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IMPROVING THE COMPETITIVENESS OF U.S. INDUSTRY

HEARINGS

BEFORE THE

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COMMUNICATIONS

IMPROVING THE COMPETITIVENESS OF U.S. INDUSTRY

TUESDAY, MAY 12, 1992

U.S. SENATE,
COMMITTEE ON FINANCE,
Washington, DC.

The hearing was convened, pursuant to notice, at 10:00 a.m., in room SD-215, Dirksen Senate Office Building, Hon. Daniel Patrick Moynihan, presiding.

Also present: Senators Bentsen (chairman), Baucus, Riegle, Daschle, and Grassley.

[The press release announcing the hearing follows:]

[Press Release No. H-23, May 5, 1992]

BENTSEN PLANS INDEPTH LOOK AT IMPROVING COMPETITIVENESS, EFFECTIVE TRADE POLICIES VITAL, CHAIRMAN SAYS

WASHINGTON, DC.—Senator Lloyd Bentsen, Chairman of the Senate Finance Committee, Tuesday announced a series of hearings to explore ways to improve the competitiveness of U.S. industry.

The first hearing will be at *10 a.m., Tuesday, May 12, 1992* in room SD-215 of the Dirksen Senate Office Building.

Bentsen (D., Texas) said he wants to explore options for policies to restore the competitiveness of American companies and help ensure fair and open competition for them in the global marketplace.

"Study after study today tells us that American industry is losing ground to its foreign competitors. An especially troubling sign is our loss of two and a half million manufacturing jobs since 1980—jobs replaced by service jobs that pay only a third as much," Bentsen said.

"We are hearing a growing chorus in favor of a national competitiveness strategy designed to reverse that trend. There is no silver bullet that will restore American competitiveness. The problem has many facets. So will the solution, which must encompass an effective trade policy, along with tax and other domestic policies that help make our companies more competitive. We also need to think about ways in which the public and private sectors can work more effectively as partners, for example, in converting our nation's research into new products," Bentsen said.

"These hearings will provide an opportunity to explore the views of important industry, labor and academic leaders on ways to put America back at the pole position in global competition," Bentsen said.

OPENING STATEMENT OF HON. DANIEL PATRICK MOYNIHAN, A U.S. SENATOR FROM NEW YORK

Senator MOYNIHAN. Good morning to our distinguished witnesses and fellow Senators and guests. I must apologize for the absence of our Chairman who is at the White House on a meeting on unemployment insurance, which is symptomatic, I suppose, with the subjects that we are dealing here with.

This is the first of a series of hearings that the Committee on Finance will hold on the subject of trade and competitiveness. We have two particular subjects that are the responsibility of our committee. The first is tax policy, which obviously relates to matters of investment and savings that go into the capital plan. We decide in effect how much of the profit streams are available for various activities in the economy; and there is a lively debate about what is the impact of taxation on capital gains, taxation on marginal rates, on profitability, and things of that kind.

Then also we are responsible for trade policy, and the whole question of a fair trade system in the world is the responsibility of our committee. We watch with some growing concern the inability so far of the trading nations to reach an agreement in the Uruguay round which has been negotiating for years now, the attempt to bring the General Agreement on Tariffs and Trade into the field of services and other activities apart from trade in manufactured goods which has tended to be the nature of the GATT.

We have had two large efforts commissioned, one by the Government itself, to inquire into this. First, the Competitiveness Policy Council, which is chaired by Dr. Bergsten and he will be reporting to us. That was established by statute in 1988. Then Dr. Erich Bloch, our distinguished scientist will be talking to us on behalf of the Council on Competitiveness.

I do not wish to pronounce in an area where I am singularly unqualified. I said earlier to Dr. Bloch that 40 years ago I wrote a paper for a seminar at the London School of Economics. I was there on the G.I. bill, on a Fulbright. I was trying to work out something of Schumpater's, which I did not fully understand, in dealing with Joan Robinson's theory as animal spirits as the only coherent explanation of capitalist effectiveness.

I came to the conclusion that if you wanted to mark a point on the arch of the rise and declineof economic powers the moment of decline—would be in the 20th Century—most readily identified as that moment when the nation establishes a council on productivity. That meant it was all over.

The other thing though I find is that even that may not be so. We find that there are—I know my good friend, I am sure a friend of both of our witnesses, William Baumol, keeps asserting the quite extraordinary rates of productivity growth in American manufacturing. It fell to me last year to be chairman on our side of the Surface Transportation Act, in which we produced the largest infrastructure legislation in our history and we were talking about productivity and return on investment. We kept saying that there is no such thing as a free lunch, and there is no such thing as a free way. And that we had for 35 years been spending highway monies as if they were consumption goods.

We asked Dr. Boskin at the Council of Economic Advisers to give us an estimate on productivity in transportation. He wrote that for the entire sector for the last 15 years he estimated the productivity in transportation to have risen at the rate of 0.2 percent.

Now that is a medieval rate. It takes 350 years to double. It is said to be about the rate at which Western Europe grew from the millennial year of 1000 to the cusp of the Renaissance about 1350.

This was something in which the Federal Government had a very large role. We were responsible for a lot of that investment, which obviously was wasted—which could have been predicted and some of us did—very badly spent, very badly allocated.

So we have had an infrastructure not growing at all with the manufacturing private sector growing very well, which suggests we look to our own affairs.

Then finally I would hope we might hear just a little bit about a question which interests me which is the absorptive capacity of the American economy for new technologies from abroad.

We have spent a very great deal of time trying to keep other nations from acquiring our secrets. One of the secrets up until recently was how much of our exports were licensed by the Federal Government and restricted for fear some foreigner might find out. I think the problem was that the amount restricted for reasons of secrecy was itself a secret. I think up until recently about three-quarters of our manufactured exports have required a piece of paper from somewhere in the Government, the location of which cannot be revealed at this time.

We have had a long pattern of learning that the Japanese have stolen our secrets. I remember in my youth one of the first things I learned was the Japanese had stolen the plans to one of our battleships. I grew up to be a Lieutenant Junior grade and learned that the plans to a battleship would fill the Dirksen Office Building and that if you stole them you would have to have a pretty big ship to ship them away in. But that was a detail.

But what we were learning is that the Japanese had acquired an absorptive capacity for the technology of other nations. We have, I think, probably lagged in that. I think some people would estimate that we continue to be a very innovative economy. But probably only a quarter of the really good ideas that come along in a decade appear here; others appear elsewhere.

How do we get hold of them? That may be a matter of culture or business. You know, can you speak German as it were. We assume Germans speak English. There was a time when we did speak German. We don't anymore. That kind of detail.

I think the question of technology transfer to this Nation from a world which is increasingly capable of producing innovations on its own—always has, it should not surprise us—is an absorbing issue and we might learn more about it if I stopped talking, which I hereby do and invite some comments from my distinguished friend, Senator Baucus who was here first, and then, of course, we turn to Iowa.

OPENING STATEMENT HON. MAX BAUCUS, A U.S. SENATOR FROM MONTANA

Senator BAUCUS. Thank you very much, Mr. Chairman. Mr. Chairman, I thank you and Senator Bentsen for holding these hearings.

In my view, the greatest public policy challenge we face in our country today is arresting and reversing America's competitive decline. Competitiveness has been actively discussed now for close to a decade. But we are a lot better at talking than we are at doing. Problems continue to mount.

American living standards have been stagnant for more than a decade. The real wages of the bottom four-fifths of the work force are declining. American productivity growth lags behind that of most industrialized countries. The overall U.S. savings rate lags behind the rest of the world. The U.S. savings rate is only about half that of Germany and of Japan.

And finally, in a recent survey of education in the nine major developed countries, American students ranked last in math skills and second to last in science skills. Thirty years ago these statistics may have been cause for concern, but not for alarm. The U.S. economy was insulated from the world by two large oceans. For the most part, American workers were not in direct competition with German, Japanese and Korean workers.

But times have changed. Now nearly one-quarter of the American economy is directly linked to international trade. Virtually every sector of the U.S. economy meets foreign competition either here or abroad.

In the next century the standing of America and the world and the wealth of its citizens will directly depend upon the competitive strength of the American economy.

Manufacturing is not the core of my home State's economy. Nevertheless, I believe that if America is to maintain a strong economy, it must maintain a competitive manufacturing base. For this reason I spent the Easter recess visiting important manufacturing sectors around our country. I was impressed with much of what I saw.

After some years of denying that there was a problem, the auto industry and the electronics industry have faced up to the challenges of international competition. The auto industry is working to adopt new manufacturing techniques and has made some impressive strides in matching competition in Japanese techniques.

The electronics industry is also battling against Japanese competition. And largely through the efforts of Sematech, the U.S. semiconductor industry has reversed the trend of declining market share for U.S. semiconductors. In the semiconductor equipment market, the U.S. has reestablished the equipment supplier base necessary to compete with Japan.

The Government's $100 million annual investment in Sematech is clearly paying off. But not all of the news is good. Clearly, many of the businesses I met on my trip view Government as an impediment instead of a partner. That is, part of the problem rather than part of the solution—an intolerable situation.

In my view the Government and industry must open dialogue. Both must learn to better trust each other and to be more worthy of that trust. In this regard, important groups like the Congressional Economic Leadership Institute, the Competitiveness Policy Council, the Council on Competitiveness and others have important roles to play. They can facilitate a productive Government-private sector dialogue.

We in Government must also act. Many members of this committee, including myself, talk a great deal about competitiveness, but we need to back our words with deeds. For the sake of our country, the members of this committee should work together in a bipartisan way to tackle some of the critical challenges we face.

I realize we are in the midst of an election year, but I hope we can still pass trade legislation, tax legislation and health care legislation to help improve our competitive position. We cannot solve all of the competitiveness challenges this year or even this decade. It will take many separate sustained decisions over a long period of time.

Nevertheless, it is our responsibility to make a good start. Mr. Chairman, I look forward to very eminent witnesses who I know have spent a lot of time in this area and I hope that our hearing this morning can help in some way to help move the ball forward.

I thank you.

Senator MOYNIHAN. Senator Grassley?

OPENING STATEMENT OF HON. CHARLES E. GRASSLEY, A U.S. SENATOR FROM IOWA

Senator GRASSLEY. Thank you, Mr. Chairman. I likewise am delighted to be able to participate in the hearing this morning. Of course, I look forward to hearing from our distinguished witnesses. Dr. Bloch has been very cooperative with Congress and with me in the past. I appreciate that. I've known Dr. Bergsten since I was on the House Banking Committee years ago and he testified there as an administration witness, I believe, at one time.

We must in this hearing begin to ask ourselves if America is prepared to compete in what is an increasingly interdependent and competitive world environment. It is important that our answer, of course, be a positive one since our ability to compete in world markets is the very foundation that enables this country not only to maintain our current standard of living, but more importantly to increase it for every American worker and family.

The ability to compete will provide a rich environment for the creation and the full development of new technologies and markets. It is also vital, of course, for our National security. Technology today is highly mobile and many nations are aggressively pursuing its benefits through financial and human resource advancements.

Some have benefited from Government policies designed by their Government to nurture their export potential. If we are to compete effectively in the future in this global market place, we must begin immediately to build on our strengths and to minimize our weaknesses.

It is very difficult today to find an American industry that is not in trouble because of this worldwide competition. Exports are increasingly exposing U.S. companies to competition from foreigners with superior technologies, in some cases even deeper pockets, better trained workers, and probably all of this is true because Governments have been determined to provide their indigenous firms with advantages not available to U.S. firms.

Therefore, U.S. policy currently puts important industries at risk. No matter how hard these U.S. firms work under current conditions they may not be able to compete with foreign industries if those foreign industries are backed by their government.

So, Mr. Chairman, it would be foolish for me to lay the blame at just the doorstep of Government alone. For to some extent U.S. businesses and their leadership are to blame as well. We must, however, begin to spend more time looking for solutions and less time looking for who to blame. The time is right for us to explore a vast and unknown American frontier and that frontier is all over the world as far as our economic expansion is concerned.

The American people are looking for each of us to chart a new course, not only for this generation, but one that will extend into the generations to come.

I thank you, Mr. Chairman.

Senator MOYNIHAN. Thank you, sir.

So in good time we come to our witnesses. We will follow the order as indicated in the list.

May I say, gentlemen, that first you might want to know that our camera today is from the Westinghouse Group. It has been engaged by a Japanese firm to be shown in Japan. So if you have any friendly phrases you might try them out. [Laughter.]

We have plenty of time this morning so I do not want to ask anyone to keep to anything like a 5-minute rule. We would like to ask you questions. So do not go on so long that we shall have disappeared before you are finished.

Dr. Bergsten, good morning, sir.

STATEMENT OF DR. C. FRED BERGSTEN, DIRECTOR, INSTITUTE FOR INTERNATIONAL ECONOMICS, AND CHAIRMAN, COMPETITIVENESS POLICY COUNCIL, WASHINGTON, DC

Dr. BERGSTEN. Thank you very much, Mr. Chairman.

I do have a few words for our Japanese friends later in my statement, and when I come to those I will look straight into the camera. [Laughter.]

As you indicated, Senator Moynihan, the Congress did create the Competitiveness Policy Council, of which I am chairman, toward doing something about the competitiveness problem. There have been lots of reports, lots of studies. What is needed now is to pave the way for action.

We presented our first annual report to the President and to the Congress, including this committee and other Senate committees of jurisdiction, on March 1. Our report was unanimously adopted by our rather unusual group of business executives, labor leaders, Federal and State government officials, and public interest members, those 12 members having been appointed last year by the President, the leadership of the Senate, and the leadership of the House.

Senator MOYNIHAN. This report here.

Dr. BERGSTEN. That is it.

We were greatly encouraged, I might say, by the initial reception of our report. This is the sixth Congressional group to which I and my colleagues have addressed our comments. We have presented the report to the White House. We have had lots of consultations with the private sector—for example, this past weekend I was invited to present our findings to the Business Council at the Homestead, and the leadership of the business community indicated great interest and a desire to work extensively with us as we develop detailed proposals for our next report later this year. There has also been a lot of international interest in our report, including notably in Japan. I have, therefore, been very encouraged by the reception that we have gotten.

Our Council did conclude that the United States has a very serious competitive problem, along the lines indicated by Senator Baucus. We did note, as you said, Senator Moynihan, some good news, including rapid productivity growth in manufacturing. But on the whole we feel the country has a very serious problem, one that is of a long-term, erosive nature—termites in the woodwork rather than crisis a la Sputnik—which perhaps in our pluralistic society makes it more difficult to deal with.

Senator MOYNIHAN. What kind of a crisis was Sputnik?

Dr. BERGSTEN. What I mean by that is the drama of a single event.

Senator MOYNIHAN. Oh, you mean a newspaper crisis.

Dr. BERGSTEN. A publicly perceived crisis.

Senator MOYNIHAN. That was no crisis in America in physics or engineering.

Dr. BERGSTEN. Right, a publicly perceived crisis that galvanizes action, rightly or wrongly.

Senator MOYNIHAN. A fake crisis.

Dr. BERGSTEN. Well, in that case it turned out to be.

I think, Senator, just to divert a second——

Senator MOYNIHAN. Just be careful what you say.

Dr. BERGSTEN. Well, fair enough. I mean a public · erception of crisis that galvanizes national action.

Senator MOYNIHAN. Even when the crisis is not a crisis.

Dr. BERGSTEN. Even when there may not be a crisis.

In the case of the current competitiveness problem, perhaps unfortunately, there seems to be no such galvanizing event. What we have had is an erosion of American real wages over 20 years. They are lower today than they were 20 years ago.

As Senator Baucus said, the results of our educational system are worse today than they were 20 or 30 years ago and stack up very poorly in comparison with other countries.

Senator MOYNIHAN. I do not believe that.

Dr. BERGSTEN. Well, that is what the indicators show. I am not an expert personally, as you know, on education issues.

Senator MOYNIHAN. I am a little bit. I do not think our scores are worse. I think they are unchanged with given controls.

Two years ago the President got together with the Governors at Charlottesville, the third Presidential conference in our century and in our history—well, Theodore Roosevelt, Franklin Roosevelt and now President Bush. They set the goals for the year 2000 on education.

They said that we would be first in the world in science and mathematics in the year 2000. I wrote or gave a paper at Brown on this matter and published it and said, you know, this presents us with some difficulties because it is clear that the principal goals, the goals they set forth, saved those which were tautological could not be achieved by the year 2000 and would not be.

So the question was raised, the alarming possibility was that the President and his staff did not know this. Now that would chill your blood. A more comforting realization is that they knew it, but they also knew they would be long gone by the time 2000 came around so what the hell.

And I say, although this is not very helpful in a public statement, that I had a chance to discuss this matter with the principal White House person involved and I said to him, you know, could you tell me—I mean, do not tell me you believed that. That really would be frightening. He said, no, we knew perfectly well it is not possible.

So, let's clear our minds and stop telling each other things that are not so, Dr. Bergsten, I do not think that controlling for the very changed factors our schools are any worse than they were 20 years. I think they are now better.

Dr. BERGSTEN. The reason I made my comment, Senator——

Senator MOYNIHAN. What is your source?

Dr. BERGSTEN. On page 21 of our report we used—and this may be an imperfect test—the trend in SAT scores over the past 20 years, both math and verbal, simply as one indicator. In both cases they are considerably lower than 20 years ago, particularly on the verbal side.

Lower on the page——

Senator MOYNIHAN. Verbal, yes; math, I think if you control you will find given the controls, the math scores are about the same.

Dr. BERGSTEN. Well, I will not quibble as between 10 percent down or no change. I think in a world where the rest of our competition is substantially and rapidly increasing its educational attainment that that is a relative decline of some concern.

If you look lower on the page, we show two of the comparisons from the Educational Testing Service between United States and foreign results, on the math and science proficiency of thirteen-year-olds. In both cases the United States is toward the lower end of the scale. Again, I am not trying to cut it precisely, but it is not an encouraging picture in terms of maintaining——

Senator MOYNIHAN. You need to know where we were in 1965.

Dr. BERGSTEN. That is true.

Senator MOYNIHAN. There is no thing on earth that can prevent Hungarians from learning physics, not fascism, war, communism.

Dr. BERGSTEN. Now would we want to discourage them from doing so.

Senator MOYNIHAN. Somehow nothing can get some of us to—go ahead. I am sorry.

Dr. BERGSTEN. In any event, the basic conclusion——

Senator MOYNIHAN. I make this point because we have committed ourselves in education to a set of goals that were unrealistic and cynical. The people involved know they cannot be done.

So let us be careful with our National goals. I think that is trivializing something important. It is lying to the American people.

Dr. BERGSTEN. Senator, our Council fully agrees with you on the need for much more extensive policy changes to improve the educational performance of the United States, whatever we think about the precise trend lines in the past. We have a subcouncil, which I will turn to in a moment, working to develop detailed proposals in that area, which we hope would, in fact, lead to a more effective reform of the educational system, to improve this aspect of our competitiveness over time.

In any event, the first conclusion of our Competitiveness Policy Council is that the United States has a very serious competitive problem; the second is that we therefore need to establish a comprehensive strategy to deal with it at three levels.

The first is more effective and stable economic policies, particularly to raise the low levels of saving and investment that Senator Baucus referred to.

We suggested specifically that the budget position of the Federal Government needs to be one that not only eliminates the deficit but converts it into a surplus. We also argue for a serious look at the tax system, which we believe now to some extent promotes consumption and debt, and should instead be altered to promote saving and investment. We are now working on that in detail as well. We will come up with specific proposals in our next report at the end of this year. But one set of reforms has to be at the aggregate level of economic policy.

A second level is reform of certain key structural elements of the economy, including education and training, health care costs, and public infrastructure, which you referred to. I just came this morning from starting off a meeting of experts on that topic. We convened that group in an effort to propose ideas to improve public infrastructure's contribution to the Nation's productivity and competitiveness. Commercialization of technology is another area where structural reform may be needed. Dr. Bloch will talk about that in detail.

Third, in addition to aggregate economic policies and structural reforms, we clearly need more effective sector-specific policies based on new or strengthened Governmental mechanisms. We are always going to have sector-specific policies in this country. We always have had such policies. We do now. We always will have them.

The issue is not whether we have them. It is whether we conduct them intelligently. One thing our Council found was that the Government is not now structured in a way to promote thoughtful, constructive sector-specific policies. We have some suggestions as to how that might be improved.

Our Council in this first report has laid out our ideas for a broad strategy, and we are now developing detailed blueprints in each of the areas that we isolated for priority treatment. We will submit them in good time for consideration by the next administration and Congress.

Each of those issues is being pursued by one of our subcouncils, which are also made up of corporate, labor, Government, and public interest members. The subcouncils are developing detailed proposals. I think we have some very distinguished Americans chairing and participating in each of those groups, including a number of members of the Senate and the House. I have listed in my written statement the chairmen of the subcouncils. We will be announcing their full memberships literally over the next few days. Each of them is quadri partite, with business, labor, Government, and public interest representation, and I would reiterate our interest in consulting very closely with the Congress as our process evolves.

Today's focus, I believe, is on trade. Our Competitiveness Policy Council did identify trade as one of the priority areas. But, picking up on a point that you made already and that Senator Baucus referred to as well, we found that trade was not the key area for restoring America's competitive position.

Rather, the key areas are at home and concern the issues that I mentioned—saving and investment to provide the resources we need, improvement of the educational system, reduction of our health care costs, improvement of our public infrastructure, and the like. Nevertheless, trade is key. And our subcouncil on trade will be looking——

Senator MOYNIHAN. Could I just ask you when we refer to—What do we mean by competitiveness if we do not mean comparative prices as between different national economies?

Dr. BERGSTEN. Senator, we consciously chose to define competitiveness more broadly than just trade.

Senator MOYNIHAN. Okay.

Dr. BERGSTEN. We include not only trade but also American incomes in comparison with other countries——

Senator MOYNIHAN. Not just trade. Competitiveness has some reference to price relationships as between different national economies. If we should think of it otherwise tell us because we want to learn.

Dr. BERGSTEN. It clearly includes comparative prices and the quality of American products, but also whether those generate high levels of income, and high levels of economic growth for the country as a whole. We give our definition in a box on page 2 of the report that you have in front of you. Our indicaters that American goods and services have to be comparable to those produced abroad, but also have to generate therefore sufficient U.S. growth to increase the incomes of Americans, and that investment in the labor and capital necessary to produce those goods and services should be produced through our national saving, not through borrowing from the rest of the world.

We had growth in the 1980's. But it was financed by an enormous buildup, of debt, a $1 trillion shift in our international investment position and the United States becoming the major debtor country in the world. We did not regard that as a desirable or sustainable way to promote economic growth and enhance the incomes of Americans. Growth has to be based on our own saving, not on borrowed money.

Those are three criteria that we spelled out in our definition. We indicated as well that growth has to be sustainable over the longer run, meaning that the policies and corporate performance have to be in place to give us some confidence that we will be able to maintain those criteria over time. That is how we defined competitiveness. We then, through the entire report, examined specific policy areas and corporate practices in relation to that definition.

In my statement, Mr. Chairman, because I assumed that today's focus was on trade policy, I then take off my hat as chairman of the Competitiveness Policy Council and make a few remarks wearing my other hat as director of the Institute for International Economics.

Senator MOYNIHAN. Welcome, Mr. Director. [Laughter.]

Dr. BERGSTEN. Not that I am going to say anything inconsistent as between the two, only that our Competitiveness Policy Council has not yet looked at all these issues in detail, and so I am now going beyond the Council's report to express some personal views and also some views based on work done at my Institute for International Economics.

First, our economic model suggests very little change in the U.S. trade and current account positions this year over last year. That is very unfortunate, because over the last 5 years the enormous improvement in the U.S. trade balance has been a major source of U.S. economic growth.

