Printing Office).

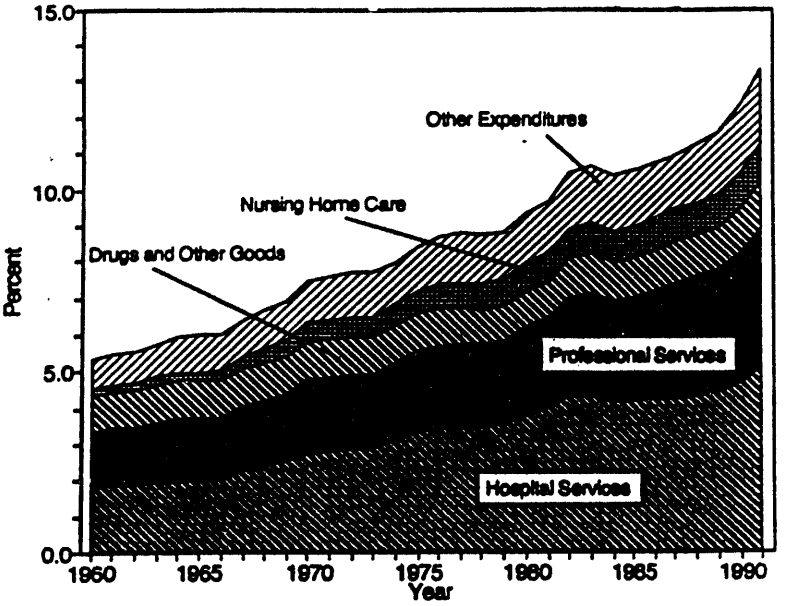
———. 1991. *Employee Benefits in Small Private Establishments, 1990,* Bulletin 2388. (Washington, D.C: U.S. Government Printing Office).

Waldo, Daniel R., and others. 1989. "Health Expenditures by Age Group, 1977 and 1987." *Health Care Financing Review* 10(4):111–20.

Warshawsky, Mark J. 1992. *The Uncertain Promise of Retiree Health Benefits: An Evaluation of Corporate Obligations* (Washington, D.C: The AEI Press).

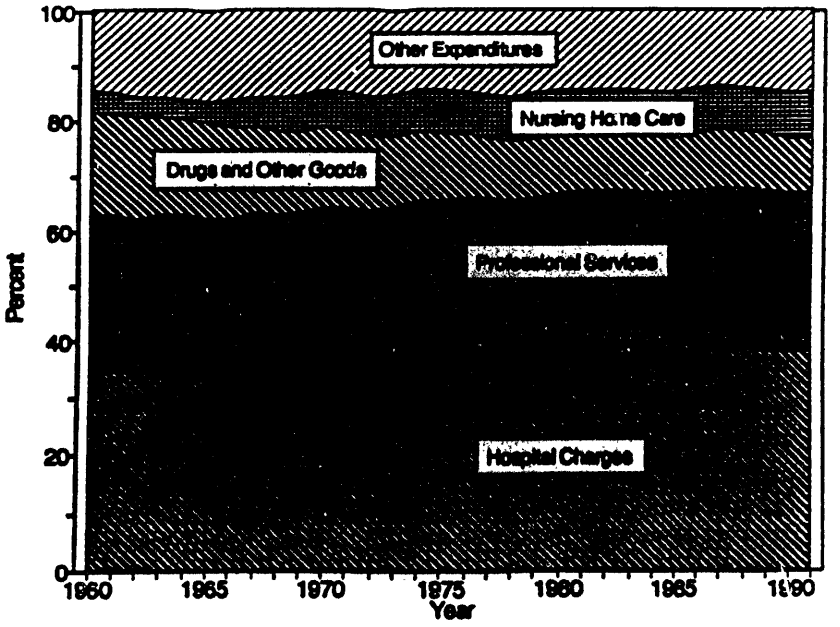
Woodbury, Stephen A. and Wei-Jang Huang. 1991. *The Tax Treatment of Fringe Benefits (Kalamazoo, Mich: W.E. Upjohn Institute for Employment Research).*

Figure 1. National Health Expenditures by Type
Percent of GDP, 1960-1991



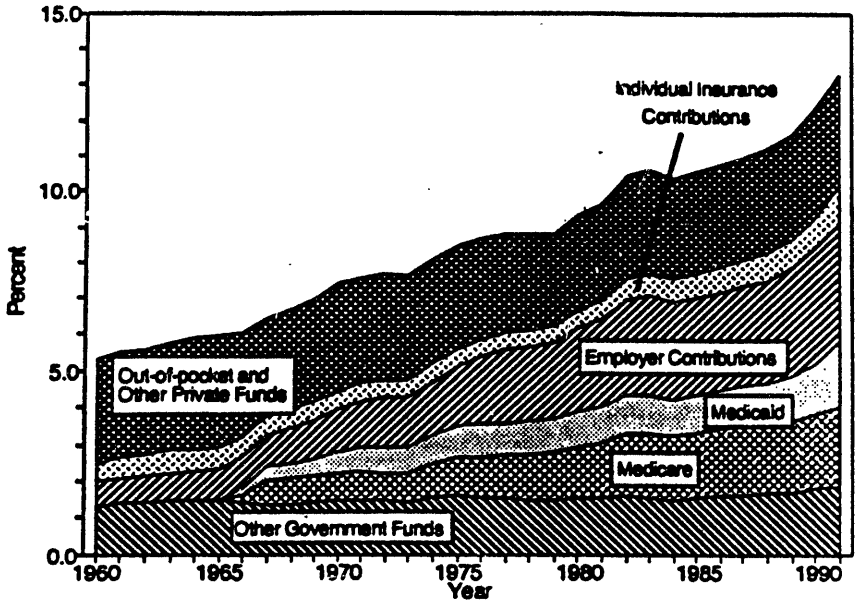
Source: Health Care Financing Administration

Figure 2. Composition of Expenditures by Type
Percent Distribution, 1960-1991



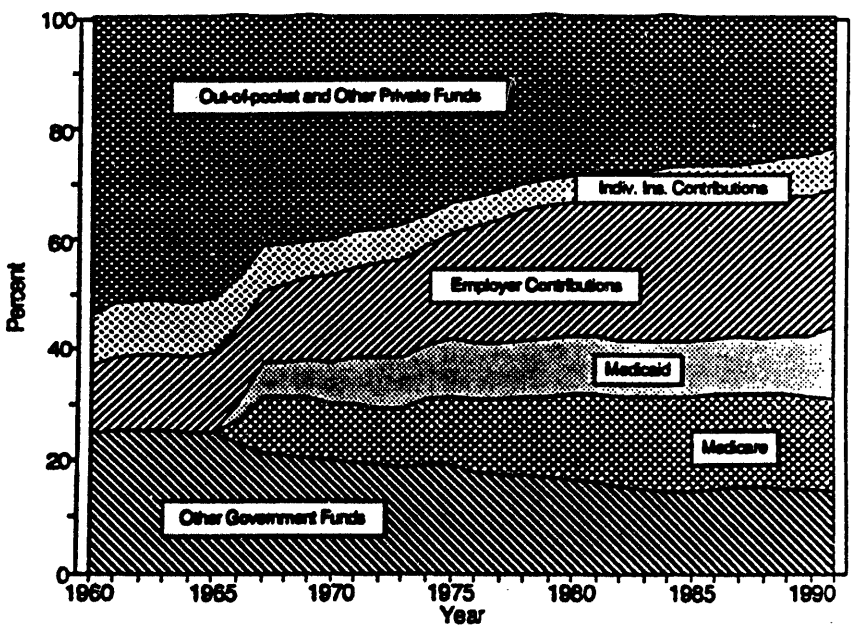
Source: Health Care Financing Administration

Figure 3. National Health Expenditures by Source of Financing
Percent of GDP, 1960-1991



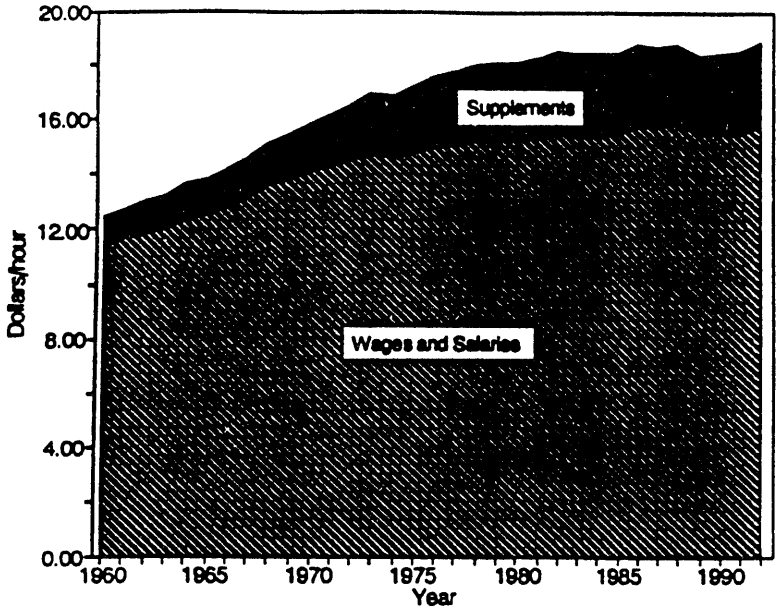
Sources: Health Care Financing Administration and National Income Accounts

Figure 4. Composition of Expenditures by Source of Financing
Percent Distibution, 1960-1991



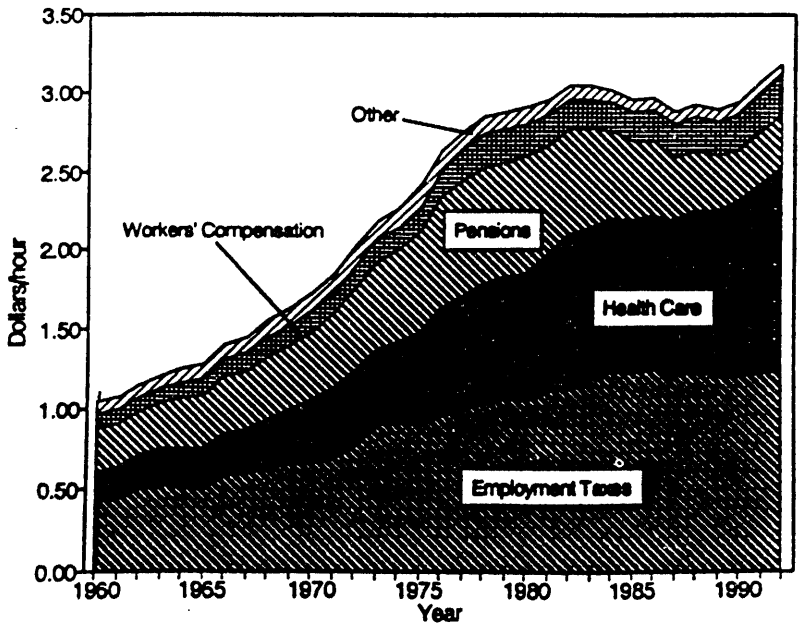
Sources: Health Care Financing Administration and National Income Accounts

Figure 5. Hourly Compensation, 1960-1992
1992 Prices



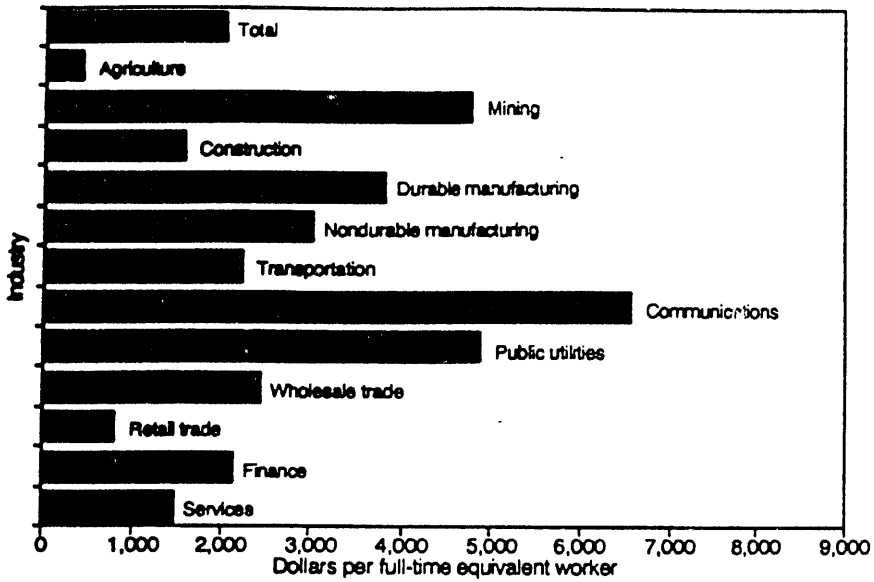
Source: National Income Accounts

Figure 6. Wage Supplements, 1960-1992
1992 Prices



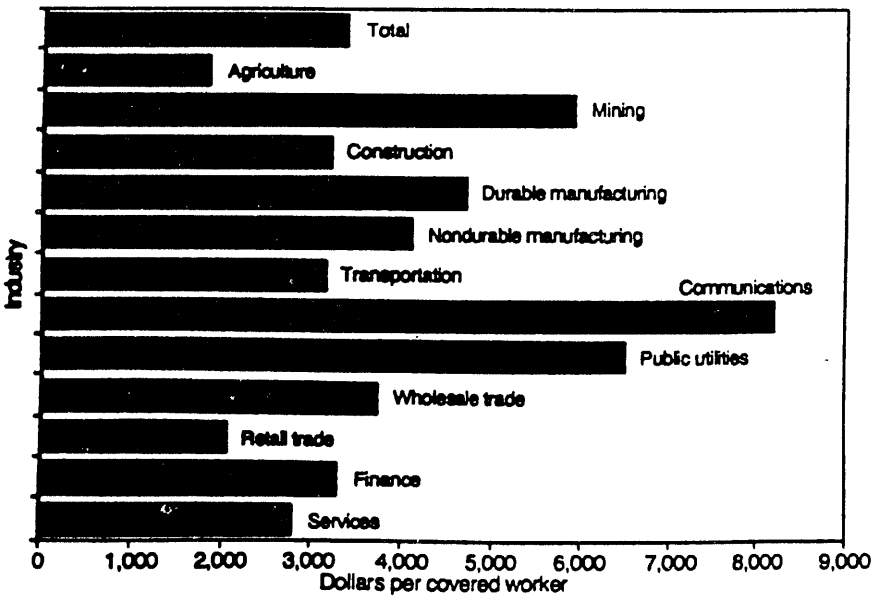
Source: National Income Accounts

Figure 7. Private Employer Health Insurance Costs per Full-Time Equivalent Employee, by Industry
1992



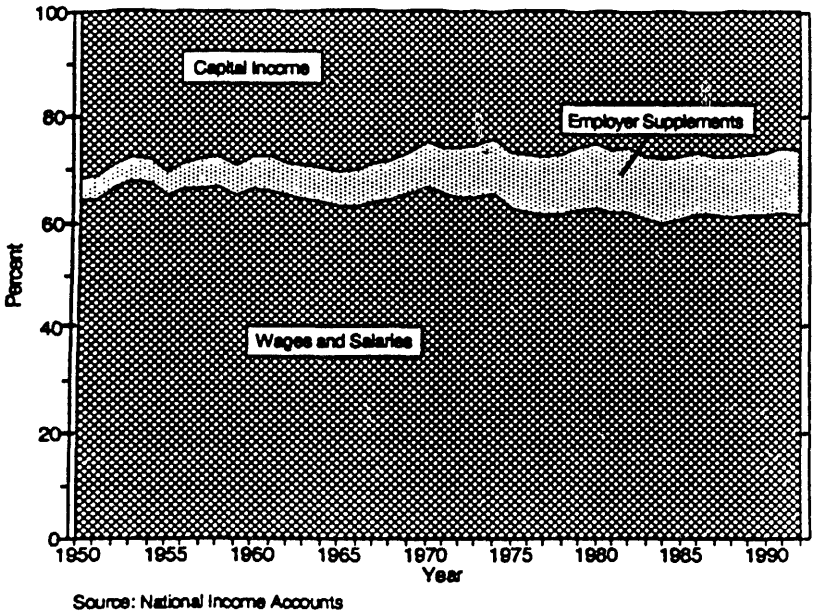
Source: Computed by the authors from unpublished data of the Bureau of Economic Analysis.

Figure 8. Private Employer Health Insurance Costs per Covered Worker, by Industry
1992



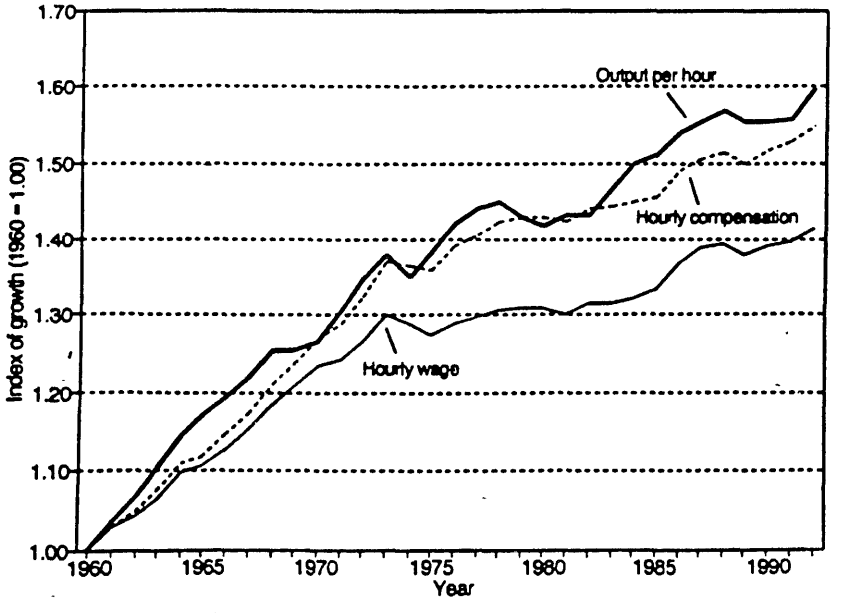
Source: Computed by the authors from the March 1992 Current Population Survey and unpublished data of the Bureau of Economic Analysis.

Figure 9. Income Shares Within Non-Financial Corporations
1950-1992



Source: National Income Accounts

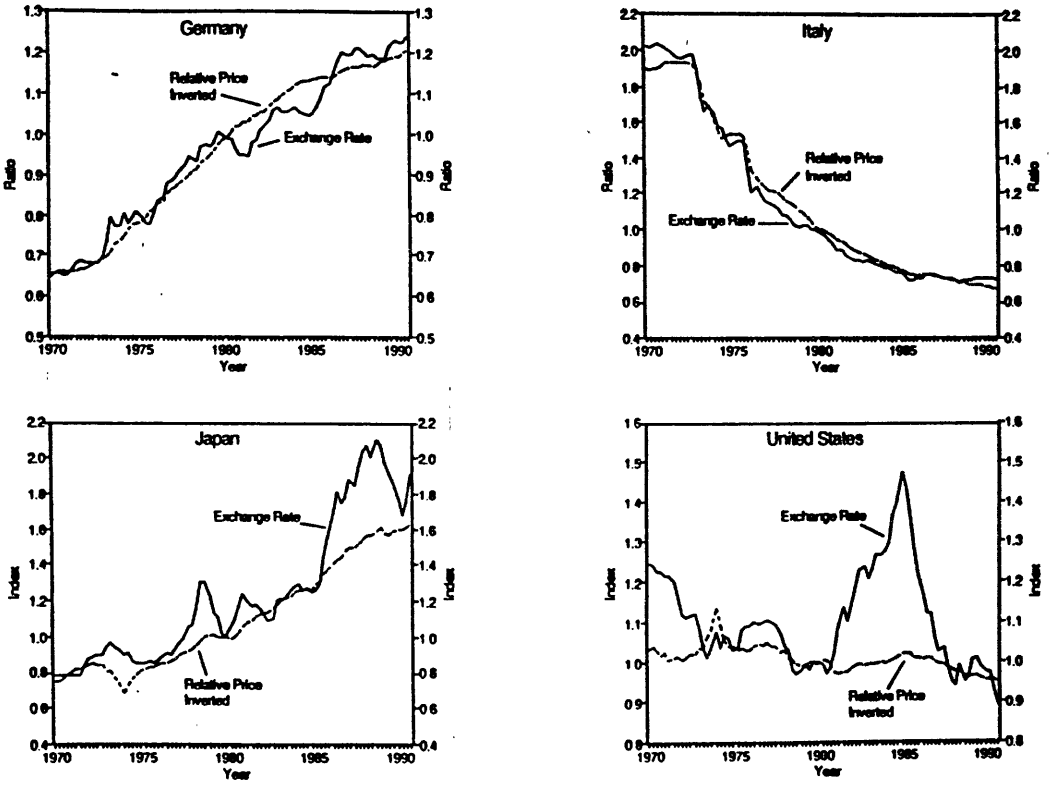
Figure 10. Productivity, Compensation, and Wages
1960-1992



Sources: National Income Accounts and Bureau of Labor Statistics

Figure 11. Nominal Exchange Rates and Relative Prices, Four Countries, 1970-1991

Index, 1980 = 1.0



Source: Morgan-Guaranty Trade-Weighted Exchange Rates, 15 Industrial Countries

Table 1. Sources of Insurance Coverage, 1992

	Persons (in millions)	Percent
All persons	251.4	100.0
Uninsured	35.4	14.1
Insured	216.0	85.9
Sources of insurance: [a]		
Employer coverage	139.9	55.6
On own job	67.6	26.9
As dependent	72.3	28.8
Retiree coverage	10.2	4.0
Non-group coverage	31.3	12.4
Medicaid	27.1	10.8
Medicare	32.9	13.1
Military	9.9	3.9
Addenda:		
Multiple insurance coverage	35.2	14.0

Source: Tabulated from the 1992 Current Population Survey by Lewin-VHI.
[a] Includes persons with multiple coverage.

Table 2. Employment Status of Uninsured Persons, 1992

Persons (in millions)

		Families			Unrelated
		Relationship to family head			
	All persons	Head/spouse	Child	Other	Individual
Total population	251.4	120.4	70.6	23.3	37.1
Uninsured persons	35.4	12.4	8.6	7.7	6.7
Neither head nor spouse worked	7.1	2.1	1.1	2.6	1.2
Head or spouse worked	28.3	10.2	7.4	5.1	5.5
Full time	22.0	8.0	6.1	4.1	3.8
Part time	6.3	2.3	1.3	1.0	1.7

Source: Tabulated from the 1992 Current Population Survey by Lewin-VHI.

Table 3. Health Insurance Coverage of Workers, 1992

Characteristic	All workers (in millions)	Workers covered by own employer	Workers covered by spouse's employer	Workers not covered by employer
		Percent		
All workers	117.4	57.6	14.7	27.7
Age of worker				
Under 19	1.5	8.0	52.8	39.2
19 - 24	13.9	38.3	16.4	45.3
25 - 44	65.3	62.3	14.2	23.5
45 - 64	33.1	62.1	14.4	23.5
65+	3.6	25.1	6.7	68.2
Status of worker				
Full-time	96.1	67.2	10.8	22.0
Part-time	21.3	14.2	32.3	53.5
Number of employees in firm*				
0 - 9	22.9	23.1	23.6	53.3
10 - 24	10.1	45.5	18.4	36.1
25 - 99	14.8	56.9	14.5	28.6
100 - 499	16.5	68.1	12.5	19.4
500 - 999	6.5	72.5	12.1	15.4
1000+	44.6	74.4	10.3	15.3
Class of worker*				
Private	85.8	59.4	14.1	26.5
Government	18.5	73.2	11.9	14.9
Self-employed	12.7	23.5	23.4	53.1
Average weekly earnings of worker*				
Self-employment loss	0.6	8.9	27.8	63.3
$1 - $149	14.8	10.7	30.8	58.5
$150 - $249	17.1	34.7	19.5	45.8
$250 - $399	24.8	59.9	13.9	26.2
$300 - $599	25.1	74.4	11.0	14.6
$600 - $799	15.0	80.1	8.7	11.2
$800+	17.5	81.5	6.9	11.6

Source: Tabulated from the 1992 Current Population Survey by Lewin-VHI.
*For each of these characteristics, some data were reported as not specified. The figures for the not specified category are category are not shown separately in this table.

Table 4. Total health expenditures as a share of GDP in G7 countries
Percent

Country	1960	1985	1991	average annual change 1960-91	1985-91
United States	5.3	10.5	13.4	0.26	0.48
Canada	5.5	8.5	10.0	0.15	0.25
France	4.2	8.5	9.1	0.16	0.10
Germany	4.8	8.7	8.5	0.12	-0.03
Italy	3.6	7.0	8.3	0.15	0.22
Japan	3.0	6.6	6.6	0.12	0.00
United Kingdom	3.9	6.0	6.6	0.09	0.10

Source: "OECD Health Data: Comparative Analysis of Health Systems" diskettes, 1993.