It is improper to compare, as some people do, export expansion alone with overall economic growth and say that 70 percent of our growth came from exports. We have to look at the trade balance. It does us no good to expand our exports sharply if our imports go up by the same amount. That is no net improvement in the U.S. economy—no improvement in U.S. job creation for example.

We have to look at our competitiveness in terms of both sides of the trade balance. But even on that basis, 30 percent of all the growth in this economy over the last 5 years came from improvement in our trade balance. Over the last 2 years—1990 and 1991—half of our total economic growth, meager though it was, came from the trade balance.

Indeed, in 1991 the recession was cut in half by further improvement in our external economic position. Without that improvement we would not have been talking about a short, shallow recession; we would have been talking about one of the deeper recessions in the entire postwar period.

So trade improvement, since the exchange rate of the dollar came down, and since a lot of things happened 5 years ago, has been an enormous source of improvement in the economy. However, it now looks like that improvement has stalled out and may even turn around and deteriorate a bit this year, and therefore this recent engine of growth either stagnates or goes into reverse.

That is an important point which further dims the prospect for economic growth in this country. As our fiscal deficit has gotten so large and made it essentially impossible for us to stimulate domestic demand through fiscal policy, and as our financial system's fragility has made it very difficult for the Federal Reserve even with much lower short-term interest rates to stimulate domestic demand through monetary policy, we have become heavily dependent on trade improvement for our overall economic growth. Indeed, that is the record over the last couple of years; and now with the trade balance either stagnating or going somewhat into reverse, I am afraid we face continued, very slow economic growth in this country.

In that context, and here I will look my friends in Japan in the eye, I note a new or revived and very important problem, namely, a renewed surge in the Japanese trade surplus, which suggests to me that the exchange rate of the yen has again become very undervalued, probably on the order of 25 percent.

Japan is now the world's only large surplus country. Its trade surplus last year soared above $100 billion for the first time. This year it may rise close to $150 billion. This is occurring while Japan's domestic demand remains stagnant, meaning that virtually all of its economic growth is coming from the improvement in its trade surplus.

How has that happened? One problem is that domestic demand is flat in Japan despite the fact that Japanese are running a consolidated fiscal surplus equal to 3 percent of their GNP. In short, they should be expanding fiscal stimulus of their economy to boost domestic demand and stop relying on renewed export growth for their overall economic progress.

But a second problem is that the yen has become substantially undervalued. The exchange rate of the yen in nominal terms is 10 percent weaker today than it was 4 years ago. However, during that period cumulative inflation in Japan has been 10 percent less than in the United States, improving their trade position. During those 4 years Japanese productivity growth has been 10 percent more than in the United States, improving their international competitiveness.

So when you put the three elements together the yen is now undervalued by something like 25 to 30, percent greatly improving Japan's trade competitiveness around the world. Thus it is no surprise to me that their surplus has again soared and is again raising important trade problems.

The most urgent requirement for U.S. trade policy is therefore for the Treasury Department to work out an agreement with the Japanese and the Group of Seven, perhaps for the Munich Summit, which is coming up in 2 months. They should agree to engineer a sharp rise in the yen against all major currencies, just as they engineered a fall in the dollar back in 1985 when the American deficit was the overriding problem, and to induce the Japanese to undertake fiscal stimulus in order to increase domestic demand in their economy and to stop relying on the enormous growth in their trade surplus to boost their overall economy. I put that at the top of the trade policy priority list right now.

In addition, I will quickly mention three other items, one of which you already mentioned, Mr. Chairman, in your initial remarks. One is NAFTA, the North American Free Trade Agreement. We recently published a study at my Institute which suggests that NAFTA, in combination with the sweeping economic reforms in Mexico, which NAFTA will help to lock in permanently, will produce a positive swing of about $10 billion in the U.S. trade balance with Mexico. That in turn will create on balance something like 130,000 jobs in the United States.

Now that is not just theory. Most of it, in fact, has already happened. Last year Mexico attracted about $18 billion in net capital inflows as a result of its reforms and the expectation that NAFTA would be signed. That in turn financed a sharp growth in the Mexican trade deficit to something like $12 billion.

Since three-quarters of Mexico's trade is with the United States, the great bulk of the increase in the Mexican deficit generated a big increase in American exports to Mexico. That in turn generated a considerable increase in jobs in the United States.

As NAFTA takes effect there will be some U.S. jobs lost, and we have to improve our trade adjustment assistance programs to deal with those. Indeed, our study recommends appropriating almost $1 billion over the next 5 years for that purpose, to help the workers who are dislocated by NAFTA to get new and better jobs.

But on balance, unless the whole objective of the Mexican reforms and NAFTA fails, there must be a consequent large improvement in the U.S. trade position with Mexico, and through that a consequent big pickup in American job creation.

Second, and this topic that was mentioned earlier, we must review our own policies and programs that deter or even block our own exports. We talk a lot about barriers to U.S. exports in foreign countries, including Japan, and we must work very hard to remove those. I will say something on that in a moment. But all too often we fail to recognize that many of our own policies and programs block our exports. We are nearing completion of a study at my Institute that tries to take, I think for the first time, a comprehensive look at America's own export disincentives.

The preliminary conclusion of that study is that something like $20–30 billion per year of potential American sales abroad are being blocked by our own policies and programs. All of those policies pursue legitimate and important goals such as national security or environmental and other standards. But I believe most of those programs were adopted without much attention being paid to their adverse affect on our trade, and through trade on our economy. So what we are suggesting is there is a lot of money out there that needs to be looked at in some detail. We will be publishing that study in the near future.

Third, and finally, we have done another study that looks at tough U.S. trade policies—the use of section 301, the Super 301 legislation—that was in effect for 2 years through the 1988 Trade Act. We find that the use of those tools in at least two-thirds of the cases has resulted in at least partial opening of foreign markets to U.S. exports.

We also found that the Super 301 provision did not provoke any of the trade wars that some of its opponents at the time feared. Therefore, I would support renewal of the Super 301 legislation as contemplated in the new bill that is now being considered in the House Ways and Means Committee.

I would suggest that any such renewal embody the same provisions as in 1988, and not bring in new bells and whistles such as numerical triggers linked to the surpluses of other countries. We should go after foreign barriers that hurt our exports whether the other country is in surplus or not. That should be the indicator, not whether the country is in trade surplus or deficit. And we should focus on foreign trade practices that hurt our exports more than on whether a specific country in some aggregate sense is a problem.

In any event, renewal of Super 301, I think, would help. I would note, however, that other parts of the trade bill now being considered in the House are highly undesirable and indeed anticompetitive.

There is, as you may know, a provision that would call for new export restraint agreements with Japan on their auto sales to the United States. The new agreements would include the Japanese transplant factories here in this country.

I would quote from the testimony before Ways and Means 1 month ago of General Motors itself, through its Vice President, Marina Whitman, who said:

"The voluntary export restraint program will mainly help the Japanese manufacturers. Experience has shown that such programs serve largely to enhance the profitability of the Japanese producers."

That was General Motors' statement on the proposed new voluntary restraint agreement. Studies at my Institute show that these auto restraint agreements at the height of their impact several years ago augmented the profits of the Japanese auto companies by $2–3 billion annually, enabling them to invest that much more, boost their productivity further, and further impair our own competitive position.

Moreover, the proposed new restraints would destroy American jobs by limiting investment in the United States by Japanese automobile companies. It has to be recognized, of course, that all import barriers are generally anticompetitive for the nation as a whole. Steel quotas raise costs to our auto industry and other steel users. Even restraints on consumer goods add to inflation pressures and render us less competitive. But so-called voluntary export restraints are the worst technique of all because they directly augment the cash position of our major competitors, and we should ban them in any new legislation.

Thank you, Mr. Chairman.

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

Senator MOYNIHAN. Thank you very much.

Senator Daschle has joined us since we began. Would you like to make a statement?

Senator Daschle. Thank you, Mr. Chairman. I have no opening comments. Thank you.

Senator MOYNIHAN. I am sure you will have many questions. We are now going to turn to Dr. Bloch, having thanked Dr. Bergsten, as the distinguished fellow of the Council on Competitiveness. Sir, we welcome you.

STATEMENT OF DR. ERICH BLOCH, DISTINGUISHED FELLOW, COUNCIL ON COMPETITIVENESS, WASHINGTON, DC

Dr. BLOCH. Thank you very much, Mr. Chairman. I am glad to be here representing the Council on Competitiveness. It is a private sector funded organization that represents a cross-section of American business, higher education institutions and organized labor. The council's sole purpose is to be a focal point for private sector activities and to work for changes to enhance the country's competitiveness.

In announcing a series of hearings I want to commend this committee that you have done that.

Senator MOYNIHAN. Senator Bentsen was the person.

Dr. BLOCH. And also you pointed out the fact that there is a need for a comprehensive solution to the challenge of American economic growth in the global economy. A single magic bullet does not exist. Many things have to move and get accomplished at the same time.

In its own work, the Council has put its main emphasis on technology and technology policy for two distinct reasons. First, research technology and innovation make a major contribution to long-term economic growth. Second, particularly in light of the importance technology and technology policy play, they do not have the focus that they really service.

By the way, you asked, Mr. Chairman, before about what is competitiveness. I will not answer that question, obviously because Dr. Bergsten has addressed it. But let me just suggest to you that one leading indicator to economic competitiveness is our standing in technology. If our standing in technology is not what it should be, is not competitive, then I think——

Senator MOYNIHAN. And how do you define standing in technology? About 15 years ago the National Science Foundation put out a report, I think it was their second, on science. They divided the field up into some 20-odd sectors and just did the simple library research of counting papers in a range of journals.

Then counting the references in the journals—that somebody with a computer could knock out pretty quickly now. The United States very much, you know, number one. Britain followed. You could see that. The Soviets were first in metallurgy. I was interested in that. But I haven't seen it since.

By which you mean first in technology you mean science and technological innovation?

Dr. BLOCH. Well, I am primarily focusing on technology, not so much on science. I have more to say about science later on.

Senator MOYNIHAN. Yes. Sure.

Dr. BLOCH. But one way of determining where you are in technology, what your standing is in technology, is to find out what each country does, what it accomplishes, what kind of institutions it has and so forth.

Senator MOYNIHAN. What is your metric here?

Dr. BLOCH. Well, the metric is people. Its patents certainly is one particular indicate, not the definitive one. It is institutions—how good your institutions are, how well they are outfitted with doing a particular job. There is not a bottom line number and that is what people are looking for. There are many different parameters that one has to consider.

Let me just say something about this difference between science and technology. In fact, I will contend and I will say that we do not have a technology policy. We do have a science policy. We have had one for 40 years, since the end of World War II. And by the way, that science policy has done good things for us. It made us a world leader in science. It made our university, education and research systems the best in the world. It allowed us to supply ourselves as well as other countries, by the way, with well-prepared scientists, researchers, and engineers.

We did not perceive, however, at the time we put that science policy in place the need for a separate technology policy or augmenting it with a technology policy. The fallout from our defense expenditures and the self-sufficiency of the private sector at that time obviated that need. After all, the defense applications preceded applications in the civilian product sector and the U.S. was ahead of other countries in private sector capabilities.

That has changed. We are facing a different kind of a world today. Leading edge technologies finds the first application today in the civilian sector, not in the defense sector. Just think of big technology as an example. But there are many more electronics and computers and so forth. So the fallout from the defense to the civilian sector has been interrupted essentially and it is not as potent a force as it was before.

The resources needed to develop new technologies are far greater today than they were in the past. Individual company or even a single industry sector cannot afford the big expenditures that must be made to move forward. The increased competition around the world, other countries have moved up to our level of accomplishment and understanding, have surpassed us in many areas, is forcing us to think of shorter life cycle products, as well as technologies.

Let me just say very generally that competitive nations succeeded, not by besting us in basic research, or in science, but by focusing their attention on technology in areas of commercial relevance, like manufacturing, in and getting to market sooner and with higher quality products.

Lacking a coherent technology policy for the country is one of the reasons I believe—certainly not the only reason—why we are trailing badly in our ability to translate basic research results into marketable products in the market place.

The Council on Competitiveness last year published a report gaining new ground. By the way it was also translated into Japanese. It said very clearly in that report: "The U.S. position in many critical technologies is slipping, and in some cases, has been lost altogether. Future trends are not encouraging."

The Council on Competitiveness has been working with industry, with labor, academic institutions, and the administration to participate in establishing a coherent technology policy. We have focused on a small number of essential policy directions.

I would like to discuss these quickly. First——

Senator MOYNIHAN. Could I just say, first of all, sir, do not discuss anything quickly. We have time to hear and we are happy to.

Dr. BLOCH. Very good.

Senator MOYNIHAN. But you do have a metric of sorts, do you not? You take your technology and you break it down and advance structural materials—electronic and photonic materials, biotechnologies, material processing.

Dr. BLOCH. Right.

Let me just say that is really a taxonomy, not necessarily a metric.

Senator MOYNIHAN. A taxonomy.

Dr. BLOCH. Right. That is right.

Senator MOYNIHAN. But you begin to count it. You put a number on things—strong, competitive, weak, losing value.

Dr. BLOCH. Except the numbers are qualitative; they are not quantitative.

Senator MOYNIHAN. They are qualitative. But you are getting there.

Dr. BLOCH. That is what I tried to say before.

Senator MOYNIHAN. You are getting there. You are finding a language.

Dr. BLOCH. Right.

Senator MOYNIHAN. Yes.

I mean photonics is an interesting field coming on strongly; is it not?

Dr. BLOCH. Exactly.

Senator MOYNIHAN. I think we are very good in photonics right now.

Dr. BLOCH. Well, we are doing quite a bit in the basic research area. We are not doing as much as we should in the manufacturing area and the product area.

Senator MOYNIHAN. That I believe is called the British disease.

Dr. BLOCH. Well, we have some of that disease. Yes. There is no doubt about it.

Let me focus on the four directions the Council is investigating and is trying to help with it. The first one is a coordinated and expanded national initiatives in key technology areas that are critical to our competitiveness. I want to mention that in the 1993 budget request to Congress the President has proposed four technology areas.

Senator MOYNIHAN. Where are you in your testimony, sir?

Dr. BLOCH. I am about in the middle of it. Let me see if I can——

Senator MOYNIHAN. Page?

Dr. BLOCH [continuing]. Give you a page number. Seven. The top of seven.

Senator MOYNIHAN. Page 7. Gotcha.

Dr. BLOCH. Okay.

Senator MOYNIHAN. The President proposed four—go ahead.

Dr. BLOCH. Four technology areas that were singled out for priority treatment: High performance computing and communications, materials research and processing, biotechnology and the beginning of a manufacturing technology program in NSF. These four areas are really the four technology areas that every critical technology report has singled out as being the most important ones to the future of our industry and our country.

Let me say at the same time there are other priority areas in the budget like education and human resources. But I do not want to dwell on it.

This is a major step forward in singling out these four areas. It addresses, as I said before, critical generic technology areas. It addresses the programs in a coherent way across many agencies that are participating in it; and essentially it focuses the attention of all the R&D agencies and all the R&D departments of the Federal Government on their importance.

But let me suggest that these programs will only be worth the investment if they are coupled closely to industry and academia. This is happening in the high performance computing and communications area. It must be accomplished in the others as well.

A second area of importance is increasing industry access to and participation in Government programs. All these and other programs paid for by the taxpayer will only be productive in yielding the return they deserve if industry is involved, links its own programs to those of the Government, and participates actively in the formulation, as well as in their management and continuous assessment of these programs.

This participation is happening with great effort only. One obvious reason is the embargoed nature of administration budget requests prior to their publications. So industry sees really the proposals at a time when they are already being cast in concrete, which is contrary to what it should be.

Senator MOYNIHAN. Yes.

Dr. BLOCH. More important, the complex rules of the Government, such as the Federal Advisory Committee Act (FACA) and conflict of interest rules and regulations are a handicap. These affect adversely private sector advice to the Government and Federal advisory committees in order to guard against misuse of information, undue parochial self-interest and undue private gain. All necessary consideration, I agree.

But I think we have moved too far in that direction and have at the same time inhibited the rendering of expert advice to the Government by the private sector. Somehow the balance is not correct. I think we have to readjust that balance.

Senator MOYNIHAN. Yes.

Dr. BLOCH. A third area is implementing and managing technology policy. The technology initiatives that I addressed before and other technical activities span many departments and agencies as they must. The Federal Coordinating Council for Science and Technology lends itself to planning. It is not clear that it lends itself to implementing and managing complex programs that exist over a long period of time.

Obviously within the Administration it is OSTP and the Federal Council that play an important role in coordinating and administering policies. By the way, these two vital organizations must be protected from inadvertent neglect. If we think back over the last ten years it was not so long ago that we really neglected OSTP or it was neglected by the administration and it really did not perform the job that Congress assigned it to perform.

They must be strengthened. Establishing the Critical Technology Institute is a step in the right direction. But again that is not enough. I would suggest a permanent advisory body from the private sector, that continually and in-depth advises the President, OMB, and OSTP on technology policy matters. This is probably something that needs to be put in place.

The Congressional system we have in place today that appropriates the R&D budget is dispersed, as you know, and fragmented among at least nine appropriation bills and subcommittees. Indeed, so are the four initiatives I mentioned before.

The funding within each subcommittee is the result of compromises between the R&D part of a committee's jurisdiction and other unrelated issues that are part and parcel of that committee's mission, therefore endangering the coherence of programs and threatening long-term strategies.

I do not know what to suggest to you as a focal point in Congress. All I would suggest is that this dispersal of responsibility of the R&D budget is not what we need at this point in time; and some kind of patches should be put on that particular system.

A third area of the Council is to assure that we utilize our existing resources better. Our investment in R&D is large. In total it is $150 billion. The Government alone is expending about $75 billion. While there are many areas that need strengthening and require additional funding, there are other areas that are amply funded but their potential contribution to the country's needs and economic competitiveness is of lesser magnitude.

I am referring primarily to the Government laboratories, which absorb about a third of the Federal R&D budget year after year. There are 800 of these laboratories in existence. Their missions are in many cases in doubt. Their resources are excellent. Their coupling to and with industry, however, is minimal. We must make these institutions more relevant to the country's needs, to industry; and the laboratories must form a true partnership with industry and academia that stands the test of the marketplace.

The fourth and last area that the Council is addressing is cooperation and sharing among industry, between industry and Government, between academia and industry and Government. We must find new ways of working together. Sharing of efforts and results in the precompetitive phase of technology is mandatory in today's resource constraint and fast moving world.

I think we need to focus on many networks that are in existence today and many more must be put in place.

Before Sematech was mentioned by Senator Baucus and I applaud Sematech. I think Sematech has done a good job. But it is only one of many of these activities that we need to put in place.

So let me then conclude. As I pointed out in the beginning there are ample reasons to establish an active and coherent technology policy, to augment, not to replace but to augment, the science policy that served us well over the 40 years of its existence.

We are moving in that direction. I mentioned the 1993 budget request as a symbol. But we need to accelerate the pace of change.

We need to facilitate cooperation among sectors of our society by revising some of the rules and regulations which we have put in place and which are not in balance today with our needs. We need to give higher priority and increased funding to programs that focus on generic technologies that address our competitiveness, manage resources that are dispersed among many agencies and departments of Government more intensely and over the life of these programs.

We need to assure that existing resources paid for by the taxpayer can be utilized better by industry and are supportive of the country's needs and not stuck in an era that no longer exists. These resources are both internal to the Government in its laboratories or external to the Government, but funded through Federal grants and contracts to universities and not-for-profit organizations.

We also need to define more fully, and put in place, a stronger Government focal point for technology policy with authority for implementation and management of that policy.

Establishing an effective private sector input to all deliberations, activities, and programs that comprise our technology efforts is long overdue.

Lastly, we need to prioritize scare resources, and change our institutions to allow this to happen, both in the Administration, as well as in Congress.

Thank you very much.

Senator MOYNIHAN. Thank you, Dr. Bloch.

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

Senator MOYNIHAN. Let me just say a few words before my colleagues get a chance.

Senator Riegle, I will not take long here.

The first is to say that I think you were talking about Vannevar Bush's "Science, The Endless Frontier," were you not?

Dr. BLOCH. Exactly.

Senator MOYNIHAN. Yes. Which was published in July of 1945. He was the Director of the Office of Scientific Research and Development under President Roosevelt. He sets it forth very nicely. Oh, my God, the Library of Congress has left a metal paper clip in there. An offending object out of the way. That is all sulfate paper, World War II sulfate paper. It will not last long.

I remember he spoke to a bunch of us in the Navy about that and his last, his final injunction was, "illegitimae noncarborundum." And for those who have forgotten our Latin, which translate, "Do not let the bastards get you down." He was a man of endless energy and ability.

But he had a very confined set of goals. They had to get the radiation lab at MIT to develop a radar and they took over the British information and proceeded to do. The British I guess had started it and I guess the battle of Britain was won because they had some rudimentary idea where the German planes were coming from and they could be up above them when they arrived over the channel.

They had to split the atom. The Hungarians, and the Germans, and the Danes, and the British had figured that out and, you know, we could work out that event and did.

I very much appreciate your efforts to try to produce a metric. I am not saying that you have. But that you are trying. It seems to me it is implicit and you have a vocabulary, as you say.

Would I be right, am I thinking right that there was a National Science Foundation report on science, developments in science, ranking countries by papers published? Do you remember it?

Dr. BLOCH. Yes. There were attempts.

Senator MOYNIHAN. There were two at least.

Dr. BLOCH. Yes. There were reports in the 1950's and 1960's that were specifically addressing some of the science areas.

Senator MOYNIHAN. Yes.

Dr. BLOCH. Not science in total.

But let me point out to you that today there is a science and engineering indicator that the Foundation puts out every 2 years. In fact, the last one just came out last year. Which systematically and as much as possible, which not completely, ranks country by country in terms of RID papers, in terms of employment and funding.

Senator MOYNIHAN. There we are.

Dr. BLOCH. In terms of education, in terms of people that goes through the educational process and things like that.

Senator MOYNIHAN. Then it is time that I ascribe my question to ignorance.

But I was a member once of the President's Science Advisory Committee and I have tried to follow that.

I would like to ask you then two quick questions, but first of all to say just to leave this, when you think you want to establish an active and coherent technology policy I hope you would consult with your colleagues in the social sciences. I do not think our Government is capable of that.

You would like this Congress to go get itself together. It will not. And you might find the model of a competitive market more attractive to you if you can find rewards for successful entry and so forth, the kind of turbulence in the system that it should not pay to describe.

Dr. BLOCH. Right.

Senator MOYNIHAN. Your economists and your organizational theorists. We are not a coherent Government. We are not formed on the assumption of coherence. We are formed on the assumption of conflict and checks and balances. It diffuses all through the system. If you ever did get one place where the decisions could be made, you would very probably find yourself with a chairman who made wrong decisions for 15 years and nothing could be done about it.

So will you think in those terms? I am not saying you should decide.

Dr. BLOCH. Right.

Senator MOYNIHAN. But would you entertain the possibility that that kind of coherence is just not natural to a Government such as ours and that a market model, which is a model of incoherent entries and exits, but outcomes determined by some levels of profitability.

Dr. BLOCH. Well, I think, Senator, you are making a very good point. I did not mean when I said active and coherent in the stricter sense of the word. What I meant to imply by it, however, is the following: That as we look at our situation today, and as we find areas where we need to improve, those are the areas that need addressing in a coherent kind of a way, by pulling together the resources that we already have devoted to it.

Senator MOYNIHAN. Well, it is very simple. You get yourself 100 Vannevar Bushes, you see, and then you do not have any problem.

We have been trying to get action out of the same Bureau of the Budget that has identified the technological areas you mentioned. We have passed legislation decreeing that there will be a magnetic levitation rail system—it is not a rail system—built in this country. It was invented in this country. The Japanese have put billions in. We have not put a dime in. The Germans have put billions in. And that Bureau of the Budget took it out of that very same budget to which you referred OMB did. So much for coherence.

Could I ask—I will get back to you in just a minute, my time being up at the moment.

Senator RIEGLE. Mr. Chairman, could you indulge me for one comment.

Senator MOYNIHAN. Yes.

Senator RIEGLE. Just to reference something you have said, accounted for my time, so you do not lose the rest of your time.

Senator MOYNIHAN. No, no, there is plenty of time.

Senator RIEGLE. I thought your comment about how our Government is designed based on conflict and how checks and balances are diffused throughout the system is a powerful and illuminating point.

I was struck by the comment that one of the would-be Presidential candidates made, Ross Perot, made when he said that he would come to Washington and have the branches of our Government dancing like Ginger Rogers and Fred Astaire. I thought this was a wonderful sort of pictorial image. [Laughter.]

Senator RIEGLE. I am just wondering in my own mind how that notion works in the context of your description of the planned chaos of Government?

Senator MOYNIHAN. It is very simple. You get Louie B. Mayer, who owns everything and pays everybody and tells them what to do. That is not, however, the American Constitution.

But my time is up and your time comes very quickly. [Laughter.]

Senator MOYNIHAN. Senator Baucus?

Senator BAUCUS. Thank you, Mr. Chairman.

I think this discussion goes to the heart of the problem here. That is, we are in a certain sense incoherent and disorganized, chaotic, fractured. I wonder the degree to which we have to change our ways in order to be more competitive. I certainly agree with the assumption that we have a competitiveness problem.

But we are a nonparliamentary form of Government. There is not a lot of accountability in this country. Special interests have immense power. They do pull the House and the Senate apart. The whole is no longer there. The center is not there near as much as I think it was maybe 30 or 40 years ago.

I sometimes wonder if the parliamentary form of Government makes some sense, frankly. At least there is some accountability. But that is way off in the future. I am just wondering the degree to which you have given, either of you, thought to this central question—I regard as a central question.

Because of the way we are constituted we are also very short-term oriented, whether it is the financial markets or whether it is private decision-making, whether it is Government decision-making. Presidents and Cabinet Secretaries and Assistant Secretaries come and go. Heads of departments in the private sector are promoted basically on the degree to which they have short-term profits in their departments.

So I am just curious what you think about all that, either of you. What do we do about all that? You know, sure we need an education policy. I think we do have a math and science problem in this country, K through 12. I think it is severe in my judgment. I do believe we need must better retraining in this country. We have to focus on commercialization, on process technologies.

We need stronger trade laws and we need to get our savings rates up. Nobody disputes any of that. The real question is: How do we do it? As you pointed out, Mr. Bergsten, this is not a Sputnik kind of problem, it is a slow erosion kind of a problem.

I think Lester Thurrow said years ago we are bleeding by a thousand cuts, it is not an immediate hemorrhage. So it is harder to deal with. So what do we do about all that?

Dr. BERGSTEN. Well, as I listened to Senator Moynihan I was hoping we might be able to find something between the extremes of dictatorship and chaos. He is quite right that our system was set up to promote conflict and checks and balances. But I would——

Senator BAUCUS. And our Founding Fathers did a good job when they set our Government up that way, too.

Dr. BERGSTEN. Right.

Senator MOYNIHAN. We are still here so far.

Dr. BERGSTEN. We are still here. But we do have some of these problems that we are talking about today. In some of the areas that we have looked at in our Competitiveness Policy Council, at least in a preliminary way, we do see a need for a more coherent Government approach—but not necessarily by any means Government dictating the course of events.

I personally think that we are into a very new world situation where the major world competition over the next few decades may be between competing models of capitalism. We have had for the last 50 years ideological and military competition between communism and what we roughly call capitalism or democracy. That, hopefully and thankfully, is behind us.

I think the main world competition in the years ahead is going to be among different types of market economies. We proudly say the world has now rejected——

Senator BAUCUS. I am sorry, but you are not really answering my question. My question is: What do we do as Americans?

Dr. BERGSTEN. Well, I was going to come to that. But I was going to draw the lesson that while we are proud that the world has rejected command economics, it has by no means bought Anglo-Saxon economics. We have at least three broad models. Call them simply the Japanese model, the Continental European model, and the Anglo-Saxon model. They are very different in terms of the way governments and private sectors interact, and the role the Governments play in the economies.

It is not by any means clear that our system is superior. And since our economy has now become as dependent on the rest of the world, as you said, as Europe or Japan, we may have to adapt some of those models.

For example, in their focus on saving and investment and long-term investment strategies, the corporate government systems in Japan and Germany are very different from ours. The holders of corporate assets are different. They are much longer term in their orientation. They provide an environment within which corporate management can take a much longer term view.

We have shied away from that. Indeed, we have tried to avoid it and rejected it in our laws and our regulatory framework. Maybe we need to take another look at whether we want to provide an institutional environment within which patient capital will take a longer-term view and perhaps contribute more to our competitiveness. That is just one of many areas.

Within Government we specifically said in our report that there is no basis now—I referred to this briefly in my opening remarks—for thoughtful sector-specific policies. Our Government has no independent baseline forecast for where industries are going, let alone whether that direction is going to be compatible with a prosperous economy. We need to set up new Governmental mechanisms at least to do that.

Senator BAUCUS. This little light over here prompts me to cut you off briefly here.

However, I have another basic question. What are the rights and responsibilities of an American corporation? Also, what are the rights of a Japanese corporation as the Japanese see it or a German corporation as the Germans see it? Accordingly, what are the rights and responsibilities of an American corporation in relation to the global economy. You mentioned that GM is a global company. Given this, what are GM's responsibilities vis-a-vis Americans, as opposed to its responsibilities worldwide or to its shareholders?

I think this is a basic question that has to be answered if we are going to begin to answer this question of how we become more competitive?

Dr. BERGSTEN. It is a very basic question. If I could answer it in one sentence, I think the answer under current institutional and cultural arrangements is very different for American, Japanese, and German companies. American companies are responsible to their shareholders. That essentially means they must maximize profits. The way our system is set up they tend to maximize short-run profits. In Japan corporate responsibility extends much more to what are called the stakeholders—the workers, the suppliers, and the community as well.

Senator BAUCUS. I know what the situation is in Japan. I know what it is in Germany.

My question is: In your judgment what should our system in America evolve to be in order that we can begin to answer this question of competitiveness?

Dr. BERGSTEN. As I was suggesting earlier, I think we may have to adopt some of the elements of those foreign systems in order to broaden the responsibilities of our corporations, to improve the nation's competitiveness.

Senator BAUCUS. What would those elements be?

Dr. BERGSTEN. One would be to change the whole set of regulations that affect investors in our corporate securities. I will give you one specific idea that has been proposed as the result of a two-year project at the Harvard Business School that was sponsored by the Council on Competitiveness. Much of our corporate equity is now held by institutional investors who have a very short-run focus.

Senator BAUCUS. Right.

Dr. BERGSTEN. One way to change that would be to change the tax treatment of payments, for example, to beneficiaries of our insurance or pension programs. One could differentiate the tax treatment, depending on whether the underlying asset was held short-term or long-term. If the pension fund that paid your annuity had held the asset for 10 years or more, no tax. If it had held it 6 months or less, pay the normal income tax rate.

Senator MOYNIHAN. Fine. We will hear more about that.

Dr. BERGSTEN. This would provide a major incentive to alter shareholder behavior and, therefore, corporate investment behavior of much of our private sector.

Senator MOYNIHAN. You will let us know about that Harvard Business School study.

Now we turn to our good friend from Iowa, Senator Grassley.

Senator GRASSLEY. Thank you, Mr. Chairman.

Foreign direct investment in America is on the increase. Yet the U.S. Government funds relatively fewer industrial competitiveness programs than foreign firms and governments of other developed nations, particularly Europe and Japan.

Considering this, how should we deal with foreign companies who ask us for access to research like Sematech and the advanced technology program of the Department of Commerce?

Dr. BERGSTEN. I would like to make two comments if I could, and then Erich knows many of the details better than I.

Senator MOYNIHAN. I think it would help if each of us would address individually, Dr. Bloch or Dr. Bergsten or both.

Dr. BERGSTEN. Just very quickly. First of all, the foreign direct investment inflow to the U.S. has plummeted in the last 2 years. It is now less than a quarter of what it was in the late 1980's. So to the extent one views foreign direct investment as a problem it is down. I happen to view it as a plus, so I worry about that. But it is much less.

Here I would go back to something Senator Moynihan said at the start. The great bulk of the leading edge technology in the world is now developed outside the United States. We want to make sure that we have access to that. One way we get access to it is through investment here by foreign-based companies. We want to make sure that they put some of their technology, some of their leading edge R&D, and a lot of their procurement here. If they do that, then foreign investment is a plus. On the question of participation in Sematech, I would have two tests. Do the would-be participants make major contributions to our economy in terms of R&D, job creation, and local procurement? And do their governments provide equal access for our firms to their government-supported R&D? If the answer to those questions is yes, I would let them in.

Dr. BLOCH. Well, I am pretty much in agreement with that, especially on the last point. It comes back to a quid pro quo. Do we have access to their best research, their best researchists and their best institutions is certainly one test. The second test, obviously, is how much can they contribute here.

By the way, that is difficult to figure out because just putting an assembly plant in this country does not necessarily—might provide temporary jobs, but it does not build the U.S. infrastructure. It does not put technology in place that everybody can learn from and everybody can benefit from.

So I think those are the two tests. Not only how much do they invest here but what kind of investment it is. I think we are many times naive if we only count jobs that are being created rather than looking at the content of the jobs—if they are permanent, if they have a high capability of educating or training the work force, if something is left behind, if that company should pull out tomorrow morning.

Senator GRASSLEY. On another point the Council on Competitiveness has listed as one of its key recommendations that the President in order to enhance U.S. competitiveness ought to act immediately to make technological leadership of our foreign nation a national priority. What specifically does that entail? What would he have to do to accomplish that goal?

Dr. BLOCH. Well, the first thing, make sure, say it. Put it in place as a policy of this administration. Follow it up by a Presidential directive to the R&D agencies and to the Government laboratories, to open these laboratories up for industry to participate in their programs.

I think those are the two main things that need to be put in place. I focused on the Government laboratories before. I have called them an underutilized resource and that is what they are. We can hardly afford that much longer. Just opening them up, making sure that agreements between a company that wants to use some of the technology and the laboratory's capability to provide it does not take 18 months before an agreement is being signed. That is what it takes today.

If it takes longer to negotiate than to do the project, it is not worthwhile doing it.

So there are many things that could be enhanced by a declaration and it is a signal to the bureaucracy that the President thinks that technology competitiveness is one of the main issues that the country faces. We live by signals and symbols.

Senator GRASSLEY. That is right.

On the point of education, and I hope it is appropriate for this discussion, to address vocational education on the one hand and academia on the other. Is there more that needs to be done with vocational education to compliment the academic side of our educational process? When we talk about the shortcomings of American education we generally refer to languages, and sciences, and math which are obviously all important. What about just vocational education?

Dr. BLOCH. Well, I think vocational training is extremely important and we are not doing very well in that.

Senator GRASSLEY. Are we doing less well there than on the academic side?

Dr. BLOCH. Oh, absolutely. There is no doubt about it.

By the way, let me say it is not because we do not have a system in place or we do not have organizations or institutions in place. If you count the number of 2- and 4-year colleges, and community colleges across the United States you come up with a number like 3,500. Some of them, by the way, are extremely good, are very good. Some of them are very poor.

Let me suggest that we do not have a quality control on these institutions that is universally accepted. We have a quality control on universities. Everybody knows which university is good and which university is not so good. We need a similar kind of a thing on vocational training.

Second, we have to make it more available to people to access these community colleges. I do not think we are doing that either. So vocational training is one of our big handicaps.

Dr. BERGSTEN. Senator——

Dr. BLOCH. Let me just make one more point. You know, at one time it was manual skills, hands-on kind of experience—how to fix a motor, how to fix an automobile engine, and so forth. Today it is more complex. Today many of these same functions are being performed by software, an intellectual, quite different approach. I am not so sure that our institutions are up to that level of sophistication where they can essentially teach in that changing environment.

Dr. BERGSTEN. Senator Grassley, in the work of our Competitiveness Policy Council we have split education and training and set up separate subcouncil to develop detailed recommendations in each area, because we do place the kind of importance on the training side that you indicated.

Senator GRASSLEY. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Riegle.

Senator RIEGLE. Thank you very much.

First of all, let me commend both of you and your organizations for producing these outstanding blueprints for what America ought to do to strengthen its economic performance, its competitiveness, and its productivity.

In going through them both, I think it is fair to say that these reports are essentially consistent with one another. Both organizations developed essentially the same definition of the problem, though with some difference, yet both reports recommend the same general blueprint as to what ought to be done to deal with the problems we face in the area of competitiveness.

Is that a fair assessment, which allows me to go from that as a foundation point?

Dr. BERGSTEN. Yes, that is fair.

Senator RIEGLE. That to me is highly significant. I will not list the names of your members, but these are distinguished people who are certainly qualified as national leaders to gather and assess this problem and to make recommendations. The fact that two such groups have arrived at similar findings in the most intense and serious way, has generated important analyses of the problem and proposals that are essentially cross-related to one another. I think this tells us about all we need to know about both the problem and how we go about fixing it. No further similar studies should be necessary.

These two reports have provided us with a road map. The question is: Can we now do something with it? I think the reports move competitiveness issues up to a higher level of discussion, which in a sense is more abstract, but highly relevant that Senator Moynihan and Senator Baucus were touching on a minute ago. The ideas in the reports cut against our prevailing private sector culture when you start talking about reorganizing things in a comprehensive and different way, such as both plans describe.

I use this phrase that has been tossed out in the Presidential race about whether or not the Government branches and agencies can be made to get together and dance like Fred Astaire and Ginger Rogers to illustrate a situation that would be ideal. It is an attractive concept and for many reasons our system is not designed in this way. As we are aware other systems are designed to encourage cooperation among many entities, including Government; and they seem to come much closer to doing that than do we.

I am alarmed by the gains that other nations are making and the gains that we are not making, especially in the economic arena. I am even further distressed about the economic problems facing our cities, including the problems of people not having health care and people not necessarily getting the educational skills they need, as Senator Grassley referred to and so forth.

As we look at the new global economy that we are now part of, I am convinced that we need to adapt to a situation which is a fundamental change from our historic experience. As such, the old invisible hand notion is not enough to get the job done for our Nation in the future. A nation's Government cannot stand aside and let the economic system work. This method won't necessarily accrue a lot of good outcomes to meet the national interest.

You can end up with a bad trade deficit, high unemployment, low productivity—all in the name of the workings of the invisible hand. I see the invisible hand at work today and you are coming in and sounding the alarm and saying that in essence this method is not getting the job done and that we need a new approach for solving are economic problem and running an economy.

That is quite stunning. When we had a hearing, Mr. Bergsten, with you up in the Senate Banking Committee, Ran Araskog, the chairman of IT&T was there. He is one of the members of your organization, and as a major corporate executive in America I would say to my colleagues that he said something at our hearing that day that was almost like a new language.

He ventured to say that he thought it ought to be a goal and purpose of American business to create jobs in America. I had not heard that before, or at least in some considerable length of time. This is because I have observed of all of the factors that are at work for American companies, in terms of seeking low-cost production, driving up market share value of stock and so forth, and moving abroad, if necessary.

To have a CEO of a major company say that a goal of an American firm ought to be to create jobs in America sort of cuts against the way much of the invisible hand economics seems to work today. Don't we have to have a comprehensive plan where business and Government and citizens get together in a kind of Team America concept that in its own unique way expresses America's way of operating in a way that does not exactly copy Japan or Germany or Europe?

Should we fashion a new arrangement in order to get an economic strategy close to either of these countries' plans?

Dr. BERGSTEN. I think we do. We in our Competitiveness Policy Council, as I mentioned earlier, are now in the process of trying to develop detailed sets of proposals in each of these areas that would do essentially what you are suggesting.

It is going to require changes in Government behavior and policy to get the saving rate up, get investment incentives up, reduce the costs of health care, and improve the educational system. We have to be careful, obviously, about the nature of this new kind of cooperation.

I do not think we want Government trying to direct or run these programs. But it is clear that the economic environment within which our private sector now operates is not creating incentives to do the things that we need for long-term growth, productivity expansion, and competitiveness. That is going to require some fundamental policy changes.

Senator RIEGLE. You know, it strikes me that Senator Moynihan is sort of a walking fountain of information and relevant observations that apply importantly in this area as to many. I think we need some kind of a new economic concord. I am not sure if that is the right word. But we should have something along that line that is comprehensive and that captures the nature of the new economic challenge that faces America in this changing global economy.

We have to invent the terms. We have to define the notion of how we see the model, so that it is something compatible with our history and our culture. However, any model must allow us to change, think and plan, and produce and perform as a nation.

Dr. Bloch, what were you going to say about that?

Dr. BLOCH. Yes, let me comment on your questions. You used the word "comprehensive plan" and I know you did not quite mean it the way it could be interpreted. But let me interpret it the wrong way.

Senator RIEGLE. I do not mean Government czars. That is right, I do not mean that.

Dr. BLOCH. Right. If you mean by that how many automobiles do we produce 1 year versus next year I am sure you did not have that in mind.

But what we do need is an understanding across all sectors of our societies that the world has changed. That number one that industry can cooperate and compete at the same time. By the way, you talked about private sector culture. The culture is changing in front of our eyes. You see today cooperative kinds of efforts among competitors which never would have happened even 5 years ago.

Senator RIEGLE. How many CEOs are there that are willing to say what Ran Araskog said in public in our hearing a month and a half ago about the responsibility of an American corporation to create jobs in America?

Dr. BERGSTEN. It is a good question. During the——

Senator RIEGLE. Dr. Bloch, before you go on please list the number of CEOs that have said that to you.

Dr. BLOCH. Zero.

Senator RIEGLE. Zero? That is a pretty depressing answer.

Dr. BLOCH. Well, that does not mean that some of them do not think that way.

Senator RIEGLE. I understand. But the point is, even if they think it it is so far down on the list. This is evident in the fact that in all the conversations you have had you have not heard it listed as a priority. I would say this idea of creating jobs in America and the role of U.S. corporations in contributing to this goal is not a very commanding part of the current culture and decisionmaking within American corporations.

Dr. BLOCH. But on the other hand I must say that many of the thoughtful leaders in industry are changing and are changing their view of what needs to be done and are now following through on that. Motorola, for instance, that I am very familiar with, pulled back some work from the Far East because they convinced themselves they could do it as well or better here.

That, I think, is a commendable change. I am sure that happens in other companies.

Dr. BERGSTEN. There is a fascinating statistic you should know about. It is a little out of date, but a few years ago a top-notch research team did a study of the global market shares of American companies—not of the United States, but of American companies. They found out that the American companies, through thick and thin, and even in a period when the dollar was greatly overvalued and hurting our trade position, had not lost global market share.

The United States, however, had lost substantial global market share. Now the inferences one can draw from that are fascinating. One could say that American companies are doing well, but there is something about the economic environment in the United States that is not as attractive as abroad. And so it comes back to a policy or environmental problem.

Or one could say that American companies do not care about creating jobs in the United States. All they care about is corporate profits, et cetera. One can draw different inferences. But it was a stunning finding, a sharp difference in the trend line of how the companies were doing versus how the country was doing.

And that is what I think you are suggesting we need to bring back——

Senator RIEGLE. I am more concerned today about how the country is doing. I think the report card there is not what it should be.

I know my time is up. May I submit some questions, too, for the record, Mr. Chairman?

The CHAIRMAN. Yes, of course.

Senator RIEGLE. Thank you.

[The questions appear in the appendix.]

The CHAIRMAN. First, let me apologize for not having been here at the beginning of the meeting.

I am fascinated by the proposal for choosing critical technology industries and outlining a vision for the path that they might pursue. You are talking about the ITC and the Department of Commerce, one or the other, I assume, doing that.

I am intrigued by that idea. Do Federal agencies perform any of that role now?

Dr. BLOCH. Could I comment, Mr. Chairman?

The CHAIRMAN. Yes.

Dr. BLOCH. I do not think we are suggesting that the Government choose critical technology industries. I think what we are suggesting is that the Government focus on critical technologies. That is quite different.

Let me give you one example. For instance, materials. While materials applies to automobiles, it applies to electronics as well, it applies to the construction sector of the economy, and so on. What we are suggesting is that they are critical technology that are very important to more than one particular sector, sometimes maybe only to one. That could very well be. But in general more than one particular sector.

The CHAIRMAN. So it might be more generic.

Dr. BLOCH. Building the base for a technology is very important so that everybody can take advantage of it.

The CHAIRMAN. All right.

Let me delve into this a little bit more. We always worry about the picking of winners and losers by Government; and yet Government has done incredible research on agriculture which has been used by all farmers and has made us certainly one of the most productive countries in the world. So we are not foreign to this idea. It has been done before.

But I look to the problem of the transferring technology to consumer products and the problems that we have in that regard and in trying to figure out ways to look through that test tube into the marketplace. The question is how much should Government be involved in that.

Perhaps we can do more in the way of basic research. We are the premiere leader of the world when we are talking about pure research. Then I look at how much Government money we are spending on R&D. I can recall the figure of $77 billion. I was also advised that 59 percent of that is spent by the pentagon. That is higher than it has been in some years past.

It seems to me we ought to be making a dramatic shift and that more basic research ought to be done, perhaps more than pure research, to try to get more bang for the buck and a faster realization. That would help move us out of the economic doldrums and help create good-paying jobs in our country.

Would you comment on the balance of pure and basic research and where you think we ought to be? Either one of you.

Dr. BLOCH. Let me comment. Let me mention one thing first. You looked at the split between defense and civilian research. By the way it is 58 percent in the 1993 budget that goes to defense R&D. The high was more like 64 or 65 percent.

The CHAIRMAN. Well, that is true. However, before that it was lower.

Dr. BLOCH. So we have come down.

The CHAIRMAN. Yes.

Dr. BLOCH. I think the right balance is somewhere where it was for many decades, around the 50/50 level. That probably would be——

The CHAIRMAN. Now why should it be 50/50 when our competition over the next decade is not military but an economic one? Why should we not concentrate more on the civilian side?

Dr. BLOCH. Well, in all fairness a number of resources today are within DOD, like some of their laboratories that are very, very good. We should take advantage of these laboratories because they have people, they have equipment, they have knowledge. We should open them up and make sure that they contribute to it. I made that point before you came in, Mr. Chairman.

I think we have to realize where some of the resources are located. That is what I am reflecting essentially.

But if you look at the split between what you call pure and basic research, and basic research people would more call applied research, I think we are today spending much too much money on development, a third part of that stool—namely how to test a missile, how to design a tank and so forth. It is all under R&D today.

So I think rather than reducing the pure research, we need to build up the supply to basic research, but drag the money out of the development effort which is very, very large and which mostly by the way is either in NASA or in DOE or in DOD, but mostly in DOD.

Dr. BERGSTEN. Could I make perhaps three comments, Mr. Chairman?

The CHAIRMAN. Yes.

Dr. BERGSTEN. First, let me reinforce your point about how thoughtful Government policies in the past have produced what we called in our report spectacular successes in the economic area. It is not just in agriculture and it is not even just Pentagon related.

I was meeting with the Business Council on this over the weekend. The CEO of one of our leading companies in the pharmaceutical industry, which is clearly a world-class U.S. competitive industry, pointed out that the National Institutes of Health spend $8–9 billion a year on research, which in turn leads to product. That is an important element, even a critical element, in our global competitiveness in that sector. So it happens across the board when we have thoughtful, consistent policies.

Second, as we in our Competitiveness Policy Council looked at all this, we concluded that the real issue here is the commercialization of technology.

The CHAIRMAN. That is correct.

Dr. BERGSTEN. That it is the third, sixth, tenth iteration of the product, which is where the business is. You have to be able to do that.