Table 5. Per capita health expenditures in G7 countries, purchasing power parity
1985 U.S. dollars

Country	1960	1985	1991	average annual growth rates 1960-91	1985-91
United States	517	1,711	2,297	4.93	5.03
Canada	375	1,244	1,536	4.65	3.57
France	257	1,083	1,313	5.40	3.26
Germany	336	1,175	1,327	4.53	2.05
Italy	175	814	1,126	6.18	5.55
Japan	93	792	1,016	8.02	4.24
United Kingdom	271	684	856	3.78	3.83

Source: "OECD Health Data: Comparative Analysis of Health Systems" diskettes, 1993.
Each country's expenditures were adjusted for general inflation with the country's GDP price deflator, and were then converted to U.S. dollars using 1985 values of purchasing power parity.

Table 6. Wage supplements as a share of total compensation in G7 countries
Percent

Country	1980	1985	1991
United States	16.6	16.9	17.3
Canada	8.5	9.8	10.7
France	26.1	27.9	27.8
Germany	17.9	18.8	18.8
Italy	26.6	26.8	NA
Japan	11.0	13.0	14.3
United Kingdom	13.5	13.5	12.2

Source: "OECD National Accounts: volume 1", 1993.
Wage supplements include employer payments for both public and private social insurance and employer payments for private pension, health, and welfare programs. Total compensation includes wage supplements

Table 7. Private Employer Health Insurance Costs by Industry, 1992

	(billions of dollars)
Total Health Insurance	171
Retirees	18
Current Employees	153
Cost of uninsured workers	20

Industry	Current employer contributions for health insurance ($ per FTE)	Current employer contributions for health insurance (% of wages)	Adjusted employer contributions for health insurance [a] ($ per FTE)	Difference between current and adjusted contributions ($ per FTE)	Difference between current and adjusted contributions (% of wages)	Imports and exports as a share of domestic shipments [b] (percent)
Total	2,017	7.2	2,253	(236)	-0.8	
Agriculture, forestries, and fishing	394	2.5	2,041	(1,647)	-10.3	
Farms	485	3.5	2,041	(1,555)	-11.4	10.0
Agricultural services, forestry, & fisheries	312	1.7	2,041	(1,729)	-9.6	14.9
Mining	4,776	11.4	3,048	1,728	4.1	
Metal mining	5,327	12.9	3,165	2,163	5.3	28.2
Coal mining	9,982	23.3	4,146	5,835	13.6	9.2
Oil and gas extraction	3,240	7.3	2,724	516	1.2	41.9
Nonmetallic minerals, except fuels	3,341	10.2	2,746	596	1.8	11.1
Construction	1,572	5.4	2,373	(800)	-2.7	
Manufacturing	3,466	10.7	2,416	1,050	3.2	28.2
Durable goods	3,801	11.2	2,452	1,349	4.0	38.8
Lumber and wood products	1,705	7.4	2,225	(520)	-2.3	17.9
Furniture and fixtures	2,296	10.0	2,289	7	0.0	18.8
Stone, clay, and glass products	3,224	10.6	2,390	834	2.8	14.7
Primary metal industries	5,108	14.3	2,593	2,515	7.0	27.9
Fabricated metal products	3,431	11.4	2,412	1,019	3.4	16.0
Industrial machinery and equipment	3,838	10.5	2,456	1,382	3.8	51.6
Electronic & other electric equipment	3,451	10.2	2,414	1,037	3.1	53.3
Transport equipment	5,449	13.5	2,630	2,819	7.0	44.9
Instruments and related products	3,958	10 1	2,469	1,489	3.8	33.9
Misc. manufacturing industries	1,923	7.5	2,249	(325)	-1.3	65.8
Nondurable goods	3,017	10.0	2,367	649	2.2	16.3
Food and kindred products	3,238	11.6	2,391	847	3.0	9.4
Tobacco manufactures	7,653	17.3	2,869	4,785	10.8	14.5
Textile mill products	1,759	7.9	2,231	(472)	-2.1	17.6
Apparel and other textile products	1,480	8.5	2,201	(721)	-4.1	32.9
Paper and allied products	3,506	9.8	2,420	1,086	3.0	15.5
Printing and publishing	2,607	8.3	2,323	284	0.9	4.8
Chemicals and allied products	4,267	9.5	2,502	1,765	3.9	22.5
Petroleum and coal products	6,800	14.2	2,776	4,024	8.4	10.9
Rubber and misc. plastics products	3,328	12.1	2,401	927	3.4	18.5
Leather and leather products	1,365	6.8	2,189	(823)	-4.1	118.6
Transportation and public utilities	3,615	10.1	2,621	994	2.8	
Transportation	2,221	7.1	2,412	(191)	-0.6	11.7
Railroad transportation	1,622	3.3	2,295	(673)	-1.4	
Local & interurban passenger transit	559	2.7	2,128	(1,569)	-7.6	
Trucking and warehousing	1,761	6.3	2,317	(555)	-2.0	
Water transportation	5,230	14.5	2,860	2,370	6.6	
Transportation by air	4,293	11.3	2,713	1,580	4.1	
Pipelines, except natural gas	2,697	5.3	2,463	234	0.5	
Transportation services	2,201	7.8	2,386	(185)	-0.7	
Communications	6,572	15.6	3,070	3,502	8.3	1.9
Electric, gas, and sanitary services	4,871	11.3	2,804	2,067	4.8	0.8
Wholesale trade	2,426	7.1	2,177	249	0.7	4.8 [c]
Retail trade	788	4.5	2,090	(1,303)	-7.5	
Finance, insurance, and real estate	2,123	5.9	2,190	(67)	-0.2	2.5
Depository institutions	3,002	10.3	2,252	750	2.6	
Nondepository institutions	1,593	4.2	2,153	(560)	-1.5	
Security and commodity brokers	2,864	3.3	2,242	622	0.7	
Insurance carriers	2,180	6.0	2,194	(14)	-0.0	
Insurance agents, brokers, and service	1,216	3.4	2,126	(910)	-2.6	
Real estate	716	2.8	2,091	(1,375)	-5.3	
Holding and other investment offices	4,186	6.7	2,870	1,777	2.9	
Services	1,480	5.5	2,177	(697)	-2.6	
Hotels and other lodging places	1,784	9.3	2,205	(421)	-2.2	0.1
Personal services	583	3.4	2,095	(1,511)	-8.8	
Business services	1,406	6.0	2,170	(764)	-3.2	1.2
Auto repair, services, and parking	754	3.6	2,110	(1,357)	-6.5	
Miscellaneous repair services	1,821	6.9	2,209	(387)	-1.5	
Motion pictures	2,469	7.5	2,268	201	0.6	
Amusement and recreation services	1,264	5.6	2,157	(894)	-4.0	1.7
Health services	2,449	7.8	2,266	183	0.6	
Legal services	2,177	4.4	2,241	(64)	-0.1	
Educational services	296	1.3	2,068	(1,772)	-7.7	
Social services	139	0.8	2,054	(1,915)	-11.5	
Membership organizations	68	0.4	2,047	(1,979)	-10.6	
Other services [d]	1,791	4.3	2,206	(415)	-1.0	
Private households	0	0.0	2,041	(2,041)	-16.5	

Sources: Current and adjusted employer contributions computed by the authors from unpublished data of the Bureau of Economic Analysis and Lewin-VHI. The industrial distribution of total employer payments is estimated for census years by the Bureau of Economic Analysis. These ratios have been held constant since the last census year, 1987, and applied to total employer contributions of each year. Imports, exports, and shipments are from the 1987 Input-Output table (BEA), the December 1992 Merchandise Trade supplement, and tabulated from "U.S. Commodity Exports and Imports as Related to Output: 1982 and 1981" (Census Bureau, 1986).

[a] Adjusted premium includes a 13 percent increase in average costs to cover uninsured workers and assumes uniform costs for non-retirees (community rating).

[b] Data for imports, exports, and shipments for all industries except manufacturing are from the 1987 Input-Output table, BEA.

[c] This figure includes both wholesale and retail trade.

[d] Other services include museums, botanical, zoological gardens; engineering and management services; and services not classified elsewhere.

PREPARED STATEMENT OF PAUL F. HOGAN

President Clinton's health reform proposal, the Health Security Act, would fundamentally reshape the United States health care system. The Health Security Act specifies that all Americans have access to comprehensive health insurance coverage and defines the roles of employers, governments, and individuals in financing this coverage. The Act also redefines the role of insurers in providing coverage to all Americans while attempting to realign the provider incentives that have contributed to the rapid rate of growth in health spending in the United States. Moreover, it would attempt to place limits on the growth in health spending through a combination of price competition and premium growth limits over time.

The Health Security Act is likely to have a favorable impact on the underlying cost structure of several industries which compete in international markets. Most of the U.S. employers who engage in international trade now provide insurance to their workforce and their dependents as well as their retirees. The cost of providing this coverage has been inflated because much of the care received by uninsured persons is actually paid by insuring companies through "cost sniting"—shifting the costs of uncompensated care to insured patients—and by providing coverage for working dependent spouses and/or working retirees whose employer does not offer insurance. The Act would retrieve employers of the cost of care for uninsured persons by eliminating uncompensated care costs through universal coverage and by requiring all employers to insure their own employees.

In this analysis, we estimate the potential savings to firms competing in international markets resulting from these reforms. These estimates reflect the impact of cost shifting savings by industry and the savings resulting from spending controls. Our estimates also reflect any offsetting increase in costs for part time workers now excluded from coverage, improvements in coverage resulting from a federal minimum benefits standard, and the effects of community rating of premiums.

We also offer a qualitative assessment of the implications of these savings the competitiveness of the U.S. economy. To the extent that health care reform results in the ability to provide health care more efficiently, the U.S. economy will clearly gain. However, our estimates suggest that there will be both winners and losers at the industry level, and the net effect on competitiveness is likely to be small.

OVERVIEW OF THE HEALTH SECURITY ACT

Major features of the plan are outlined in the following box.

OVERVIEW

- ***In general, all persons not covered under Medicare obtain coverage through a program of Health Alliances***
- ***Medicaid recipients participate in Health Alliances***
- ***Employers must contribute to coverage for workers and dependents***
- ***Non-workers must purchase coverage***
- ***Premium subsidies provided for low-income persons and certain employers***
- ***Prescription drug coverage under Medicare***
- ***Expanded long-term care coverage***
- ***Controls on overall health spending***

The major elements of the Act that affect employers, and are included the estimates below, are:

- Employer Premium Contribution Requirement
- Inter-Employer Equity Provisions
- Employer Premium Subsidies
- Retiree Health Benefits
- The Corporate Alliance Option
- The Impact of Community Rating on Employers
- Constraints on Premium Growth

These are discussed in detail in our complete paper.

DATA AND METHODS USED

In this analysis, we estimated the potential impact of the Health Security Act on expenditures for employers using the Lewin-VHI Health Benefits Simulation Model (HBSM). HBSM is a microsimulation model of health expenditures which permits us to estimate the impact of health reform alternatives on aggregate health spending and on expenditures for major payers for health care. HBSM is designed to produce estimates of program impacts by source of payment, including:

- Number of workers and dependents affected
- Cost to employers
- Impact on firms that do not now insure
- Number of firms affected
- Uncompensated care cost shift savings
- Tax savings (corporate deductions for health benefits, if applicable)

MODEL AND DATA

- ***Health Benefits Simulation Model (HBSM)***
  - ***Household data base***
  - ***Statistical match with employer data base***
  - ***Updated and projected to 1998***
- ***Household data file - 1987 National Medical Expenditures Survey (NMES)***
  - ***Source of insurance***
  - ***Health services utilization***
  - ***Health expenditures by source of payment and type of service***
  - ***Family income/employment data***
  - ***Employment characteristics***
  - ***Age/sex/family composition***
- ***Statistical match with 1991 Health Insurance Association of American (HIAA) Survey of Employers (3,000 firms)***
  - ***Characteristics of health plan (if offered)***
  - ***Covered workers; family; individual***
  - ***Non-covered workers***
  - ***Employee characteristics (category, age, full-time, part-time)***

The microsimulation approach enables us to develop aggregated estimates of program impacts while also providing information on the distribution of these effects across socioeconomic groups. Because the model is based upon a representative sample of the population, it produces aggregate estimates of the impact of policy proposals on total number of persons affected, aggregate health spending, and program costs. However, because the model develops these estimates based upon analyses performed on an individual-by-individual basis, the model also provides estimates of the impact of these policies on various socioeconomic groups.

The model is discussed in greater detail in our paper.

IMPACT ON PRIVATE EMPLOYERS

We develop estimates of health spending by industry using HBSM together with detailed employment and insurance coverage data obtained from the Bureau of the Census. HBSM currently produces estimates of the impact of reform on private employers by firm size and by major industry categories (single digit level).

We estimated the impact of reform by industry using pooled CPS data (described in detail in our complete paper.) The change in employer spending was estimated for each individual in the following steps:

- *Newly Covered Persons*—Newly covered persons were estimated from the CPS data using the coverage information provided in the CPS file. The cost of cov-

erage will be estimated based upon HBSM estimates of the per capita cost of the minimum benefits plan by age and sex.

- *Coverage Upgrade*—We estimated the impact of requirements to upgrade coverage to the minimum standard using the HBSM assigned to each individual in the CPS. These data permit us to identify persons in plans which would be required to upgrade either benefits or the employer premium contribution.

We also estimate cost shift savings. This includes:

- **Uncompensated/Undercompensated Care Cost Shift**—Premiums in firms that now offer insurance were adjusted to reflect reduced cost shifting due to reductions in hospital uncompensated care costs and improvements in reimbursement under public plans.
- *Spousal and Retiree Coverage Savings*—We estimated the savings associated with requiring dependent spouses to take coverage on their own job directly from the CPS data by shifting the cost of coverage for affected persons to their own industry.

In the absence of reform, private employers will spend about $254.2 billion on health care in 1998 (Table 1). This includes the employer share of spending for workers and dependents ($226.2 billion) and retiree health benefits ($28.0 billion). Employers' spending would increase by $28.9 billion under health reform. Aggregate health spending in firms that now offer insurance would decrease by about $0.4 billion while health spending by firms that do not now provide insurance will be $29.3 billion.

The cost to employers for health services required under the program for workers and dependents would be $230.7 billion in 1998. However, employers are likely to provide supplemental benefits and/or premium contributions for workers and dependents in many of the workplaces that now provide benefits in excess of the uniform benefits standard specified in the Act. We estimate the value of these supplemental benefits to be $19.4 billion in 1998. We estimated the amount of these supplements based upon the assumption that in workplaces with negotiated labor agreements, employers will supplement both benefits and premium contributions in cases where the employer now provides benefits in excess of standards required under the Act. We assume that firms in non-unionized workplaces will also continue supplemental benefits only in instances where their spending for health benefits is reduced under the Act:

- **Benefits**—Employers will continue to cover any benefits that they now cover which are not covered under the uniform benefits plan (i.e., adult dental, eyeglasses, etc.).
- **Premium contribution**—The dollar amount of the employee premium contribution is not allowed to increase above the current amount. Thus, if the overall premium increases under the plan, the employer pays the full amount of the premium increase.

Employers will also provide retiree benefits although the cost of these benefits will be reduced under the early retiree provisions of the plan. The Federal government will pay 80 percent of the cost of the premium in the Regional Alliance for early retirees (age 55 through 65) leaving the employer to pay only the retiree's share (20 percent) of the premium. This will reduce private employer expenses for retiree coverage from $28.0 billion under current policy to about $20.2 billion.

Employer premium payments would increase by an additional $45.2 billion because employers would be required under the Act to participate in the community rated Alliance pools that include higher than average cost populations. As discussed above, workers and dependents in the Regional Alliance will be pooled with higher cost groups such as early retirees. This raises the community rated premiums above the average cost of covering workers and dependents. Thus, a portion of the premium paid by employers will be used to subsidize care provided to other high cost populations. In addition, the Corporate Alliance payroll tax would add about $6.7 billion to employer health spending.

These costs will be offset by premium subsidies in the amount of $39.1 billion. As discussed above, employer premium payments are capped not to exceed a specified percentage of payroll which varies with firm size and average payroll. Of this $39.1 billion in subsidies, about 46 percent would go to firms that now offer insurance while the remainder would go to firms that do not now provide insurance.

Impact on Employers by Firm Size and Industry in 1998

The impact of reform on employers will vary substantially by firm size. This reflects current differences in levels of coverage across employers and variations in premium subsidy levels by firm size. Smaller firms that now offer insurance will

tend to see a reduction in health spending due to the higher level of premium subsidies provided to these groups. For example, insuring firms with less than ten workers save an average of about $868 per worker under reform (Table 2). Employee costs generally increase in higher firm size groups with an average increase of about $280 per worker among insuring firms with 5,000 or more workers.

Among firms that do not now offer insurance, employer spending would increase by about $1,908 per worker. The increase in spending per worker would be lowest among the very small firms (under ten workers) because these firms would receive the deepest subsidies under the program.

IMPACT ON EMPLOYERS BY INDUSTRY

The impact of the Health Security Act will vary across industries due to differences in existing levels of coverage. Firms that now provide comprehensive coverage to most of their employees will generally see savings under the act due to reduced cost shifting and premium growth limits under the Act. Firms that now provide little or no coverage will typically pay more due to the minimum coverage and benefits requirements under the Act. Thus, industries with high coverage rates will tend to benefit from the Act while other lower cost industries will typically see an increase in employer health benefits costs under the Act. This will have implications for industries engaged in international trade because most of these industries already provide comprehensive insurance coverage for their workers.

Aggregate private employer health spending in 1998 would increase by about $28.9 billion under the Act. This includes the cost of covering uninsured workers and upgrading to the minimum benefits standard offset by savings due to managed care, administrative simplification and reduced cost shifting. This estimate also includes savings to employer retiree health benefits programs. Most of this increase in employer costs will occur in the retail trade and services industries where coverage levels are lowest. However, although aggregate private employer costs will generally increase health expenditures will actually decline in certain industries such as manufacturing, transportation, and wholesale trade.

Costs will generally be reduced among firms that now offer insurance in most industries. Expenditures for insuring firms decline in industries such as construction, manufacturing, transportation, and wholesale trade and finance. Some of these industries are saving largely due to the requirement that working spouses take coverage on their own job while others save because they include many small firms that qualify for subsidies. In general, expenditures will increase in industries where there are large numbers of ineligible workers in existing plans such as in the retail trade and services industries under the plan.

Tradable Goods Industries

We are particularly interested in the impact of the Health Security Act on producers of goods which are potentially tradable in international markets. These tradable industries include manufacturing, mining and agriculture.

Overall, tradable industries will benefits under the Act. Employer health spending in tradable industries would be reduced by about $1.1 billion in 1998 (Table 4). Employer health spending would be reduced by about $5.2 billion in the manufacturing industry and about $0.8 billion in the mining industry. This reflects the fact that theses industries currently provide comprehensive coverage to most workers and will benefit from reduced cost-shifting under the Act. However, health spending in the agriculture industry will actually increase by about $4.9 billion under the Act due to the fact that few employers in this industry now provide insurance.

Total employer spending for tradable industries would be about $82.9 billion in 1998 under current policy (Table 5). Under the Health Security Act, employer spending in firms that now provide insurance would be reduced by about $6.3 billion. About half of these savings would be in health benefits for retirees. (A detailed analysis of the changes in employer health spending for firms that now provide insurance is provided in Appendix. A of the complete paper.) Employer health spending for firms that do not now provide insurance would increase by about $5.2 billion for firms in the tradable industries. Most of this increase would be in the agriculture industry. As discussed above, overall health spending in the tradable industries would be reduced by $1.1 billion under the Health Security Act.

Manufacturing

Manufacturing is the largest of the tradable industry groups. Employer health spending in the manufacturing industry will be about $73 billion in 1998 under current policy (Table 6). This includes spending for workers and dependents of $63.3 billion and spending for retiree benefits of about $9.3 billion. Overall, manufacturing will account for about 29 percent of total private sector health spending in 1998.

Under the Health Security Act, employer health spending in the manufacturing industry would be reduced by about $5.2 billion for firms that now provide insurance. (A detailed analysis of the impact of the Act on manufacturing firms that now provide insurance is presented in Appendix A.) Among manufacturing firms that do not now provide insurance, total health spending will increase by about $3.1 billion. Overall, employer health spending in the manufacturing industry would be reduced by about $2.1 billion in 1998.

IMPLICATIONS FOR INTERNATIONAL COMPETITIVENESS

For our purposes, an increase (or decrease) in the competitiveness of U.S. industries is defined as an increase (or decrease) in the level of output firms in the industries are willing to supply at a given price, holding other factors, including the prices of competing foreign firms and exchange rates, constant. That is, it is an increase in the efficiency of production. This is, we believe, the sense in which the issue of the effect of health care reform on competitiveness is raised. Initially, firms may lower prices relative to competitors in an effort to expand output. However, an increase (or decrease) in "competitiveness" sets into motion factors affecting trade and monetary flows, and exchange rates, such that there is a tendency toward purchasing power parity and an international version of the Law of One Price for a given tradable good. That is, if the firms in two or more countries are producing the same tradable product, the effective price[1] of each of the two countries' products, in domestic currency, will tend toward equality.[2] However, as a result of an increase in the "competitiveness" of the industry, output for that industry has expanded.

In assessing the effect of health care reform on the competitiveness of U.S. industry, it is perhaps useful to distinguish factors that affect the real costs of the health care system, under health care reform, from the financing or distribution of those costs by industry.[3] It is the first which, to a first approximation, will affect the efficiency or competitiveness of the U.S. economy as a whole. How health care is financed—who pays the costs—will have distribution affects among industries, with both "winners" and "losers," but the net effects on the competitiveness of U.S. industry are likely to be modest. If the total costs of providing a given amount and quality of health care are likely to be lower, the net effects are likely to be positive. Hence, we briefly discuss the potential effects of health care reform on the efficiency of the health care system. We then address the effects on firms in particular industries.

If, as a result of health care reform, there is an increase in the efficiency with which a given a amount of health care can be produced and delivered, there is a potential dividend as resources released from the health sector flow into other areas. Under one set of assumptions, it is estimated that total health care expenditures under the Health Security Act will be about $57 billion less by the year 2000 than would occur in the absence of reform.[4] These net savings are due to efficiencies as the result of a shift towards managed care, and savings in administrative costs through simplification and standardization. However, the single greatest component of savings is through "cost-containment." These savings will, presumably, arise through the incentives for greater efficiency provided by the discipline of premium caps, and through the competition. Caps on expenditures will presumably be met through the elimination of inefficient and wasteful practices and procedures. Note that estimated costs to private employers will be about $28.9 billion higher in 1996 and $16.0 billion higher in 2000.

These savings in expenditures potentially represent, in the longer term, real resources—labor and capital—that will leave (or not enter) the health care industry. Released from the health care industry, these resources may migrate to other U.S. industries, allowing an expansion of output in these industries and lower prices. It is these resources that potentially represent the real savings to the economy from health care reform.

---

[1] The "delivered" price, which may include transportation costs.

[2] See, for example, Charles Kindelberger, *International Economics*, Richard Irwin, Inc. 1968, pp. 474.

[3] This statement may suggest that the total cost of health care is independent of the way in which it is financed. Clearly, this is not the case. Prices, and the signals for efficient resource allocation that they imply, are most important resource allocation. Rather, before reviewing a static estimate of health care coverage costs by industry that are, presumably the result of the incentives of the system, it is useful to consider the effect of resources absorbed by the health sector to obtain the larger picture.

[4] See John Sheils, "The Financial Impact of the Health Security Act," Lewin-VHI, Inc, presentation dated January 6, 1994.

However, what constitutes "cost containment" and how it will be achieved in practice is less clear, at this point. To the extent that "cost containment" becomes a form of price controls, the reduction in nominal expenditures in the health sector may not be due to greater realized efficiencies. Instead, one might anticipate the typically observed adverse consequences of price controls—non-price rationing and quality deterioration. Additional resources may be expended by individuals and firms in attempting to adapt to the price or expenditure controls, with any net savings to the economy greatly reduced, along with the welfare of the beneficiaries.

Individual firms provide health care to their employees as part of the total compensation package—direct wages, pensions, and other fringe benefits. Our view of the health benefit as part of the total compensation package is similar to that of most economists.[5] Firms attempt to attract and motivate qualified employees at the lowest possible cost, hiring workers up to the point at which the cost of the additional worker is equal to the worker's expected contribution to the firm. Employees respond to the "total compensation package," valuing both direct wages and benefits. In principle, workers are willing to trade direct wages for additional benefits, such as health care, and firms are willing to supply these tradeoffs. There is, in principle, an "optimal" compensation package, for which the employee's value of an additional dollar spent by the employer on (non-taxable) health benefits is just equal to the value placed on an additional spent on direct (taxable) wages. In this view, the employee always "pays" for health benefits in terms of foregone cash wages.