So we suggested taking a serious look at an idea proposed by a recent National Academy of Sciences task force headed by Harold Brown, who used to be Secretary of Defense and before that President of Cal Tech, for the creation of what they called a Civilian Technology Corporation, which would invest in generic precompetitive technologies but would try to bridge from the pure research to the end product.

I was on that task force. A lot of the key technology people in the country from private industry were on that task force and think that is an idea worth serious consideration.

Finally, to go back to something you said at the outset, we in our report did suggest the need for new Government mechanisms to look at the future of individual industries. We took the view that, in answer to your question, there is inadequate Government analysis today of where key industries are going. So that when an industry comes in for Government help—for import quotas, for tax help, or whatever—the Government really does not have an independent judgment of how it should respond. It does not really have a baseline projection of where an industry is going, let alone a vision of whether that looks compatible with a prosperous and competitive country.

So already in our first report we called for, as you said, thinking about either the Department of Commerce or, my preference, an independent agency like the International Trade Commission but with a much broadened mandate, to put that kind of capability in place. At a minimum the Government would then know more about where key sectors of the economy are going.

The CHAIRMAN. Dr. Bergsten, I think that is a major point and I agree with it. I think that is important.

I see my time has expired, but I will exercise the prerogatives of a Chairman who missed the earlier round and ask a couple more questions.

As I have talked to Harold Brown and read his report about transferring technology to commercial use, one of the things that it seems to me would get the private sector more involved in the choice is if they had to put their equity money in early on and then the Government followed and put seed money in the basic research to get through that test tube into the commercial product.

Would you comment on that?

Dr. BERGSTEN. Dr. Bloch probably knows the answer better than I. I would simply say that in the task force with Harold Brown we wanted 50/50 Government-industry sharing on a project basis once the corporation was set up and pursuing individual projects. Instead it may be better to do it right from the start. I do not have a strong view on that.

We clearly shared your fundamental objective of linking any work that such a corporation would do with the private sector and with the market, as determined by the willingness of private industry to put up its own money.

The CHAIRMAN. Dr. Bloch?

Dr. BLOCH. Yes, let me comment on it.

Definitely industry needs to participate in it. If it is 50/50 or 60/40 or 40/60, is kind of immaterial. But industry needs to make the first move, no doubt about it.

By the way, that happened in Sematech.

The CHAIRMAN. Yes.

Dr. BLOCH. Industry got together first.

The CHAIRMAN. Yes.

Dr. BLOCH. And then went to the Government and said, support us. I think that is a good approach, that is a good model.

Let me suggest to you that a similar thing could be done within the Government laboratories. If part of the Government laboratories funding were set aside and would have no access to these funds, say 10 percent, unless and until industry participates in a joint program and puts its own resources in place, I think we would get a better linkage between the Government laboratories and industry.

It is a test of the marketplace that I think is needed in many of these cases.

The CHAIRMAN. That is an interesting idea.

I see my time has expired. Are there further questions?

Senator MOYNIHAN. Yes. I would like to just say two things. We had a long discussion, a good one, about how good would this Government be at picking priorities and making judgments.

Let me ask you, Dr. Bergsten, in your report, first annual report, you have these SAT scores and things like that. You say, "The goal must be a restoration of globally competitive performance by American students by 2000." Now are you associating yourself with the President's goals for the year 2000?

Dr. BERGSTEN. No. In fact, we did not in this first report endorse any specific program, but we did not intend either to endorse or to criticize the President's program as you cited it earlier.

Senator MOYNIHAN. Let me just say to you—but that is what I am talking about. The goals for the year 2000 are a political lie, an easy lie, and there is no cost because you will not be around when it turns out it was not so. But that is likely what you are to get out of our political system. I will leave it there.

Dr. Bloch, Senator Bentsen just mentioned your reference to the national laboratories, which is in the testimony here, and about a third of all R&D dollars over $20 billion are going into the Government labs.

If I had one large concern about this culture we created in 45 years, half century of war, Cold War, it is that secrecy system. Most of those national labs do secret work.

Dr. BLOCH. It is not a sacrosanct of that culture. By the way, yes, a large number of the Government laboratories are doing secret work. But the same laboratories are doing very much open R&D work.

Los Alamos, let me take one example which certainly does secret work on nuclear bombs and weapons and so forth, has a very large program which is pretty much open. In fact, Japanese scientists many times walks through there, in the computer research, in many of the materials areas, very sophisticated material areas, in many of the instrumentation areas, even in manufacturing processes and so forth.

So it is not quite right that everything they are doing is secret.

Senator MOYNIHAN. Well, I did not say everything, but the balance.

Dr. BLOCH. That is what I address we have to take advantage of that knowledge base and capability.

Senator MOYNIHAN. Back in 1970 Fred Sitz headed up a committee on this and in the height of the Cold War said we would be better off if we got rid of all secrecy because it just slows us down.

Dr. BLOCH. Right.

Senator MOYNIHAN. Of course, we did not. I think you could make a measure of the degree to which if you look at those tables you have of who spends money or what—you know, the Japanese spend almost as much money on universities as we spend on defense R&D—that culture of secrecy I would just swear to you after 50 years has become congealing, blocked circuits.

Dr. BLOCH. Just to comment on it, I agree with you that, you know, it was probably ill-founded to be that secret about many things, even during the Cold War. It is even less well-founded today.

But I would suggest that it is not only the secrecy aspect that prevents this transfer of information, if I wanted to use transfer of technology, if I wanted to use that term.

Senator MOYNIHAN. Yes.

Dr. BLOCH. It is the access, the mutual trust between industry and the laboratories, the mutual interest and the lack of incentives that stand in our way more so than secrecy or not secrecy.

Senator MOYNIHAN. I leave it that the atmosphere of distrust is simply a variable of the culture of secrecy.

Dr. BLOCH. Yes.

Senator MOYNIHAN. Thank you very much. Thank you both.

The CHAIRMAN. Senator Baucus?

Senator BAUCUS. Thank you. I have really two questions. First to you, Dr. Bergsten, goes to the problems you have with the House trade bill, particularly the VRA provisions. What is your assessment as to how strong the U.S. auto industry is? To put it starkly, whether it can survive?

That is, there are many analysts who point out that the U.S. industry is suffering today under a very difficult handicap. Number one, their health care costs are much higher than the health care costs of the Japanese auto industry. The pension costs are much higher. Some people then suggest that unless something is done, the U.S. industry is in very great trouble.

I was in Detroit several weeks ago, spent several days in Detroit asking all the questions I could. In fact, you would be interested, Dr. Bloch, I took with me the MIT study of the world auto industry, "The Machine that Changed the World." I asked GM, Ford, and Chrysler executives, also the UAW folks, lots of questions trying to find out the degree to which the U.S. industry is doing what Womack and others suggest they should be doing in adopting Japanese manufacturing techniques.

I found that in fact, the MIT study was their Bible. I also found it is the Bible of a lot of other industries. They know they have to move in that direction. I also found that they have moved somewhat in that direction, but not nearly as far as I think they have to if they are going to get the job done.

So couple on top of that, the older aged work force of the U.S. auto industry, much older than Japanese, so you compare say a Flint plant with a Japanese transplant. Add on top of that, as I mentioned earlier, the amalgamation rules and the pricing structure in Japan. One company pointed out to me that if you take a Honda made in Marysville, Ohio and that car is then shipped over to Japan and sold in Japan. The mark-up of that Honda Accord would be roughly, say, 12 percent, something like that.

If you take a Jeep Cherokee made in the United States and shipped over to Japan, the mark-up is like 45–60 percent because of the Japanese distribution system. In fact, I think Ford has joint ventured with Mazda in part just to take advantage of the problems of the Japanese distribution system. So they are going in through Mazda because they cannot distribute their own Fords any other way.

So my question is this: To what degree is the U.S. industry in trouble because of these disadvantages? What should we do about it?

The Big Three may not say so publicly, but I think privately they know they have very severe problems down the road and it is going to be difficult for them unless there are dramatic changes. So my thought was do we have some kind of VRA, a different kind of VRA, one we have never had before, where there is in fact a quid pro quo. We say to the industry, get your act together and you have to meet, say, Baldridge criteria, you have to meet very definite standards of excellence or the deal is off.

I do not like protectionism. I do not like VRAs and the old way. But I am looking for some way to put some pressure on the Japanese.

Could you just talk a little bit about the degree to which we have to kind of be responsible, but firm and move forward to make sure we have a strong U.S. auto industry that can stand on its own two feet.

Dr. BERGSTEN. Well, I certainly share the objective of a strong U.S. auto industry. Its future is a huge topic. Obviously, we could have a separate hearing on that alone. Unfortunately, I have to run for the airport in just a minute, but let me make a few quick comments.

I think there has been a lot of progress in the U.S. auto industry over the last few years. Ford in particular is now stacking up on many international comparisons and is quite competitive with most of the Japanese companies. Some of the GM products are now rating quite highly on international comparisons, at least better than they have in the past. So they are getting better.

The problem is that they are shooting, as you indicated with the Toyota example, at a very rapidly moving target, and they do have some liabilities laid on them by, as I said before, our Government policy environment.

You can go back to the 1970's when we kept energy price controls on for 5 years after the first oil shock, which sent all the wrong signals to our auto industry. They kept producing gas guzzlers because we kept the oil price down in this country. They were then savaged once we began to liberalize and imported cars with greater fuel efficiency came in. So a lot of their problems were made in Washington. I fully understand that. But I think the question, Senator Baucus, is whether we help them become more competitive by insulating them to some extent as we have done for the last 10 years with VERs.

Senator BAUCUS. It is the old infant industries argument.

Dr. BERGSTEN. Right.

Senator BAUCUS. And the degree to which that makes things better.

Dr. BERGSTEN. It is more like a senescent than an infant industry, I would say.

Senator BAUCUS. Still it is the basic principal.

Dr. BERGSTEN. But I think even as we look back over the last 10 years, one can argue whether we were better served by giving them even that degree of insulation. It turned out that the VERs we gave them were largely circumvented by the Japanese investing here with the transplants, which probably increased the competitive pressure.

In addition, however, as I said in my initial remarks, one thing we know for sure is that the VERs as they were implemented gave the market to the Japanese companies to divide up. That enabled them to set the price, and that in turn enabled them to greatly increase their profits, plow those profits back into their own investment and R&D, and so on.

So if we are going to do trade restraints, let us learn from the past. First, let us do what you said, namely, require a quid pro quo from industry, but second, let us not do it through a technique that gives market share to the foreign producers to carve up and lets them set the price and garner the extra profits. There is always a big price increase when you set a quota.

Senator BAUCUS. Right.

Dr. BERGSTEN. The issue is then who gets that price increase.

Senator BAUCUS. Well, as I am saying, try to design it in a way to prevent that as much as possible.

Dr. BERGSTEN. But you do not then do a so-called export restraint agreement. We could apply the restraints ourselves, with a higher tariff or with a quota that we auction off. Or one could use some other technique, but one should not give the quota to the foreign producers to divide up.

Senator BAUCUS. I agree.

Dr. BERGSTEN. So that you have to do. You have to do your quid pro quo. There the question is which is more effective—the market pressure of untrammeled competition from the foreigners or the Government monitoring your adjustment program. That I think is a very tough one.

We have never had a case where the U.S. Government has done that effectively. It has been talked about in the past, both in the case of autos and in the case of steel.

In the 1984 Trade Act there were requirements, so-called, that the U.S. steel industry make certain adjustments as a quid pro quo for the steel quotas. In fact, the U.S. steel industry has made a lot of adjustments, but I do not think they were under the mandate of the 1984 Act. It turned out that those requirements were an ineffectual effort to link trade protection to industry adjustment. So I do not think the record on that is very encouraging, and I would be very leery of relying on protection, even if it were backed up with an effort to establish quid pro quos to improve the competitiveness of a key sector.

Dr. BLOCH. Let me just make three very short points. First of all, all three major automobile companies have certainly improved their operation in more than one respect. Unfortunately, they have not completely caught up. I think that is what is needed.

The second point is, it is a moving target. The Japanese are moving forward. They are improving. We need to improve too, instead of sitting back.

The third problem is, it is the perception of the public that has to change also. Because of past experience it is hard to believe for many of the people that a quality product can come out of Detroit compared to one that comes out of Japan, and that has to change also.

Senator BAUCUS. I agree.

Thank you, Mr. Chairman.

The CHAIRMAN. Gentlemen, thank you very much. It has been helpful. We appreciate it.

[Whereupon, the hearing adjourned at 12:10 p.m.]

IMPROVING THE COMPETITIVENESS OF U.S. INDUSTRY

TUESDAY, JUNE 2, 1992

U.S. SENATE,
COMMITTEE ON FINANCE,
Washington, DC.

The hearing was convened, pursuant to notice, at 10:00 a.m., in room SD–215, Dirksen Senate Office Building, Hon. Lloyd Bentsen (chairman of the committee) presiding.

Also present: Senators Moynihan, Baucus, Daschle, and Chafee.

[The press release announcing the hearing follows:]

[Press Release No. H–30, May 26, 1992]

BENTSEN ANNOUNCES SECOND HEARING ON COMPETITIVENESS, BUSINESS, LABOR REPRESENTATIVES TO TESTIFY

WASHINGTON, DC.—Senator Lloyd Bentsen, Chairman, Tuesday announced the Senate Finance Committee will hold the second in a series of hearings on trade and competitiveness.

The hearing will be at *10 a.m. Tuesday, June 2, 1992* in room SD–215 of the Dirksen Senate Office Building.

Bentsen (D., Texas) said this hearing will focus on business and labor perspectives on how to restore U.S. companies' competitiveness and make sure that global competition is fair and open.

In announcing the hearings, Bentsen said: "Study after study today tells us that American industry is losing ground to its foreign competitors. An especially troubling sign is our loss of two and a half million manufacturing jobs since 1980—jobs replaced by service jobs that pay only a third as much.

"We are hearing a growing chorus in favor of a national competitiveness strategy designed to reverse that trend. There is no silver bullet that will restore American competitiveness. The problem has many facets. So will the solution, which must encompass an effective trade policy, along with tax and other domestic policies that help make our companies more competitive. We also need to think about ways in which the public and private sectors can work more effectively as partners, for example, in converting our nation's research into new products."

OPENING STATEMENT OF HON. DANIEL PATRICK MOYNIHAN, A U.S. SENATOR FROM NEW YORK

Senator MOYNIHAN. A very good morning. The Chairman will not be here, or at least not here at the beginning as he has been required to be at the White House. And he asked me as the ranking member to chair this hearing. And we expect other senators to arrive in due course.

And I am very pleased to have the opportunity, not least because of the very able persons who are going to be testifying, Mr. Corry, Dr. Ross, Mr. Clarkson, and Mr. Donahue.

I have to say that this is an ancient ritual we have of a sort of council fire. I think when President Perot arrives, one of the first things he is going to do is abolish the Congressional hearing as an information gathering procedure.

It is preliterate much less preindustrial. And it could be bad for your brain. At least I am in my 16th year in this committee. And I swear to you, I knew more about international trade when I came here than I do after 16 years on the subcommittee and now a ranking member.

I am well prepared to admit that much of what I knew when I came here was wrong, but at least it was reassuring. I thought anyway.

And I came out of the training of the old reciprocal trade agreements from Cordell Hull. And Harry Hopkins was one of my professors. And I learned all these good things and have not learned anything very different since.

No one ever says anything interesting, but at least no one ever says anything that interests me, which is a different thing altogether. I am pretty prepared to say that.

But I was struck recently by a paper that Steven Davis prepared. Davis is at the University of Chicago. He is in the graduate school of business. And he did this in collaboration with the National Bureau of Economic Research and the Federal Reserve Board of Chicago.

And he did a cross-country pattern. The paper is called "Cross Country Patterns of Change in Relative Wages." And what he finds is that—I will just read this extract for a moment:

> "Focusing on wages received by full-time male workers, the investigation uncovers several empirical regularities. The first is that most advanced industrialized economies show increases, often large, in wage inequality during the 1980's; one show declining wage inequality."

And that would have to be read that the Republicans did not do it. I think what this means is we have obviously had an increase in wage inequality. It sounds like a double negative. It is not.

But this may be a pattern of world trade, a pattern that world trade imposes on all industrial economies that the higher managerial skills get higher rewards for more effective modes of production, but that jobs are lost in the middle range. And they get lost in Italy, Germany, Canada, the United Kingdom, and the United States.

Davis goes on to say that: "Since the early to late 1970's, the advanced economies show large and persistent increases in the wages of prime age men relative to the wages of less experienced men." I do not know if I come under the category of prime age men. I think possibly not.

And Davis finds wage inequality amongst workers in less advanced countries has been decreasing. This strikes me as the most interesting thing I have heard about in international trade since I have been on this committee.

And I did not hear it from anybody on this committee. I heard it from a professor at the University of Chicago who happened to know this fellow.

This may be the long-run pattern. If it is, the issue will arise as to whether it is a pattern that is endemic and cannot be changed by trade practices or whether it is a pattern which can be affected by trade practices, but is not now addressed by them.

That seems to be a fair question. As I say, in 16 years of hearing testimony, no one has ever addressed the subject in my view. So if anybody on the panel wants to do so, I am sure Mr. Donahue in particular, I would be very interested in having them do so, as will my good friend and colleague, Senator Baucus who cannot have failed to see the new income data on the levels of income during the 1980's in the high plains, for example.

Good morning, Senators.

Senator BAUCUS. Good morning.

Senator MOYNIHAN. I have just been saying that with my 16th year on this committee and when President Perot comes in, one of the first things he is going to do is abolish the congressional hearing as a mode of information transmittal.

It can all be done electronically. This council-fire approach just does not get us far, at least it does not get me very far. I know less about the subject than when I arrived here.

But you, sir, have a statement to make. And I look forward to hearing it.

OPENING STATEMENT OF HON. MAX BAUCUS, A U.S. SENATOR FROM MONTANA

Senator BAUCUS. Thank you, Mr. Chairman. Perhaps we could also gather all intelligence electronically, too. We used to have intelligence electronically gathered.

Senator MOYNIHAN. We have solved that unemployment problem. Just as the Federal elevators have automatic buttons, they also have elevator operators. That is our answer to automation.

We have electronic gathering, but we also have the CIA. Otherwise, unemployment would be horrendous. [Laughter.]

Senator BAUCUS. I agree with you. Thank you very much, Mr. Chairman. I just have a brief point to make.

This concept of competitiveness is a very important one. It is a very nebulous one. And it is difficult for people to get a handle on it.

Nevertheless, there are certain definite steps we should take. Let me name one. And that is just knocking down foreign-trade barriers.

It is clear that competitiveness includes dramatic improvements in our education, retraining, increasing our savings, raising incentives for long-term as opposed to short-term decisions.

It is a greater focus on process technologies in this country. There is a whole long list, but certainly one item that must be addressed is knocking down foreign-trade barriers.

Not that we Americans are Simon pure. We have our own faults. And they should be reduced as well. But a necessary condition for higher U.S. living standards is the reduction of foreign-trade barriers.

I therefore believe that this year Congress should pass a trade bill. A trade bill which includes the extension of Super 301.

A trade bill which has provisions to enforce trade agreements with other countries. A trade bill which has a mandated auto market-opening provision and some other provisions.

I say all this because the house is moving on a trade bill. We have it certainly within our wherewithal in the Senate to pass a trade bill this year.

I do not know that we are going to pass a comprehensive health care bill which would help competitiveness by reducing health care costs, or that we are going to pass a massive education-retraining bill. I think that is unlikely this year.

So I urge us to at least do something this year. And the doing something is the passage of a trade bill. It is at least a part of improving American competitiveness. Thank you.

Senator MOYNIHAN. That is certainly in the range of prospects. One of the points I was just making before you came in—and I hope people will address this—is that we have tended in our discussions, and I do not question that it may have been the right thing, to focus on the competition between advanced countries, advanced economies, and the effective way of trade policies and practices in that competition.

There seems to be a body of economic work coming along that says there is no real competition between the advanced countries and the less advanced and that basically the patterns of trade in the world today are that the advanced economies will export manufacturing jobs.

And hence, wage inequality is growing in all those economies, Japan, Germany, and the United States. And inequality is decreasing in the countries that import manufacturing jobs.

Interesting question. Let us hear from some interesting people.

Gentlemen, would the panel come forward? Mr. Corry, USX, formerly U.S. Steel. We used to know what these people made. We do not even know what they make anymore.

If only Andrew Carnegie were around. I guess it was Morgan.

Dr. Ian Ross—a good Scot's name—president emeritus of the AT&T Bell Labs and chairman of the National Advisory Committee on Semiconductors.

Dr. Ross, good morning, sir. Mr. Corry, good morning. We have talked in the back.

And Mr. Lawrence Clarkson who is vice president for Planning and International Development of The Boeing Company from Seattle.

Gentlemen, we welcome you all. And we have plenty of time. And I will hope you will take whatever time you would like. We are privileged to hear from you. You have come a long way in some cases and have a lot to say I am sure in each case.

And so our panel. We will stay with our listing. Mr. Corry, you are first.

STATEMENT OF CHARLES A. CORRY, CHAIRMAN, BOARD OF DIRECTORS, AND CHIEF EXECUTIVE OFFICER, USX CORP., PITTSBURGH, PA

Mr. CORRY. Thank you, Senator. Thanks for inviting me to appear before the committee this morning.

I am Charles A. Corry, the Chairman and Chief Executive Officer of the USX Corporation, one of the countries top 25 industrial concerns. And we operate primarily in the energy and steel industries.

Senator MOYNIHAN. Can I give you the faintest counsel? Be careful how you say USX Corp. This is the day we have the Corporation for Public Broadcasting on the Senate floor. And we do not want to get you involved. [Laughter.]

Mr. CORRY. I welcome this opportunity to discuss the competitiveness of U.S. industry and to help identify ways that can ensure that global competition is open and fair.

I would like to focus primarily on the steel industry since it represents basic manufacturing and since the health of the steel industry is in my judgment an excellent indicator of the competitive posture in the global marketplace.

Let me begin with some good news about the domestic steel industry. Since 1987, American steel producers have invested over $10 billion in capital construction and modernization programs. And as a result of these investments, productivity of American steel plants has more than doubled over the past decade.

Domestic steel manufacturers now require just 5.3 man-hours to produce a ton of steel. This is a record low in our industry. And it is lower than the man-hours required in Japan or Germany.

Of all the major, integrated steel producers in the United States, USX Corp. claims to be the most efficient. Our company averages 3.5 man-hours to produce a ton of steel, which is down from 10.8 man-hours per ton a decade ago.

Senator MOYNIHAN. In one decade?

Mr. CORRY. Yes.

Senator MOYNIHAN. That is classy.

Mr. CORRY. Our Gary Works facility is the largest steel plant in North America. And man-hours per ton shipped there is 2.7.

Let me now turn to the not-so-good news about steel. Overall, our manufacturing sector continues to decline. In 1983, 1 of every 4 private-sector jobs was in manufacturing. Now, it is just 1 in 5. It is true that many new jobs have been created in the service sector, but many are in health care, shopping malls, hotels and motels, and restaurants. And these are typically not the kind of jobs that a family can build a life around.

Swapping a manufacturing job for a service-sector job is not a good exchange. It is a loss in the quality of employment. The average pay of a manufacturing job is more than twice as much as the average service-sector job.

The past year in particular has been a difficult one for the steel industry. In 1991, U.S. steel companies experienced operating losses in excess of $2.5 billion.

The number of jobs in the domestic steel industry shrunk by an additional 20,000 during 1991. Domestic steel industry shipments to the automobile industry in 1991 represented a 25-year low for the domestic industry.

These figures show that despite the achievements of the American steel industry, our markets continue to shrink and our operating losses continue to mount. This is primarily the result of trade policies and practices that do not adequately comprehend the realities of international trade.