Though the employee "pays" for health care costs, this does not mean that changes in those costs will not affect efficiency, relative prices and industry output. Consider, for example, an employer which provides a standard health benefits package and a money wage to employees. A decrease in the cost to the employer of providing the standard benefits package will lower the cost of labor. The firm will attempt to hire additional labor, raising the money cash wage offered. If that firm or industry, alone, enjoyed the lower cost of health benefits, the firm (or industry) will be able to attract workers from other firms, or induce some new entrants into the labor force, through offering a higher wage. Output and employment in that firm or industry will expand. Money wages will rise, but by less than the amount of the decline in the cost of health benefits.

If, on the other hand, all firms enjoy the same decline in the cost of the health benefit package, all will attempt to hire more employees, expanding output and substituting the (now) less costly labor for other productive inputs. However, the supply of labor to the economy as a whole is likely to be less elastic than the supply to an individual firm or industry. Wages, in this example, will rise by almost all of the decline in health costs in each industry, and output will expand relatively little.

Under the Health Security Act, all employers will be required to provide health benefits to their employees. Some firms will experience an increase in health care costs, and others will enjoy lower costs for the same, or better, benefits. Obviously, those firms that will experience the largest increase in costs are those which do not currently provide insurance. Most large employers, and employers in higher wage industries, provide health insurance currently. Lower wage, and smaller firms are less likely to provide insurance.

In those firms who do not offer insurance under the current system, employees are less willing to accept lower cash wages in return for health benefits, at least at the terms the employer is able to offer. Or, binding minimum wage constraints may make the firm unable to offer the tradeoff at all. As shown in Table 5, firms in retail trade, services, agriculture, and construction will experience the largest per worker increases in health care costs. This does not necessarily mean, however, that they will become a less attractive employer because of the lower cash wages they are likely to offer. These firms may not offer insurance because it comes at a very high price, relative to the prices faced by larger firms for comparable coverage, under the current system. If so, health care reform that makes the tradeoff to employees at small firms more attractive by lowering the price may find employees who willingly accept it. On the other hand, firms in manufacturing, mining, wholesale trade and transportation, communication and utilities will enjoy decreases in costs for, typically, the same coverage.

With the exception of agriculture, the industries experiencing the largest decrease in per capita insurance costs are those in the tradable goods sector. According to our estimates, the typical firm in manufacturing or mining will enjoy a decline in

[5] Henry Aaron and Barry Bosworth, "Health Care Financing and International Competitiveness," The Brookings Institution, draft dated December 2, 1993, provide a brief exposition of this view, and review the relevant evidence.

the cost of labor, albeit a relatively modest one on average.[6] Because labor has become slightly less costly, these firms will have an incentive to hire additional workers, substitute labor for other resources, and expand output. These firms may reduce product prices slightly, relative to foreign competitors, in order to increase sales. However, as output (and exports) rise, increased output will tend to raise (marginal) costs and this, perhaps coupled with an adjustment in the exchange rates, will restore equilibrium. Hence, based on our estimates of the magnitude of the reduction in health care costs, we believe there will be modest effects on output.

Our estimates suggest a slight increase in per worker costs in agriculture. This increase is due largely to the high proportion of employers who do not currently provide health insurance in the agricultural industry. To the extent that health care reform lowers the price of insurance to small employers in that industry, and employees willingly trade lower wages for health benefits at the lower price, the competitiveness of the agriculture industry may not necessarily be reduced.[7] If, however, some employees are less willing to make that trade, employment and output could be reduced.

Four other aspects of the Health Security Act that have implications for the competitiveness of the U.S. economy are (1) community rating; (2) early retirement benefits; (3) cost-sharing with spouse's employer; and (4) greater labor market mobility.

Community rating means that a health insurance plan must charge the same premium to beneficiaries, irrespective of differences in risk, or expected health costs, of those employees. In contrast, current health insurance is typically experience rated, or employers are self insured. In either case, the premium costs are more likely to reflect the expected costs of insuring a group with particular risk characteristics. With community rating, industries which, on average, employ a distribution of workers with higher expected health costs are being subsidized by industries which, on average, employ a less risky distribution. As our analysis has suggested, this cross-subsidization results in income transfers, and allocation effects.

Under the Health Security Act, the government provides a major subsidy to the insurance premiums of workers who retire early. As a consequence, we are likely to observe an increase in the retirements for employees between ages 55 and 64.[8] The likely effect of increased early retirements is to decrease the effective supply of labor, increasing labor costs and reducing the competitiveness of U.S. industries, particularly those in which older workers are important.

Under the current system, spouses of employed workers often accept jobs that offer no health insurance coverage, or often decline coverage if offered, because they are covered under the employed spouse's policy. Under the Health Security Act, employers would have to share the cost of such coverage.[9] The likely result is analogous to firms which must offer coverage for the first time. The employee ultimately pays for the "coverage" in reduced wages, except in this instance the spouse was already covered. The reduced wages are a net loss to the two-worker family. A decline in the labor force participation of spouses in those circumstances is not unlikely. It is likely that employment, and output, will decline in industries that currently employ a large proportion of such workers.

Finally, universal coverage will increase the job mobility of workers. To the extent that this improves the "job match" between the worker and the firm, economic efficiency is enhanced.

In summary, health care reform may improve the overall competitiveness of the U.S. economy to the extent that it increases the efficiency of the health care sector itself. However, our estimates suggest that overall effects are likely to be modest, and there is always a risk that "cost containment" may not achieve its goals. There will be distribution effects across industries—winners and losers under health care reform. Based on our estimates, the tradable goods sector, particularly manufacturing and mining, are likely to experienced reduce health care costs.

---

[6] A portion of the cost savings per worker we estimate is due to savings in retirement costs. This may overstate the relevant savings.

[7] If exchange rates rise because of an increase in the demand for U.S. exports in other sectors, the real price of U.S. agricultural goods may rise on foreign markets.

[8] A recent study by Gruber and Madrian found that mandatory "continuation of coverage" laws increased early retirement rates by 20%. See Jonathan Gruber and Brigette Madrian, "Health insurance Availability and the Retirement Decision," *National Bureau of Economic Research*, Working paper no. 4469, September 1993.

[9] In fact, each employer pays somewhat more than 50%.

TABLE 1

THE IMPACT OF HEALTH REFORM ON PRIVATE EMPLOYER HEALTH SPENDING IN 1998 (IN BILLIONS)

	Firms That Now Offer Insurance	Firms That Do Not Now Offer Insurance	All Firms
SPENDING UNDER CURRENT POLICY			
Workers and Dependents	$226.2	----	$226.2
Retirees	$28.0	----	$28.0
Current Spending	$254.2	----	$254.2
SPENDING UNDER REFORM			
Service Costs for Workers and Dependents a/	$188.1	$42.6	$230.7
Retiree Benefits	$20.2	----	$20.2
Supplemental Benefits b/	$19.4	----	$19.4
Community Rating Cross Subsidy c/	$37.4	$7.8	$45.2
Corporate Alliance Payroll Tax	$6.7	----	$6.7
Premium Subsidies d/	($18.0)	($21.1)	($39.1)
Total	$253.8	$29.3	$283.1
CHANGE IN EMPLOYER COSTS			
Net Change	($0.4)	$29.3	$28.9

a Includes the cost of care provided to workers and dependents. Reflects managed care and cost shift savings as well as savings from the premium cap and the requirement that employers share the cost of family coverage in two-worker families.

b Employers with unionized workplaces are assumed to continue existing coverage for services not covered under the program (i.e., dental and eyeglasses). The amount of the employee contribution for health benefits does not increase above current levels. Employers in non-unionized workplaces are assumed to continue supplemental benefits only if their costs are reduced under reform.

c The premiums paid by employers will generally exceed the actual cost of covering workers and dependents under the plan due to pooling the relatively low cost working population with older, higher cost groups.

d The program provides a subsidy which caps employer spending at various percentages of payroll. The level of subsidy varies with firm size and average employee payroll.

Source: Lewin-VHI estimates using the Health Benefits Simulation Model (HBSM).

TABLE 2

IMPACT OF THE HEALTH SECURITY ACT ON PRIVATE EMPLOYERS BY FIRM SIZE IN 1998

Firm Size	Net Change in Health Spending					
	Firms That Now Insure		Firms That Do Not Now Insure		All Firms	
	Total (Billions)	Avg. Change Per Worker	Total (Billions)	Avg. Change Per Worker	Total (Billions)	Avg. Change Per Worker
PRIVATE EMPLOYERS BY FIRM SIZE						
1-9	($6.7)	($868)	$10.8	$1,543	$4.1	$276
10-24	$2.0a/	$268	$8.1	$2,173	$10.1	$900
25-99	($3.5)	($378)	$3.8	$1,997	$0.3	$28
100-999	$1.7	$102	$2.7	$2,102	$4.4	$251
1,000-5,000	($0.6)	($58)	$3.9	$2,690	$3.3	$275
5,000 or More	$6.7	$280	----	----	$6.7	$280
ALL PRIVATE EMPLOYERS						
All Firms	($0.4)	($5.0)	$29.3	$1,908.0	$28.9	$319.0

a The HIAA data indicates the share of premiums paid by employers in firms with 10 to 24 employees is 70 percent compared with 84 percent for firms with 10 or fewer workers and an overall average among employers of about 80 percent. The cost of increasing premium contributions to 80 percent accounts for most of the increase in costs for this firm size group.

Source: Lewin-VHI estimates using the Health Benefits Simulation Model (HBSM).

TABLE 3

NET CHANGE IN HEALTH SPENDING FOR PRIVATE FIRMS IN SPECIFIC INDUSTRIES IN 1998

Industry	NET CHANGE IN HEALTH SPENDING					
	Firms That Now Insure		Firms Than Do Not Now Insure		All Firms	
	Total (Billions)	Average Change per Worker	Total (Billions)	Average Change per Worker	Total (Billions)	Average Change Per Worker
Construction	($1.8)	($397)	$3.4	$1,593	$1.6	$243
Manufacturing	($5.2)	($263)	$3.1	$1,726	($2.1)	($96)
Transportation, Communication and Utilities	($5.7)	($924)	$1.4	$2,070	($4.3)	($628)
Wholesale Trade	($1.9)	($561)	$1.2	$2,136	($0.7)	($177)
Retail Trade	$10.1	$914	$7.0	$1,957	$17.1	$1,167
Services	$5.8	$270	$9.2	$1,992	$15.0	$576
Finance	($0.7)	($117)	$1.5	$2,050	$0.8	$127
Other	($1.0)	($306)	$2.5	$1,978	$1.5	$334
Total Private	**($0.4)**	**($5.0)**	**$29.3**	**$1,908**	**$28.9**	**$319**

Source: Lewin-VHI estimates using the Health Benefits Simulation Model (HBSM).

TABLE 4

IMPACT OF THE HEALTH SECURITY ACT ON TRADABLE INDUSTRIES IN 1998

	Net Change in Spending (in millions)	Change per Worker
All Tradables	($1,073)	($43)
Industry		
Manufacturing	($2,063)	($96)
Mining	($847)	($997)
Agriculture	$1,837	$301
Insuring Status		
Firms That Now Offer Insurance	($6,313)	($283)
Firms That Do Not Now Offer Insurance	$5,240	$1,823

Source: Lewin-VHI estimates using the Health Benefits Simulation Model (HBSM) and the March 1992 Current Population Survey Data.

TABLE 5

THE IMPACT OF THE HEALTH SECURITY ACT ON HEALTH SPENDING FOR PRIVATE TRADABLES FIRMS IN 1998 (IN MILLIONS)

	Firms That Now Offer Insurance	Firms That Do Not Now Offer Insurance	All Firms
SPENDING UNDER CURRENT POLICY			
Workers and Dependents	$72,701	---	$72,701
Retirees	$10,261	---	$10,261
Current Spending	$82,962	---	$82,962
SPENDING UNDER REFORM			
Service Costs for Workers and Dependents a/	$57,942	$11,206	$69,148
Retiree Benefits	$7,470	---	$7,470
Supplemental Benefits b/	$5,349	---	$5,349
Community Rating Cross Subsidy c/	$7,797	($2,241)	$5,556
Corporate Alliance Payroll Tax	$2,760	---	$2,760
Premium Subsidies d/	($4,669)	($3,725)	($8,394)
Total	$76,649	$5,240	$81,889
CHANGE IN EMPLOYER COSTS			
Net Change	($6,313)	$5,240	($1,073)

a Includes the cost of care provided to workers and dependents. Reflects managed care and cost shift savings as well as savings from the premium cap and the requirement that employers share the cost of family coverage in two-worker families.

b Employers with unionized workplaces are assumed to continue existing coverage for services not covered under the program (i.e., dental and eyeglasses). The amount of the employee contribution for health benefits does not increase above current levels. Employers in non-unionized workplaces are assumed to continue supplemental benefits only if their costs are reduced under reform.

c The premiums paid by employers will generally exceed the actual cost of covering workers and dependents under the plan due to pooling the relatively low cost working population with older higher cost groups.

d The program provides a subsidy which caps employer spending at various percentages of payroll. The level of subsidy varies with firm size and average employee payroll.

Source: Lewin-VHI estimates using the Health Benefits Simulation Model (HBSM).

TABLE 6

THE IMPACT OF THE HEALTH SECURITY ACT ON HEALTH SPENDING FOR PRIVATE MANUFACTURING FIRMS IN 1998 (IN MILLIONS)

	Firms That Now Offer Insurance	Firms That Do Not Now Offer Insurance	All Firms
SPENDING UNDER CURRENT POLICY			
Workers and Dependents	$63,326	---	$63,326
Retirees	$9,326	---	$9,326
Current Spending	$72,652	---	$72,652
SPENDING UNDER REFORM			
Service Costs for Workers and Dependents a/	$50,536	$6,115	$56,651
Retiree Benefits	$6,795	---	$6,795
Supplemental Benefits b/	$5,349	---	$5,349
Community Rating Cross Subsidy c/	$5,966	($674)	$5,292
Corporate Alliance Payroll Tax	$2,614	---	$2,614
Premium Subsidies d/	($3,798)	($2,314)	($6,112)
Total	$67,462	$3,127	$70,589
CHANGE IN EMPLOYER COSTS			
Net Change	($5,190)	$3,127	($2,063)

a Includes the cost of care provided to workers and dependents. Reflects managed care and cost shift savings as well as savings from the premium cap and the requirement that employers share the cost of family coverage in two-worker families.

b Employers with unionized workplaces are assumed to continue existing coverage for services not covered under the program (i.e., dental and eyeglasses). The amount of the employee contribution for health benefits does not increase above current levels. Employers in non-unionized workplaces are assumed to continue supplemental benefits only if their costs are reduced under reform.

c The premiums paid by employers will generally exceed the actual cost of covering workers and dependents under the plan due to pooling the relatively low cost working population with older higher cost groups.

d The program provides a subsidy which caps employer spending at various percentages of payroll. The level of subsidy varies with firm size and average employee payroll.

Source: Lewin-VHI estimates using the Health Benefits Simulation Model (HBSM).

PREPARED STATEMENT OF EDITH RASELL

I am Edith Rasell, a health economist at the Economic Policy Institute. Thank you for allowing me to testify today on the effects of health care reform on the competitiveness of U.S. firms.

I will begin by reviewing some of the major factors that cause differences in firms' health costs by industry and I will describe why businesses in the tradable goods sector face particularly high costs. Second, I will discuss how the various components of health care reform would affect firms' health costs, particularly firms in the manufacturing sector. Third, I will discuss the issue of who pays for health insurance received on the job and argue that health costs are a competitive disadvantage for U.S. firms. Last, I will briefly describe how the reduction in manufacturers' health costs under the Clinton health reform plan would affect net exports and investment in manufacturing.

The focus of this hearing is on competitiveness. Since 58 percent of America's internationally traded goods and services are manufactured goods, competitiveness is a particular concern of manufacturing firms. These remarks will focus on the effects of health care reform on the manufacturing sector.

MAJOR DETERMINANTS OF FIRMS' HEALTH COSTS

Under the current system, manufacturers' health costs are relatively high. In the manufacturing sector in 1992, the employer cost of employee health benefits per hour worked was 76 percent higher than in nonmanufacturing (Bureau of Labor Statistics). Many of the reasons for these high costs are outlined below. Some of these factors will be affected by proposed health care reforms and some will not.

1. Level of Coverage and Benefits Provided. Most manufacturing firms provide health insurance to employees. In 1991, 75 percent of manufacturing workers received coverage from their own employer This is a higher rate of coverage than in any other industry except mining. Also, there is anecdotal evidence that manufacturing workers have relatively comprehensive policies, another factor which drives up costs.

2. Uncompensated Care. It is estimated that the hospital costs of private payers are increased by 30 percent due to costs shifted from uncompensated care. The cost shift from ambulatory services is probably of similar magnitude. Uncompensated care increases all payers' costs by the same percentage. Thus, a firm with a relatively high level of health costs experiences a cost increase of a greater absolute amount due to uncompensated care than does a firm with lower health costs.

3. Experience Rating. Small firms often are experience rated. In addition, self-insured firms including most manufacturers pay their actual health costs, not a community-rated, average amount per person. So self-insured firms actually pay costs as if they were experience rated. Thus health costs of small and self-insured firms will often depend upon the health status of employees and their dependents. I have not examined data on employee health status by industry. But if we use age as a proxy for health status and note that the average age of workers in manufacturing is somewhat higher than in nonmanufacturing, we conclude that per-employee health costs will likely be higher also.

4. Number of Spouses and Dependents Covered. Covering spouses and dependents as well as employees raises health costs for those firms that provide insurance. If all working spouses received coverage through their own employer, this would reduce costs for firms currently providing insurance to large numbers of working spouses. Firms providing the best health insurance benefits (broadest coverage at least cost to enrollees) likely attract disproportionately large numbers of spouses and dependents.

5. Number of Retirees with Employer-Sponsored Health Insurance, Especially Retirees under Age 65. Manufacturers have large numbers of retirees to whom they provide health insurance. Early retirees are not eligible for Medicare, but due to their age, they are often heavier users of health care than are active workers. Health costs for this group are quite high. The cost of retiree health coverage in the manufacturing sector in 1994 is estimated to be $15 billion out of total health costs of $67 billion (Rasell, Baker, and Tang).

6. Firm Size. Administrative costs as a share of benefits paid fall as firm size rises. Small firms employing one to four people pay administrative costs equal to 40 percent of claims while firms of 10,000 or more face costs of only 5.5 percent (Congressional Research Service). The average size of a manufacturing company with more than 4 employees is over 100 people (Bureau of the Census). However in the economy as a whole, the average size of companies with more than 4 people is 39 people. Larger firm size would tend to reduce administrative costs as a share

of claims, and make health costs of manufacturers relatively lower than nonmanufacturers.

HOW HEALTH CARE REFORM WILL AFFECT FIRMS' HEALTH COSTS

Having delineated the major reasons why manufacturers' health costs are high, we can now examine how various components of health care reform would affect these factors.

1. Community rating. Community rating would eliminate cost differences based on age or health status and would likely lower manufacturers' costs. It would also help all experience-rated or self-insured firms with higher than average per-enrollee costs due to health status.

2. Relief from the Costs of Retiree Coverage. The costs of retiree health coverage are borne by the firm, not by active workers. Relief from this expense would mean a major decrease in manufacturers' health costs.

3. Universal Coverage. Universal coverage would reduce the level of uncompensated care. Of total uncompensated hospital care, two-fifths is received by the uninsured (ProPAC). These costs would be eliminated if coverage were universal and the uninsured were covered by private health insurance. However, two-fifths of uncompensated hospital costs are due to the low rates paid by Medicare, and one-fifth are due to Medicaid. Universal coverage alone would reduce, but not eliminate, cost shifting from uncompensated care.

4. Employer Mandates. For firms not currently providing health insurance or providing only minimal, low cost coverage, an employer mandate will mean an increase in health costs. But since most manufacturing workers already receive insurance from their own employer that is at least equal to that in the Clinton basic benefit package, the employer mandate will not raise costs for most manufacturers. Instead, the mandate will reduce the costs of uncompensated care for the uninsured and will likely lower the number of working spouses covered under policies paid for by manufacturers.

The employer mandate will also bring many Medicaid recipients into the private insurance system, further reducing uncompensated care. Over 20 percent of Medicaid beneficiaries live in families with a full-time, full-year worker (Employee Benefit Research Institute). With an employer mandate, these people will be covered by private insurance. An additional 31 percent of Medicaid beneficiaries are in families with a part-time or part-year worker. Under the Clinton plan, these people would be covered with private insurance through the alliances, paid for by employers and personal contributions and probably with public subsidies as well. Thus, Medicaid enrollments would be reduced by approximately half. Cost shifting from Medicaid will probably be reduced, even if payments to alliances for people who remain in the program continue to be lower than private sector premiums.

5. Caps on Costs for Small Firms. Most manufacturers are too large to be eligible for small firm subsidies. However, to the extent the cost of the subsidies requires a tax increase or diverts public money from other uses more beneficial to manufacturers, it could adversely affect this sector.

6. Caps on Costs for All Firms, Such as the Clinton Cap of 7.9% of Payroll. If this cap reduced manufacturers' costs, and if the benefits of these cost reductions were greater than the adverse affects of diverting money from other uses or raising taxes, then the cap would be beneficial for manufacturers. However, the main beneficiaries of such a cap are firms facing relatively high health costs as a share of payroll. Given other reforms such as community rating, relief from retiree health insurance costs, and universal coverage, there is no reason that manufacturers' costs as a share of payroll should be relatively high.

7. Cost Containment. The imposition of cost containment will likely result in increased efficiency and health cost savings. These gains would benefit all firms, including manufacturers.

8. Individual Mandate. Such a mandate would reduce the amount of uncompensated care and lower the number of working spouses covered under manufacturing employees' policies. Thus, it would reduce costs for manufacturers.

9. Reform of the Small Group Insurance Market. Since most manufacturers are sufficiently large to avoid the insurance problems faced by small firms, this would have a very small effect on their costs. However, to the extent this reform extended coverage and reduced uncompensated care, it would reduce manufacturers' costs.

HOW CHANGES IN HEALTH COSTS WILL AFFECT FIRMS' COMPETITIVENESS

To understand how a reduction in manufacturers' health costs would affect competitiveness, it is first necessary to know how the health cost savings would be used.

Many economists argue that firms' savings in health care costs would be entirely passed to the firms' workers in the form of higher wages. In the standard theoretical view of the labor market, identical workers in different firms receive equivalent total compensation. A worker without employer-sponsored health insurance would receive an exactly compensating increase in money wages so that total compensation of both workers would be equal. The costs of health insurance would be exactly offset by dollar-for-dollar reductions in wages. In equilibrium, the cost of health care or the share of total compensation received in the form of health insurance would have no effect on the level of total compensation.

However, such a trade-off between health benefits and wages has never been empirically demonstrated with an analysis of microdata. In addition, the loud and frequent complaints by business about high health costs placing firms at a competitive disadvantage also tend to support the view that health costs are not completely offset by lower wages.

Given the high and rapidly rising costs of health care and health insurance in recent years and the slow growth in productivity and wages, it is very likely that the U.S. may be in a period of disequilibrium where the costs of workers' health care and health insurance are not entirely offset by lower wages. In some firms or industries, rapidly rising health costs may require real reductions in money wages for a fully compensatory trade-off. However, wages are not easily lowered and reductions of the necessary magnitude may not be possible in the short run. Simultaneously, workers are increasingly realizing the importance of health insurance and have become very unwilling to give up coverage or accept reductions in benefits. Disagreements over health insurance packages have become major hurdles in collective bargaining.

I argue that we are in a period when health insurance costs are not fully offset by reductions in money wages. Total compensation for a worker with health insurance may be higher than the value of what that worker produces and these high labor costs could reduce profits or raise prices.

If workers are not currently bearing the full cost of health care, then they will not receive the full health cost savings that would occur with health care reform. Firms would therefore use the savings to raise profit margins or to reduce prices. The increase in profits could be invested by the firm or could be paid to shareholders as larger dividends. Alternatively, firms could pass along the savings in health care to consumers in the form of lower prices

These three situations—with health cost savings being used to raise wages, increase profits, or reduce prices—outline the range of possible uses of the savings from health care reform. The most likely outcome of a reduction in health costs would be some combination of these.

In an examination by myself and others at the Economic Policy Institute of a fully implemented Clinton health plan, we find that manufacturers would save $18 billion in health costs in 1994 (Rasell, Baker, and Tang). In one scenario in which one-third of the savings in the manufacturing sector are used for each of raising wages, increasing profits, and reducing prices, we find a cumulative increase in net exports of $54 billion (1994$) over the first ten years of the plan and an cumulative increase in investment of $31 billion over the 10-year period.

CONCLUSION

Health costs in manufacturing are particularly high. The costs of uncompensated care, the large numbers of retirees and working spouses receiving health insurance coverage, experience rating, and inefficiencies in the health care sector are all factors that drive up costs and could be affected by health care reform. If manufacturers experience a fall in their costs for health care, this would likely enhance their competitiveness by allowing reductions in prices and increased levels of investment. Although the effects of health care savings on competitiveness are positive, they are likely to be fairly small.

BIBLIOGRAPHY

Bureau of the Census, U.S. Department of Commerce. *1987 Enterprise Statistics, Company Summary.* Washington, DC: U.S. Government Printing Office, June 1991.

Bureau of Labor Statistics, U.S. Department of Labor. *Employer Costs for Employee Compensation—March 1992.* Washington, DC: U.S. Government Printing Office, June 1992.

Congressional Research Service, Library of Congress. *Cost and Effects of Extending Health Insurance Coverage.* Washington, DC: U.S. Government Printing Office, October 1988.

Employee Benefit Research Institute. *Sources of Health Insurance and Characteristics of the Uninsured: Analysis of the March 1992 Current Population Survey.* Special Report and Issue Brief Number 133. Washington, DC: EBRI, January 1993.

Prospective Payment Assessment Commission. *Medicare and the American Health Care System: Report to the Congress.* Washington, DC: Prospective Payment Assessment Commission, June 1993.

Rasell, M. Edith, Dean Baker, and Kainan Tang. *The Impact of the Clinton Health Care Plan on Jobs, Investment, Wages, Productivity and Exports.* Washington, DC: Economic Policy Institute, November 1993.

Attachment.

THE IMPACT OF THE CLINTON HEALTH CARE PLAN ON JOBS, INVESTMENT, WAGES, PRODUCTIVITY, AND EXPORTS [1]

[By M. Edith Rasell, Dean Baker, and Kainan Tang]

INTRODUCTION

Although the health care reform debate has just begun, already a major point of disagreement is the effect of the Clinton Administration proposal on employment: The Clinton plan requires all employers to pay at least 80 percent of the average premium cost for each worker and a prorated amount for each part-time worker, with subsidies for small firms and caps on total costs for all firms. Some people, particularly members of the small business community, argue that these mandates will raise labor costs and result in significant job losses.

This paper examines the potential economic impact of two aspects of the Clinton health reform proposal: (1) the initial redistribution of health costs that will result from the employer mandate requiring all employers to provide health insurance to workers, the use of community rating, and coverage of early retirees through the public program; and (2) the cost-containment component of the plan We investigate the effects of the plan on employment, investment, wages, net exports (exports minus imports), and productivity in manufacturing and in the economy as a whole. We also evaluate claims that the mandates will result in large job losses in small firms.

The complexity of the Clinton Administration health care reform plan makes it very difficult for researchers to simultaneously determine all the effects of all the provisions of the plan. Specifically, we do not attempt to identify the employment effects on particular industries or occupations whose employment would be affected, either adversely or positively, by cost containment efforts or by the specific means of financing the health care plan (e.g., job losses in the tobacco industry). The study *does,* however, determine the major effects of some of the plan's most important elements.

Using standard macroeconomic assumptions and a modified microsimulation model, we find:

- Under the Clinton health care plan, in 1994 the manufacturing sector will save $18 billion compared to its expenditures under the current system. These savings will increase manufacturing-related employment by 112,800 jobs by the fifth year of the plan.
- The economy-wide effect of the redistribution of health costs is a net increase of 75,900 jobs by the fifth year.
- The cost containment provisions of the plan will increase employment in manufacturing-related sectors by 52,000 by the fifth year. The combined effects of the cost redistribution and cost containment provisions of the plan will create an additional 164,700 jobs in manufacturing-related industries by the plan's fifth year and 258,700 jobs by the 10th year.
- The economy-wide effects of the cost containment provisions will depend on how the health dividend is used. If it is invested, then the new jobs created will more than offset the slowdown in job growth in the health care sector. Cost containment will also lead to greater efficiencies in health care delivery.

This analysis also finds that the Clinton health care plan promotes an improved mix of jobs, with relative increases in permanent and full-time employment and manufacturing-sector employment growing relative to service-sector employment: In addition, we argue that reports of large job losses in small firms because of the employer mandate rest on assumptions completely irrelevant to the Clinton plan. However, undoubtedly some job loss and dislocation will result from the Clinton plan.

While all sectors of the economy will be affected by the Clinton plan, this analysis focuses primarily on one sector—manufacturing—for two reasons. First, manufacturing plays a singularly important role in the economy. Manufacturing is the sector most subject to foreign competition. Insofar as manufacturing firms' health costs are reduced, the firms will be better able to export abroad as well as compete with imports in domestic markets. This will improve the country's trade balance, boost employment, and increase economic growth. Also, manufacturing continues to set the pace for the economy as a whole in raising productivity. So as the share of manufacturing in the economy rises, so will average productivity growth and real wages.

Second, manufacturing is similar to other sectors of the economy and thus can illustrate the various aspects of the Clinton health care plan. Because many manufacturing workers are already provided with health insurance (75 percent in 1991 [Employee Benefits Research Institute 1993]), many firms can expect to see their costs fall. However, the firms employing the 25 percent of manufacturing workers who do not receive insurance from their employer likely will see their costs rise. In addition, many firms in the manufacturing sector will benefit when they are relieved of the health costs of early retirees. As in all sectors, the impact of the health care plan on manufacturing will be the net result of these contradictory effects.

This study is based on the Clinton health care reform plan as of September 7, 1993.[2] The effects are determined assuming that the plan is fully implemented on January 1, 1994. Our purpose in this analysis is not to endorse or verify the various components and projections of the Clinton plan. We are not attempting to go behind their numbers, nor are we endorsing the plan as the best means of providing high-quality, affordable health care. Our intent is to evaluate selected employment and economic effects of the plan as it has been outlined by the Administration.

EMPLOYER MANDATES AND SMALL FIRMS

Mandates on employers to provide insurance to their workers will impact most heavily those firms not currently insuring their employees. Since most currently uninsured workers are employed in small firms, the mandate will have its greatest potential impact on employment in small firms. However, the subsidies for low-wage firms with 50 or fewer employees will mitigate this impact.[3] Recent concerns about the effects of an employer mandate on employment have been driven primarily by two studies,[4] widely cited in the press,[5] that have presented a picture of large-scale job loss stemming from a health care mandate. However, neither of these analyses examined the *Clinton mandate,* which caps firms' costs and provides generous subsidies to small firms.[6] The other studies also exclude the effects of reductions in health costs in many sectors that could lead to job growth. Finally, both of these analyses assume an extremely high employment response to changes in labor costs that is not supported by recent empirical work.[7] In fact, no existing study has examined the effects of the Clinton mandate on employment in small firms. See "Mandates and Small Firms" in the Appendix for more information.

SCENARIOS

In determining how the savings in health care costs could affect employment, investment, net exports, productivity, and wages, we consider three distinct possibilities, all of which are plausible. First, it may be the case that firms' savings in health care costs will be passed directly to the firms' workers in the form of higher wages. There are many economists who argue that firms see health care expenses as simply part of the cost of hiring labor; they do not care if they pay the money as a premium for health insurance or to the worker in his or her wage. In this view, savings that the firm receives from the Clinton health plan would be paid to workers as higher wages.

A second possibility is that firms will use the savings in health care to raise their profit margins. By this logic, when a worker is hired, the employer and employee agree on the compensation package. If the compensation includes health insurance and if the cost of the premium climbs faster than productivity grows or wages fall, then firms would be forced to pay the higher health costs out of their profits. If health costs were reduced, as they would be in the Clinton plan, then firms would see their profits rise. The increase in profits could be invested by the firm or could be paid to shareholders as larger dividends.

A third possibility is that firms pass along the savings in health care to consumers in the form of lower prices. This could occur due to competition driving down prices, or it could be explained by a mark-up pricing model, where firms set their prices at some fixed margin above their costs. In either case, if firms' costs for health care fall, then the price they charge for their product will fall a corresponding

amount. This would mean that savings in health care are passed along to consumers in lower prices.

These three situations outline the range of possible uses of the health cost savings. The most likely outcome of the Clinton plan would be some combination of these; that is, some portion of the savings would be used to raise wages, to increase profits, and to reduce prices. Therefore, in estimating the impact of the Clinton plan, we have chosen to present a variety of scenarios that are combinations of the situations described above. The following four combinations will be considered:

(1) half the savings are used to raise wages, half to raise profits
(2) half to raise wages, half to reduce prices
(3) half to raise profits, half to reduce prices
(4) one-third to raise wages, one-third to raise profits, and one-third to reduce prices.

Most of the discussion below highlights the fourth combination, the midrange scenario in which one-third of the savings goes to wages, profits, and prices. The cases from which these scenarios are derived are described in more detail in the Appendix.[8] We estimate these scenarios for two different time periods: years 1 through 5 of the Clinton plan and years 1 through 10. For each period, we make an assessment of the cumulative impact over the period and of the effects of the plan in a single year.[9]

THE CLINTON HEALTH CARE PLAN AND THE REDISTRIBUTION OF COSTS AMONG FIRMS

The Clinton plan will redistribute health costs among firms. Currently, firms that provide health insurance to their employees are also paying for the health care of many other people. The Clinton plan's mandate that all employers provide insurance to their workers will raise costs for firms not currently buying insurance. But the mandate also will immediately reduce costs for many firms that already insure employees. These savings will come through two channels. First, mandating all employers to cover their employees will reduce cost shifting for uncompensated care and lower the costs for firms that already provide insurance. Currently, an estimated 30 percent of private insurers' hospitals payments actually cover the nonreimbursed expenses of people who are uninsured, underinsured, or covered by Medicare or Medicaid, both of which reimburse providers at levels below the actual cost of the care provided. Since everyone will be insured under the Clinton plan, this cost shifting will no longer occur, reducing the bills of firms that now provide insurance.

Further immediate savings by firms currently providing insurance will occur because all workers will have their own insurance. At present, workers who are insured on the job commonly provide coverage for spouses and dependents who may be working but who do not have coverage through their own employer. This subsidy from firms that do provide insurance to those that do not would be eliminated under the Clinton plan because all employers would be required to insure their workers.

In addition to the mandate, a second source of immediate savings for many firms currently providing insurance, particularly small firms, will be the switch to community rating. At present, many firms, especially small firms, are experience rated, meaning that their health costs are determined by their employees' age, health status and existing medical conditions, and the level of health risks faced by workers. In addition, small firms are charged much higher administrative fees than are large firms. Under the Clinton plan, all firms will be charged the same rates. This means that for some firms rates will rise, while others will see rates fall. Among those most likely to see falling rates are small firms that currently insure their workers and manufacturing firms, whose work forces are usually somewhat older than the average for the economy as a whole.

A third source of immediate savings for many firms, particularly in manufacturing, will be the large reduction in or elimination of expenditures for the health care of early retirees. As part of their strategy to become more competitive, many firms have been shrinking the size of their workforce. They often try to do this through early retirements (before age 65) to avoid layoffs or through outright dismissals. In many cases, in return for employees agreeing to take early retirement, the firm promises to maintain workers' health care benefits. While the promise of health insurance is very important to early retirees who are not eligible for Medicare until age 65, these agreements can be very costly to employers because these older individuals tend to use more medical services than do average-age workers. Under the Clinton proposal, the government will pick up 80 percent of the expense of a basic health insurance package for early retirees age 55 to 64. This will provide substantial and immediate savings for firms with large numbers of early retirees.[10]

METHODS: MEASURING THE SAVINGS FROM THE REDISTRIBUTION OF COSTS

The savings to the manufacturing sector from the redistribution of costs is calculated as the difference between projected expenditures under the current health care system and estimated expenditures under the Clinton proposal, both calculated for 1994, the year in which we assume the plan is fully implemented. Expenditures under the Clinton plan are estimated using a modified microsimulation technique based on the National Medical Expenditure Survey (NMES), with firm level information from the Census of Manufacturers and the Bureau of Labor Statistics' (BLS) Current Employment Statistics. Based on this technique, manufacturers' expenditures in 1994 under the Clinton plan are estimated at $49 billion. (For more details on these estimates, see the Appendix.) Manufacturers' spending in 1994 under 'the current system is estimated as a projection of current health care expenditures based on the BLS' Employer Costs for Employee Compensation and Employment and Wages. Manufacturers' expenditures in 1994 under the current system are projected to be $67 billion. Thus in 1994, the manufacturing sector would save $18 billion under the Clinton plan compared to the current system. The following sections of this paper show how these savings will affect employment, investment, net exports, productivity, and wages in manufacturing and in the economy as a whole.

We begin with an examination of the economic effects of the redistribution of health costs and reductions in firms' costs of health care for early retirees. From there, we address the economic effects of cost containment and the combined effects of the redistribution of costs and cost containment.

THE EFFECTS OF THE REDISTRIBUTION OF COSTS ON MANUFACTURING

The first set of projections (Table 1) shows the effects of the immediate savings to manufacturing resulting from the redistribution of costs among all employers and relief from the health costs of early retirees. Specifically, Table 1 shows the effects on employment, investment, net exports, productivity, and wages. The discussion below describes the midrange outcome (Scenario 4), where one-third of the savings goes to each of wages, profits, and prices.

Compared to continuing with the current health care system, by the fifth year of the Clinton plan, 112,800 new manufacturing-related jobs would be created. By the 10th year, 123,900 additional jobs would be created (see Scenario 4 in Table 1).

Cumulative investment would rise by $9.8 billion over the first five years and by $20.5 billion over 10 years. The cumulative increase in net exports would be $15.2 billion and $33.9 billion over five and 10 years, respectively. Productivity would rise 0.22 percent by the end of the fifth year and 0.52 percent by the end of the 10th year. Wages would rise 1.05 percent by the end of the fifth. As can be seen in Table 1, each of the four scenarios shows gains in all areas. In addition, these gains are significant relative to the size of the manufacturing sector. For example, three of the four scenarios show gains of employment greater than 112,000 in the fifth year after the plan is implemented. This would represent a 0.7 percent increase in manufacturing employment over the baseline scenario with the current health care system. Manufacturing investment rises by approximately 2 percent in two of the four scenarios, and net exports increase by approximately 1 percent. When half of the savings is passed along in higher wages, real wages take an immediate jump of almost 1.6 percent. In general, the effects of the initial savings increase over time as the higher profits gradually lead to more investment and the lower prices increase net exports.

THE EFFECTS OF THE REDISTRIBUTION OF COSTS ON THE ECONOMY AS A WHOLE

The manufacturing sector will see its health costs fall due to the redistribution of health care expenditures. As shown above, these health care savings will increase employment, output, and investment, as well as raise productivity and wages in manufacturing-related sectors. However, other sectors that currently do not insure their workers will see their health costs rise. Since many of the uninsured are in the service sector, the cost increases will be largest there.[11]

There are no reliable data available to show the exact impact that these cost increases will have on wages, employment, investment, and productivity in small, primarily service-sector firms.

Table 1.—THE EFFECTS OF THE COST REDISTRIBUTION ON MANUFACTURING

	Scenario 1[1]	Scenario 2[2]	Scenario 3[3]	Scenario 4[4]
Employment (Thousands of Jobs)				
Effect in:				
Fifth Year	54.4	115.1	169.2	112.8
Tenth Year	72.0	113.8	185.8	123.9
Investment (Billions of 1994 Dollars)				
Effect in:				
Fifth Year	$2.7	$0.0	$2.8	$1.8
Tenth Year	3.5	0.0	3.6	2.4
Cumulative Effect:				
First Five Years	13.2	1.8	15.0	9.8
First Ten Years	29.1	1.8	30.9	20.5
Net Exports (Billions of 1994 Dollars)				
Effect in:				
Fifth Year	$0.0	$5.6	$5.6	$3.8
Tenth Year	0.0	5.6	5.6	3.8
Cumulative Effect:				
First Five Years	0.0	22.7	22.7	15.2
First Ten Years	0.0	50.8	50.8	33.9
Productivity (Percent Change from Baseline)				
Effect in:				
Fifth Year	0.29	0.06	0.34	0.22
Tenth Year	0.73	0.06	0.78	0.52
Wages (Percent Change from Baseline)				
Effect in:				
Fifth Year	1.57	1.57	0.0	1.05
Tenth Year	1.57	1.57	0.0	1.05

[1] ½ Higher Wages, ½ Higher Profits
[2] ½ Higher Wages, ½ Lower Prices
[3] ½ Higher Profits, ½ Lower Prices
[4] ⅓ Higher Wages, ⅓ Higher Profits, ⅓ Lower Prices

In the absence of clear evidence, we assume that the losses in the service sector directly due to the redistribution of current health care expenditures would exactly offset the gains in manufacturing and other high health cost sectors that directly result from their savings. In other words, we assume that for every dollar that wages rose in manufacturing due to lower health care costs, wages fell a dollar in the service sector due to higher costs. We make the same assumption for employment, investment, and productivity.[12] Insofar as the mandates lead to net increase in national health expenditures, we have assumed that the additional revenue flowing to the health care sector has a positive employment effect of approximately the same magnitude as the negative employment effect resulting from the additional costs incurred in the rest of the economy.

However the net impact for the economy as a whole is not zero. The reason for this is that manufactured goods are in general traded internationally, whereas services for the most part are not. This means that a decline in the price of U.S. manufactured goods will increase our exports and decrease our imports (because domestically produced goods are comparatively cheaper) in a way that will not be offset by a corresponding increase in the price of goods in the service sector.

By mandating a more even distribution of health care expenses among all employers, the Clinton plan is in effect removing an excess burden that U.S. manufacturers currently are being forced to bear in their efforts to compete with foreign manufacturers. In addition, firms will see large reductions in their costs for retiree health care. Lowering their health expenditures will increase their ability to compete, leading to more exports and more jobs in the economy as a whole, even assuming that the service sector's losses otherwise completely offset the gains in manufacturing.

It is also worth noting that there are not only gains in net exports and employment, but also in investment and productivity. The reason for the gains in these latter two categories is that higher export sales act to stimulate investment. Although these gains are comparatively modest, over time even these secondary effects are a substantial stimulus to the economy. In general, the manufacturing sector has been the most significant source of productivity growth in the economy. By lessening the extent to which manufacturing is being forced to subsidize health care costs in the rest of the economy, the Clinton plan will be a boost to the economy as a whole.

The economy-wide effects of the redistribution of costs are shown in Table 2. Assuming the complete offset in services discussed above, there would be a net increase of 75,900 jobs in both the fifth year and 10th year of the plan compared to continuing with the current health care system. There will be a small cumulative increase in investment of $1.2 billion by the fifth year. Net exports would rise by a cumulative total of $15.2 billion over the first five years and by $33.9 billion over the first 10 years of the plan.

Table 2.—THE EFFECTS OF THE COST REDISTRIBUTION ON THE ECONOMY AS A WHOLE

	Employment (Thousands of Jobs)	Investment (Billions of 1994 Dollars)	Net Exports (Billions of 1994 Dollars)	Productivity (Percent Change)	Wages (Percent Change)
Effect in:					
Fifth Year	75.9	$0.0	$3.8	0.01%	0.0%
Tenth Year	75.9	0.0	3.8	0.01	0.0
Cumulative Effect:					
First Five Years		$1.2	$15.2		
First Ten Years		1.2	33.9		

Note: These projections assume savings are equally distributed between higher wages, higher profits, and lower prices.

THE CLINTON HEALTH CARE PLAN AND COST CONTAINMENT

In addition to these immediate savings, the cost containment provisions of the Clinton plan will reduce the rate of growth of health care costs, creating substantial savings for firms. In recent years, health expenditures have been rising at a rate of 9 to 11 percent annually. If the health care system is not reformed, the rate of growth is projected to remain very high for the indefinite future, and firms' already heavy health cost burden will grow even larger. The Clinton plan will put in place a mechanism to slow the growth in costs, which will create large savings that we are calling a health care dividend. In the fifth year of the new plan, this dividend will equal $72 billion.

METHODS: MEASURING THE SAVINGS FROM COST CONTAINMENT

To measure the longer term savings to manufacturing from cost containment, we subtracted the targeted rate of growth in the Clinton plan from current forecasts of the rate of growth of health care spending over the next 10 years. Since the cost-containment target of the plan has been criticized as being unrealistic, we also calculated the plan's effects based on the assumption that just half the amount of predicted long-term savings is actually realized. In this way we have set out a range between an optimistic and a pessimistic scenario for cost containment. We have estimated the impact of this cost-containment program under the same set of scenarios in which savings flow to some combination of higher wages, higher profits, or reduced prices. We estimate the effect of the savings due to cost containment on employment, investment, net exports, productivity, and wages both in manufacturing and in the economy as a whole.

THE EFFECTS OF COST CONTAINMENT ON MANUFACTURING

Whatever the benefits associated with the redistribution of costs among firms, ultimately the major source of potential gain to manufacturing and to the economy will result from the cost containment program put in place by the Clinton plan. The economic effects of cost containment are shown in Table 3, and further details are in the Appendix. Table 3 shows a range of outcomes; in each case the smaller numbers show the effects of the Clinton plan achieving half its targeted savings, and the higher numbers show the effects of achieving all the targeted savings.

Table 3 shows that the gains to manufacturing from cost containment will eventually be even larger than the gains resulting from the redistribution of expenditures and the immediate reduction in costs. Again, we assume the midrange (Scenario 4) outcome, where one-third of savings flows to each of wages, profits, and prices. Due to cost containment, employment in manufacturing will be higher by 26,000 to 52,000 jobs in the fifth year of the plan, and by 68,100 to 135,100 jobs in the 10th year. By the fifth year of the plan, cumulative investment will have a increased by $1.1 billion to $2.2 billion, and by $5.4 billion to $10.8 billion by the end of the 10th year Cumulative net exports will increase between $2.1 billion and $4.2 billion over the first five years and between $10.2 billion and $20.3 billion over the first 10 years. Productivity will rise by 0.15 to 0.30 percent by the end of the 10th year. By

the fifth and 10th years of the plan, wages will be an average of 0.29 to 0.57 and 0.66 to 1.32 percent higher, respectively.

THE EFFECTS OF COST CONTAINMENT ON THE ECONOMY AS A WHOLE

Effective cost containment will present both opportunities and hazards for the economy as a whole. As noted earlier, there should be an unambiguous positive effect on manufacturing from cost containment as savings in health care are passed through in the form of higher wages, higher profits, and lower prices. This clearly leads to gains in the form of increased employment, investment, productivity, and net exports.

There is a second unambiguously positive effect that can be associated with cost containment. To some extent cost containment will involve lowering incomes (reducing economic rents) earned by some of the workers and corporations in the health care industry. This would

Table 3.—THE EFFECTS OF COST CONTAINMENT ON MANUFACTURING

	Scenario 1[1]	Scenario 2[2]	Scenario 3[3]	Scenario 4[4]
Employment (Thousands of Jobs)				
Effect in:				
Fifth Year	11.1–22.1	28.0–55.3	29.0–78.0	26.0–52.0
Tenth Year	33.4–66.8	67.9–135.8	101.3–202.6	68.1–135.1
Investment (Billions of 1994 Dollars)				
Effect in:				
Fifth Year	$0.6–1.1	$0.1–0.2	$0.7–1.3	$0.4–0.8
Tenth Year	1.7–3.3	0.1–0.2	1.8–3.5	1.2–2.3
Cumulative Effect:				
First Five Years	1.2–2.3	0.3–0.6	1.7–3.3	1.1–2.2
First Ten Years	7.3–14.5	0.8–1.6	8.1–16.2	5.4–10.8
Net Exports (Billions of 1994 Dollars)				
Effect in:				
Fifth Year	$0.0–0.0	$1.3–2.6	$1.3–2.6	$0.9–1.7
Tenth Year	0.0–0.0	3.3–6.5	3.3–6.5	2.2–4.3
Cumulative Effect:				
First Five Years	0.0–0.0	3.1–6.2	3.1–6.2	2.1–4.2
First Ten Years	0.0–0.0	15.3–30.5	15.3–30.5	10.2–20.3
Productivity (Percent Change from Baseline)				
Effect in:				
Fifth Year	0.04–0.08%	0.0–0.01%	0.05–0.09%	0.03–0.06%
Tenth Year	0.21–0.42	0.02–0.04	0.23–0.45	0.15–0.30
Wages (Percent Change from Baseline)				
Effect in:				
Fifth Year	0.43–0.86%	0.43–0.86%	0.0–0.0%	0.29–0.57%
Tenth Year	0.99–1.99	0.99–1.99	0.0–0.0	0.66–1.32

[1] ½ Higher Wages, ½ Higher Profits
[2] ½ Higher Wages, ½ Lower Prices
[3] ½ Higher Profits, ½ Lower Prices
[4] ⅓ Higher Wages, ⅓ Higher Profits, ⅓ Lower Prices

mean reducing the excessive fees received by highly paid health care professionals or cutting the extraordinary profits earned by some of the corporations producing pharmaceutical and other health care supplies and equipment. However, despite the lower incomes and reduced profits, there is likely to be little change in behavior or employment. In other words, highly paid specialists might still work roughly the same hours even if their pay rates were somewhat lower. Or, pharmaceutical companies may still produce roughly the same supply of drugs even if their profits were no greater than those received by firms in other industries. Insofar as health cost containment brings savings of this sort, it represents a pure gain to the economy. There is no effect on employment in the health care sector, but because of the lower cost to the rest of the economy, there will be additional money going to higher wages, higher profits, or lower prices.