We believe we are being severely damaged by the actions of certain of our major trading partners who have been unfairly subsidizing their steel and selling their flat-rolled steel products at prices below home-market value and in some instances, at prices below the cost of producing the product.

In just the last 12 years, we believe foreign countries have spent more than $100 billion to subsidize their steel industries.

Europe alone has spent more money on steel subsidies than the United States spent in putting a man on the moon. And that figure was about $80 billion.

Senator MOYNIHAN. Did we not have the pleasure of putting the man on the moon? We had a choice, did we not?

Mr. CORRY. Well, we have to I guess judge with hindsight whether we were better served to spend that $80 billion in putting a man on the moon or doing something else.

Senator MOYNIHAN. You might call it an opportunity cost.

Mr. CORRY. Opportunity. Well, it remains a unique achievement, whatever the cost. No one else has done it.

Last month, the domestic steel industry took steps on its own to confront unfair trading practices. On May the 8th, the 6th largest domestic steel producer began the process of initiating trade cases with the Department of Commerce and the International Trade Commission.

The cases involved dumped and subsidized imports of flat-rolled, carbon steel products.

Let us recognize that we are between Japan which believes strongly in a managed economy and which has been very successful and Europe which has a long tradition of subsidizing the basic activities in their economies, be it an airline, agriculture, or steel.

We must therefore have trade laws that are vigorously enforced. And they must not be weakened by international agreements, such as GATT.

Our economy has already paid a stiff price for its neglect in trade matters. We strongly believe that legislative action is needed to strengthen our Nation's trade laws and our tax laws.

I will note each proposal briefly. A more complete description is contained in the full statement which I have submitted in writing.

Senator MOYNIHAN. Which we will place in the record of each of our cases.

[The prepared statement of Mr. Charles A. Corry appears in the appendix.]

Mr. CORRY. First, in trade, we need to renew Super 301 authority under section 310 of the Trade Act for an additional 5 years. This power which required USTR to annually identify barriers and trade-distorting practices in our trading partners and to initiate section 301 investigations on the basis of these findings has proved to be a useful tool.

Two, we believe legislation should be adopted that requires initiation of a section 301 case aimed at Japan's systematic, anti-competitive practices in auto parts. These practices prevent U.S. parts' manufacturers from penetrating the Japanese distribution system.

And next, we need more effective mechanisms for preventing circumvention of outstanding countervailing duty and anti-dumping cases. For example, the scope of anti-dumping orders should include parts and components supplied by companies in third countries that have historically supplied such parts to the original producer.

And we need to take direct action to reduce the nation's trade deficit, particularly with Japan. And we support legislation that would mandate that the trade deficit with Japan be reduced by a set percentage each year, such as 20 percent.

And most importantly, I think legislation is needed to bolster the rights of companies injured by trade law violations with a private right of action. And this legislation would enable U.S. companies to stop trade law violations without having to rely on the government, or even involve the government, to impose discipline on our trading partners.

It would also remove any political considerations from the administration of trade matters.

As for competitiveness in the tax area, the alternative minimum tax is one of the most anti-competitive aspects of our current tax law. It needs reform.

At the time Congress adopted it, it did not foresee the adverse impact that the AMT would have on capital-intensive companies and especially those which operate in cyclical industries, such as energy, steel, chemicals, airlines, and motor vehicles.

In our own company, we are trapped in the AMT unless we dramatically reduce our investment to reduce the amount of depreciation which we generate.

And last, virtually all of America's major trading partners already have a border-adjustable tax that is levied on imports and rebated on exports. The adoption of——

Senator MOYNIHAN. By which do you mean a value-added tax?

Mr. CORRY. Not necessarily a value-added tax, but some type of tax that will pick up foreign products, be it some incentive to export taxes, and simply put a U.S. automobile, for example, on a competitive tax posture with an imported automobile which faces one tax.

Senator MOYNIHAN. Got you.

Mr. CORRY. The adoption of a properly constructed border-adjustable tax would help put domestic industries on a competitive tax footing with most of our foreign competitors.

Mr. Chairman, the subject at hand is deadly, serious business. In the global marketplace, our trade policies are the most important single determinant of our Nation's standard of living.

Since 1980, we have had our economy devastated by the loss of $2.5 million in good manufacturing jobs. And we have also had our economy suffer a $1 trillion trade deficit. It is time for a change.

Thank you very much. That completes my oral submission.

Senator MOYNIHAN. We thank you. Sir, you left out the passage on tax treatment for environmental expenditures, but let us say that we take judicial notice thereof.

It is something Senator Baucus and I are concerned about. We also sit next to each other on the Committee on Environment and Public Works and have been trying to deal with that.

We thank you very much.

Dr. Ross, good morning, sir.

STATEMENT OF IAN M. ROSS, PRESIDENT EMERITUS, AT&T BELL LABORATORIES, AND CHAIRMAN, NATIONAL ADVISORY COMMITTEE ON SEMICONDUCTORS, HOLMDEL, NJ

Dr. ROSS. Good morning. Thank you, Mr. Chairman. I will just briefly summarize.

Senator MOYNIHAN. Take your time, but be brief if that is what you choose.

Dr. ROSS. I will summarize the comments that are in my written testimony. I believe I was asked to present views on U.S. competitiveness. And I am going to do that from the point of view of high-technology industry.

[The prepared statement of Dr. Ian M. Ross appears in the appendix.]

Dr. ROSS. Now let it be clear, I do not believe that technology is a panacea for all of the problems in the nation. However, I think it is widely accepted that high-technology industries enhance productivity, standards of living, and increase our economic and our military security.

And for those reasons, I believe that the United States needs to stay at the leading edge of high-tech industries, such as electronics, aircraft, chemicals, biotechnology, and a number of others.

But we do have a problem in our high-tech industries. And I think this problem is well illustrated by looking at the electronics industry.

The U.S. electronics industry today has revenues of over $380 billion a year and employs about 2.5 million people. It is probably the biggest employer that we have.

It is estimated that the world market for electronics will increase by a factor of 3 between now and the year 2000. So there is great opportunity in that industry.

A recent study by the American Electronics Association shows that we are losing world market share from the U.S. electronics industry by about 3 percent per year.

And that loss is about at the same rate, whether you talk about industry that is owned by U.S. companies and the product is manufactured anywhere, or alternatively, if the product is manufactured in the United States regardless of who owns the company. Three percent per year.

This has been going on for 5 years. And during that period, we have lost $100 billion of revenue and the correspondingly good jobs.

Now, as a partial result of that, the semiconductor industry—when you pointed out I have been associated with that—has been losing about a 1-percent market share per year.

Now, what is our problem? I believe in electronics, the problem began when we let our consumer electronics manufacturing go overseas.

And as you know, very little of consumer electronic products is now made in the United States.

Senator MOYNIHAN. And also you said when we let it go overseas.

Dr. ROSS. We let it go.

Senator MOYNIHAN. Did it ask to go overseas? And we said fine, you can go.

Dr. ROSS. Yeah. I think we chose to have it go overseas.

Senator MOYNIHAN. Help us out. In what sense? I do not think anybody wished that to happen.

Dr. ROSS. No.

Senator MOYNIHAN. But we wished things to happen that had a secondary effect of making that happen.

Dr. ROSS. Well, I think if you trace the history there, this again started with the desire to follow cheap labor. So what we started doing was moving the labor content overseas.

And what we did not realize is that, having done that, then the components that were assembled by the low-labor content began to be purchased overseas. And our foreign competitors were not content with low-cost labor.

They started adding capitalization to their labor. And, in fact, they ended up with more effective manufacturing processes than we did, with most of the value added being overseas.

Senator MOYNIHAN. Now, part of that surely is the product cycle that was described at MIT and Harvard in the 1940's. The economists got onto that.

You start manufacturing something in country "X" and export to country "Y". And pretty soon they are manufacturing in country "Y". And then finally, they are exporting back to country "X". And that can be a very healthy cycle.

But it might also be—I know Frank Fenton has spoken about this—there is such a thing as a trade policy that prefers consumption to production. And it will have this effect. We are not very good at tracing it.

I do not mean to interrupt you. When you said we let, now, what let? Was a decision made or was a decision implicit in a set of preferences?

Dr. ROSS. I believe we allowed this to happen. I believe it was mainly decisions made by industry leaders. I believe it was a question of not really appreciating what the consequences would be.

And it is very easy for me to sit here 10 years later and say what those are. Certainly, there must have been trade issues and cost of capital issues that were involved, but I think principally, the responsibility of this would rest with the leaders of industry, not with leaders of government.

Now, what we lost with consumer electronics was a very delightful source of large revenues and growing revenues from manufacturing, but, almost as important, the consumer electronics business is beginning to drive the leading edge of electronics technology.

Senator MOYNIHAN. Oh.

Dr. ROSS. That is rather interesting. People do not always realize that it is the camcorders, the VCRs, and the compact discs that are pushing, for example, the density of components on chips of silicon much more than the computers or even the switching machines in telecommunication networks.

So, as long as we do not have a presence—an active presence—in consumer electronics, then we are going to lose our contact to some extent with the leading-edge technology. And I think that is as important as the market itself.

Now, unfortunately, this erosion has not remained just with consumer electronics. I see it spreading into what we like to call high-volume electronics.

Senator MOYNIHAN. Say that again.
Dr. ROSS. High-volume electronics.
Senator MOYNIHAN. High volume.
Dr. ROSS. And there I think of any electronic product that people acquire or purchase for their own use and which costs, shall we say, $2,000 or less. When you do that, you bring in the copying machine.
Senator MOYNIHAN. Market volume.
Dr. ROSS. Market volume, yes. Market volume.
And I think what we are seeing today is an erosion of our position in the smaller computers, the PCs, many of which are now made overseas or they contain most of their valuable components made overseas. And we are seeing an erosion in the manufacturing of telecommunication terminals.
So here is an example of allowing something to happen in one part of the industry and it spreads into other parts of the industry.
Now, what can we do about this? You mentioned the National Advisory committee on Semiconductors, which I chair. We produced this year a strategy to keep a healthy, semiconductor industry. We issued it this February. And one of the observations we made——
Senator MOYNIHAN. This is it. [Showing the booklet.]
Dr. ROSS. That is it. A good looking report.
One of the things we observed was that the strategy we recommended for the semiconductor industry was also broadly applicable to high-tech industry as a whole.
Now, I believe this is because these industries share a number of common attributes. And let me mention the main ones.
First, almost by definition, they have a very large knowledge base and require a large, long-term investment in R&D.
Second, they are capital intensive, requiring large investments in factories and in equipment. And both of these factors lead to a need for substantial economies of scale.
In order to compete in these businesses, you have to have large volumes of manufacture. And that leads, in turn, to a large market share. And if it is a global market, then you need large, global market shares.
And that, in turn, leads to a final attribute that there are substantial barriers to entry into these kinds of businesses, or to reentry, if you permit yourself to exit those kinds of businesses.
Those are the sorts of attributes that are common to these kinds of industries.
Now, with those common attributes, it is not too surprising that we can find an agenda or a set of common strategies that would help the health of a wide range of high-technology industries.
Now, what are those? Briefly, what I think we need are activities in 4 areas.
First, we need a level-playing field for our industry. And that includes the ability to attract at reasonable cost, patient capital to invest in our industry.
We need to strengthen our education system so that we can have high quality labor in our factories. And of course, we need to establish fair trade. And I would say we need to establish fair trade with a higher priority than we do free trade.

I think free trade is an excellent long-term objective, but fair trade is a short-term imperative.

The second thrust is that we need to stimulate that high-volume electronics manufacturing in our country. And it will be very difficult, because of those barriers to reentry, to bring into the country the established kinds of products like the compact discs and the VCRs.

Senator MOYNIHAN. When you say barriers, Dr. Ross, is that just an image for difficulty?

Dr. ROSS. Yes. And let me be specific. You need to have the knowledge base, which, if you lose it, you either have to acquire it, or buy it from somebody else, or rebuild it. You have t build the factories—which for a semiconductor factory, requires $400 million per single production line.

You need to get up to high-volume manufactures, so you get the economy of scale. You have to have the markets to do that. That takes a long-term investment and patient investment. And those are what the economists call barriers to reentry and entry.

So, one way to handle this is to look for discontinuities, look for where the marketplace is changing, where the technology is changing, and, therefore, where the United States may have a more level playing field.

And you see that in things like the intelligent highway and vehicle system, where as much as 30 percent of the value of an automobile will be in electronic components.

Senator MOYNIHAN. We wrote that into our transportation legislation in November.

Dr. ROSS. And that I think is going to be helpful.

Senator MOYNIHAN. But we have not heard a word from anybody.

Dr. ROSS. Well, you just heard a word from me. Thank you.

Senator MOYNIHAN. You are very welcome, sir.

Dr. ROSS. Broad-band telecommunication networks with fiber to the end customer represents another opportunity, not so much in what goes into the network, but what it opens up in terms of broad-band terminals on the end of those networks and advanced display systems, including things like HDTV.

These are the sorts of discontinuities we ought to look at.

I think the question is, if we take on that strategy, is it going to be enough, or do we have to do more to build and rebuild our electronics?

The third thrust we need, I believe, is to encourage consortia, alliances and collaborations.

Senator MOYNIHAN. No, sir. It says here, "Third, we must make changes to our culture."

Dr. ROSS. Well——

Senator MOYNIHAN. If you know about that, we would be very interested in hearing it.

Dr. ROSS. I know that. And you are making a very important observation there because when we ask, what gets in the way of setting up consorta, or alliances among industries, it is not the antitrust laws—though changing those would be helpful. The main problem is people like me.

My culture is to compete, from soup to nuts, with somebody else in the business. And what people like me have to learn to do by a culture change is to cooperate in the pre-competitive phases of our activities, while competing fiercely in the market place.

Senator MOYNIHAN. Well, do we not do that? I mean, in most respects, the most cooperative communities we have in the world are the American universities. Scientists tell each other everything they know the minute they know it.

Dr. ROSS. Absolutely. But they are dealing usually with information that is so pre-competitive that it is——

Senator MOYNIHAN. But it is really pre-competitive.

Dr. ROSS. Oh, yes.

Senator MOYNIHAN. You said, "So pre-competitive". There are stages of pre-competitiveness?

Dr. ROSS. Absolutely. And there are gray areas in this, but let me cite the example of Sematech which is an organization to build the pre-competitive technology, including some of the manufacturing processes for the semiconductor industry.

Now, that goes way beyond what would be done in the university, but it is sharing and pooling what a dozen companies would have done separately. And what, as it is, a dozen companies triplicated 4 times. It is wasted effort compared to working together cooperatively.

Senator MOYNIHAN. OK. We do not have to bring this thing in from Thailand?

Dr. ROSS. No.

Senator MOYNIHAN. It is right there on the banks of the Charles River, called MIT. It is called the—your lab gets your things public pretty fast, do you not or——

Dr. ROSS. Mr. Chairman, I think what we are saying is we need to move this concept of cooperation.

Senator MOYNIHAN. This culture.

Dr. ROSS. Further away from the basic long-term research and into this pre——

Senator MOYNIHAN. It is not like it does not exist.

Dr. ROSS. It is not like it does not exist. And Sematech is a good example of how to do it. And we do not need to copy the Japanese or the Koreans. I think that would be a mistake. We need our own way of doing this. And I will come back to it.

I think the main thing we have to do is encourage people in the industry, people like myself, to get on with it.

Senator BAUCUS. An interesting point, Dr. Ross. I know that MIT—Lester Thurow, is trying to encourage the greater cooperation, the culture cooperation in some of their classes at MIT.

He divided the students into teams. How many to a team, 6, 7, 8, 10 to a team. And the grade that the team gets is the grade of the lowest grade of the team.

And it caused undue consternation, of course, at first, but what happened, the culture is very interesting. Each student felt he was going to be the lowest. So he worked harder to make sure he was not the lowest or she not the lowest.

And in one case, a team was given a very low grade because one team member, in fact, got a low grade. And the student was given the opportunity to retake the test, but all the other members of the team also volunteered to retake the test, too.

Not that that would necessarily help, but at least it is an idea to help encourage the culture of cooperation and team work. I think it is an interesting idea.

Dr. ROSS. We need to learn to do the same kinds of things in corporations, which are considered to be competitive with one another, and recognize that not everything we do need be competitive, but still retain that very important competition when it gets to delivering the product to the customer.

Well, then finally, we need to commit—or I would say recommit—to the total quality program in our industry. And that involves the quality of the skills of the employees in our factories and the quality of the processes that we use in our factories.

Now, what I conclude is that I believe that we should adopt a national goal that we intend to be and remain a world leader in high-tech industry.

We have the resources. We have the strength to build on today. I believe these common attributes that I discussed demonstrate that a common strategy, a common technology agenda can serve that goal.

We do not need to target. We do not need to pick winners or losers, but I would say that we must act promptly, because an erosion of 3 percent per year, as we have in electronics, cannot go on too long and remain healthy. Thank you.

Senator MOYNIHAN. We thank you, Dr. Ross.

And we will get back to you Mr. Corry as soon as we have heard from Mr. Clarkson.

STATEMENT OF LAWRENCE W. CLARKSON, VICE PRESIDENT, PLANNING AND INTERNATIONAL DEVELOPMENT, THE BOEING CO., SEATTLE, WA

Senator MOYNIHAN. We welcome you, sir. And for heaven's sake, give us some good news about Boeing.

Mr. CLARKSON. Good morning, Senator. I am Larry Clarkson, Vice President for Planning and International Development at The Boeing Company. I wish to commend the committee for holding these important hearings.

International competitiveness is an issue that is very much on the mind of The Boeing Company. Our competitiveness is defined at the most fundamental level in terms of global market access. Unless we sell overseas, as well as in the U.S. market, we will not generate the revenues required to develop and commercialize the products that keep us a highly competitive industry leader.

Historically, the most visible hurdle to our competitiveness has been foreign unfair trading practices. Aircraft, semiconductors, and steel share common concerns in the international market. Each of us competes against foreign industries that benefit enormously from foreign government intervention, be it subsidies, discriminatory procurement practices, or political intervention in sales campaigns.

Today, Boeing faces a broader set of hurdles that require us to look beyond traditional trade policy tools to help maintain our market position. This hearing provides an opportunity to discuss the nature of these hurdles and to begin to lay out a road map of how the U.S. Government and industry can work together to ensure the continued strength of the U.S. aerospace industry.

Today, The Boeing Company is in the enviable position of being this Nation's number one exporter. We have retained close to 60 percent of the global market for large, jet transports through a combination of engineering excellence, a propensity to take risks and an aggressive——

Senator MOYNIHAN. The business risks?

Mr. CLARKSON. Yes. And being here. [Laughter.]

An aggressive R&D program, a commitment to quality, and plain, old fashioned hard work on the part of Boeing employees.

But we are not complacent about our future. We understand that every market that has been won, can be lost; every technology that has been developed, can be surpassed.

We have an ambitious effort underway to continually cut our cost and to improve quality, to better design, build, and support our products.

We are increasing our expenditures on research and development to keep us at the forefront of aviation technology. In 1992, we plan to invest approximately $1.8 billion in R&D primarily in support of our new 777 and other commercial jet transport programs.

We are undertaking capital improvements that are essential to our future competitiveness, including a 70 percent expansion of our Everett plant to accommodate 777 production. These and other investments in plant and equipment totalled another $1.8 billion in 1991.

Finally, to adapt to changes in the market, we are exploring new opportunities and new ways of doing business, including international alliances. International collaboration can be a win-win situation, allowing us to maintain our competitive edge, provide jobs for our employees, and generate a sound return for our shareholders.

Despite these ongoing efforts, we face three interrelated hurdles to our future competitiveness. The first is the enormous capital requirements associated with developing and producing new airplane models. The second is the rapid increase in what I will refer to as "externally-generated" cost drivers. The third is the unfair trading practices and protectionist pressures at home and abroad that could reduce our access to the global market.

The cost of developing new airplanes is staggering. Every time we move forward with a new program, we are virtually betting the entire net worth of our company. We must make enormous front-end investments for returns that will not be realized until many years down the road.

While the cost of developing new programs is enormous, the cost of not moving ahead is greater. Our position as a global aero space leader depends fundamentally on our willingness to capitalize on new market opportunities. Our ability to undertake this type of risk depends, in turn, upon our ability to market our products worldwide. Where the market is limited, or the barriers to entry prohibitively high for one company, we may turn to international collaboration to ensure a role for Boeing and maximize opportunities for U.S. suppliers.

The second hurdle we face is the rapid increase in what I refer to as externally-generated cost drivers. A good example is the increasing burden on industry of providing health care coverage. Between 1985 and 1991, Boeing's cost for medical care for employees and their families doubled. We expect that in 1992, the cost per employee will be approximately $4,200 for a total price tag of over $600 million.

Rising health care costs are one of the many cost factors which include regulatory issues, work-force training and retraining, and environmental compliance that government and business can no longer ignore. These issues are increasingly important to Boeing and to our suppliers who face the dual pressures of these rising costs, while downsizing as a result of the massive reductions in the defense budget.

The third hurdle we face is foreign unfair trade practices and protective pressures that could limit our access to markets at home and abroad.

Mr. Chairman, the most formidable competitor for Boeing has been and will continue to be Airbus Industries. The Boeing Company thrives on competition, but Airbus has not been a normal competitor. Extensive levels of past subsidization provided by the governments of France, Germany, the United Kingdom, and Spain have enabled Airbus to develop a full family of aircraft without ever having made a profit, to price these aircraft without full-cost recovery, and to offer concessionary financing terms to customers. Today, Airbus commands roughly 30 percent of the global market for commercial transports. And its stated goal is further market penetration in the United States and overseas.

We expect the U.S. Government and the European community will soon announce an historic agreement that will for the first time provide real disciplines over certain Airbus subsidies. The agreement includes a ban on production supports, which is noteworthy in that this is the first agreement in which a domestic subsidy is prohibited. Furthermore, the agreement provides for a cap, terms, and conditions on development funding which will dramatically reduce Airbus' ability to subsidize new aircraft models.

We fully recognize that this bilateral agreement will not eliminate subsidies. A subsidy-free environment for aerospace can only be achieved through a comprehensive effort that includes, first, multilateralizing the bilateral agreement so that all aerospace players and products are bound by the same international rules; second, complementing that bilateral agreement with a strong subsidies code agreement; and third, enforcing the terms of other agreements that govern aerospace trade, especially the rules on official financing. On this latter point, I want to emphasize how important it is for the U.S. Government to remain firm on the issue of official financing of sales in the U.S. market.

The objection of international rules on government financing of aircraft is clear—financing should be a neutral factor in sales competition. Any effort by the Europeans to provide official support for Airbus sales in the U.S. market would provide Airbus with a competitive advantage. Conservative estimates are that between $10 billion to $20 billion in domestic aircraft sales could be lost over the next 8 years if such official support is not checked immediately.

Boeing's concerns about foreign subsidization and other unfair trade practices are not limited to Airbus. We are equally concerned about any government-supported entity that is not bound by the rules of the game, be it Taiwan in its effort to develop a new aerospace industry or the integration of the former Soviet Union's aerospace industry into the global market. We believe that as every new player enters the market, they should do so under established, international discipline. The cost to the U.S. aerospace industry of non-action in this area will be high in terms of lost market share and lost jobs.

I would like to conclude my remarks this morning by focusing on those areas where public-private sector cooperation is essential to the future competitiveness of the U.S. aerospace industry.

Our first line of defense in obtaining market access rests with our trade policy tools. This requires effective enforcement of aerospace trade agreements, including the new U.S.–EC bilateral agreement and rules on official financing; expanding the disciplines of these agreements to all new entrants to the aerospace market, including Taiwan and the CIS; maintaining our ability to use U.S. trade policy tools, including the anti-dumping and countervailing duty statutes and section 301 to address foreign, unfair trade practices, and enforcement of trade agreements, including the Uruguay Round expeditiously with particular attention to strengthened subsidies code.

However, even the most effective trade policy will be insufficient to enable us to overcome the broader competitiveness hurdles we face. Attention must be focused on three additional sets of issues.

The first is R&D policy. Permanent extension of the R&D tax credit would enable us to continue to invest in the R&D that is key to our technological strength. Furthermore, the Government should increase resources to support free competitive technologies, including higher levels of NASA resources for aeronautical research and technology, as well as for facilities to ensure the scientific infrastructure needed to perform critical research.

Second, we urge you to create an environment that will allow us to take the risks required to remain a highly competitive industry leader. We need a responsible fiscal policy to keep capital cost low. We need an educational system that will produce a highly-skilled and motivated work force to enable us, in turn, to stay at the cutting edge of technological advancement. And we need to recognize that in crafting regulatory and other policies that the public good and cost competitiveness are not mutually-exclusive goals.

Finally, we need a competitively-funded Eximbank. Few tools have such a proven track record of success in facilitating this Nation's exports and economic growth. Eximbank's funding authority is insufficient to meet this year's demand, as well as anticipated requirements for next year. It is essential that we not diminish our export capabilities for lack of Eximbank support.

Mr. Chairman, The Boeing Company remains optimistic about the future. We have been in the business of building airplanes for 75 years. And we do not intend to relinquish our position as the industry leader.

We look forward to working with you to develop public policies that will position us to be competitive well into the next century and beyond. Thank you very much.

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

Senator MOYNIHAN. Thank you, Mr. Clarkson. And let me put myself with those who share that last hope of yours.

The President has a new Air Force One as you know. And it is a Boeing. It has to be. And we were at the same graduation ceremonies a few weeks ago. And he gave me a ride home. And he showed me around. And I want to say to you that the putting green is really very elegant. [Laughter.]

Just the sort of thing to relax the Chief Executive between international conferences.

Mr. CLARKSON. We try to keep our customers happy.

Senator MOYNIHAN. We have been joined by our very distinguished colleague, Head of the Policy Committee of the Democratic Caucus, Senator Daschle.

Good morning, sir. Would you like to make some statements here?

Senator DASCHLE. I will wait my turn.

Senator MOYNIHAN. OK. We are in that mold. Actually, we have been going along. And now, we have heard from all three of these distinguished panelists.

I would like to say, why do I not ask you, Senator Baucus, to start out, as I have had more than my chance.

Senator BAUCUS. I would like to ask all three of you a basic question. We in America, as you know, have been pushing this process called the Structural Impediments Initiative, trying to get Japan to be more like us, namely to encourage Japan to knock down their collusive practices, to open up their distribution systems, to somehow to break up their keiretsu.

My question really is, are we doing it all backwards? Should, say, the three of you with some major financing companies, a bank or something, get together and form your own keiretsu?

Why do we Americans not get together, a little more in the spirit of cooperation, work together and develop our own arrangements of some kind to increase our competitiveness? Any of you or all of you.

Mr. CORRY. Well, I think what that gets you to—and it is an element of management in your National trade affairs. And as I indicated in my remarks, the Japanese feel very strongly that that is the correct way to manage their affairs.

I do not know if we will ever be successful in getting them to play the game that we are playing. It is culturally embedded in their affairs. And it has been very successful for the Japanese economy and the Japanese standard of living and the people of Japan.

They have put their finger on a winning combination. They are a good testament to the successes that a managed economy can bring.

Now, there are down sides to that. While I think the best posture for us trade-wise is simply to be cognizant of the fact that it is not—as I heard one economist say once: "They are not just playing by different rules. They are playing a whole different game."

And we simply have to be cognizant of that when we formulate our rules. And we can make them break down barriers if we demonstrate the will and the strength to do it. That is, they clearly do not believe in a free enterprise, free market system.

And if we want to impose our will upon them, we have to take very strong measures to make them do it. I am not saying that is necessarily the best answer.

I think it is the best answer for us because there is a price for too much management, as the Japanese consumer pays for the price of his automobiles and the things that he buys in Japan. There is a down side to that.

But I think, Senator, we simply have to be cognizant that that is the world that we are now competing in. Everyone does not have the same notions or the role of the governments.

Senator BAUCUS. That is right. I am asking the question, what is the degree to which we should change?

Mr. CORRY. No. I think we need an element. I guess I would put some element of management and common interest in our trade policies, but I would not advocate that we attempt to manage our economy to the extent that the Japanese do.

Senator BAUCUS. Okay. Dr. Ross.

Dr. ROSS. Well, I would basically support what you are suggesting, that I do not think that it is proper nor do I think it is fruitful to try and tell another nation how to handle its internal affairs.

Senator MOYNIHAN. I think in the interest of full disclosure, it should be stated that Dr. Ross is far an associate member of the Engineering Academy of Japan.

Dr. ROSS. That is correct. [Laughter.]

And of the one in the United Kingdom by the way.

Senator MOYNIHAN. And of the one in the United Kindom.

Dr. ROSS. But I think it is not fruitful to tell the Japanese housewife that she must buy from a supermarket rather than from a corner grocery store.

Now, I think that if we see things that are being done by the Japanese economy that are aimed at hurting our industry and hurting our employees, then we should certainly attack those things, but not issues that are ways of life.

On the other hand, I think it is important that we fix our own house and that we change some of our own ways of doing business. And clearly, we need to deal with our budget deficits. We need to deal with our savings shortfalls compared to consumption. We need to deal with our education.

So I think there are a lot of good things that the Japanese do. We should not copy them, but we should recognize that we——

Senator BAUCUS. I guess what I am really getting at, fundamentally I think our problem in this country is that we are too disaggregated. There are too many lone rangers. There are too many separate actors.

And following up on a main point that you made earlier, we need much more cooperation, much more team work. It is a platitude, but I think often the trite things are the most true.

Dr. ROSS. Yes.

Senator BAUCUS. And I am just trying to find mechanisms and vehicles to help us as Americans to work much more closely together than we have in the past. That is the main goal that I am trying to pursue.

Dr. ROSS. I would agree with that. And I also would agree that we must find ways of cooperating between industry and government.

Senator BAUCUS. Right. Absolutely.

Dr. ROSS. Not just exclusively industry.

Senator BAUCUS. Mr. Clarkson.

Mr. CLARKSON. To your basic point, I have to agree. Although the SII has made some progress and it is a good effort, the fundamental issue is we are not going to change the culture of Japan or the way they do business and how they think it should be done nor are we going to change the way that business is done in Europe, which is also quite different.

We talk free trade, but, in fact, in this country, we practice a form of managed trade. Many of the laws in the books were put there in this country when international trade was not such an important factor.

And I think perhaps—and I am speaking for myself perhaps now instead of the Boeing Company—but I think it is time that we recognize that the world has changed. The position of the United States has changed.

And some of those laws need to be looked at as to whether or not they are keeping us as competitive as we have to be.

Senator BAUCUS. I will not take too much time here, but I can follow up a little bit, in particular, with Boeing on just different manufacturing techniques that I think are critical in this country.

I am referring to a major study, a 5-year study, a $5 million study of the world automobile industry called: "The Machine that Changed the World", by James Womack.

It is my belief that the principles contained in that book, out a couple of years ago, must be applied to most manufacturing industries in America or they are going to go down the drain.

Take Boeing for example. I mean, it may be that those principles adopted by Toyota could in a few years produce a 757 or 767 more efficiently than even Boeing could.

I do not know the degree to which Boeing has adopted those principles, but I would like you, Mr. Clarkson, and the other two gentlemen to react basically to the point that those principles have to be adopted for you to survive.

I know that is true in the U.S. automobile industry. I was in Detroit a couple of weeks ago. I went to the big three for several days and quizzed them on that point. And they all agreed. In fact, they had the book there. And it's their bible. They are moving somewhat in those directions, but not enough in my view.

Then I went to visit U.S. electronics companies. And I was surprised that they, too knew about the book. And they readily agreed that it has to be adopted.

So I am curious if that also applies in your view to the commercial aviation industry?

Mr. CLARKSON. Yes. It does 100 percent. And we are in the process of updating all of our processes in the way we manufacture airplanes. It is difficult to do it quickly because of the capital-intensive nature of it.

We have all heard about the development of the just-in-time inventory system in Japan. And we in the past, we practiced something called the just-in-case inventory system which meant you never were short of a part when you needed it, but that required huge inventories.

We are in the process of changing our processes to include that just-in-time approach, as well as getting rid of all the non-added value effort that is involved.

So our industry and I think every other industry in this country has to make some of those changes. And we should not be ashamed of learning from what Japan has put into place. I would add, however, that many of those systems that have been put into place by the Japanese were invented in this country.

Senator BAUCUS. Well, that is not the point. I do not care who invented them. The question is who is practicing them?

Mr. CLARKSON. Yes. I agree.

Senator BAUCUS. That is the question.

Mr. CLARKSON. Yes. And we are trying. The keiretsu system plays into that because the keiretsu system allows much greater cooperation between suppliers and their producers, on down to sub-suppliers and so forth, which helps efficiencies and lower production costs. It helps quality because the genius of all that system is it's inherent incentive for quality.

Senator BAUCUS. So you all agree that is part of the solution?

Dr. ROSS. Yes.

Senator MOYNIHAN. They also all agree that we should balance the budget.

Senator BAUCUS. That is true. [Laughter.]

Senator MOYNIHAN. Each of you in your testimony said something about it. Senator Daschle.

Senator DASCHLE. Thank you, Mr. Chairman. Mr. Clarkson, I want to compliment you on your testimony. I did not have the good fortune to hear the first two, but I was especially interested in what you had to say about health care and the specific recommendations you made with regard to what you call public-private cooperation, trade policy, a far more aggressive R&D position, risk reduction, and a competitively-funded Eximbank.

In answer to Senator Baucus' question, all of you agree that there really ought to be more public-private cooperation if we are going to be effective in international trade in the future.

What I always find interesting and I would be curious as to your response is why there is this reluctance to call it industrial policy? I mean, isn't that what you are talking about?

You just laid out what I consider to be, by definition, a very effective industrial policy, yet not one of you will call it that.

Is there still that stigma attached to the so-called public-private cooperation? And do we not have to deal with that stigma more effectively to get beyond that point?

I hear someone talking about this issue from every different perspective. We are calling it a competitiveness policy. We are calling it public-private cooperation, but the bottom line is that we have had industrial policy in this country in defense with Boeing for the last 50 years and look where it has gotten us.

We have had a competitiveness policy or industrial policy with General Dynamics, and with a lot of other defense contractors, in a very effective way for the last 50 years. And it has made us the preeminent weapons manufacturer in the world.

What is it about competitiveness policy, about industrial policy, that still gives you pause as you testify before a committee like this?

Mr. CLARKSON. I think unfortunately, the term industrial policy has become a political term of art. And as businessmen, we try to avoid politics with the exception of——

Senator BAUCUS. Is that not that part of the——

Senator MOYNIHAN. I would like to strike that from the record. I mean, there are no laws about perjury here, but you never——

Mr. CLARKSON. Well, with the exception of Mr. Perot.

Senator MOYNIHAN. Mr. Clarkson, do you want it out of the record or——

Senator DASCHLE. What is your real answer? [Laughter.]

Mr. CLARKSON. My real answer is that we have an industrial policy. No industrial policy is an industrial policy. And I think the issue you and Senator Baucus are raising is whether we should recognize this and get on with what we need to stay competitive? And we gave you basically our view.

Senator DASCHLE. And I subscribe to it wholeheartedly. I guess that my concern is that it is becoming an impediment.

It is just semantics that keeps us from doing what we know we have to do. And so we try to call it a lot of different things to rationalize our advocacy for it, but we end up in the same place.

I do not know how we get to the next step, but I must tell you that if business leaders like you who come before this committee with very effective, persuasive testimony—I agree with so much of it—are still reluctant to use whatever terms necessary to commit this country to do the right thing, then I wonder how politicians are ever going to find the courage to do it.

But maybe, Dr. Ross, you can enlighten us.

Dr. ROSS. Well, look, let us be blunt. If you use the term industrial policy, certain people close their ears and certain people reject what you are saying.

I do not see there is much point in irritating your audience for the sake of irritating the audience.

Now, having said all of that—oh, a second thing. When you mentioned industrial policy, you frequently get into a religious debate which really does not help the issue.

I think what we need to be discussing is what should we be doing to keep our industry competitive and what should we not be doing. And if that is called industrial policy, fine. I happen to agree.

We have an industrial policy. The question is is it suiting our purpose in today's world? That is what we ought to be debating, whatever you call it.

Senator DASCHLE. Good answer.

Mr. Corry, do you have any additional comments?

Mr. CORRY. Just briefly. The implications—certainly I have been saying we need some elements of management and common sense in our trade affairs.

Are we going to be damaged more severely than we have been by not being cognizant that others around the world do not have the same cultural notions that we have or the role of business and government?

And I guess the aversion to industrial policy really depends on precisely what it is meant by that.

Are we going to have the government setting production output as they do in India, telling manufacturers how much water they can use in a month, what the price of the product is?

So there is certainly room. And it would be an improvement in my opinion to have elements of management, particularly in this trade area. I mean, much of the world's steel industry is either government-owned or government-controlled.

Now, we have been cavalier and simply saying, "Well, we believe in private, free enterprise. You guys go out and do it."

And when the Japanese tubular mills go to Russia to sell tubular products, they are accompanied by the equivalent of the Japanese export-import bank.

We do not operate like that. It would certainly be an advantage if we did.

Senator DASCHLE. Mr. Chairman, I think it is remarkable that we have three business leaders now who have come out publicly, unabashedly supportive of industrial policy. And I think that is exactly the kind of candor and really frankly courage we have to see more of when we debate these issues.

The last question. You all mentioned health care to a certain degree. To what degree would you feel comfortable supporting legislation which would comprehensively change the health care delivery system in this country to de-link, for the first time, employment and responsibility for health care? Do you feel comfortable advocating a plan that would do that? Mr. Clarkson.

Senator BAUCUS. Knowing that every other country does to every degree.

Mr. CLARKSON. Well, as you know, our main facilities are very close to the Canadian border. So we obviously hear a lot about what the advantages and the disadvantages are of the system in Canada.

I guess all I am really prepared to say today is that we clearly cannot continue to have this health care cost escalation.

We are interested in our employees and our families getting the best possible health care. However, our costs have been growing at 15 to 17 percent per year. And it does not take you very long to run that out to where you just are not going to be competitive.

Clearly, something has to be done. And we certainly believe that it ought to be done at the Federal level—that we should not have 50 different systems state by state.

So we would certainly support an approach that is based on a national program.

Senator DASCHLE. Any other comments from either of you, Dr. Ross or Mr. Corry?

Dr. ROSS. I do not feel qualified to comment on that one.

Senator DASCHLE. OK.

Mr. CORRY. I would agree with the tenure of the gentleman's remarks.

Senator DASCHLE. I thank you gentlemen very much. And thank you, Mr. Chairman.

Senator MOYNIHAN. Thank you. I will just make two parting comments. And I say this as much to my friends here as to our distinguished panel.

It is all very well for these gentlemen to say, yes, an industrial policy. You got the best aircraft industry in the world, the best research facility for electronics in the world, the lowest cost producer of steel in the world.

An industrial policy says more resources to them. And good for them. I am all for them. I am all for that. But when you get to the industrial policy, it says: "But you over there, I am sorry, you close down."

And the political process does not do that very well. If you think it does, wait until you try it. And you do not have to comment, but I meant to be flattering.

But the other thing to say is it may be a pattern of advanced economies like ours that more and more we get ourselves stuck with activities that are riddled with Baumol's Disease. I mean, health care is an example.

Mr. Clarkson, you would say you want the best possible health care for your employees. We can have that.

And we get Baumol's Disease. That is something that is called cost disease. Baumol, is at Princeton. He was President of the American Economic Association a couple of years ago.

Out of curiosity he asked: "Why is the orchestra of the Metropolitan Opera always on strike? It was curious. They should not be on strike all the time." And I remember it was on strike when I was the Assistant Secretary of Labor. And we had to arbitrate.

And he got to looking into this. He said, "Oh, got it. Their productivity has not increased." It is just as simple as that.

And getting down to your Mozart quartet, it takes 4 people to play it today just like it took when Mozart invented it. And you can play the minute waltz in 50 seconds. It is not that much.

And so the lawyers, like Mr. Corry, see Baumol's Disease right here.

I was talking earlier about when President Perot comes in the first thing he is going to do is change this form of gathering information. I mean, it is preliterate. It is the mode of the council fire. And the chief sits up here and the braves report.

I mean, it is not a very effective way to transmit information. This fellow invented the transistor what, about 30 years ago, 35?

Dr. ROSS. Forty-five.

Senator MOYNIHAN. Forty-five years ago. It changed the world, 2 or 3 three fellows with about 10,000 helpers and a great scientific tradition.

But you get into those modes. People do not see the levels of economy where productivity is rising and their relative costs go up. The cost of medicine has to go up because the people who got to Seattle in the first place got there by wagon.

And the efficiency of going back across the country since Boeing came along is amazing. But the amount of productivity out of a lawyer's time or a minister's time has not changed very much.

And that will cause bafflement in economies and cause bafflement in ours. That is enough of that.

And I want to say, Senator Bentsen has questions for each of you. I will give them to you, which I may do as you leave. If you could give him answers in writing. We would like to have them a part of the record.

Senator BAUCUS. Excuse me, Mr. Chairman.

Senator MOYNIHAN. Sure.

Senator BAUCUS. Thank you, Mr. Chairman. I just have a basic question I would like to ask you, particularly as you are heads of large corporations. And that is, what kind of policy makes most sense for America? Should it be one where a multinational company can go out around the world and operate the best it can to get the greatest return for its shareholders? That is one construct.

Or should it be one where U.S. public policy and private corporate policy is more nationalistic, where American corporations see themselves as having certain obligations to country.

I am really getting at the degree to which this country should pursue some form of economic nationalism in the broad sense. And in a narrow sense, what you think not only about the rights, but also the obligations of U.S. corporations?

Should the American corporation undertake a policy that helps America, or be free to go overseas for a higher return to the shareholders?

I know it is a broad question. We do not have much time here, but I would like each of you to very briefly just get to the heart of the matter, what you think the answer to that questions should be.

Dr. ROSS. Could I take a crack at that?

Senator BAUCUS. Yes.

Dr. ROSS. It seems to me it is a question of roles and missions.

Senator BAUCUS. Sorry.

Dr. ROSS. I think it is a question of roles and missions. It seems to me, sir, that your job and your colleagues' job is to assure that the national infrastructure causes the best things to happen for the welfare of the United States citizenship.

It is the job of industry, within those rules and regulations and tax laws, to maximize the profits and benefits to its employees.

Senator BAUCUS. Regardless of where the operations may be around the world?

Dr. ROSS. Well, I think that we ought to set up the situations so that a fair share of those benefits come back into this Nation.

And I would like to make one more comment. I think any corporation, any big corporation, is a product of the nation in which it is bred.

Take my corporation. We would get nowhere without the output of the United States universities. And that is a product that comes out of the U.S. Government largely.

And there are a number of other things that give us an advantage if we take care of it, including a properly managed health care system.

So I think that, yes, you ought to and we ought to encourage you to set the rules and taxes and laws and other things so that by carrying out our job of optimization of our investments, we do benefit the United States, at least as much if not more than we do in our operations overseas.

Senator BAUCUS. But does the American corporation not have a greater obligation to American people than to people in other parts of the world?

Dr. ROSS. Idealistically, I agree with that.

Senator BAUCUS. No. I mean practically. Should corporations, either alone or in conjunction with government, not take actions which pursue that goal as——

Dr. ROSS. In conjunction with government, yes, sir.

Senator BAUCUS. Mr. Clarkson.

Mr. CLARKSON. Senator Baucus, I think that latter point is one of the reasons we are here and came to testify, but not by wagon, by boat. If it is not Boeing, I am not going. [Laughter.]

Boeing is not a multinational company. It is the world's largest aviation company, but it has only two small operations outside the United States. Those are in Canada.

Senator BAUCUS. I thought I read somewhere that 60 percent of the air frames are made in Japan, some Boeing aircraft.

Mr. CLARKSON. No. And you will hear that 20 percent of the 777 will be built in Japan, but that is of the air frame. It will be less than 10 percent of the airplane that the Japanese subcontractes are responsible for.

Work we have put in Japan and work we have put otherwise, other places in the world on a subcontract basis, we are able to show it has always created more jobs in the United States than we have exported.

In other words, for every job that we have created in Japan, we have created 22 jobs here in the United States. In the case of Japan, we have secured market access through our involvement with them.

But clearly, the question you have asked is a question that is facing The Boeing Company. Can it continue to operate in the manner that it has? It certainly wants to. And again, that is why we are here, looking for ways to stay competitive in the manner in which we are now operating. Thank you.

Senator MOYNIHAN. Just one last remark. If anybody wants to know whether we should have an industrial policy, in the name of God for the last 45 years, we have had the most explicit industrial policy in the world. And that is the cold war.

And if we have not understood that. It is so big and so round, we do not even know it. Would you like a number? As of 1989, 74 percent of the manufactured exports of the United States needed a U.S. Government license so they would not fall in the hands of communists. And that is an industrial policy.

And here is the chairman who knows all about that. Mr. Chairman, you arrived in the nick of time.

And we have had some exceptional testimony from Mr. Corry, Dr. Ross, and Mr. Clarkson. And I mentioned your questions, but thought they might want to have the chance to put them in writing.

We have learned a great deal. I have learned a great deal. I do not know if our panel has, but they have certainly been agreeable and responsive.

And I want to thank you all. And now, here is the—as I said to you, he would arrive—the real chairman.

The CHAIRMAN. Well, gentlemen, thank you very much. I apologize for not having been here throughout your testimony. I look forward to being briefed on it later. Coming in at this late stage, I do not have any specific questions other than those that have already been mentioned.

Senator DASCHLE. Yes. We have spent a good time already.

The CHAIRMAN. Good. Thank you.

That means he is ready to call it to an end.

Gentlemen, thank you very much. I appreciate your testimony.

Mr. CLARKSON. Thank you.

Dr. ROSS. Thank you.

Mr. CORRY. Thank you.

The CHAIRMAN. Our next witness is Mr. Tom Donahue, secretary and treasurer of the AFL–CIO.

Mr. Donahue, we are pleased to have you before this committee again. I am looking forward to your statement. You can proceed.

STATEMENT OF THOMAS A. DONAHUE, SECRETARY AND TREASURER, AFL–CIO, WASHINGTON, DC, ACCOMPANIED BY MARKLEY ROBERTS, ASSISTANT DIRECTOR, AFL–CIO, WASHINGTON, DC, AND BILL CUNNINGHAM, LEGISLATIVE REPRESENTATIVE, AFL–CIO, WASHINGTON, DC

Mr. DONAHUE. Thank you Senator. I am delighted to be here. I am accompanied this morning on my left by Markley Roberts, the Assistant Director of our Department of Economic Research. And on my right, Bill Cunningham of our Legislative Department.

For the record, I am Tom Donahue, Secretary-Treasurer of the AFL–CIO.

We have submitted for the record, Mr. Chairman, extensive testimony on the various aspects of the issues that are raised by this hearing. And I would like only to try in an opening statement, if I may, to comment on a few pieces of that.

The first question I would like to raise or the first issue I think this committee has to examine is what is competitiveness? What is the definition of it? What is it we are talking about? Who is competing with whom and for what purpose?

Some suggest that we have won the competition when a U.S.-based corporation is thriving and piling up profits. We obviously would argue that that standard is not nearly high enough.

I was following with interest Senator Baucus' questions of the last witness. We do not think that standard means very much. We do not think it means very much that a corporation happens to be based in the United States.

A number of economists point out that with globalization of the economy, most multinational corporations no longer have a strong national identity. And that seems to us apparent.