While these first two effects are unambiguously positive, there is a third and probably more important effect, the impact of which can be either positive or negative. To some extent, effective cost containment is almost certain to involve the reduction of waste in the form of eliminating unnecessary paperwork or reducing the provision of unnecessary services. Reduction of waste of this sort means increasing

the efficiency of the health care sector, but it also means that fewer workers will be employed than if current trends continued. The rate of growth of health care employment would decrease. Thus, the increase in efficiency presents an opportunity to the economy in the sense that these workers could be more productively employed in other sectors. It also presents a risk, however, in that it is possible that alternative forms of employment will not be forthcoming. In this case, an increase in the efficiency of the health care sector may actually lead to a loss of jobs for the economy as a whole.

In most economic analyses of the impact of health care reform this possibility is not considered, since most analyses use economic models that assume the economy will always be at or near full employment. We have explicitly not made such an assumption, since historically (and certainly in recent years) the economy has generally not been at or near full employment. If full employment is not assumed, then the reduced rate of job creation in the health care sector could pose a real problem. In the three years since the onset of the last recession in June 1990, the health care sector has accounted for over 25 percent of all the new jobs that have been created. If the growth of employment in the health care sector over this period had been slower, then in all probability overall job growth would have been slower as well. The economy is still operating well below full employment, and most forecasts predict slow economic growth for the rest of the decade. In such a situation, there is a real risk that the primary impact of increasing the efficiency of the health care sector will be to raise unemployment.

However, the cost savings and resultant increased efficiency also present an opportunity. The savings can be seen as a health care dividend. If this money is put to productive use—for example, if both the private and public sector invest the bulk of their savings—then it can lead to alternative sources of employment and higher productivity for the economy as a whole. Policies that are conducive to private investment in plant and equipment and public investment in education, training, and infrastructure can ensure this result. If, however, a large portion of the savings in health care is used in less economically productive ways, such as to purchase imports or to reduce the deficit, then the net effect of the cost containment may well be to produce higher unemployment. In short, if we do not assume the economy automatically attains full employment, whether or not the economy actually gains from the cost savings and increased efficiency of the health care sector will depend on how the dividend is used. This will in turn depend upon the macroeconomic policies pursued by the government at the time.

COMBINED EFFECTS OF THE CLINTON PLAN

This section examines the effects of the redistribution of costs among all employers, firms' savings on early retirees' health care, and savings from cost containment on the manufacturing sector and on the economy as a whole. By combining these three factors, it is possible to determine the major economic effects the Clinton health plan will have on employment, investment, net exports, productivity, and wages.

THE COMBINED EFFECTS OF THE CLINTON PLAN ON MANUFACTURING

The impact of the combined effects of the Clinton plan on the manufacturing sector—the effect of the immediate saving from the redistribution of costs (Table 1) and the longer-term savings from cost containment (Table 3)—is summarized in Table 4. We assume that savings are equally distributed between higher wages, higher profits, and lower prices. The numbers shown also assume that the Clinton plan's cost containment targets are achieved.

Employment will be 164,700 higher in the fifth year of the plan and 258,700 higher in the 10th year (see Figure 1). In the fifth year, investment will be $2.8 billion higher (see Figure 2). The cumulative increase will equal $11.0 billion by the end of the fifth year and will rise to $30.5 billion by the end of the 10th year. Net exports will be $5.4 billion greater in

Table 4.—THE COMBINED EFFECTS OF THE COST REDISTRIBUTION AND COST CONTAINMENT ON MANUFACTURING

	Employment (Thousands of Jobs)	Investment (Billions of 1994 Dollars)	Net Exports (Billions of 1994 Dollars)	Productivity (Percent Change)	Wages (Percent Change)
Effect in:					
Fifth Year	164.7	$2.8	$5.4	0.28%	1.62%

Table 4.—THE COMBINED EFFECTS OF THE COST REDISTRIBUTION AND COST CONTAINMENT ON MANUFACTURING—Continued

	Employment (Thousands of Jobs)	Investment (Billions of 1994 Dollars)	Net Exports (Billions of 1994 Dollars)	Productivity (Percent Change)	Wages (Percent Change)
Tenth Year	258.7	4.7	8.0	0.82	2.37
Cumulative Effect:					
First Five Years		$11.0	$19.2		
First Ten Years		30.5	53.9		

Note. These projections assume savings are equally distributed between higher wages, higher profits, and lower prices.

the fifth year (see Figure 3). The cumulative increase will be $19.2 billion by the end of the fifth year and $53.9 billion by the end of the 10th. Productivity will have increased by 0.28 and 0.82 percent by the end of years 5 and 10, respectively. Wages will be 1.62 percent higher on average by the fifth year and 2.37 percent higher by the 10th year.

THE COMBINED EFFECTS OF THE CLINTON PLAN ON THE ECONOMY AS A WHOLE

To complete the analysis, we examine the effects of the redistribution of costs and the cost containment on the economy as a whole. As pointed out above, the effects of cost containment on the economy as a whole cannot be quantified with any precision. We can note again, however, that the savings in manufacturing produce a net gain. The net effect outside the manufacturing sector will be somewhat ambiguous. Obviously, efficiency gains in health care will be a pure gain to the economy. However, the ultimate impact of the Clinton plan will depend on the success in redirecting the health care dividend toward more productive ends.

CONCLUSION

Our results clearly show that the Clinton health care plan could produce significant economic benefits for the economy. Although some firms will pay more, the cost burden for many firms that already provide insurance will be reduced. Due to the redistribution of costs that will result from the employer mandate, community rating, and firms' savings on retiree health care, in the economy as a whole there will be a net increase of 75,900 jobs by the fifth year of the plan. In addition, investment will increase and net exports will rise. The manufacturing sector will save approximately $18 billion in the first year of the plan. These savings will increase manufacturing-related employment by 112,800 by the plan's fifth year as well as produce economically significant gains in exports, wages, and profits and reduce prices. This will in turn lead to more jobs, more investment, increased net exports, higher productivity growth, and more rapid real wage growth.

As the cost containment provisions in the Clinton plan reduce the rate of increase in health care expenditures, there will be even larger savings for health care purchasers. In manufacturing, cost containment will create an additional 52,000 jobs by the fifth year of the plan and increase net exports. In addition, cost containment will increase efficiency in the health care sector. By the fifth year of the plan, the health care dividend will total $72 billion and will be rising rapidly. The net economy-wide effects of cost containment will depend upon how this dividend is used. If it is invested either in the public or private sector, the new jobs created will more than offset the slowdown in job growth in health care. If the dividend is not invested, then the reduced rate of job creation in health care could lead to higher unemployment.

The proposed health care reform will also shift the economy toward a better mix of jobs, in part because of the already discussed expansion of the manufacturing sector that provides well-paying jobs for the non-college-educated workforce, precisely the group experiencing adverse wage and job trends in recent years. Equally important, the employer mandates in the health care plan will reduce the existing financial incentives for employers to use contingent forms of work—hiring part-time and temporary workers or using independent contractors.

During the 1980s and into the current economic recovery, there has been an excessive growth in contingent employment (duRivage 1992; Mishel and Bernstein 1993) that has undercut the living standards and economic security of the workforce. This growth of contingent employment has been partially driven by employers seeking to escape fringe benefit costs, especially health insurance. Such moves will no longer be possible under the new health care plan. Employers will have to pay a prorata share of the insurance premium of part-time workers, with

the costs of a 15 hour-per-week worker being half that of a full-time worker. Temporary help agencies will be required to pay 80 percent of the insurance premiums for the temporary workers on their payrolls, as will all employers for their employees. Last, independent contractors who receive 80 percent of their income from one firm will be considered an employee of that firm and will have 80 percent of their premiums paid for by the firm. Thus, the employer mandates will reduce employer financial incentives to shift toward contingent work. The result will be that employers will structure their workforce based on productivity and quality considerations, not on their savings from providing fewer benefits.

The main purpose of the Clinton plan is not to aid the economy but rather to provide high quality health care to all Americans at a reasonable cost. The plan's merits will ultimately depend on how effectively it meets these goals. However, the plan's economic impact could be very positive as well.

APPENDIX

THE EFFECTS OF THE REDISTRIBUTION IN COSTS: THREE SCENARIOS

The calculations for the scenarios discussed in the text are based on combining, with different weights, three cases in which savings in health care are passed on completely in the form of higher wages, higher profits, or lower prices. We first model each of these "pure" scenarios before averaging them together to get the results discussed in the text. Each of these pure scenarios is constructed using assumptions about elasticities that are well within the range frequently used in economic modeling and are well supported by empirical research.

WAGES

The scenario in which savings in health care expenditures are passed on entirely in the form of higher wages is extremely straightforward. We simply assume that wages rise dollar for dollar in accordance with declines in health care costs. We then calculate this increase as a percentage of current wages in manufacturing. There are no other effects from this change because the price of manufactured goods is completely unchanged, as are firm profits. This means that there should be no impact on either investment or net exports. While workers in manufacturing industries will have more income to spend as a result of their higher wages, this should be offset exactly by the reduction in incomes of providers in the health care industry who will be earning less than in the baseline scenario and by the increased health care expenditures of firms that had not previously provided insurance to their workers. Since the gains in income for workers in manufacturing are offset exactly by losses of income elsewhere, there is no change in total demand. This leaves output and employment unaffected. The impact of $18.4 billion in health care savings for manufacturing firms passed on entirely in the form of higher wages is summarized in Appendix Table 1.

PROFITS

In the scenario where the health savings are kept entirely by firms as increased profits, we have to make an assumption about how higher profits affect investment. For this we relied on recent work on the effect of cash flow on investment by Steve Fazzari (1993). In the most extensive microlevel study to date of the investment patterns of manufacturing firms, Fazzari found a very strong link between cash flow

Appendix Table 1.—EFFECTS OF COST REDISTRIBUTION

	Employment (Thousands of Jobs)	Investment (Billions of 1994 Dollars)	Net Exports (Billions of 1994 Dollars)	Productivity (Percent Change)	Wages (Percent Change)
Higher Wage Scenario					
Effect in:					
Fifth Year	0.0	$0.0	$0.0	0.0%	3.15%
Tenth Year	0.0	0.0	0.0	0.0	3.15
Cumulative Effect:					
First Five Years		0.0	0.0		
First Ten Years		0.0	0.0		
Higher Profit Scenario					
Effect in:					
Fifth Year	108.0	$5.3	$0.0	0.57%	0.0%
Tenth Year	144.1	7.1	0.0	1.45	0.0

Appendix Table 1.—EFFECTS OF COST REDISTRIBUTION—Continued

	Employment (Thousands of Jobs)	Investment (Billions of 1994 Dollars)	Net Exports (Billions of 1994 Dollars)	Productivity (Percent Change)	Wages (Percent Change)
Cumulative Effect:					
First Five Years		26.3	0.0		
First Ten Years		58.1	0.0		
Lower Price Scenario					
Effect in:					
Fifth Year	230.2	$0.1	$11.0	0.10%	0.0%
Tenth Year	227.6	0.0	11.0	1.10	0.0
Cumulative Effect:					
First Five Years		3.6	45.4		
First Ten Years		3.6	101.6		

and investment. We aggregated the coefficient for the different categories of manufacturing firms in his study to derive a coefficient for the manufacturing sector as a whole. The aggregate coefficients are as follows, with the subscript indicating the length of the lag in years:

$$CF_t = 0.072$$
$$CF_{t-1} = 0.11$$
$$CF_{t-2} = 0.067$$

The rate of growth of sales also affects investment. This means that as investment increases the sales of firms producing capital goods, it will induce further investment. To estimate the size of this effect we again used the results of the Fazzari study. His estimated coefficient for the effect of sales growth (expressed as a percent of current sales) on the firm's investment divided by their capital stock is:

$$SG_t = 0.138$$
$$SG_{t-1} = 0.085$$
$$SG_{t-2} = 0.042$$

To use these coefficients to calculate the amount of investment induced by sales growth, we multiplied the sales growth by the size of the capital stock in manufacturing. We estimated that this will be $2.4 trillion in 1994 (in 1994 dollars) based on data from the U.S. Department of Commerce's *Fixed Reproducible Tangible Wealth in the United States, 1925–1989,* and subsequent investment data. To calculate the growth rate of final sales we used a denominator of $2.0 trillion, which is approximately equal to final sales of manufactured goods in 1993. We assumed that the only change in sales was that due to the profit-induced effect on investment, with the rest of the redistribution in demand from the service sector to manufacturing bringing no net change in final demand.

Over the longer term this increase in investment raises national output by increasing productivity. To calculate this impact we assumed that the effect of capital on productivity is the same in manufacturing as elsewhere in the economy. DRI, a leading econometric forecasting firm, estimates the elasticity of output with respect to capital services to be 0.33. This means that a 1 percent increase in capital services will increase output by 0.33 percent. This figure is similar to estimates that have been produced in a wide range of studies over the years. At present capital services are being used up at an approximately $650 billion annual rate (all numbers are in 1987 dollars. unless otherwise indicated). Gross domestic product (GDP) is approximately $5.0 trillion. This means that a $6.5 billion increase in capital services would lead to a $16.7 billion increase in output. To translate current investment into capital services in future years it is necessary to adjust for the life of the investment. According to BLS' most recent multifactor productivity tables, the annual rate of depreciation for structures and equipment is approximately 5.5 percent and 11.7 percent, respectively. The ratio of investment in equipment to structures was approximately 4.8 for the five years from 1986 to 1990. This gives an annual rate of depreciation of slightly more than 10 percent. If the ratio of equipment to structure investment remains the same, this means that roughly $65 billion dollars of investment is needed to generate an additional $6.5 billion of capital services. Applying the elasticity cited earlier, we calculate that an additional dollar of capital generates approximately $0.25 in additional output in subsequent years. This is the ratio we used in calculating the impact of increased manufacturing investment on productivity and GDP.

In order to be consistent, we assumed that the increase in productivity is translated entirely into higher profits. Prices do not fall and wages do not rise even as workers become more productive and profit margins are growing. As productivity and profits grow, the amount of investment they induce grows as well. We translated the increase in investment into gains in employment at the rate of 20,270 jobs per billion dollars of additional demand. This ratio is derived from an Economic Policy Institute study (Baker and Lee 1993) that measured the secondary employment impacts associated with jobs in various sectors of the economy. Baker and Lee estimated the average number of jobs created either directly for the end product or indirectly in the supplier industries per billion dollars of expenditure on manufactured goods. This number was adjusted to take account of inflation from the year used in the study (1991) until 1994. The impact of the entire $18.4 billion in savings to manufacturing firms being added to profit is summarized in Appendix Table 1.

PRICES

In the scenario where savings in health care are all passed along in the form of lower prices, the initial impact comes entirely through net exports. While lower prices should make manufactured goods more affordable for domestic consumers, the reduction in purchasing power for workers or owners of firms in the service sector largely offsets this effect. The increase in net exports, however, has a secondary impact in that higher net exports create higher growth in sales which leads to more investment. We calculated the impact on investment of this sales growth using the estimates from the Fazzari study discussed earlier. We also assumed that any productivity gains resulting from this investment are passed along in the form of lower prices, although this second-order effect is too insignificant to be of any consequence in these calculations.

We calculated the effect of lower prices on net exports using estimates of price elasticity calculated by Barry Bosworth (1993). In his recent book he estimated the elasticity of demand for nonoil, nonfood manufactured exports as -1.02. He calculated the elasticity for imports as -1.43. This means that a 1 percent reduction in the price of manufactured goods should lead to a 1.02 percent increase in U.S. exports of manufactured goods and 1.43 percent decline in U.S. imports of manufactured goods. These elasticities are consistent with many other estimates in the literature. Since Bosworth estimated these elasticities with a three-year lag structure, when we applied them to our calculations we assumed that 30 percent of the impact is felt in the first year, 75 percent by the second year, and the full impact by the third year.

Our calculations of employment gains are based on multiplying the increase in net exports plus the increase in investment by 20,270 jobs as described above. In both the case of health care savings being passed on in lower prices and in the case of the savings being kept as increased profits, we have not included any multiplier effect for the induced increases in demand. We have not estimated this multiplier effect for two reasons: (1) it would be difficult to attempt to calculate how much of this spending will produce a second round of demand for domestic manufactured goods; and (2) it would be difficult to determine the multiplier impact associated with the reduction in demand in the service sector. By excluding any multiplier effect we have probably underestimated the effect that health care savings will have on the manufacturing sector. The impact of the savings to manufacturing firms being entirely passed along in lower prices is summarized in Appendix Table 1.

THE EFFECTS OF COST CONTAINMENT

We estimated the savings from the Clinton plan's cost containment by assuming that costs for manufacturing would follow the same path as health care costs for the economy as a whole under both the baseline scenario and the Clinton plan. In order to keep the numbers in 1994 dollars and directly comparable to our other calculations, we assumed a 3 percent annual inflation rate for the whole period and deflated each year's savings accordingly. After calculating the level of savings year by year, we examined the same three pure scenarios described above, assuming in turn that all savings are passed along in higher wages, higher profits, and lower prices. The summaries of the impact of the health care plan in each of these scenarios appear below in Appendix Table 2.

ESTIMATING HEALTH COSTS IN THE MANUFACTURING SECTOR

Health care savings in the manufacturing sector are the difference between health care expenditures under the Clinton plan and spending under the current health care system. The calculation is made for 1994 because the Clinton plan premium estimates are for that year. We project manufacturers' spending under the current

Appendix Table 2.—EFFECTS OF COST CONTAINMENT

	Employment (Thousands of Jobs)	Investment (Billions of 1994 Dollars)	Net Exports (Billions of 1994 Dollars)	Productivity (Percent Change)	Wages (Percent Change)
Higher Wage Scenario					
Effect in:					
Fifth Year	0.0	$0.0	$0.0	0.0%	1.72%
Tenth Year	0.0	0.0	0.0	0.0	3.97
Cumulative Effect:					
First Five Years		0.0	0.0		
First Ten Years		0.0	0.0		
Higher Profit Scenario					
Effect in:					
Fifth Year	44.2	$2.1	$0.0	0.15%	0.0%
Tenth Year	133.6	6.6	0.0	0.81	0.0
Cumulative Effect:					
First Five Years		5.5	0.0		
First Ten Years		29.2	0.0		
Lower Price Scenario					
Effect in:					
Fifth Year	111.7	$0.4	$5.1	0.02%	0.0%
Tenth Year	271.6	0.4	13.0	0.08	0.0
Cumulative Effect:					
First Five Years		1.1	12.3		
First Ten Years		3.1	60.9		

system to 1994. Health costs as a share of wages and salaries in manufacturing were obtained from the BLS' Employer Costs for Employee Compensation. The health insurance share of all insurance costs was obtained from the U.S. Chamber of Commerce survey of employee benefits. Total wages and salaries in manufacturing were obtained from BLS' Employment and Wages (ES–202 data). Spending was adjusted to reflect a continuation of current trends in manufacturing employment and health insurance coverage. Manufacturers' health costs in 1994 were estimated to be $67 billion.

Manufacturers' costs under the Clinton plan were estimated using the National Medical Expenditure Survey (NMES) as the primary data source. To estimate firms' eligibility for subsidies under the Clinton plan and to determine whether the payroll cap was binding, we needed to know manufacturing workers' enterprise size, average wage in their enterprise, enterprise payroll, and the mix of family types (single, single-headed household, couples without children, and couples with children) in the firm. The average enterprise size, average wage, and payroll information for durable and nondurable manufacturing by range of firm size was obtained from the 1987 Census of Manufacturers conducted by the Bureau of the Census. Payroll and wage data were projected from the BLS' Employer Cost for Employee Compensation.

These firm level data were appended to the records of manufacturing workers in the NMES using firm size and durable/nondurable as match variables. (The 1988 May Current Population Survey was used to estimate enterprise size from establishment size in manufacturing, holding constant durable/nondurable manufacturer and rural/urban/suburban location; these relationships were then used to determine enterprise size in the NMES.) The mix of family type by firm size, durable/nondurable manufacturing, and rural/urban/suburban location was determined by averaging over manufacturing workers in the NMES. Premium costs were estimated at $1,881, $3,761, $3,789, and $4,243 for singles, couples without children, single-headed households, and couples with children, respectively.[13] Firms' minimum premium costs, i.e., 80 percent of the total premium adjusted for numbers of workers per family, were estimated to be $1,504, $2,068, $2,412, and $2,412, respectively.

Enterprise costs were then estimated by assuming firms would pay the lesser of their payroll-capped premiums, where the caps varied by firm size and average wage according to the specifics of the Clinton plan, or 80 percent of the estimated premiums of the workers. Where under the current system firms paid more than 80 percent of premiums, these additional costs were added to the firms' expenditures, as were the costs of supplemental insurance not included in the Clinton basic Plan. We adjusted for changes in the health insurance status of workers between 1987 and 1994, and for the change in the size of the manufacturing labor force over the period. Finally, we added on the costs of the over 65-year-old retirees' insurance premiums by inflating the costs in 1987, taken from the NMES, by the rate of in-

crease in national health care expenditures, plus a 15 percent increase in the number of retirees. Expenditures by manufacturers under the Clinton plan in 1994 were estimated at $48.6 billion.

With the exception of the premium costs shown just above, these calculations are based on the "leaked" description of the Clinton plan dated September 7, 1993. Since that time, some changes have been made in the plan. Eligibility for subsidies has been broadened to include firms with up to 75 workers. This should further reduce potential job loss. However, since the size of the increase will be quite small—an estimated $16 billion over five years or an increase of 4 percent—the effects will also be very small.[14] In addition, the subsidy has been changed so that it is no longer an entitlement. However, the administration estimates that funds raised by the health plan provisions will cover all the subsidies. So, in keeping with our goal of estimating the effects of the plan as it is written and estimated by the administration, these calculations assume complete funding of the subsidies.

MANDATES AND SMALL FIRMS

Under the Clinton plan, firms with 50 or fewer employees and with average wages of $12,000 or less would pay no more than 3.5 percent of payroll for employee health insurance premiums. For a worker in a small firm earning $12,000 per year, or about $5.75 an hour, the Clinton mandate would mean an additional cost of about 20 cents an hour, or $8.08 a week. A new payroll tax of 3.5 percent is approximately equal to the decline in the value of the minimum wage due to inflation over the last 14 months. Just as this decline has produced no employment boom, it is unlikely that the mandate will lead to large job losses. Recent research by leading labor economists indicates that the employment effects will not even be large enough to be picked up in national statistics (Card 1992; Katz and Krueger 1991; Spriggs forthcoming).

Under the Clinton plan, small low-wage firms will have their costs capped at 3.5 percent of payroll. As average wages in small firms rise from $12,000 to $24,000, the payroll cap rises from 3.5 to 7.9 percent of payroll. No firm will be required to pay more than 7.9 percent of payroll for health insurance premiums. However, the studies most frequently cited in critiques of the Clinton mandates assume much higher costs. A study by the Employment Policies Institute assumes employer premium costs of $5,310 for family coverage and $2,160 for individuals (O'Neill and O'Neill 1993). The report concludes that such mandates would result in a loss of 3.1 million jobs. While we strongly disagree with many of the assumptions and technical aspects of this work, our central objection to its use in the current debate is that it is irrelevant to the question of the effects of the Clinton mandates on employment. This work assumes that low-wage, small firms' premium costs for a family policy would be more than 12.5 times greater than they actually would be under the Clinton plan and that costs for individual premiums would be more than five times greater. Under the Clinton plan, even large high-wage firms would not face costs as high as those used in this work. The study's family premiums are more than twice as large, and individual premiums are nearly 1.5 times as large as those that would be faced by large high-wage firms under the Clinton plan. In addition, this work ignores the cost savings that will be received by many firms and the resultant employment gains.

Another frequently cited work was prepared by the CONSAD Research Corporation for the National Federation of Independent Business, a small-business trade association. This work examines the employment effects of five health reform proposals (but not the Clinton plan; it had not been developed), and specifically excludes from the estimates of employment effects "businesses whose health care insurance premiums are reduced under a health care reform proposal" (page 18). Moreover, of the three proposals they examine that include employer mandates, none is at all similar to the Clinton plan. Two plans require all employers to pay 75 to 80 percent of premiums, and the third imposes a 7 percent payroll tax on all firms. Under these regimes, they find that 6.6 to 16.3 million jobs would be placed "at risk," meaning the workers in these jobs would face job losses, layoffs, or reduced wages and benefits. While we question many of their assumptions and methods, our main critique is the relevance of these findings to the Clinton proposal. None of these proposals provide subsidies to small firms nor cap firms' costs as the Clinton plan does. These two studies do not inform us about the employment effects of the Clinton plan. An examination of these effects has yet to be done.