There is no more vivid example than a corporation with a name well known in this country, namely, Zenith which has now shifted an estimated 24,000 of their 27,000 hourly jobs to Mexico.

The Springfield, Missouri plant has gone from 3,000 workers in 1985 to 400 today. Their Evansville plant has gone from 1,500 workers to zero in the same period of time.

That means as far as our economy is concerned, Zenith is being hollowed out, only the shell will remain.

In a very few years, Zenith will have managers, lawyers, accountants, and undoubtedly lobbyists in this country. And it will sell its stock here. It will class some of its profits and pay some taxes, but the U.S. operations are going to be reduced to kind of an import-export firm to I suppose the equivalent of an investment in a mutual fund which invests abroad while the real work of the company is going to be done by workers in other countries.

The profits of Zenith may well go up as a result, but as thousands of jobs are lost, those communities are crippled, empty plants left behind, the question is does that make our Nation more competitive? I think not.

Zenith is not alone. Literally, hundreds of other U.S.-based companies have shifted their productive operations to low-wage economies where workers are poor and where they are vulnerable to exploitation.

Mr. Chairman, it may be too much to expect such corporations to feel a great sense of responsibility to American workers, but at the very least, we could eliminate the incentives that those companies now have to close up shop here and set up their operations abroad.

This committee can play an enormous, constructive role by revising the tax code so that it encourages investment and job creation at home and discourages it abroad.

Also, we will tell you that the AFL–CIO urges you to promote trade policies which created good jobs for U.S. workers and not policies which export them by the tens and hundreds of thousands.

In the case of the emerging North American Free Trade Agreement, we obviously believe that agreement should include strong guarantees of workers' rights and environmental protection measures and appropriate trade adjustment assistance measures.

More generally in the trade area, we believe that the sunset last year of the Super 301 provision of the 1988 Trade Act eliminated what was a useful mechanism for prying open foreign markets to U.S. products and reducing unfair trade practices abroad.

The existence of Super 301 is still necessary. We urge you to support its extension.

Such policies would make the United States more competitive in the best sense of that term, but they may also require a considerable courage.

Perhaps a recent presidential candidate was correct when he said: "Economic loyalty to one's fellow countrymen is not a value that is fashionable in America today."

To raise the matter in the public speech he said: "It is to cause more seat squirming than a discourse on safe sex."

It is not easy to go against political fashion, but in this instance, we think it is vital. And it is vital to keep asking the questions of what are the United States' interests and why do we engender economic loyalty to this Nation?

Another area where the Finance Committee could enhance our economic competitiveness has to do with worker-management relations. It is interesting that in all of the debate about competitiveness, the impact of labor relations on productivity has received very little attention.

For example, in the first annual report of the Competitiveness Policy Council, there are a number of excellent recommendations in areas of savings, investments, education, technology, and so forth, many of which we in the AFL–CIO would strongly endorse and encourage.

But the report gave very short drift to worker participation in the work place. It mentions it as a third element in productivity questions.

The truth is there have been enough studies in the last several years for us to know with certainty that some kinds of employee involvement can have a positive effect on work productivity. We know what works and what does not.

A study for the Brookings Institution notes that the arrangements that do the best have 4 mutually-supporting pillars: guaranteed long-term employment, so workers do not feel threatened by change; relatively narrow wage differentials, apart from those based on seniority; guarantees of worker rights, such as dismissal only for just cause; and some form of profit sharing or gain sharing.

Some of our competitors, especially in western Europe, have paid far more attention to worker participation and its effect on productivity than this nation has. They provide strong protections for collective bargaining, the framework that makes employee involvement practical.

They do not permit, for example, the permanent replacement of strikers with all of the disruption and damage to labor-management relations that that brings in its wake.

But equally and importantly, they affirmatively support trade unionism. And they support labor-management conduct which is conducive to productivity increases. And to enhance competitiveness, we are to follow their lead.

Mr. Chairman, the Finance Committee could make a substantial contribution to national competitiveness by working out a package of incentives and disincentives and a tax code that would encourage those forms of worker participation that can boost productivity.

Those recommendations, changing the tax code to encourage domestic investment, job creation, and worker participation are not enough to make our economy competitive, but they will help.

They ought to be part of the larger strategy which would include an industrial policy that includes full employment and a tripartite industrial board and a national development bank.

The larger strategy obviously also has to deal with the questions of an effective education and a job training program system, the containment of health care costs, a trade policy that fosters domestic employment, greater support for research and development in the civilian economy, and better maintenance of the nation's infrastructure.

The strategy which might include all of those elements might begin we think, Mr. Chairman, to address the issues of competitiveness as we now define it and to help this Nation perform better.

We have submitted for the record our longer statement, Mr. Chairman. And I would be happy to try to answer any questions you or any of the members might have.

The CHAIRMAN. That is fine.

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

The CHAIRMAN. On this question of industrial policy, for many it is a bad word, but we have been involved in industrial policy in this country for a long time.

Look at agriculture. We have done an incredible amount of research here. County agents get that information out to the farmer.

Look at what we do in the health area in research on drugs and trying to get breakthroughs on disease control.

Look at what we have done in the Defense Department.

But how do we avoid the Government picking losers?

For example, I was reading in this morning's paper about the Japanese finally backing off of their new world computer after studies and support by the government for 10 years.

What kind of counsel would you give in that regard?

Mr. DONAHUE. Well, one, I would not be afraid of losers.

The CHAIRMAN. Yes, but——

Mr. DONAHUE. There is a phrase about better to have played than never to have been in the game.

The CHAIRMAN. I understand.

Mr. DONAHUE. And if it came to picking winners or losers, I think we ought to be brave enough to do that. Most importantly, I do not think that is often the choice, but I would submit that this Nation has picked the loser in the savings and loan situation.

And we paid an enormous cost for it, but we went ahead and did it because we saw it as an important policy to guarantee the security of peoples' money. And we undergirded that policy for lots of years. And now, we are paying a very high price for it.

That is a loser as it turns out. I do not think anyone would advocate, however, that we should not have had the policy in place.

I think, Senator, you are always going to have the discussion which was indeed with the previous panel on the semantics of words.

There are as many people who will object to the word competitiveness as there are who would object to industrial policy.

I can cite to you lots of sins that are being committed in the name of competitiveness. Someone else will cite those committed in the name of industrial policy.

The CHAIRMAN. It seems to me that we have to do a better job of looking through the test-tube into the marketplace. We have been great starters, but we have not been very good finishers.

When I see some of the inventions in this country and then watch other countries convert that technology into consumer products quicker and faster than we do, it seems to me that with the great universities that we have and the amount of money that we spend on pure science, perhaps some of that should be shifted to basic science, a little closer to the conversion of the technology to the product.

I look at what has happened with Sematech. I think it is about to prove itself. There is an example where the private sector put in the original seed money and then government came along and matched it in the way of research.

So that is what I am probing for, to see how we can do a better job and be more competitive in converting from science to the consumer product faster and what contribution labor can make in that process.

Mr. DONAHUE. And I will only ask you, Senator, to add to that consideration as to how we develop the product, add to it the consideration of where will be the product be produced.

The CHAIRMAN. Oh, absolutely. That is what I——

Mr. DONAHUE. We must not be asked to put tax dollars into R&D for products which were produced in Mexico, for products that will be produced in East Asia.

That is unfair to ask the working American taxpayer to invest their money in assisting the movement of jobs offshore. So there has to be a piece of the consideration.

I obviously share your views. And we share your views that there is an appropriate government role in here. There is a role in your fashioning of tax policies which I have said ought to encourage U.S. investment rather than domestic, an advantage for those who choose to invest in the United States. There is an appropriate role for Government in fostering and assisting through university structures or otherwise R&D efforts and the development of new products and the applications of technology.

But I think you have to ask the next question of, application of technology to what and where it will create jobs in the United States?

That is why I said at the outset that I believe the test of competitiveness—I mean, competitiveness as a pure science or as a singular activity is not of any great interest to us.

Competitiveness which enables us to create more jobs in America, enables us to create a full employment economy that we need is, but it always has to be for that purpose of developing that full employment economy.

The CHAIRMAN. Well, that is what I am striving for in this line of questioning. We do the creating and we do the inventing, but other countries convert that technology to consumer products faster than we do.

I want to close that gap so we can do it faster. So we can get those jobs created here. So we can be world competitive even more than we are now. That is what I am seeking.

Over and over you hear comments about the quality of our products and the importance of meeting competition with quality.

I see our companies making substantial progress on quality. I see them closing the gap with some of our international competition. What further contribution can labor make in that regard do you think?

Mr. DONAHUE. Well, I suggested, Senator, the cooperative work place, the work place in which the employee has a sense of involvement and a sense of accomplishment and a sense of reward is the best guarantee of a productive—what is fashionably called a high-performance work place, if you will.

And that is going to be fostered by a labor-relations policy which makes it possible for people to have unions without contest, a policy which would make it possible for workers and managers to cooperate to work together in new styles and in new forms—and it is happening all over America—a policy which we think would change the current emphasis of employers on striker replacement as an answer or an antidote or an often conclusive act to a strike or strike threat.

All of those policies I think would improve the ability of people to work together and enhance their productivity, competitiveness, and improve product quality.

What you have seen in those companies that have improved quality time after time is that where that formula is put in place, quality has improved. Workers who feel left out of the process, workers who feel in one way or another denigrated by a work process are not very interested in the quality of the product.

The CHAIRMAN. Well, I just left a meeting with the President, some of the members of the Cabinet, and the leadership of the Congress about enterprise zones. The concern is trying to take care of some of the problems we see in major cities today. I share that concern and we have to address it, but the problems go far beyond that, it seems to me, to our international competitiveness.

And then I look at some of the supplements that we have today. We have to do something on the extension of unemployment benefits. They are expiring this month. That has to be accomplished by this committee and we are dedicated to doing so.

But I do not think we can just look at enterprise zones as such and say that solves our problem. Our problems in being more internationally competitive go far beyond that.

Would you like to make any comment on that?

Mr. DONAHUE. I think, Senator, that the enterprise zone approach is one that we have never been very attracted to. We have never seen it as an effort to create an island of competitiveness, if you will, or an island of prosperity, but it has become the accepted wisdom.

It is essential, as you note, that we do something about the urban areas and the decline of those areas.

The enterprise zone carefully managed, I suspect in my view, limited in the ways in which you make it different from the community around it and from the larger community may be modestly effective.

The evidence is though in enterprise zones in this country and certainly in the enterprise zones that have been created in other nations around the world as free trade areas, so-called, they are pockets of low wages. They are pockets of poverty in employment.

And I happen to share your view that it is very difficult to cure the larger ills which cause the poverty of an inner city—of course, the urban blight. It is very difficult to solve those on an enterprise zone basis.

There are larger problems in society that have to be dealt with if we are going to deal effectively with the problems in the inner city, the education levels, housing, employment opportunities, not just the putting of a plant in that area, but employment opportunities generally on a full-employment economy, most particularly.

If people have an opportunity to work, they will find their way out of poverty. They will find their way to a better standard of life and to improving their own conditions. That is not to say there is not an appropriate role for government in helping them to do that.

The UI I suspect is the best and most obvious example of what needs to be done to help the unemployed in this country to keep body and soul together while we try to work our way out of a recession and try to provide jobs for them.

The CHAIRMAN. Yes. While we try to find jobs for these people.

Mr. DONAHUE. Sure.

The CHAIRMAN. I yield to Senator Baucus.

Senator BAUCUS. Thank you, Mr. Chairman. Mr. Donahue, you raised an interesting point earlier, suggesting that one way to address quality of the product is to enhance and stimulate better cooperation between management and the work force.

I very much agree with that. I mean, it is just obvious that the more there is harmony on the shop floor and the work place, the more likely there will be a higher-quality product. I think that is clear.

The question though is how do we help encourage that from a public-policy point of view? I generally regard management-labor relations as the responsibility of management. Maybe when you have good management that wants to have good relations with its work force, it will find a way to do so. It is also a responsibility of labor, but I think it is primarily the responsibility of management.

The question though is, are there any tax policies or is there any other public policy that you can recommend that we in the Congress can address to help encourage greater cooperation?

Mr. DONAHUE. I think there are, Senator. One thing I think that every time the issue of competitiveness is raised, somebody has to insert this subject as a piece of it.

And that is why I was saying I was disappointed with the report of the Competitiveness Policy Council which after all flows from this committee.

Senator BAUCUS. What do we do? What does the Congress do to help foster cooperation?

Mr. DONAHUE. Well, you created the Competitiveness Policy Council. And you said: "Let us have a tripartite organization, take a look at competitiveness, and expose the need for improvement in this area or that." And I think the Policy Council is moving along well in doing that.

I said I confessed my disappointment that they may be—they said they have set up a Subcommittee on manufacturing. The goal is to consider how companies in a select group of industries can better stimulate innovations, speed product development, improve quality, and increase participation of workers. But it is a fourth consideration. And it is only——

Senator BAUCUS. Well, that is what they did. I am asking what do you recommend the Congress do?

Mr. DONAHUE. Well, there are representatives of the Congress on the Policy Council. One of the things they can do is improve that performance.

I think that there are—it is difficult for me to think of specific tax policies which would make it possible, except to I suppose refer to assistance in terms of educational opportunity.

I do not know exactly what needs to be done in terms of making profit sharing easier. I would say to you that I think that we have gone in the wrong way for a long time with an Aesop philosophy and following that to its extremes.

All of those are issues that this committee has addressed. I think if you are going to give assistance through tax policy to corporations, you might make it contingent upon the development of a jointness policy in a corporation or a performance policy in a corporation. I think that is one thing you can do.

I think the other thing you can do is take a look at the other corporations which can be judged I believe to have destroyed their competitiveness in various ways by attacking a union or attacking their workers and see how you think that reflects upon their competitiveness.

I submit to you that when Caterpillar decided it was going to fire 12,000 people, it did not help its competitiveness very much and it did not enhance its productivity.

Senator BAUCUS. Let me ask a question in another area just to kind of play the devil's advocate here. That is, when a company, an American company produces a product and sees lower wages in another country, it is obvious that that company is going to look at the possibility of opening up a plant in that other country, just to lower the cost of doing business. And that is just obvious.

And I assume that that prospect also presents itself to other companies in other countries, namely a Japanese company or a German company, for example.

So my question is how do other countries handle this problem, that is, let us say, Japan for instance, where a Japanese company sees that they can go offshore to produce, and yet I assume that the country of Japan and to some degree the company in Japan wants to keep its work force?

You hear about the position of the work force in Japan and also to pay them high wages.

So how do other countries handle this problem, namely, allow their companies to take advantage of overseas opportunities and at the same time keep high wages and high-paying jobs at home?

How does Japan handle that problem and how, say, does Germany?

Mr. DONAHUE. I think the short answer, Senator, is that those countries for whatever reasons have a high degree of company loyalty to the nation than has not been evidence in the United States.

I do not mean to ascribe unpatriotic motives to that. It may well be that our companies are as patriotic as anybody else's, but they move more quickly to the bottom line.

I was thinking as you were talking about it, my first trip to Japan. I remember going to Japan in 1979 and being taken to the Nippon Steel plant where the one blast furnace was shut down.

And the manager explained to me that it was shut down because it was being torn down and replaced with a new blast furnace.

And I asked why? And he said because it is 20 years old. And that was his total answer. He thought I understood it. If it is 20 years old, it must be old. You tear it down. And you invest in building a new one.

While they were doing that, the people who were laid off because of that furnace being shut down were engaged in various other jobs in the plant. They were painting curbs. They were growing grass.

They were taking training. They were going to school. Nobody was laid off by the process.

It evidenced to me a much greater dedication to maintaining the work force and to maintaining home employment, domestic employment in Japan than I see in this country.

I think you are right. I think that employers will always chase the lowest wage, providing other things are equal. They will.

And transportation is going to be a big factor in that. That is one of the reasons why we believe the NAFTA negotiations are so serious and present such a threat to continued manufacturing employment in the United States.

Senator BAUCUS. Is your answer basically, then in many cases, a company need not go offshore if it properly invests or if the country's policy is such that if they invest in an American plant, they can still maintain a high rate of return to its shareholders? Is that what I hear you are saying?

Mr. DONAHUE. Yes. And what you are hearing me say is that we have to find the ways by which to give the advantage to that corporation which stays in the United States and creates employment here as opposed to the corporation which does not. The corporation which creates technology here.

And the Deltronico plant comes to mind. Delco Electric plant, Kokomo, Indiana, has 800 employees. Deltronico and Matamorus has 4,250 employees. The manager of that Mexican plant will you tell you that this is the state-of-the-art technology. This is the same technology we use in Kokomo, Indiana.

Senator BAUCUS. That is right.

Mr. DONAHUE. Now, if that continues to be true and unless you do something about tax policies, then those companies are going to continue to go for the dollar or $2-an-hour wage. They would be fools not to.

Senator BAUCUS. But again to some degree, are you saying that Japanese companies go offshore less often than United States or that German companies go offshore less than United States, or not?

Mr. DONAHUE. I do not know the absolute statistics on that, Senator. I am not sure I am capable of answering in that term.

They seem to display a whole lot less desire or ability to go offshore at the cost of domestic employment.

There is no evidence whatsoever that the out-sourcing of some parts or equipment by the Japanese and in Korea or in East Asia has affected the employment base in Japan. The same is true in Germany. There is such evidence in the United States.

Senator BAUCUS. How are those companies able to be so profitable, if they are and not go offshore to other countries?

Mr. DONAHUE. Well, a variety of things which make up quote, competitiveness.

Why is a Japanese auto competitive with an American auto if wages are roughly the same?

And their wages and costs are probably 85 percent of ours. And they have to ship the product all the way over here.

Well, one of the factors certainly is health care costs. One of the factors is that the American producer has to put an $800 or a $900 price on that car because he is paying for health care costs that his

Japanese competitor has a governmental system for. That is part of why they are more competitive than we are.

Why are the others? There is certainly an element that I averted to earlier, the element of productivity, quality, and enhancement through a sense of permanence of employment and a sense of the interest of the worker in the work place.

Senator BAUCUS. Thank you very much. Mr. Chairman, thank you.

The CHAIRMAN. Senator Chafee.

Senator Chafee. Nothing.

The CHAIRMAN. Mr. Donahue, thank you very much.

Mr. DONAHUE. Thank you very much, Senator.

The CHAIRMAN. That is the conclusion for the hearing for today.

[Whereupon, the hearing was concluded at 12:00 p.m.]

APPENDIX

ADDITIONAL MATERIAL SUBMITTED

PREPARED STATEMENT OF SENATOR LLOYD BENTSEN

Today we begin a series of hearings in the Finance Committee on trade and competitiveness.

There is no question that the trade issue is heating up. There have been suggestions that the House of Representatives may send the Senate a trade bill in the coming months. The NAFTA talks and the Uruguay Round continue. This Committee has closely followed those negotiations and, if either is completed, we will be asked to approve them and put together implementing legislation.

Moreover, the world trading system demands that we adjust to today's economic realities. Now more than ever, our position in it is linked to our ability to master the world economy. Military superiority is no longer front and center in defining world leadership. *Economic* superiority is.

The job of this Committee is to make sure that we do whatever we can to help our companies get the most out of world trade, with or without the trade agreements being negotiated by the Administration—in other words, to help them compete. In that context, I decided that it was time for the Finance Committee to take a fresh look at the world economy and how our companies are fairing in it.

The fact is that study after study today shows that we are not well prepared for this new order, that our competitiveness is flagging. How are we doing among the several largest industrialized democracies? The answer isn't good. Education test scores by our children—last place. Investment in plant and equipment as a percent of GDP—last. Savings rates as a percent of GDP—last. Growth in real income per person—last again. The fact is that we need to fundamentally rethink how we are going to compete in the world that is taking shape.

This isn't just an economic issue. It has important social implications too. During the 1980's we saw a widening disparity between the incomes of the poor and wealthy in our society. Forty-four percent of the income gains in the 1980's went to the top one percent of families. We hear from many sources that our trade strategy must be based on creating high-skilled, high-paying jobs for Americans. I'm all for that.

But we have no program to ensure that those Americans on the bottom rungs of the ladder—those who could most easily lose their jobs to foreign competition—will get the education, the training or the assistance needed to help them perform those high-skilled, high-paying jobs. And the riots in Los Angeles last week are a dramatic reminder that we must develop a competitiveness strategy in this country that provides all segments of our society with the hope, the ability, and the opportunity to succeed.

Not all the news is bad, of course. We still have one of the most productive and innovative nations in the history of mankind. Many of our industries remain world leaders, in fields such as aerospace, computers, and biotechnology. On the trade front, exports have been one of our brightest economic indicators. American exports increased $58 billion, or 16 percent, over the last two years. And we are finding new markets for our products—over 50 percent of our export gains in the last two years went to the developing world.

But we cannot rest on the bright spots because the erosion in our competitiveness is too disturbing. And there is no simple solution that will reverse the decline we have seen in the 1980's. But this Committee is uniquely placed to address the issue of U.S. competitiveness. In the Competitiveness Policy Council's first report to Congress, trade and tax policy, and health care costs were all identified as priority issues to be addressed in developing a national competitiveness strategy. Those are issues that this Committee deals with, day in and day out.

Yesterday's solutions are not necessarily today's answers. The world has changed too much to expect that. It's time to think about new answers, whether we are talking about opening foreign markets to U.S. industry or domestic policies that help them compete in those markets. And that is why I have called these hearings.

In the next month business, labor, and academic leaders will come before the Committee to give us their best thoughts on this issue. We'll hear from American industries that are world leaders, those struggling to stay ahead, and from basic manufacturing industries which face particularly difficult challenges.

Today we begin by hearing from two Councils whose sole mission is to look for solutions to the problems in American competitiveness: the Competitiveness Policy Council and the Council on Competitiveness.

Prepared Statement of C. Fred Bergsten

THE COMPETITIVENESS OF THE UNITED STATES

The Competitiveness Policy Council presented its First Annual Report to the President and the Congress (including this Committee and other Senate committees of jurisdiction) on March 1.[1] The report was unanimously adopted by our bipartisan group of corporate executives, labor leaders, federal and state government officials, and public interest members that were appointed last year by the President and by the joint leadership of the Senate and House.

The Council concluded that the United States needs to establish a comprehensive competitiveness strategy to stem the steady erosion of the country's economic performance:

1. more effective and stable *economic policies,* including conversion of the budget deficit into a surplus and reform of the tax code to sharply increase national saving and investment;
2. fundamental reform of key *structural* elements of the economy including education and training, health care costs, public infrastructure, commercialization of technology, and corporate governance and financial markets;
3. more effective *sector-specific* policies based on new or strengthened governmental mechanisms to (a) assess the likely course of key American industries, (b) compare those baseline projections with 'visions' of industry paths that would be compatible with a prosperous and competitive American economy, and (c) monitor the activities of competing foreign governments and firms to produce early warning of problems that might be on the horizon.

The Council is now developing detailed blueprints on each of these issues and will submit them in good time for consideration by the next Administration and Congress. We have established Subcouncils to develop detailed proposals, which the full Council will consider for incorporation into its own report, in the following eight areas:

Capital Formation—chaired by Peter G. Peterson, Chairman of the Blackstone Group;
Corporate Governance and Financial Markets—chaired by Edward V. Regan, Comptroller of the State of New York;
Critical Technologies—chaired by Erich Bloch, Distinguished Fellow of the Council on Competitiveness;
Education—chaired by Albert Shanker, President of the American Federation of Teachers;
Manufacturing—chaired by Ruben F. Mettler, former Chairman and CEO of TRW;
Public Infrastructure—chaired by Gerald L. Baliles, Partner, Bunton & Williams and former Governor of the Commonwealth of Virginia;
Trade Policy—chaired by John J. Murphy, Chairman and CEO of Dresser Industries;
Training—chaired by Lynn R. Williams, International President of the United Steelworkers of America.