In addition to basing their studies on estimates of premiums that are too high and on very dubious assumptions, these two reports also explicitly exclude from their analysis those sectors of the economy that will gain from health care reform.

Clearly many firms will benefit, as described above, and the manufacturing sector, which is singularly important for the economy, stands to gain quite a bit.

BIBLIOGRAPHY

Baker, Dean and Thea Lee. "Employment Multipliers in the U.S. Economy." Washington, DC: Economic Policy Institute, Working Paper, 1993.

Bosworth, Barry P. *Savings and Investment in a Global Economy.* Washington, DC: The Brookings Institution, 1993.

Card, David. "Do Minimum Wages Reduce Employment? A Case Study of California, 1987–89." *Industrial and Labor Relations Review,* No. 46, pp. 38–54, October 1992.

CONSAD Research Corporation. "The Employment Impact of Proposed Health Care Reform on Small Business." Washington, D.C.: National Federation of Independent Business, May 6, 1993.

duRivage, Virginia L. *New Policies for the Part-Time and Contingent Workforce.* Washington, DC: Economic Policy Institute, 1992.

Employee Benefit Research Institute. *Sources of Health Insurance and Characteristics of the Uninsured.* Washington, DC: Employee Benefit Research Institute, 1993.

Fazzari, Steven. "Investment and U.S. Fiscal Policy in the 1990s." Washington, DC: Economic Policy Institute, Briefing Paper, 1993.

Katz, Lawrence and Alan Krueger. "The Effect of the New Minimum Wage Law in a Low Wage Labor Market," National Bureau of Economic Research, Working Paper No. 3655, 1991.

Mishel, Lawrence and Jared Bernstein. *The Joyless Recovery: Deteriorating Wages and Job Quality in the 1990s.* Washington, DC: Economic Policy Institute, 1993.

O'Neill, June E. and Dave M. "The Impact of a Health Insurance Mandate on Labor Costs and Employment." Washington, D.C.: Employment Policies Institute, September 1993.

Spriggs, William. "Changes in the Federal Minimum Wage, A Test of Wage Norms." *Journal of Post-Keynesian Economics,* forthcoming.

U.S. Department of Commerce. *Fixed Reproducible Tangible Wealth in the United States, 1925–1989.* Washington, DC: U.S. Government Printing Office, 1992.

ENDNOTES

1. This report was funded by the Henry J. Kaiser Family Foundation as part of the Kaiser Health Reform Project, an effort to help inform policymakers, the media, and the public on critical issues in health reform. This study by the Economic Policy Institute examines one such issue and is one of several the Foundation is funding on the economic impact of health reform. The Kaiser Family Foundation does not endorse the findings of any single study, and hopes that each will contribute to the debate.

2. As of early October 1993, when this report was being written, the Clinton health reform plan had not been officially released. The basis of this analysis is a "leaked" but widely circulated description of the plan, dated September 7, 1993.

3. Since this analysis was completed, the Administration has announced changes in the health care plan. See "Estimating Health Care Costs in the Manufacturing Sector" in the Appendix for a discussion of the effects of these changes.

4. See "The Impact of a Health Insurance Mandate on Labor Costs and Employment," by June E. O'Neill and Dave M. O'Neill of the Employment Policies Institute, Washington, DC, September 1993, and "The Employment Impact of Proposed Health Care Reform on Small Business," prepared by the CONSAD Research Corporation for the National Federation of Independent Business, Washington, DC, May 1993.

5. Kathleen Day, "The Reformer Meets the Restaurateurs," *The Washington Post,* September 14, 1993, and Sylvia Nasar, "Health Care Quandary: Will Coverage Cut Jobs?" *The New York Times,* August 30, 1993.

6. The Clinton plan would provide approximately $421 billion in subsidies over five years to small firms for the purpose of offsetting their expenditures for health insurance premiums. This would greatly reduce their premium costs and eliminate much of the employment effects of the mandates. See Dana Priest, "Health Subsidy Estimate Rises by $16 Billion," *The Washington Post,* October 5, 1993.

7. The Employment Policies Institute study uses an elasticity of −0.3 in calculating the sensitivity of labor demand to changes in labor costs. This implies that a 1 percent increase (decrease) in labor costs leads to a 0.3 percent decrease (increase) in labor demand. This degree of sensitivity would imply that the 20 percent rise in the real value of the minimum wage between 1989 and 1990 would have led to a

6 percent drop in employment for minimum wage workers. In fact, a variety of studies by the nation's leading labor economists found no evidence of any decline in employment (Katz and Krueger 1991; Card 1992; Spriggs forthcoming).

8. In all of these scenarios we count only the direct impact of increased spending on net exports or investment. We do not include any respending or multiplier effects from the higher wages, etc., under the assumption that this spending is largely displacing other spending that, in the absence of the redistribution of costs, would have been done by firms or workers in the service sector. Insofar as this is not the case, we have understated the positive impact of the redistribution of health care costs.

9. A key assumption we made in modeling the Clinton plan is that it is possible for the economy to be below full employment and to have unused resources. Economists often use general equilibrium models, which assume full employment, to assess the impact of policies. In these models, changes only come about through the reallocation of resources from less to more productive Uses, or vice versa. There can be no overall gains to the economy as a whole except for the increased efficiency associated with such reallocations. We did not take this route in modeling the Clinton health care package, because we do not believe it presents an accurate description of the economy. By almost any standard measure, such as unemployment rates or capacity utilization, the economy is nearly always operating below its potential. This means that the impact of a policy in dampening or stimulating demand for unused resources is likely to be far more significant than its impact in reallocating resources between more and less productive sectors.

10. The latest details on this issue from the Clinton Administration indicate that for the first three years of the plan firms may be assessed a fee equal to one-half of their savings on early retirees' health costs (Wall Street Journal, October 14, 1993). Such fees are not included in this analysis.

11. **Health Insurance Coverage from Own Employer, 1991**

Industry	*Percent Insured*
Wholesale Trade	66
Retail Trade	35
Business and Repair Services	44
Personal Services	26
Entertainment and Recreational Services	33
Professional Services	56
Finance, Insurance, and Real Estate	67

Source: Employee Benefit Research Institute, 1993.

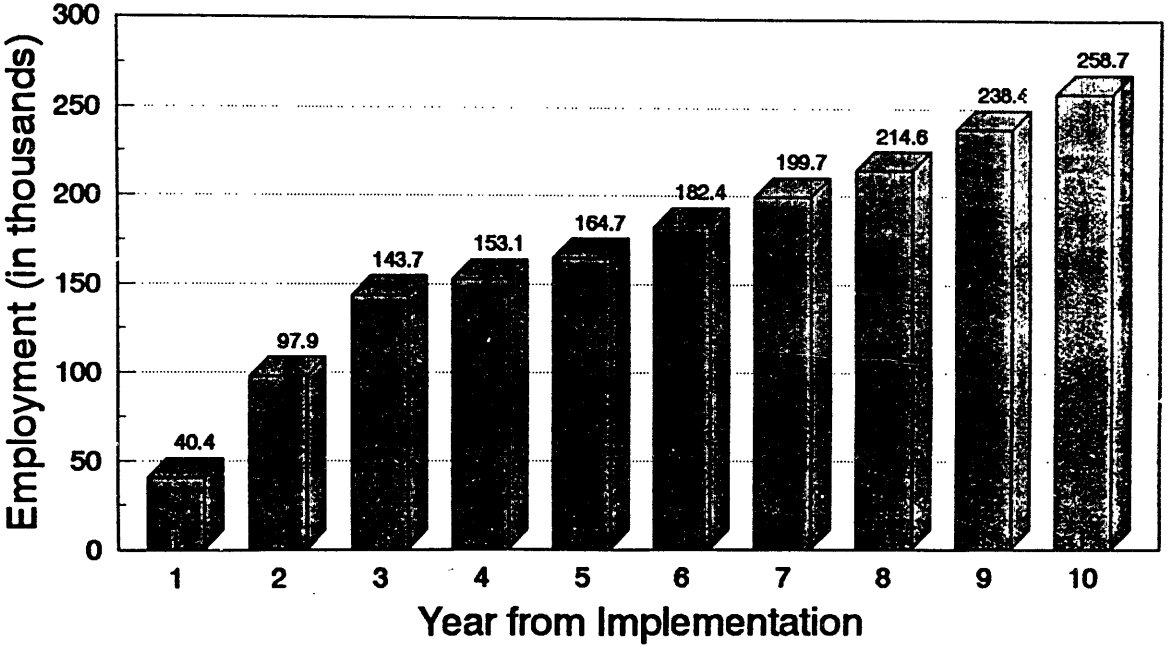
12. It is possible that the negative impact of increased costs in the service sector is larger than the positive impact of lower costs in the manufacturing sector. This would require a greater elasticity of demand for labor in the service sector than in manufacturing. There is no evidence that this is the case. Furthermore, since most estimates of the elasticity of demand for labor are very low in any case, it is very unlikely that any difference between sectors could have much of an impact on our calculations.

13. Personal communication, Health Care Task Force.

14. Priest, Dana. "Health Subsidy Estimate Rises by $16 Billion." *The Washington Post,* October 5, 1993.

Figure I

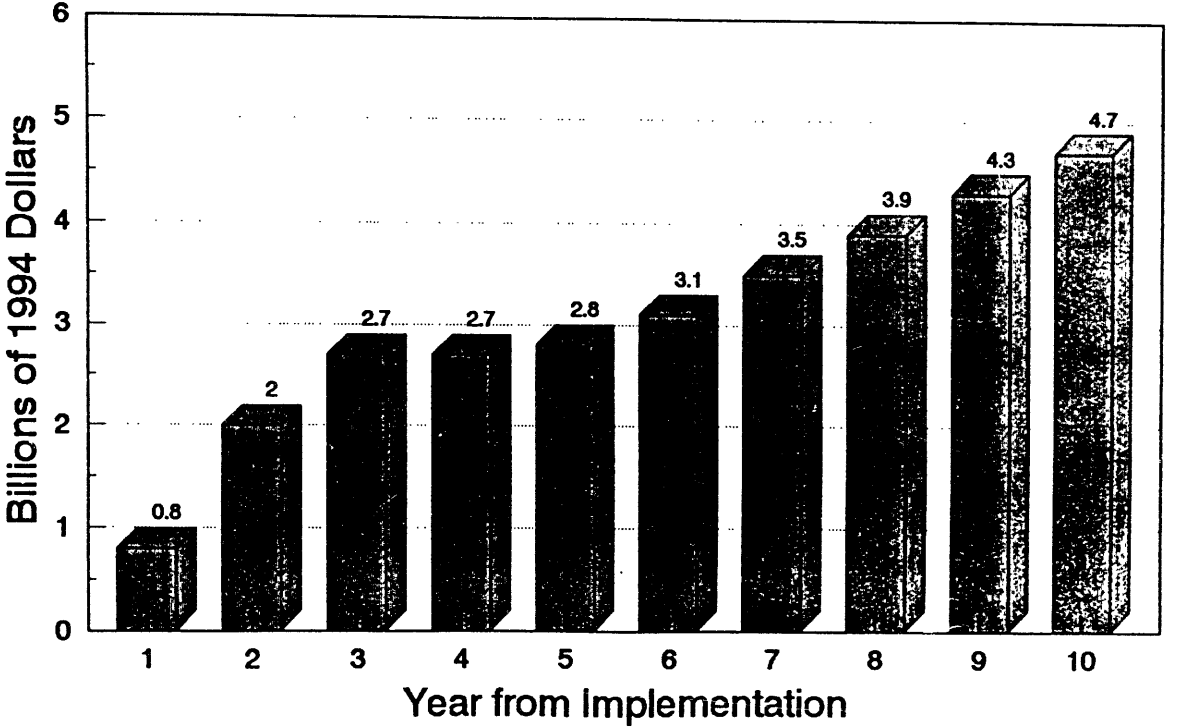
Job Growth in Manufacturing under the Clinton Plan



Note: Findings based on authors' estimates.

Figure 2

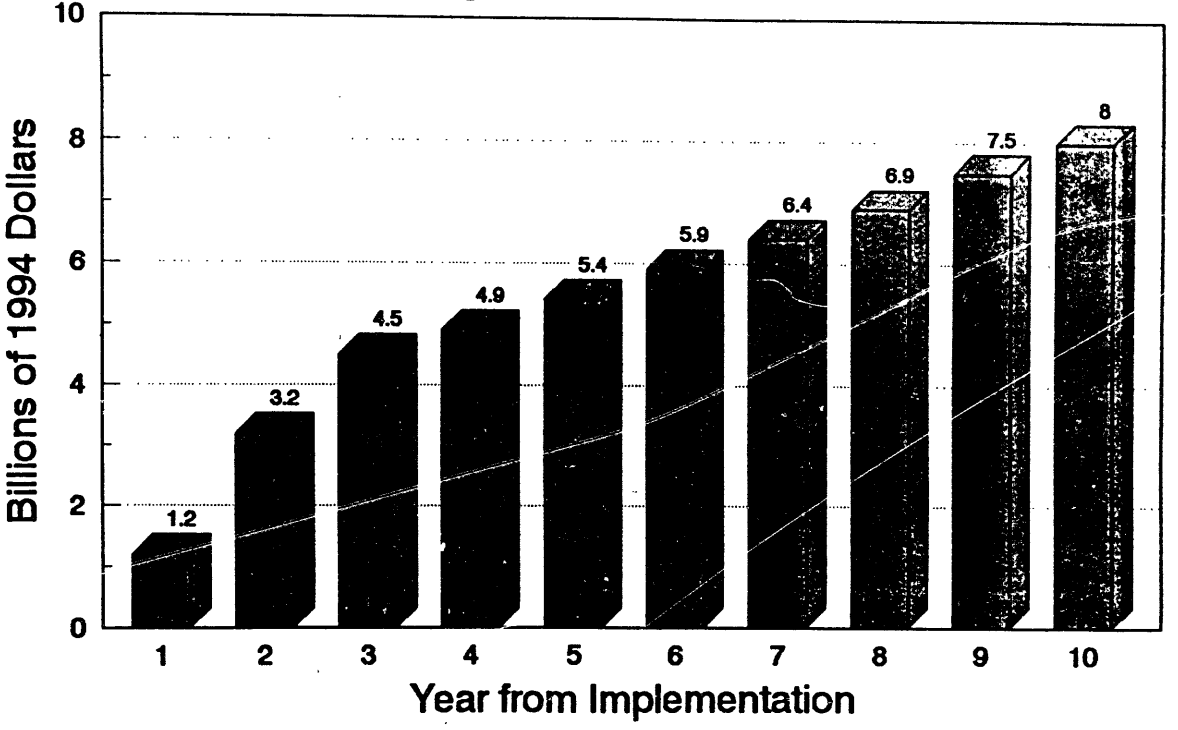
Increase in Investment under the Clinton Plan



Note: Findings based on authors' estimates.

Figure 3

Increase in Net Exports under the Clinton Plan



Note: Findings based on authors' estimates.

COMMUNICATIONS

STATEMENT OF THE AMERICAN DENTAL HYGIENISTS' ASSOCIATION

The American Dental Hygienists' Association (ADHA) is the largest national organization representing the professional interests of the approximately 100,000 dental hygienists across the country. Dental hygienists are preventive oral health professionals, licensed in dental hygiene, who provide educational, clinical and therapeutic services that support total health through the promotion of optimal oral health.

ADHA is pleased that reform of the nation's health care delivery system is one of Congress' highest domestic priorities. We are committed to participating in this process to ensure universal access to cost-effective quality health care, including, *at a minimum* preventive oral health services. Oral health *is* a part of total health and the oral health care delivery system requires reform along with the medical care delivery system.

ADHA is pleased that the Health Security Act proposed by President Clinton includes preventive and primary dental care for children as well as emergency care for both children and adults. However, in light of the proven cost-effectiveness of preventive oral health care—where each $1 spent yields $8–$50 in savings—ADHA feels strongly that preventive and other basic oral health care benefits should be provided to adults from the outset. As currently written, the Clinton plan would phase in additional dental benefits for adults by the year 2001.

As this Subcommittee explores the impact of health reform on business competitiveness, ADHA wishes to highlight the cost savings associated with preventive oral health care.

ADHA has joined the Coalition for Oral Health, which includes approximately twenty-five national oral health organizations, to press for the inclusion of cost-effective oral health benefits in health care reform legislation. The Coalition, using U.S. Public Health Service data, has developed a preventive and primary oral health package for children and adults which would cost a modest **less than $10 per person per month.** *This package would include: preventive services consisting of a professional oral health assessment, dental sealants, professionally-applied topical fluoride, an annual dental cleaning (oral prophylaxis), and fluoride supplements; acute, emergency dental services; early intervention services (to maintain and restore function) including restorative services and periodontal maintenance services; and certain accommodations for persons with disabilities.*

ACCESS TO ORAL HEALTH CARE

The Institute of Medicine estimates that fifty percent of Americans do not receive regular dental care. Further, while 37 million Americans lack medical insurance, the National Dental Research Advisory Council reports that 150 million Americans lack dental insurance, and millions more are underinsured for health care, including oral health care.

Preventable oral diseases currently afflict the majority of children and adults in our country. Dental caries (tooth decay), gingivitis and periodontitis (gum and bone disorders) are the most common oral diseases. In fact, the Public Health Service reports that fifty percent of all children in the United States experience dental caries in their permanent teeth and two-thirds experience gingivitis. Furthermore, nearly half of all employed adults have gingivitis and eighty percent have experienced periodontitis, according to the U.S. Preventive Services Task Force. If untreated, gum disease causes bone deterioration and eventual loss of teeth, pain, bleeding, loss of function, diminished appearance, and possible systemic infections. Indeed, as many as four to fifteen percent of American adults, and more than forty percent of the elderly, have lost all their teeth. These individuals frequently experience nutritional deficiencies as a result of being unable to chew food. *Each of these oral health*

disorders—dental caries, gingivitis and periodontitis—can be prevented through regular preventive care.

Universal access to oral health services should be provided to all Americans as one way to support total health. Ideally, everyone should have access to diagnostic, preventive, restorative and periodontal care, as well as emergency care to treat pain. At a minimum, however, preventive services should be available as an investment for long-term savings.

Children, in particular, should be assured regular preventive services. The American Academy of Pediatrics supports a *fully funded* preventive care benefit package—which includes preventive dental care—as a component of its recommended basic benefit package for children. The Medicaid Early and Periodic Screening Diagnosis and Treatment (EPSDT) program also recognizes the value of preventive oral health care for children, mandating coverage of these services for all Medicaid-eligible individuals from birth to age 21. Because of financial and other restrictions imposed by states, however, the September 1989 "Public Health Service Workshop on Oral Health of Mothers and Children" revealed that the Medicaid program continues to serve only a fraction of the children it was intended to serve.

Preventive oral health care has already proven beneficial. The National Institute Dental Research (NIDR) reports that one-half of American children ages five to seventeen are now cavity free. Although the prevalence of dental caries among school-aged children has declined in recent years, 84 percent of 17-year olds were found in a recent NIDR survey to have cavities. Further, the Centers for Disease Control reports that the oral health of African Americans and Hispanics is far worse than that of whites. For example, one of the most severe forms of gum disease—localized juvenile periodontitis—disproportionately affects teenage black males and can result in loss of all teeth before adulthood.

Americans with access to preventive dental services highly value this care, as illustrated by federal government workers. The *Washington Post* recently reported that 1.5 million of the four million current and retired federal workers who participate in the Federal Employees Health Benefits (FEHB) program choose the Blue Cross-Blue Shield policy, in part because of its preventive dental package, which includes dental exams, X-rays, prophylaxis (cleaning) and fluoride treatments. In addition, Hewitt Associates (Hewitt), an international consulting firm specializing in employee benefit plans, reports that 92 percent of the health plans in its data base include dental coverage.[1] Hewitt also reports that employees ranked dental coverage second in importance only to medical coverage and before all other benefits, including paid time off, pension options, sick leave and life insurance.

COST SAVINGS ASSOCIATED WITH PREVENTIVE ORAL HEALTH CARE

Investing in America's oral health care will translate directly into fiscal savings. It is a known fact that preventive care can reduce the need for expensive critical care. In fact, NIDR reported in July 1992 that Americans saved nearly $100 billion in dental bills during the 1980s because of improvements in oral health. Each $1 spent on preventive oral health care yields $8–$50 in savings.

Remarkably, while economic factors, such as population growth, increases in numbers of dentists, and increases in numbers of Americans with dental insurance, might have significantly increased the growth in dental expenditures over the past decade. National Income and Product Accounts data from the U.S. Commerce Department indicate that average annual growth in total real dental expenditures, adjusted for inflation, was only one percent annually from 1979 to 1989. This was substantially less than growth in medical expenditures. This slower growth in dental expenditures is estimated to have resulted in savings to the American public of more than $39 billion in 1990 dollars from 1979 through 1989. Increased emphasis on prevention, widespread use of fluorides, and a better-informed public contributed to those cost savings.

Even with these savings, however, there is room for significant improvement. In fact, the American Fund for Dental Health reports that 20 million work days are lost annually due to oral health problems. Increased access to preventive oral health services undoubtedly would reduce this staggering number and exponentially increase cost savings.

---

[1] Hewitt Associates March 30, 1993 testimony before the House Ways and Means Subcommittee on Health, "HealthCare Reform: Consideration of Benefits for Inclusion in a Standard Benefits Package," stated that it maintains a data base covering the salaried employees of over 1,000 major employers and the hourly and union employees of more than 200 major companies. These employers provide benefits to more than 20 million employees and 35 million of their spouses and dependents.

A working draft report prepared by the Public Health Service's Oral Health Coordinating Committee entitled "An Essential Oral Health Benefits Package" estimates an annual per capita cost of $74 to provide all American children with comprehensive oral health services[2] and all American adults with only acute emergency and preventive services.[3] Thus, the estimated cost of providing these services would be $19.2 billion for the entire population or $11.8 for the 160 million Americans who presently lack dental insurance. The report further estimates that extending comprehensive coverage to all Americans would entail a per capita cost of $134 or $34.9 billion for the entire population or $21.5 billion for the dentally-uninsured. [See attached table.]

The Coalition for Oral Health, which includes ADHA and other national oral health organizations, is advocating the inclusion of a cost-effective oral health benefits package in health care reform legislation. The Coalition, using U.S. Public Health Service data, has developed a preventive and primary oral health package for children and adults which would cost a modest **less than $10 per person per month.** *This package would include: preventive services consisting of a professional oral health assessment, dental sealants, professionally-applied topical fluoride, an annual dental cleaning (oral prophylaxis), and fluoride supplements; acute, emergency dental services; early intervention services (to maintain and restore function) including restorative services and periodontal maintenance services; and certain accommodations for persons with disabilities.*

ROLE OF DENTAL HYGIENISTS IN PROVIDING AMERICA'S ORAL HEALTH CARE

As the primary providers of preventive oral health services, dental hygienists stand ready to aid the nation in improving its delivery of oral health care and subsequently contributing to total health by providing valuable services such as routine prophylaxis; periodontal assessment, treatment and maintenance; application of fluorides and sealants; x-rays; and education in self care. By helping patients modify personal health behaviors to promote self care, dental hygienists assist individuals in playing a vital and cost-effective role in their own oral health.

As Congress reforms the health care delivery system, lawmakers thus should not view dentists as the gatekeepers of oral health services, akin to the primary care physician whose status may be elevated to that of gatekeeper of the provision of medical services in the future. The role of a dentist in the delivery of oral health care is not akin to that of a primary care physician. The preventive oral health services which ADHA is advocating be included in a standard benefits package should be available to all Americans when provided by any state licensed provider. Both dental hygienists and dentists are licensed in all 50 states and therefore have demonstrated their competence to the satisfaction of state licensure boards whose mission it is to ensure the health, safety and welfare of the public. Further, dental hygienists receive three times the amount of education in preventive oral health services as do dentists.

Federal legislation should ensure direct access to dental hygienists by providing for direct reimbursement in order to maximize Americans' access to preventive oral health care services. We must break down arbitrary practice setting barriers to access which have long tied oral health care delivery to the fee-for-service private dental office, where only 50 percent of the population is served. Several states, including Colorado and Washington, have endorsed direct access to dental hygienists through legislation which permits dental hygienists to practice independently. These states expressly have recognized that full utilization of the services of dental hygienists can address the need to augment the delivery of oral health care. Federal law in no way should impede the progress that states are making in recognizing that dental hygienists appropriately may provide preventive oral health services outside of the purview of a dental office, thus breaking down the barriers which have impeded access to oral health services for too long.

---

[2] Services recommended include professional oral health assessment, consisting of thorough examination of the hard and soft tissues of the oral cavity and related structures provided on an annual basis, for those age two and older; dental sealants for permanent molar teeth in children; professionally-applied topical fluoride provided up to twice a year for children and adults who are assessed to be at risk for dental caries; oral prophylaxis (cleaning) for the removal of hard and soft deposits and extrinsic strain; and fluoride supplements made available to children until age 13 whose water supply contains sub-optimal levels of fluoride, acute emergency dental services, dental restorative services, and periodontal maintenance services.

[3] Adult preventive services would include oral health assessment, oral prophylaxis, periodontal maintenance services, professionally-applied topical fluoride for adults at risk for dental caries, and acute emergency dental services.

A 1987 Federal Trade Commission study entitled *Restrictions on Dental Auxiliaries, An Economic Policy Analysis* recommends the elimination of licensing laws which limit the number of dental hygienists in a dentist's practice, finding that increased use of dental hygiene services will decrease costs to the consumer and improve access, without compromising quality. It is critical for federal legislation to buttress, and not impede, state law efforts to ensure increased access to dental hygiene services for children, the elderly, minorities, the poor, and the traditionally underserved. Indeed. recently proposed Medicaid EPSDT program rules for dental screening services would provide for referral to a dentist *or a professional dental hygienist* under the supervision of a dentist as an option to satisfy the requirement for initial referral for dental services. The stated rationale is to "increase the availability of dental services in areas where dentists are scarce or not easy to reach." Any federal legislation that provides for preventive oral health care services must protect patients' direct access to dental hygienists by providing for direct reimbursement.

CONCLUSION

In conclusion, preventable oral diseases still afflict the majority of children and adults in our nation, compromising their health and unnecessarily adding to health care costs. Ideally, all Americans should have access to diagnostic, preventive, restorative and periodontal care, as well as emergency care to treat pain. But, at a very minimum, Americans need access to basic preventive oral health care, including education in self care, routine teeth cleaning, provision of fluorides and sealants, periodontal maintenance and routine x-rays. Any federal legislation that provides for preventive oral health benefits also must ensure Americans' access to dental hygienists, the primary providers of preventive oral health care services.

ADHA stands ready to work with the nation's policymakers to ensure every American basic oral health and the savings of billions of health care dollars.

TABLE IV. **Oral Health Benefits Package**
Primary Preventive, Acute Emergency & Early Intervention Services
Targeted for Children, Adolescents, Adults, and Seniors

Basic Oral Health Services *Primary Prevention & Acute Emergency Services*	Target Population	Provider-Based Services (Guidelines / Modifiers / Estimated Costs)				
		Frequency of Service (V/Year)	Utilization Rate[a]	Specific Service Modifier	Estimated Unit Cost ($/unit)[b]	Estimated Annual Per Capita Cost
Oral Health Assessment	Children / Adolescents & Adults / Seniors					
• Initial Oral examination		1	70 %	–	$22	$15
• Periodic Oral Examination		1	70 %	–	$17	$12
• Dental X-rays (3 bitewings)		1	70 %	–	$16	$11
Dental Sealants	Children & Adolescents[c] (5 and 14 years)	1	50 %[d]	4 molars[e]	$19	$38
Professionally-Applied Topical Fluorides	Children & Adolescents (Non-Fluoridated Areas)	2	85 %[f]	45 %[g]	$16	$12
	Children & Adolescents (High Risk – Fluoridated Areas)	2	20 %[h]	55 %[i]	$16	$ 4
	Adults (High Risk of Caries)	2	70 %	10 %[j]	$16	$ 2
	Seniors (High Risk of Caries)	2	70 %	10 %[j]	$16	$ 2
Oral Prophylaxis (Dental Cleaning)	Children & Adolescents	1	70 %	60 %[k]	$28	$12
	Adults & Seniors	1	70 %	40 %[l]	$39	$ 11
Fluoride Supplements (Daily Supplements)	Children (13 years and under)[m]	1 (daily)	85 %[f]	45 %[g]	$16	$ 6
Acute Emergency Dental Services	Children / Adolescents & Adults & Seniors					
• Emergency Examination		1	15 %[n]	–	$23	$3
• Sedative Filling		1	2 %	–	$31	$1
• Emergency Tx of Pain		1	2 %	–	$34	$1
• Extraction (simple tooth)		1	10 %	–	$47	$5
• Extraction (surgical)		1	1 %	–	$86	$1
• Traumatic wound Tx		1	1 %	–	$55	$1
Dental Restorative Services (Dental fillings)	Children (Primary Teeth) (3 to 10 years)[o]	1	70 %	1.1 surfaces[p]	$38	$30
	Children & Adolescents (Permanent Teeth) (6 to 18 years)[q]	1	70 %	0.4 surface[r]	$44	$12
	Adults (Coronal Caries)	1	70 %	1.3 surfaces[s]	$44	$40
	Adults (Root Caries)	1	70 %	0.4 surface[t]	$44	$12
	Seniors (Coronal Caries)	1	70 %	1.54 surfaces[u]	$44	$46
	Seniors (Root Caries)	1	70 %	1.46 surfaces[v]	$44	$46
Periodontal Maintenance Services (Dental scaling and root planing)	Children & Adolescents	1	70 %	10 %[w]	$60	$4
	Adults	1	70 %	54 %[x]	$60	$23
	Seniors	1	70 %	66 %[y]	$60	$28

FOOTNOTES: Assumptions used in the development of the Oral Health Benefits Package

a **Estimated utilization rate**–The proposed oral health service package projects an overall utilization rate of 70 percent for the target population, unless disease conditions or other modifying factors warrant adjustment of this rate.[20] National dental care utilization data (NHIS, 1989) reports an overall annual utilization rate of 57 percent.[2] *Healthy People 2000* has set a goal of 70 percent utilization of the oral health care system for adults aged 35 years and older.[33] Recommend that future cost estimates be based on a utilization rate of 70 percent for all age categories.

b **Unit cost of dental services**–Cost estimates for individual clinical-based services are based on 1985 median fees from a national survey of dentists conducted by the American Dental Association[1] and adjusted to 1992 dollars.

c **Eligible population**–The services package targets the population of two age groups (8 and 14 year old children) for placement of dental sealants on susceptible permanent molar teeth, in any one year.[20] Recommend the application of sealants to a total of eight (8) permanent molar teeth per individual during the period of 7 to 15 years of age.[34]

d **Utilization modifier**–A modified utilization rate of 50 percent for sealant application is recommended based upon the target goal of 50 percent established in *Healthy People 2000*.[33] In 1989, only 17 percent of eight year old children, and 13 percent of children aged 14 years, were reported to have sealants.[2]

e **Service modifier**–The preventive services package recommends a single application of dental sealants to four (4) permanent molar teeth per individual, in any one year, during the period of 7 to 15 years of age.

f **Utilization modifier**–The benefit package employs an 85 percent utilization rate, which corresponds to the *Healthy People 2000* target goal for individuals not receiving optimally fluoridated public water.[33]

g **Service modifier**–The Centers for Disease Control and Prevention (CDC) estimates that approximately 112 million people (or approximately 45 percent) in the U.S. (1989) did not have access to the benefits of optimally fluoridated water, either through adjusted or naturally occurring means.[4] Assuming the U.S. population served by community and non-community water supplies is distributed evenly by age category, this service package assumes that 45 percent of the child population consumes drinking water with less than optimal levels of fluoride. Thus, this figure represents the proportion of the U.S. population not receiving water with a dentally significant concentration of fluoride and would benefit most from the application of professionally-applied topical and systemic fluoride supplements. Children and adolescents consuming dentally significant concentrations of fluoride in their drinking water should not be prescribed dietary fluoride supplements.

h **Utilization modifier**–A modified utilization rate of 20 percent is used in the model to represent the proportion of the U.S. child population at high risk of experiencing dental caries, and thus would benefit from additional topical fluoride treatment–even those residing in fluoridated areas. This estimate is based on the 1986-87 National survey of oral health in school children that reported 60 percent of the decayed teeth in children were found in 20 percent of the individuals surveyed.[19]

i **Service modifier**–The CDC estimates that over 128 million people (1989) in the U.S. in more than 8,081 communities are receiving the benefits of optimally adjusted fluoridated water, and an additional 9 million people in 1,869 communities are using water with naturally occurring fluoride at levels of 0.7 mg/liter or higher.[4] Assuming the child population served by community and non-community water supplies is distributed evenly by age category, the service package used the estimate of 55 percent as the proportion of the U.S. child population with access to drinking water with a dentally significant concentration of fluoride. This population would not benefit significantly from professionally-applied topical fluoride, unless there is evidence the individual is at increased risk of dental caries (see footnote h).

j **Service modifier**–The National Institute of Dental Research (NIDR) conducted the 1985-86 National Survey of Oral Health in U.S. Employed Adults and Seniors and reported that approximately 7 percent of employed adults (dentate) aged 18-64+ years were caries free, and about 3 percent of dentate seniors aged 65+ (dentate) were caries free.[18] Although only a small proportion of adults/seniors were found to be caries free, an estimate of 10 percent was project as the proportion of adults/seniors at increased risk of active dental caries and would benefit from fluoride supplements. The service modifier is based upon the survey findings that the decayed component (D) of caries scores (unrestored tooth surfaces) comprised approximately 8 percent in employed adults and 9 percent in seniors of the decayed and filled tooth scores (DFT).[18]

k **Service modifier**–The proportion of children and adolescents requiring "routine oral prophylaxis" is estimated to be 60 percent. This estimate is based on the 1986-87 NIDR National Survey of Oral Health in School Children which reported 59 percent of children aged 14-17 years demonstrated gingival bleeding upon probing.[19] Gingival bleeding serves as an indicator for mild or moderate gingival inflammation and an indirect measure of treatment need required.

l **Service modifier**—Approximately 89 percent of the adult population aged 18 and older is classified as dentate.[9] The proportion of dentate adults aged 19 to 64 years and dentate seniors aged 65+ years requiring "routine oral prophylaxis" is estimated at 40 percent. Projection based of data from the 1985-86 NIDR National Survey of Oral Health in U.S. Employed Adults and Seniors -- 43.6 percent of employed adults (dentate) aged 18-64+ years were reported with gingiva bleeding in at least one site; and 46.9 percent of seniors (dentate) were reported with bleeding gingiva.

m **Eligible population**—The target population includes infants and children, 13 years of age and younger. Daily use of dietary fluoride supplements is recommended for infants (pediatric drops) and children (fluoride tablets) up through the age of 13, who reside in areas not served by fluoridated public or private water supplies.[14]

n **Estimated utilization rate**—The estimated need for emergency dental services is 15 percent. Based on data from the 1985-86 National Survey of Oral Health in U.S. Employed Adults and Seniors -- 18.6 percent of employed adults, and 16.2 percent of seniors self-reported the need for "immediate" dental treatment.[15] From the same national survey, 14 percent of adults and seniors reportedly sought dental care for either a toothache or to have a tooth extracted.[16]

o **Eligible population**—The benefit package targets the population of children, aged 3 to 10 years, at risk of experiencing dental caries in their primary dentition.

p **Service modifier**—Based upon the findings of the 1986-87 National Survey of Dental Caries in U.S. School Children, the mean number of decayed (unrestored) primary tooth surfaces requiring restoration was 1.1 tooth surfaces. The mean decayed and filled tooth surfaces score (dfs) for children aged 5-9 years was reported as 3.9 surfaces (the decayed component was 28 percent).[17]

q **Eligible population**—The benefit package targets the population of children and adolescents, aged 6 to 18 years, at risk of experiencing dental caries in their permanent dentition.

r **Service modifier**—Based upon the findings of the 1986-87 National Survey of Dental Caries in U.S. School Children, the mean number of decayed (unrestored) permanent tooth surfaces requiring restoration was 0.4 of a surface. The mean decayed, missing, and filled tooth surface score (DMFS) for children and aged 5-17 years was reported as 3.07 surfaces (the decayed component comprised 13.4 percent).[17]

s **Service modifier**—Based upon the findings of the 1985-86 National Survey of Oral Health in U.S. Employed Adults and Seniors, the mean number of decayed (unrestored) coronal surfaces for employed adults aged 18 to 64+ was 1.3 surfaces. The mean decayed and filled coronal surfaces score (DFS) was reported as 23.2 surfaces (the decayed component comprised 5.6 percent).[18]

t **Service modifier**—Based upon the findings of the 1985-86 National Survey of Oral Health in U.S. Employed Adults and Seniors, the mean number of decayed (unrestored) root tooth surfaces for employed adults aged 18 to 64+ was 0.4 of a surface. The mean decayed and filled root surfaces was reported as 0.76 of a surface (the decayed component comprised 53.5 percent of the DFS score).[18]

u **Service modifier**—Based upon the findings of the 1985-86 National Survey of Oral Health in U.S. Employed Adults and Seniors, the mean number of decayed (unrestored) coronal surfaces for seniors aged 65+ was 1.54 surfaces. The mean decayed and filled coronal surfaces score was reported as 20.4 surfaces (the decayed component comprised 7.6 percent of the DFS score).[18]

v **Service modifier**—Based upon the findings of the 1985-86 National Survey of Oral Health in U.S. Employed Adults and Seniors, the mean number of decayed (unrestored) tooth surfaces for seniors aged 65+ was 1.46 surfaces. The mean decayed and filled root surfaces score was reported as 3.17 surfaces (the decayed component comprised 46.1 percent of the DFS score).[18]

w **Service modifier**—Based upon the findings of the 1986-87 National Survey of Dental Caries in U.S. School Children, 10 percent of children and adolescents were estimated to require dental scaling services beyond the "routine oral prophylaxis."

x **Service modifier**—Based upon the findings of the 1985-86 National Survey of Oral Health in U.S. Employed Adults and Seniors, 53.7 percent of employed adults aged 18 to 64+ were reported with findings of subgingival calculus.[18]

y **Service modifier**—Based upon the findings of the 1985-86 National Survey of Oral Health in U.S. Employed Adults and Seniors, 65.6 percent of seniors aged 65+ years were reported with findings of subgingival calculus.[18]

STATEMENT OF THE INTERNATIONAL HEARING SOCIETY

The International Hearing Society (IHS) is pleased to have this opportunity to submit testimony for the hearing record of the Senate Finance Subcommittee on Health for Families and the Uninsured January 12th hearing on the Impact of Health Reform on the Competitiveness of American Businesses.

IHS represents the vast majority of traditional hearing aid dispensers (a/k/a hearing aid specialists) in the United States. IHS members are the nation's most experienced providers in testing, selection, fitting and follow-up care of hearing aids. IHS members typically are small business men and women strategically located and accessible to the hearing impaired public throughout the United States.

Health reform appropriately seeks to increase patients' access to needed health care services in a cost-effective manner. To foster this goal, federal health reform policy should ensure utilization of and competition between all qualified providers. Indeed, Congress must be wary of professional groups that may seek to capitalize on health reform to secure a monopoly position where it is unwarranted. Further, federal (and possibly state) regulatory bodies may undermine Congressional efforts to ensure a maximally competitive marketplace.

The hearing aid industry offers an example of a segment of the health care delivery system that today offers patients services in a competitive marketplace, fully utilizing all qualified providers. Unfortunately, this environment is threatened by a possible revision of Food and Drug Administration (FDA) regulation of hearing aid devices which could restrict patients' access to one group of qualified providers. As such, the hearing aid industry also presents an example of how efforts could be undertaken at the regulatory level that could totally undermine Congressional goals. In devising health reform legislation, Congress should include provisions to require the utilization of all qualified practitioners and should coordinate, to the extent possible, with federal regulatory agencies to ensure that their policies are consistent with federal health reform goals.

THE HEARING HEALTH INDUSTRY

Over 26 million Americans suffer from hearing loss, but only 6 million of them use hearing aids. Given the vast underutilization of hearing aid devices, health reform presents an opportunity to augment Americans' utilization of this extremely valuable medical device in a competitive marketplace.

A. Provider groups

In the hearing health care industry, there are essentially three provider groups: physician ear specialists (otolaryngologists), audiologists and hearing aid specialists. Otolaryngologists treat hearing loss either medically or surgically. They request diagnostic testing performed by audiologists to assist them in reaching their medical diagnoses and treatment protocols. However, only 5–10% of the approximately 26 million hearing-impaired Americans can be treated medically or surgically. The remaining 90–95% have irreversible sensorineural hearing loss for which the only possible treatment is the use of a hearing aid.

Both audiologists and hearing aid specialists perform the requisite testing to determine hearing aid candidacy and to select and fit hearing aids. Audiologists have Masters degree in audiology. Hearing aid specialists may or may not have formal education, but are licensed in 46 states and registered in 2 others. Two independent role delineation studies find that qualification to test for hearing aid candidacy does not correlate with formal education.[1] Further, the American Academy of Otolaryngology has stated that both audiologists and hearing aid specialists are qualified to detect symptoms that warrant medical referral.

B. Cost and access issues

Hearing aid specialists typically are the most cost-effective providers. The average price of an in-the-ear hearing aid is $670. When sold by hearing aid specialists, this price includes testing and fitting fees in 90% of sales. Testing and fitting fees are included in the price of the instrument in 55% of the sales by dispensing audiologists in private practice. Dispensing audiologists in clinics and doctor's offices include testing and fitting fees in only 24.5% of sales.[2] The fees for the standard tests for hearing aid candidacy are not insubstantial (approximately $110).[3] These professional fees are nonrefundable and neither the professional fees for determin-

[1] The first role delineation study was conducted in 1981. More recently, in 1991, a second comprehensive study was conducted by Ayres D'Costa, Ph.D., of Ohio State University.
[2] *Hearing Instruments*, Vol. 44, No. 6 (1993).
[3] *Ibid.*

ing hearing aid candidacy nor the price of the hearing aid are covered by Medicare or most private insurers.

Hearing aid specialists also are more likely to be located in or service non-metropolitan areas than are audiologists. (*See* attached Exhibits 1 and 2).

Given the hearing aid specialists' accessibility and cost-effective provision of services, health reform should ensure patients' continued access to this provider group.

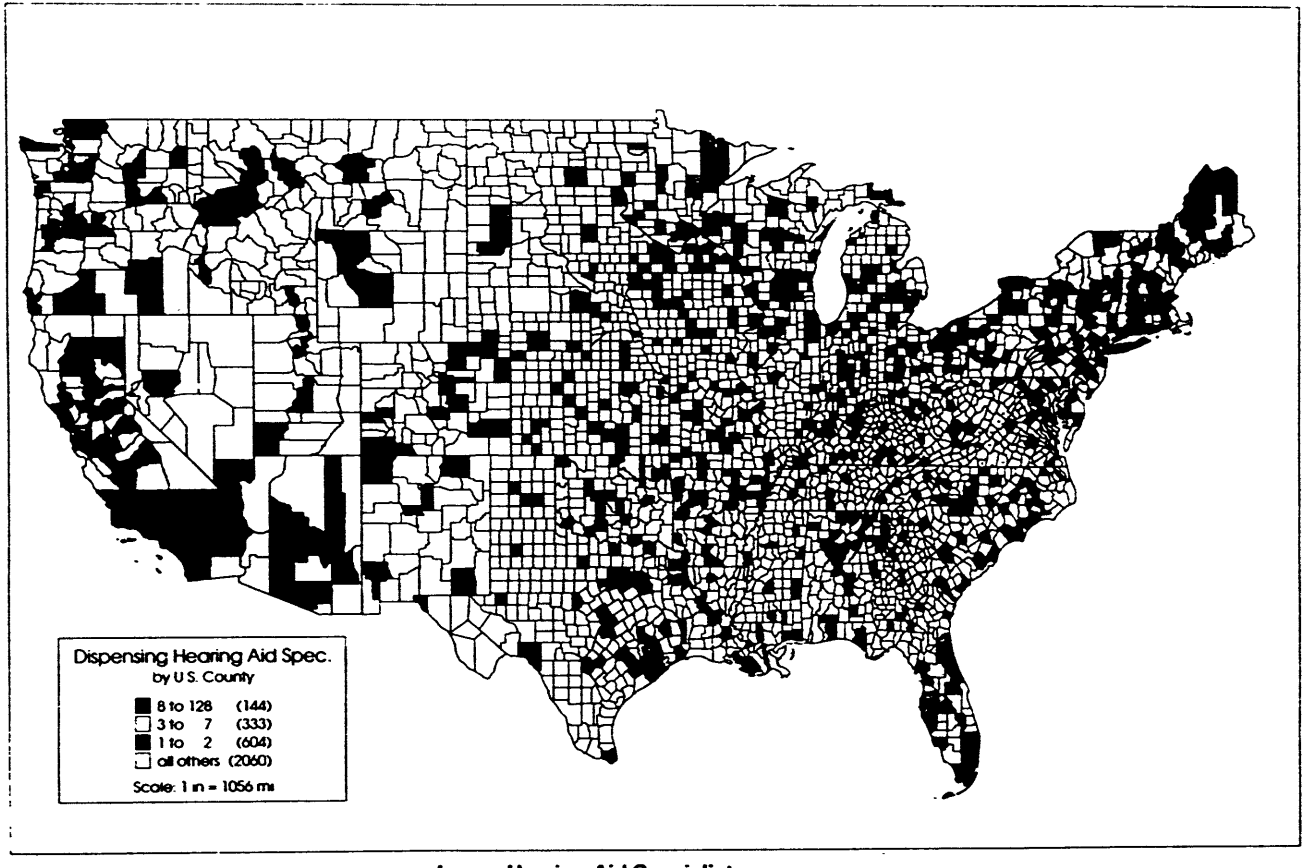
C. FDA activities

Ironically, as Congress debates health reform, the Food and Drug Administration (FDA), which has jurisdiction over the condition of sales of hearing aids, is considering a new proposed rulemaking that could *restrict* access to hearing aid specialists as a viable point of entry into the hearing health system. An Audiology Coalition of professional self-interest groups recently recommended that the FDA designate audiologists as the sole point of entry into the hearing health care system on the basis that only audiologists have an understanding of the full range of services that a hearing impaired individual may require. Yet, as noted above, only 5–10% of the hearing-impaired population requires the diagnostic services that audiologists principally perform. Further, unless ordered by a physician for the express purpose of assisting with a medical diagnosis or treatment plan, the audiologic diagnostic tests are unreimburseable under the Medicare program.

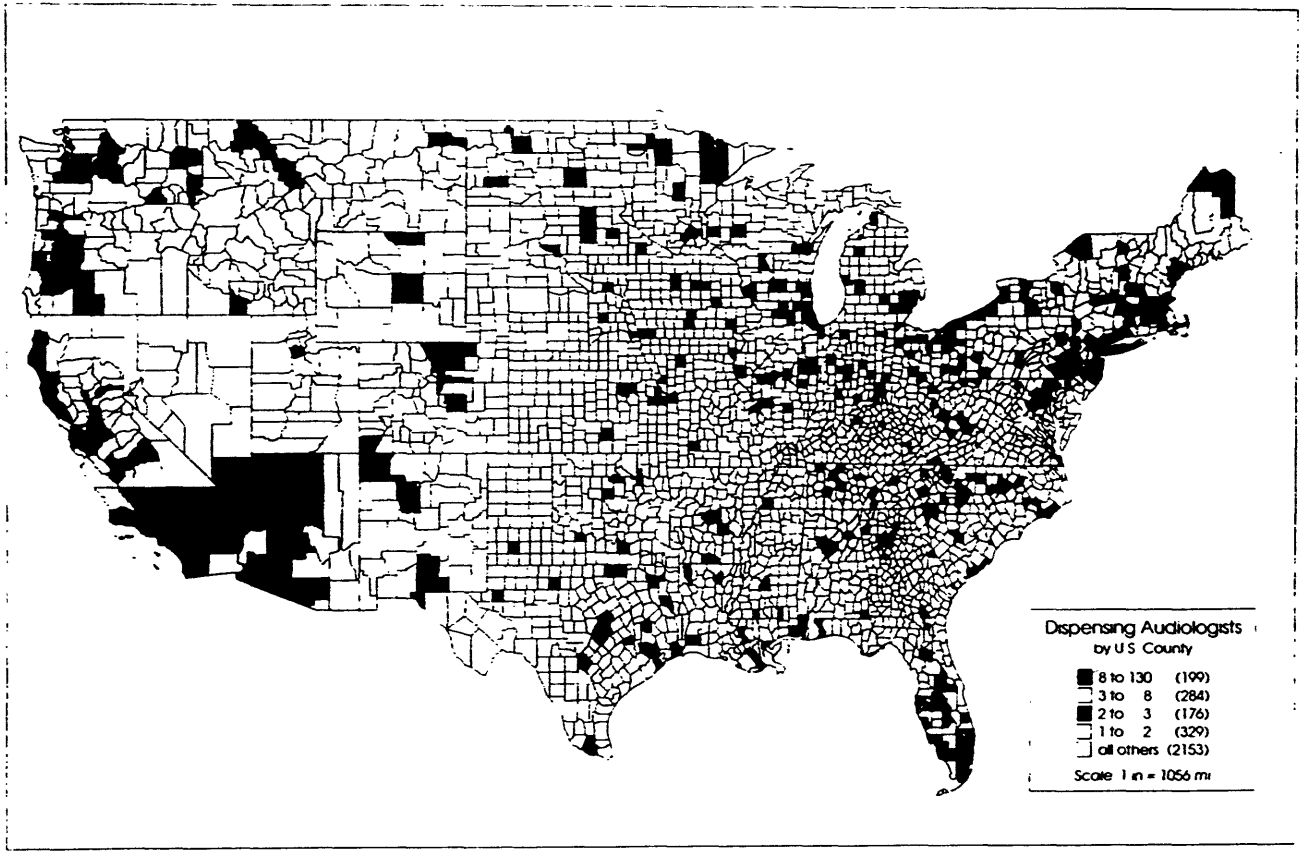
IHS has submitted comments to the FDA in response to its November 10, 1993 Advance Notice of Proposed Rulemaking on the conditions of sale of hearing aids. Attached is the Executive Summary of IHS' comments for the Subcommittee's review and record.

The potential for the FDA to restrict patients' access to hearing aid specialists through its rulemaking underscores the need for all branches of the Federal government to coordinate carefully federal health policy, especially in an era of health reform. Indeed, unless such coordination takes place, one arm of the Federal government (*e.g.*, FDA) could completely undermine the efforts of the Congress to ensure maximum utilization of all cost-effective qualified providers.

IHS appreciates the opportunity to provide these comments and would be pleased to provide the Subcommittee with any additional information. Please feel free to contact IHS' Director of Government Relations, James Lovell, at 1/800–521–5247 or IHS' Washington Counsel, Tim Waters or Sally Rosenberg at 202/887–8000.



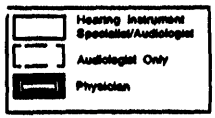
Layer: Hearing Aid Specialists

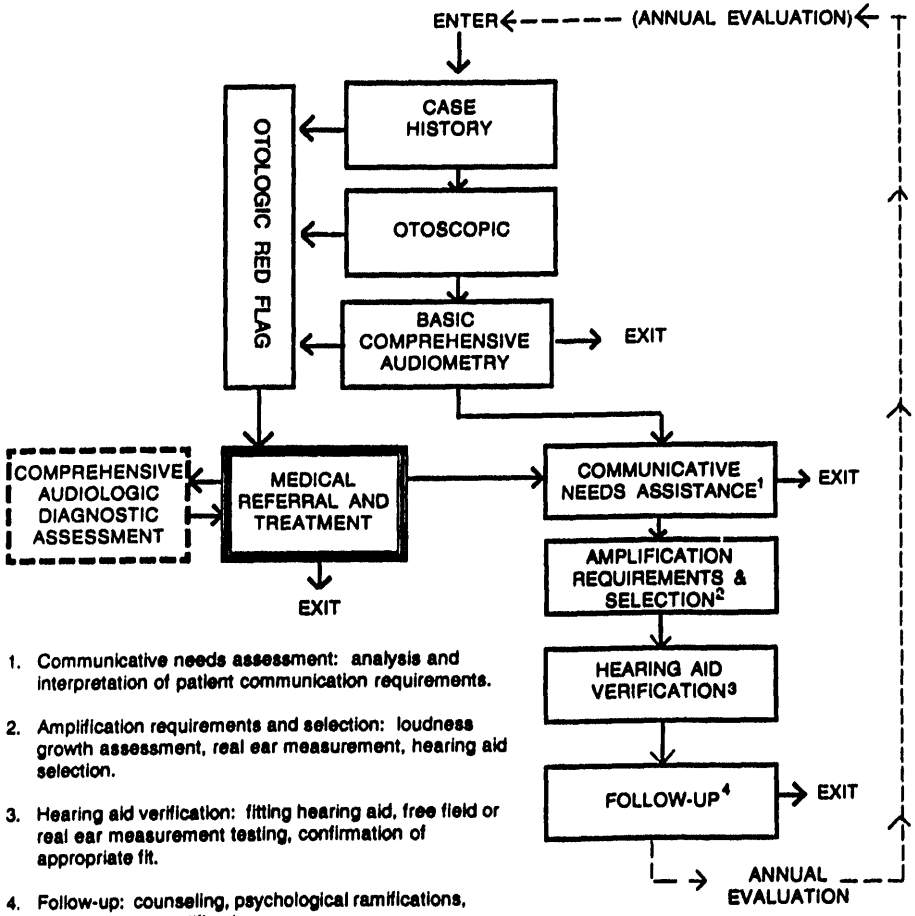


Layer: AUDIOLOGISTS

EXHIBIT 3

HEARING HEALTHCARE PATIENT FLOW CHART FOR ADULTS (HEARING AND DISPENSING)





1. Communicative needs assessment: analysis and interpretation of patient communication requirements.
2. Amplification requirements and selection: loudness growth assessment, real ear measurement, hearing aid selection.
3. Hearing aid verification: fitting hearing aid, free field or real ear measurement testing, confirmation of appropriate fit.
4. Follow-up: counseling, psychological ramifications, expectations, modifications.

EXHIBIT 4

EXECUTIVE SUMMARY OF BASIC AUDIOMETRIC TESTS PERFORMED BY BOTH AUDIOLOGISTS AND HEARING AID SPECIALISTS

1992 National Submitted and Allowed Medicare Charge and Frequency Data for Selected Codes

		SUBMITTED			ALLOWED		
BASIC AUDIOMETRIC		FREQUENCY	TOTAL CHARGE	AVERAGE CHARGE	FREQUENCY	TOTAL CHARGE	AVERAGE CHARGE
92551	Screening Test, Pure Tone, Air Only	8,067	$176,600	$22	3,329	$45,186	$14
92552	Pure Tone Audiometry -- Threshold -- Air Only	162,555	$3,836,481	$24	130,649	$1,955,135	$15
92553	Pure Tone Audiometry -- Threshold -- Air and Bone	207,334	$7,311,412	$35	168,292	$3,889,503	$23
92555	Speech Audiometry; Threshold Only	27,837	$566,802	$20	21,875	$287,172	$13
92556	Speech Audiometry; Threshold and Discrimination	133,704	$4,149,876	$31	109,779	$2,293,410	$21
92557	Basic Comprehensive Audiometry	711,646	$44,017,377	$62	581,145	$24,045,112	$41

Source: Lewin/VHI Analysis of 1992 Medicare Part B Physician Procedure File

\\DS2\91400\CHTSAR.002

EXECUTIVE SUMMARY OF A SAMPLING OF THE COMPREHENSIVE AUDIOLOGIC DIAGNOSTIC TESTS ADVOCATED BY THE AUDIOLOGY COALITION AS WITHIN AUDIOLOGISTS' DISCRETION TO PERFORM FOR ALL PROSPECTIVE HEARING AID PURCHASERS

Reimbursable under Medicare only when ordered by a physician for purposes of medical diagnosis or treatment

1992 National Submitted and Allowed Medicare Charge and Frequency Data for Selected Codes

		SUBMITTED			ALLOWED		
	SITE OF LESION	FREQUENCY	TOTAL CHARGE	AVERAGE CHARGE	FREQUENCY	TOTAL CHARGE	AVERAGE CHARGE
92562	Loudness Balance Test, Alternate Binaural or Monaural	3,512	$85,562	$24	3,047	$47,097	$15
92563	Tone Decay	40,163	$974,052	$24	34,251	$545,515	$16
92564	Acoustic Reflex Testing	203,985	$4,594,225	$23	170,643	$2,412,889	$14
92569	Acoustic Reflex Decay	59,250	$1,370,964	$23	50,704	$782,518	$15
92585	Brainstem Evoked Response	84,034	$17,174,181	$204	55,488	$6,984,738	$126
	REQUIRED TYMPANOMETRY						
92567	Tympanometry	579,876	$16,628,712	$29	474,532	$9,143,804	$19
	SPEECH RECOGNITION THRESHOLDS						
92571	Filtered Speech	1,035	$25,564	$25	876	$15,034	$17
92572	Staggerfed Spondaic Word Test	79	$2,049	$26	57	$572	$10
92576	Synthetic Sentence ID	178	$4,728	$27	134	$2,003	$15
	TOTAL	972,112	$40,860,037	$405	789,732	$19,934,170	$247

Source: Lewin/VHI Analysis of 1992 Medicare Part B Physician Procedure File

\\1924\9140\CHTSAR.002

Table 1
1992 National Submitted and Allowed Medicare Charge and Frequency Data for Selected Codes

		Submitted			Allowed			
		1	2	3	4	5	6	
Code	Description	Frequency	Total Charge	Average Charge (2/1)	Frequency	Total Charge	Average Charge (5/4)	Percent of Average Charge Disallowed ((6-3)/3)
VESTIBULAR FUNCTION TESTS *								
92531	Spontaneous Nystagmus, Including Gaze	677	$21,864	$32	230	$6,697	$29	-10%
92532	Positional Nystagmus	822	$25,945	$32	492	$11,473	$23	-26%
92533	Caloric Vestibular Test, Each Irrigation	395	$16,719	$42	205	$6,302	$31	-27%
92534	Optokinetic Nystagmus	167	$5,698	$34	126	$2,078	$16	-52%
92541	Spontaneous Nystagmus Test,	47,992	$2,778,487	$58	39,499	$1,493,767	$38	-35%
92541-TC	including Gaze and Fixation	462	$19,563	$42	360	$3,449	$10	-77%
92541-26	Nystagmus, with Recording	10,342	$542,759	$52	7,551	$197,568	$26	-50%
92542	Positional Nystagmus Test, Minimum	49,677	$2,490,317	$50	41,123	$1,272,861	$31	-38%
92542-TC	of Four Positions, With Recording	470	$21,548	$46	354	$3,209	$9	-80%
92542-26		7,362	$299,066	$41	5,317	$124,995	$24	-42%
92543	Caloric Vestibular Test, Each Irrigation,	73,399	$4,251,401	$58	59,935	$2,161,373	$36	-38%
92543-TC	With Recording	639	$31,049	$49	490	$6,772	$14	-72%
92543-26		12,460	$482,795	$39	9,463	$211,305	$22	-42%
92544	Optokinetic Nystagmus Test,	39,177	$1,362,027	$35	32,303	$739,370	$23	-34%
92544-TC	Bidirectional, Foveal or Peripheral	363	$11,142	$31	281	$2,259	$8	-74%
92544-26	Stimulation, With Recording	6,934	$223,198	$32	4,820	$77,825	$16	-50%

Source: Lewin-VHI Analysis of Part B Physician Procedure File

*These represent all of the CPT-codes in this category, all of which are audiologic diagnostic tests performed only by audiologists.
*This code has been deleted.

Table 1
1992 National Submitted and Allowed Medicare Charge and Frequency Data for Selected Codes

		Submitted			Allowed			
		1	2	3	4	5	6	
Code	Description	Frequency	Total Charge	Average Charge (2/1)	Frequency	Total Charge	Average Charge (5/4)	Percent of Average Charge Disallowed ((6-3)/3)
92545	Oscillating Tracking Test,	40,568	$1,379,094	$34	33,368	$714,638	$21	-37%
92545-TC	With Recording	310	$8,042	$26	251	$1,789	$7	-73%
92545-26		6,313	$191,462	$30	4,002	$52,047	$13	-57%
92546	Torsion Swing Test, With Recording	4,722	$251,771	$53	3,722	$104,841	$28	-47%
92546-TC		36	$2,380	$66	35	$258	$7	-89%
92546-26		2,880	$123,988	$43	1,497	$31,304	$21	-51%
92547	Supplemental Electrical Test	19,891	$709,373	$36	15,281	$312,141	$20	-43%
AUDIOLOGIC FUNCTION TESTS WITH MEDICAL DIAGNOSTIC EVALUATION*								
92551	Screening Test, Pure Tone, Air Only	8,067	$176,600	$22	3,329	$45,186	$14	-38%
92552	Pure Tone Audiometry -- Threshold -- Air Only	162,555	$3,836,481	$24	130,649	$1,955,135	$15	-37%
92553	Pure Tone Audiometry -- Threshold -- Air and Bone	207,334	$7,311,412	$35	168,292	$3,889,503	$23	-34%
92555	Speech Audiometry; Threshold Only	27,837	$566,802	$20	21,875	$287,172	$13	-36%
92556	Speech Audiometry; Threshold and Discrimination	133,704	$4,149,876	$31	109,779	$2,293,410	$21	-33%
92557	Basic Comprehensive Audiometry	711,646	$44,017,377	$62	581,145	$24,045,112	$41	-33%
92559	Audiometric Testing of Groups	60	$6,367	$106	47	$2,619	$56	-47%
92560	Bekesy Audiometry; Screening	86	$1,756	$20	43	$570	$13	-35%

Source: Lewin-VHI Analysis of Part B Physician Procedure File

*These represent all of the CPT-codes in this category. Both audiologists and hearing aid specialists perform codes 92551-92559 and 92590-92599. The rest are all audiologic diagnostic tests performed only by audiologists.

Table 1
1992 National Submitted and Allowed Medicare Charge and Frequency Data for Selected Codes

		Submitted			Allowed			
		1	2	3	4	5	6	
Code	Description	Frequency	Total Charge	Average Charge (2/1)	Frequency	Total Charge	Average Charge (5/4)	Percent of Average Charge Disallowed ((6-3)/3)
92561	Bekesy Audiometry; Diagnostic	1,934	$76,428	$40	1,603	$39,740	$25	-37%
92562	Loudness Balance Test, Alternate Binaural or Monaural	3,512	$85,562	$24	3,047	$47,097	$15	-37%
92563	Tone Decay Test	40,163	$974,052	$24	34,251	$545,515	$16	-34%
92564	Short Increment Sensitivity Index	4,727	$117,385	$25	4,197	$73,761	$18	-29%
92565	Stenger Test, Pure Tone	752	$19,557	$26	619	$8,361	$14	-46%
92566	Impedance Testing*	726	$28,290	$39	261	$3,306	$13	-67%
92567	Tympanometry – Impedance Testing	579,876	$16,628,712	$29	474,532	$9,143,804	$19	-33%
92568	Acoustic Reflex Testing	203,985	$4,594,225	$23	170,643	$2,412,889	$14	-37%
92569	Acoustic Reflex Decay Test	59,250	$1,370,964	$23	50,704	$782,518	$15	-33%
92571	Filtered Speech Test	1,035	$25,564	$25	876	$15,034	$17	-31%
92572	Staggered Spondaic Word Test	79	$2,049	$26	57	$572	$10	-61%
92573	Lombard Test	24	$499	$21	22	$245	$11	-46%
92574	Swinging Story Test	68	$3,342	$49	65	$3,190	$49	0%
92575	Sensorineural Acuity Level Test	904	$26,663	$29	753	$8,832	$12	-60%
92576	Synthetic Sentence Identification Test	178	$4,728	$27	134	$2,003	$15	-44%
92577	Stenger Test, Speech	1,135	$61,454	$54	1,027	$35,488	$35	-36%
92578	Delayed Auditory Feedback Test	13	$506	$39	13	$249	$19	-51%

Source: Lewin-VHI Analysis of Part B Physician Procedure File

*This code has been deleted.

Table 1

1992 National Submitted and Allowed Medicare Charge and Frequency Data for Selected Codes

		Submitted			Allowed			
		1	2	3	4	5	6	
Code	Description	Frequency	Total Charge	Average Charge (2/1)	Frequency	Total Charge	Average Charge (5/4)	Percent of Average Charge Disallowed ((6-3)/3)
92580	Electrodermal Audiometry	454	$23,036	$50	352	$8,809	$25	-50%
92581	Evoked Response Audiometry*	314	$51,023	$162	196	$20,958	$107	-34%
92582	Conditioning Play Audiometry	866	$40,734	$47	649	$15,746	$24	-48%
92583	Select Picture Audiometry	81	$5,519	$68	70	$1,672	$24	-65%
92584	Electrocochleography	4,148	$671,872	$162	3,496	$336,054	$96	-41%
92585	Brainstem Evoked Response Recording	84,034	$17,174,181	$204	55,488	$6,984,738	$126	-38%
92589	Central Auditory Function Test(s)	3,451	$133,808	$39	2,459	$49,876	$20	-48%
92590	Hearing Aid Examination and Selection: Monaural	157	$13,909	$89	1	$75	$75	-15%
92592	Hearing Aid Check: Monaural	149	$5,335	$36	1	$22	$22	-39%
92593	Hearing Aid Check: Binaural	1	$100	$100	1	$95	$95	-5%
92596	Ear Protector Attenuation Measurements	36	$2,206	$61	24	$501	$21	-66%
92599	Unlisted Otorhinolaryngological	20,842	$2,335,513	$112	8,146	$574,412	$71	-37%
92599-TC	Service or Procedure	30	$6,933	$231	26	$4,096	$158	-32%
92599-26		2,014	257,132	$128	1,226	87,248	$71	-44%

*This code has been deleted.

EXHIBIT 6.—A REPORT ON HEARING AIDS

[By The American Association of Retired Persons (AARP), (September 1993)]

SELECTED EXCERPTS OF FINDINGS AND CONCLUSIONS

INTRODUCTION AND SUMMARY

The report indicates that millions more people should wear hearing aids for social and safety reasons. (p. 1)

The report is anecdotal in nature; the data are not generalized to the population as a whole. (p. 2)

Neither Medicare nor most health insurance plans pay for hearing tests or hearing aids, except under very limited circumstances. (p. 2)

Report prepared by a certified audiologist. (p. 2)

20 million people need a hearing aid and don't wear one. (p. 3)

Users are more satisfied with dispensers than products. (p. 3)

The central theme of the report is not about new federal legislation and/or trade regulations. Certain policy reforms are needed, particularly at the state level. However, there are many workable statutes and regulations at the federal and state levels. The thesis of the report is for continuing oversight. (p. 4)

CHAPTER ONE: BACKGROUND

A hearing loss is too often accepted as another part of the aging process. "I hear as well as can be expected for my age." (p. 7)

Most adults have a sensorineural loss that cannot be treated medically. (p. 7)

For most of those with hearing loss, hearing aids improve their hearing dramatically. (p. 8)

Without an aid, those with a hearing loss could bring danger to themselves and others. (p. 8)

Without a doubt, persons with a hearing impairment are well served by wearing an aid. Sixty-five percent of users indicated that hearing instruments improve their life. Eight out of ten owners would recommend a hearing aid to a friend. (p. 9)

There is little similarity between hearing aids and eye glasses. An aid cannot bring hearing back to the equivalent of "20/20" hearing. (p. 10)

Background noise remains a persistent problem. Hearing aids do help some wearers distinguish sounds in a noisy environment. To date, the ability to distinguish sounds is improved, but not solved. Background noise is the focus of substantial industry and university research. (p. 10)

In 1992, 42 hearing aid manufacturers sold 1.78 million hearing aids. (p. 10)

In the opinion of many hearing professionals, hearing aid technology have improved significantly in the last ten years. (p. 11)

The number of hearing professionals dispensing hearing aids have almost doubled since 1978, to approximately 11,000. (p. 12)

Almost all manufacturers and dispensers offer some form of "return policy" to consumers. This liberal return policy is unique to the hearing aid industry. The return rate by consumers is around five percent. (pp. 12, 39, 42)

There are approximately 5,000 hearing aid specialists and 2,100 audiologists in private practice dispensing hearing aids, and 2900 audiologists dispensing hearing aids in clinics. (pp. 12, 13)

Professional competency and consumer protection for hearing aids are regulated principally at the state level. Most licensing boards have adequate oversight, disciplinary and enforcement powers, but do not consistently or effectively use those powers. (pp. 18, 19)

State Attorneys General also have broad authority over state consumer protection statutes. (p. 20)

While both federal and state regulators have extensive authority to oversee the manufacture and sale of hearing aid products, there has been a lengthy period of benign neglect. (p. 20)

CHAPTER TWO: CONSUMER RESPONSE

AARP survey was based upon 4,000 letter from members and a follow-up questionnaire to 1,000 original letter writers. There was an 86% response rate to the questionnaires. 50% of the respondents were satisfied with their aid and 79% were satisfied with their dispenser. (p. 22)

Only 9% of survey respondents indicated they that do not wear their hearing aids at all. Two-thirds of the respondents stated that they wore their aids all day. (pp. 27)

Fifty-five percent (55%) of purchases were from retail hearing aid dispensers; seventeen percent (17%) were from a "medical site" and fifteen percent (15%) were from a "hearing center." (p. 27)

In-house sales were only eight percent (8%) of all purchasers. (p. 27)

AARP's conclusion (p.3) that less than 50% of purchasers are satisfied with their hearing on aids apparently is predicated upon their tabulation that 43% of the survey respondents made "only positive comments" as opposed to "positive and negative" comments in a single letter (p. 30). In contrast, 50% of AARP members completing the questionnaire reported satisfaction with the hearing aid and 82% reported satisfaction with their dispenser (p. 43). *See* p. 43. The AARP Report also noted that MarketTrack surveys in 1989, 1990, and 1991 reflect consumer satisfaction levels between 55% and 58%. (p. 30) The report indicates that the most persistent problem reported by its respondents was background noise, which may have more to do with consumer expectations rather than the product (p. 30)

While AARP Report referred to the fact that 58% of all respondents obtain a 30-day trial rental option, Figure 16 in the report reflects that 78% of the respondents actually obtained a rental option, and the remaining 22% did not know (19%) or provided no response (3%). (p. 42)

Only 26% of the respondents stated that they were "dissatisfied" with their purchasers. (p. 43)

As a general proposition, consumers experience problems with about 20% of their purchases. The AARP Report notes that some purchase categories are much higher than others. (p. 46)

User satisfaction should not be considered a simple issue. A hearing aid is not a one-dimensional purchase. There are many players and actions involved with product satisfaction or dissatisfaction. (p. 47)

Satisfaction is also related to the fact that users may not want to wear their aid at all. For them it may be at best a necessary evil. To them it symbolizes advanced age and weakness. (p. 48)

It appears that disgruntled letter writers lay their dissatisfaction at the feet of the manufacturers. Satisfaction with hearing evaluators approaches 80%. (p. 48)

The data reported raises more questions than it answers (p.48)

CHAPTER THREE: SHOPPING EXPERIENCE STUDY

Sixteen teams of consumer testers shopped for hearing aids at 23 different locations in Tampa and West Palm Beach, Florida. 169 visits were made to the 23 different sites. (p. 50)

Fifty-seven percent of the consumer testers received recommendations to buy a hearing aid. The audiologist coordinating of the tests would have recommended that 45% of the consumers needed an aid (pp. 51, 52)

Florida's regulations are among the strongest in the country. They are equal to or stronger than a number of other states. Florida ranks among the top states in terms of disciplinary proceedings. Florida regulations also reflect accepted standards of practice. The *ASHA Preferred Practice Patterns* include the same tests required by Florida regulations. (p. 53)

Twenty-four dispensers were actually visited by the AARP testers. seven were audiologists. Only one, a hearing instrument specialist, required each tester to visit a physician before conducting an examination. This site was excluded from the survey results. (pp. 54, 55)

While the AARP report summarizes a series of reported deficiencies and inconsistencies, including apparent failure by certain providers to follow mandated Florida procedures. The tables in Chapter 3 depicting performance by the various sites visited reflect as many omissions and difference in test procedures among and between audiologists as with hearing instrument specialists. (pp. 50–67, Tables 7–12) For example 4 of the 7 audiologists surveyed did not perform the minimum tests required by Florida regulations. (*See* Tables 11, 12) Illustrated by this data is the difference of professional judgment among providers and the particular importance of consumer responses to test procedures. Every audiologist visited recommended hearing aids to a higher. percent of testers than the audiologist who coordinated the shopper survey. (*See* p. 52 and Tables 11, 12)

A majority of survey respondents visited their doctor before buying a hearing aid. (p. 65)

Incidents of unfair and deceptive practices which appeared to be violations [of Florida regulations] were a series of isolated incidents. (p. 66)

CONCLUSION

The Conclusion articulated by the AARP reflects their best recommendations to purchasers of hearing aids. Many of the recommendations previously have been advanced by industry groups. Many of its recommendations, however, do not necessarily correlate to the findings actually reflected in AARP's Report. For example, AARP recommends a state mandated trial period when 78% of their respondents indicated that the market place already provides a wide variety of options. No respondent said that a trial option was not made available.

Similarly, AARP recommends that every purchaser first see an audiologist. Their data in Chapter Three would not support this recommendation, nor is the conclusion accurate that audiologists know more about hearing aids and hearing fittings.

The report, however, does confirm the fundamental fact that millions of Americans can and should benefit from hearing aid instruments.

It is noteworthy that the report concluded after reviewing its shoppers experiences that it is unfair to say sellers are only pushing a product. (p. 69)

Prepared by International Hearing Society, Livonia, Michigan, December 1993.

○