Each of the Subcouncils includes representatives from business, labor, government, and the public interest. Several members of the Committee and a number of

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[1] *Building a Competitive America: First Annual Report to the President & Congress,* Washington, DC: Government Printing Office, March 1, 1992.

other members of Congress are participating in our efforts, and I would reiterate our desire to consult closely with you as our process evolves.

The Subcouncil on trade will be considering a number of possible initiatives for US policy including:

- new agreements with the Group of Seven industrial nations (G–7) to maintain the exchange rate of the dollar (and other currencies) at a competitive level, building on the "reference ranges" that were agreed in 1987. Avoiding dollar overvaluation is of central importance in maintaining American trade competitiveness;
- agreements with the other economic superpowers (the European Community and Japan) to coordinate macroeconomic and monetary policies to sustain world growth and thus a hospitable environment for continuing trade expansion;
- results that will effectively promote US trade, employment and other interests through the several international negotiations in which the United States is presently engaged, most importantly the Uruguay Round in the GATT and the North American Free Trade Agreement;
- substantial expansion of the programs of the Export-Import Bank to match both the magnitude and effectiveness of other countries' official export credit efforts;
- elimination or sharp reduction of many of the export disincentives (excessive or unnecessary national security controls, foreign policy controls, sanctions, short supply controls, etc.) that now curtail billions of dollars worth of foreign sales by US firms annually;

TRADE POLICY

Taking off my Competitiveness Policy Council hat and speaking as Director of the Institute for International economics, I would make several comments on current issues facing US trade policy.

First, we are likely to experience little change in our trade and current account balance from 1991 to 1992. The absence of further improvement (and perhaps some renewed deterioration) is extremely unfortunate because the economy has become reliant on trade gains to support overall growth. In light of the impossibility of spurring domestic demand through significant fiscal stimulus due to the huge budget deficit, and the limited effectiveness of monetary ease due to the fragility of the financial system, our increased dependence on trade-led growth will probably continue for some time.[2] It should also be noted that the share of trade in the American economy has become as great as in Japan and in the European Community as a group, representing a doubling in our trade dependence over the past two decades.

We therefore need to address promptly a significant new problem: a renewed substantial undervaluation of the Japanese yen in the exchange markets. The yen is 10 percent weaker against the dollar today than it was at the end of 1987. During the intervening four years, however, Japan's cumulative inflation rate has been about 10 percent less than ours and its cumulative productivity growth has been about 10 percent greater. Hence *the yen needs to rise by at least 25 percent against the dollar* (and against the European currencies), *to about 100:1 from its current level of 130-135:1, to restore a competitive price position for American industry against Japanese competition in world markets.*

The best evidence of this new currency imbalance is the renewed surge in the Japanese trade and current account surpluses. The Japanese surplus declined sharply for four consecutive years in response to the dramatic appreciation of the yen in 1985-87 and the related burst of growth in domestic demand, falling from almost 5 percent of GNP in 1986 to slightly above 1 percent in 1990. But the current account surplus leaped by about $40 billion last year and the trade surplus reached a new high, exceeding $100 billion for the first time. It will rise substantially more this year. Japan is now the only large surplus country in the world.

The most urgent requirement for US trade policy is thus for the Treasury Department to work out a three-part arrangement with the Japanese and the G–7, perhaps for the Munich summit in early July:

- to engineer a sharp rise in the yen against all major currencies, as the Plaza Agreement in 1985 engineered a sharp fall in the dollar against all major currencies and a subsequent reduction of over $100 billion in the US current account deficit;
- to induce Japan to undertake strong fiscal action to stimulate its slumping economy, taking advantage of the sizable surplus in its consolidated budget po-

[2] See my "Trade and Jobs: A Strategy for Export-Led Growth," a statement presented before the Senate Banking Committee on January 9, 1992.

sition (3 percent of GNP in 1991). Japan should stop relying on interest rate cuts which, while helpful in stimulating growth, further weaken the yen in the currency markets.

- helped by such a Japanese commitment, to induce the Europeans to take steps to stimulate their own stagnant economies, which are also creating a major drag on world growth and thus on US export prospects.

On the trade policy front, three new studies at the Institute for International Economics highlight possible actions that could substantially help our trade position. One is *successful negotiation and ratification of the North American Free Trade Agreement.* Our comprehensive analysis of that arrangement, by Gary C. Hufbauer and Jeffrey J. Schott, concludes that NAFTA—in combination with the sweeping Mexican economic reforms which it will help to lock in permanently—*will produce a positive swing of about $10 billion in the US trade balance with Mexico.*[3] Much of this result has in fact already occurred, in anticipation of a successful outcome of the talks, as huge amounts of capital have flowed into Mexico ($18 billion in 1991 alone) and its economy has begun growing rapidly again despite the stagnation and recession on its northern border.

On balance, our study concludes that NAFTA will create about 130,000 jobs in the United States. However, over 100,000 existing jobs could be lost as a result of the agreement. Hence it is essential that the Congress, together with the Administration, work out a sharply improved program of adjustment assistance for these workers. Our study recommends appropriation of about $1 billion for this purpose over the next five years.

Second, our Government must review the entire range of its own policies and priorities that block or deter American exports. A pathbreaking analysis by J. David Richardson at the Institute estimates preliminarily that *we may be reducing our own foreign sales by $20–40 billion annually through* such "export disincentives."[4] All of these practices of course pursue some legitimate policy goal but most have been adopted and maintained without consideration of their adverse effect on the country's trade position. A review is urgently required.

Third, an examination of the use of "tough" trade policy tools shows that almost two-thirds of the Section 301 cases since 1985 have resulted in at least partial opening of foreign markets for US firms.[5] In the process, Super 301 provoked none of the trade wars predicted by some of its opponents. I would therefore support renewal of "Super 301" legislation as contemplated in the new legislation proposed by the House Ways and Means Committee.

However, any such renewal should embody the legislative language developed for that provision in 1988. It should avoid numerical triggers, especially those linked to trade surpluses of other countries; we should attack foreign trade barriers which limit our exports whether or not those countries are running surpluses with us or the world. The legislation is also likely to be more successful if it focuses on priority foreign trade *practices* rather than "priority foreign *countries.*"

Other parts of the newly introduced trade bill in the House are highly undesirable, however. For example, *General Motors itself has testified against the proposed new export restraint agreement on Japanese autos:* General Motors Vice President farina Whitman concluded before the Ways and Means Committee on March 30 that "the voluntary export restraint program . . . will mainly help the Japanese manufacturers. Experience has shown that such programs serve largely to enhance the profitability of Japanese producers . . . ."[6] Studies at the Institute show that the auto VER, at the height of its impact in 1984, augmented Japanese auto profits by $2–3 billion annually—enabling them to invest that much more, boost their productivity further, and further impair our competitive position.[7] Moreover, the proposed new restraints could destroy US jobs by limiting investment in the United States by Japanese automobile companies.

It must be recognized that all import barriers are generally anticompetitive for the nation as a whole. Steel quotas, for example, raise costs to our auto industry

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[3] See Gary C. Hufbauer and Jeffrey J. Schott, *North American Free Trade: Issues and Recommendations,* Washington: Institute for International Economics, 1992.

[4] See J. David Richardson, *Sizing Up U.S. Export Disincentives,* Washington: Institute for International Economics, forthcoming 1992.

[5] Thomas O. Bayard and Kimberly Ann Elliott, *Reciprocity and Retaliation: An Evaluation of Aggressive Trade Policies,* Washington: Institute for International Economics, forthcoming.

[6] Marina v. N. Whitman, "Statement of General Motors Corporation Submitted to the House Ways and Means Committee, Subcommittee on Trade," March 30, 1992, p 2.

[7] C. Fred Bergsten, Kimberly Ann Elliott, Jeffrey J. Schott, and Wendy Takacs, *Auction Quotas and United States Trade Policy,* Washington: Institute for International Economics, September 1987, p. 42.

and other steel users. Even restraints on consumer goods add to inflation pressures in the economy as a whole and render us less competitive. So-called VERs are the worst technique of all because they directly augment the cash portion of our toughest competitors abroad.

The most critical trade issue for the United States at this time is the Uruguay Round. It is vital that the Round be completed successfully not only to improve the international trading system but to create new opportunities of American exports. Moreover, only if the Round is successfully completed can the GATT move on to address the "new" trade issues of the 1990s including the linkage to environmental concerns, the interplay of national competition policies and a host of others.

To facilitate the implementation of both the Uruguay Round and NAFTA Agreements next year, it will be essential to reform the programs of trade adjustment assistance that help dislocated workers adjust to trade liberalization. We must constantly be aware that the gains from trade liberalization are net gains, and that there are losers as well as winners. We must reaffirm a strong commitment to those people who pay the price for greater benefits to the economy as a whole.

As someone who has labored on these issues for over 20 years, I recognize that making adjustment assistance more effective will not be easy. Yet those who firmly believe in the benefits of greater trade have an obligation to continue efforts to reform and improve these programs until we can get them to work. That is one path to Building a More Competitive America. The Subcouncil on Training of the Competitiveness Policy Council (headed by United Steelworkers President Lynn Williams) will be developing specific proposals for how current federal legislation and programs can be improved to this end.

CONCLUSION

I would not want to leave the impression that even full implementation of the actions recommended here for new G–7 initiatives and US trade policy will resolve America's fundamental competitiveness (or even trade) problems. Our external deficit is probably stuck at a plateau of $50–100 billion—only 1–2 percent of GNP but still a substantial drain on the economy and producing steady annual increases in our net foreign debt.

Even more importantly, we know from a series of key domestic indicators that the country's overall competitiveness is deteriorating slowly but steadily. Productivity has grown by less than 1 percent annually for twenty years. The average real wage in America is below the level of twenty years ago. The educational attainment of our high school graduates is lower than twenty or even thirty years ago, and compares unfavorably with virtually all other industrial countries and even some developing countries. Our trade deficits and buildup of foreign debt have cumulated more than $1 trillion over the past decade. Our per capita income has dropped below a number of other countries.

To deal with these problems, the United States needs to undertake a series of reforms along the lines suggested by the Competitiveness Policy Council—to revert to the hat I was wearing at the outset of this Statement. The Council is pleased by the very favorable reaction we have received to our First Annual Report and looks forward to working with the Congress and the Administration over the next several months as we develop our specific recommendations.

RESPONSES OF MR. BERGSTEN TO QUESTIONS SUBMITTED BY SENATOR RIEGLE

Question No. 1. Pages 18 of the Competitiveness Policy Council's report begins the section on "Savings and Investment," which references U.S. tax policy.

What is your opinion on the Value-Added Tax and proposals for decreasing the depreciation rate for manufacturing equipment, like that used in the production of semiconductors?

Answer. The Competitiveness Policy Council has taken no position on value-added taxes or changes in depreciation schedules. Our First Annual Report, however, noted that "a value-added tax (VAT), as utilized in virtually every other major country . . . could encourage saving"—whose shortfall is one of this country's major competitiveness problems. I personally think there is much merit in considering the introduction of a value-added tax for the United States. This could help increase the incentives for saving, reduce the deficit and provide the resources for increased government investment in education, training, technology, and infrastructure.

Question No. 2. Would these measures help with the cost of capital issues? If so, how should they be structured to achieve goals in this area?

Answer. Our Capital Formation Subcommittee, chaired by Peter G. Peterson, is considering ways to increase investment and to reduce the cost of capital to industry. Any increased tax on consumption, such as a value-added tax, could lower the budget deficit and thus reduce the pressure on interest rates. More generous depreciation schedules would increase corporate profits, thereby leading to higher private saving and more private investment.

Question No. 3. Page 30 of the Council's report covers "Training" and the need to make U.S. programs more effective and more—widely accessible. How did the Council account for the increased worker training needs that will inevitably arise as a result of the North American Free Trade Agreement (NAFTA)?

Answer. The CPC strongly advocates a major expansion of training programs for American workers (see especially page 22 of our First Annual Report). We did not specifically address the issue of worker adjustment as a result of NAFTA, but the Council clearly believes that the government has a responsibility to help workers who lose their jobs as a result of trade liberalization. Our Subcouncil on Training, chaired by Lynn Williams of the United Steelworkers of America, is considering this issue in depth and the Council will be making proposals on it in our next report to the President and Congress.

Question No. 4. What are your recommendations for improving our worker training system and programs so that they can better meet current and future needs?

Answer. The Council will make comprehensive proposals in this area in its next report, which we plan to submit in late 1992. I would also note that the Institute for International Economics recently published a study entitled *North American Free Trade* which devotes an entire chapter to labor issues (Chapter 6) and makes a number of recommendations for better worker adjustment programs.

Question No. 5. I understand that in a few weeks, the Finance Committee will be holding a hearing on executive compensation and stock option plans. The section on "Corporate Governance and Financial Markets" in the Council's report is relevant to issues we will discuss in that hearing. The report references "legislation to establish duties to several constituencies." Could you elaborate on the Council's ideas in this area?

Answer. Our Subcouncil on Corporate Governance and Financial Markets, chaired by Edward V. Regan, is considering whether changes in the patterns or regulation of corporate governance could improve the competitiveness of American industry. In particular, the Subcouncil is examining the relationship between corporate management and major shareholders, and proposals to improve the accountability of all key parties in the process. One issue is whether legislative changes, particularly in the states (where most corporations are chartered), could help by clarifying the responsibilities of directors to promote the interest of the several groups of stakeholders (workers, suppliers and communities as well as shareholders) served by the companies.

RESPONSE OF MR. BERGSTEN TO A QUESTION SUBMITTED BY SENATOR SYMMS

Question. I have heard that a foreign company in the United States whose parent company is located in another country has sat on U.S. trade delegations and can receive U.S. export assistance. Do you know if this is true and is this legal under federal law?

If this is a standard practice in the United States, do you know if U.S. companies located in foreign countries receive the same benefits?

Answer. The issue raised is an important one but it has not directly come before the Council. The Council does not have any specific information about the incident raised in the question. Our staff has contacted the U.S. Department of Commerce and the Office of the U.S. Trade Representative to obtain more information about this issue.

PREPARED STATEMENT OF ERICH BLOCH

I. INTRODUCTION

My name is Erich Bloch and I am distinguished fellow at the Council on Competitiveness, a private organization that represents a broad cross section of American business, higher education institutions and organized labor. The council's sole purpose is to be a focal point for private sector activities and to work for changes to enhance the country's competitiveness.

Before joining the council, I was the director of the National Science Foundation (NSF). Both there and at the council my concern has been, and remains, the linkage between science and technology and our economic competitiveness.

In announcing a series of hearings on competitiveness this committee points to the need for a comprehensive solution to the challenge of American economic growth in a global economy. This is very much the perspective of the council on competitiveness.

The council's long term goal is to make the American workforce and companies competitive in international markets in a way that builds a rising standard of living at home. As you put it, Mr. Chairman, it is a goal that demands everything from an effective trade policy to a series of domestic initiatives.

In the council's annual *competitiveness index*, which compares America's economic performance to that of the other major industrialized nations, we put a particular emphasis on measuring investment whether that investment occurs in new plant and equipment, education or in research and development.

In its own work, the council has put the main emphasis on technology and technology policy, for two distinct reasons. First, researach, technology and innovation make a major contribution to long-term economic growth.

Second, particularly in light of its importance, technology and technology policy do not have the focus their importance demands.

The purpose of this testimony is to examine the issues that affect our economic competitiveness and because of it our position in the global market and trade. One such area that affects our success in the world marketplace is a robust and effective technology base at home, which in turn depends on a consistent long term strategic technology policy. I would like to focus my remarks on the issues such a policy needs to address. We do not have such a, policy today. It is urgent—in fact long overdue to establish one.

II. THE STATE OF U.S. TECHNOLOGY POLICY

The end of world war II brought with it the establishment of a U.S. science policy as defined in the report by Vannevar Bush, entitled "Science, The Endless Frontier."

Our science policy has brought the United States many benefits over the years:

—It made us a world leader in science;
—It made our university education and research system the best in the world;
—It allowed us to supply ourselves as well as to other nations well-trained scientists, researchers and engineers;
—And our science policy made it possible to supply equipment to—academia, industry and the government that would have been out-of-reach for any individual, or single company or laboratory.

However, we did not perceive the need for a technology policy. The fall-out from our defense expenditures and the self-sufficiency of the private sector obviated that need. After all, defense applications preceded applications in the civilian product sector, the U.S. was ahead of other countries in capabilities and investment and our companies were able to capture spin-offs from defense and basic research sufficiently to keep them ahead.

Today we are Faced with new Realities and Changes

—Leading edge technologies find the first application in the civilian sector and only much later in defense, if at all;
—Today the resources needed to develop new technologies are far greater than any individual company, or even a single industry sector can afford, because of increasing changes in technical complexity, the need for multi-disciplinary content and the "fusion" of technologies that is occurring in many product lines;
—The increased competition around the world, leading to shortened and shorter-lived product cycles puts added stresses on resources;
—Competitor nations succeeded, not by besting us in basic research, but by focusing their attention on technology in areas of commercial relevance and getting to market sooner and with higher quality products.

Not recognizing these changes early enough and not developing a coherent technology policy for the country is one of the reasons why we are trailing badly in our ability to translate basic research results—one of our strengths—into commercial products and why we have lost, and are continuing to lose, our former lead in technology. The report, *Gaining New Ground* published by the Council on Competitiveness, puts it bluntly when it stated:

> "The U.S. position in many critical technologies is slipping, and in some cases, has been lost altogether. Future trends are not encouraging."

I don't want to imply that technology policy is the only concern we need to have. But, unless we have a road map, our efforts resemble a random walk, rather than a purposeful, focused national effort.

III. A NEW POLICY FRAMEWORK

The *Gaining New Ground* report issued by the council last year highlighted the requirement for a technology policy to augment our existing science policy.

The document "U.S. Technology Policy" issued in 1990 by the office of science and technology policy (OSTP) made the same point, when it called for a strategy of:

> " . . . participating with the private sector in pre-competitive research on generic, enabling technologies that have the potential to contribute to a broad range of government and commercial applications."

In the first annual report to the President and Congress, the Competitiveness Policy Council (CPC) issued a report just this month reaffirming what the Council on Competitiveness (COC) and others have said. Let me briefly quote a simple, but startling fact from their introductory chapter:

> "America's Competitiveness—defined as our ability to produce goods and services that meet the test of international markets while our citizens earn a standard of living that is both rising and sustainable over the long run—is eroding slowly but steadily."

This is not a new finding. Nor is it difficult to understand. The language is simple and direct.

While this new report has shed additional light on our predicament, the council on competitiveness, which is an action-oriented private sector organization, has been working with industry, labor, academic institutions and the administration to participate in establishing a coherent technology policy. We have focused on a small number of essential policy directions:

Coordinated and Expanded National Initiatives in Key Technology Areas, Critical to our Competitiveness

The President's 1993 budget request to Congress identifies four technology areas for coordinated priority treatment across most R&D agencies, namely:

—High performance computing and communications;
—Materials research and processing;
—Biotechnology; and
—The start of a manufacturing technology program in NSF.

This is a major step forward on two counts: it addresses critical, generic technology areas and addresses the programs in a coherent way across all R&D agencies. Expanding the manufacturing technology effort across all R&D agencies in the 1994 budget and further increases in other initiatives is a must.

These programs will only be worth the investment if they are coupled closely to industry and academia. This is happening in the first one mentioned and must be accomplished in the others.

Increasing Industry Access to and Participation in Government Programs

All these and other programs paid for by the taxpayer will only be productive and yielding the return they deserve if industry is involved, links its own programs to those of the government, and participates actively in the formulation of these programs, as well as in their management and continuous assessment.

This participation by industry is only happening with great efforts and in an adhoc fashion between individuals in industry and the administration. The reasons are many and complex:

—One obvious reason is the embargoed nature of administration budget requests prior to their publications;
—More important are the complex rules of the government such as the Federal Advisory Committee Act (FACA) and conflict of interest rules and regulations. These affect private sector advice to the government and federal advisory committees, in order to guard against misuse of information, undue parochial self interest, arrogating public goods for private gain, and levelling the playing field for all that can gain from expenditure of the public purse.

These rules and regulations are all well-intended, indeed some are required. However, in a new culture of promoting greater cooperation between the private sector and government in the development, implementation and management of a U.S. technology policy aimed at improving U.S. competitiveness, some of these rules and regulations hurt competitiveness and are creating obstacles for private sector access and participation with the government and withholding from government and its agencies informed, educated and needed advice.

For example:

—Some provisions from FACA will prematurely disclose information essential to U.S. long-term competitiveness to our foreign competitors and will defeat the purpose of a technology policy.
—Research and development of critical technologies requires the participation of the most knowledgeable individuals in both industry and government. Conflict of interest regulations, which were put in place for valid reasons, inhibit the individual afterwards from participating in their company's endeavors, thus discouraging participation of industry experts.

This catch-22, namely existing laws discouraging the very type of private sector participation in government policymaking that is so essential to improving U.S. competitiveness, must be addressed, and appropriate changes made, to ensure that key private sector individuals can, and will, participate in developing, implementing and managing the nation's technology policy to ensure long-term U.S. competitiveness.

Implementing and Managing Technology Policy

The technology initiatives addressed before and other technical activities span many departments and agencies. While the Federal Coordinating Council for Science, Engineering and Technology (FCCSET) lends itself to planning, it is not clear that it lends itself to implementing and managing.

Within the administration, it is OSTP and FCCSET that play an important role in coordinating administration policy, coordinating programs and enhancing cooperation between the private and public sector. These two vital organizations must be protected from inadvertent neglect.

They must also be strengthened. Establishing the critical technology institute is a step in the right direction. But that is not enough, we need to establish a permanent advisory body from the private sector, that continually and in-depth advises the President, OMB, and OSTP on technology policy matters.

The congressional system we have in place today that appropriates the R&D budget is dispersed and fragmented among at least 9 appropriation bills and subcommittees. Indeed so are the 4 initiatives I mentioned before.

The funding within each subcommittee is the result of compromises between the R&D part of a committees jurisdiction and other unrelated issues such as housing & VA, therefore endangering the coherence of programs and threatening long-term strategies.

Utilizing our Existing Resources

Our investment in R&D is large. While there are many areas that need strengthening and requvire additional funding, there are other areas that are amply funded but their potential contribution to the country's needs and economic competitiveness is of lesser magnitude.

I am referring to the government laboratories, including DOE's national laboratories. Almost one-third of all federal R&D dollars—over $20 billion annually—are supporting these organizations. Their missions are in many cases in doubt, their resources are excellent, their coupling to and with industry is minimal. We must make these institutions more relevant to the country's needs. Industry and the laboratories must form a true partnership that stands the test of the marketplace.

Cooperation and Sharing

Industry, academia, and government must find new ways of working together. Sharing of efforts and results in the precompetitive phase of technology is mandatory in today's resource constraint and fast moving world.

This cooperation can take many forms: Joint ownership at the research, development and manufacturing level, networks both formal and informal, workshops, industrial dissemination agencies and many more. The antitrust laws must take this new world into account. The regulation on joint research have done that, the regulations on joint manufacturing have not.

IV. WHAT NEEDS TO BE DONE

As I pointed out in the beginning, there are ample reasons to establish an active and coherent technology policy, to augment the science policy that served us well in the 40 years of its existence.

We are moving in that direction, but we need to accelerate the pace of change.

We need to facilitate cooperation among sectors of our society, by revising the FACA and conflict of interest laws and regulations to allow timely private-sector participation in the development, implementation and management of a U.S. technology policy, aimed a improving U.S. competitiveness.

We need to give higher priority and increased funding to programs that focus on generic technologies that address our competitiveness, manage resources that are dispersed among many agencies, and departments of government more intensely and over the life of these programs.

We need to assure that existing resources paid for by the taxpayer can be utilized better by industry, and are supportive of the country's needs. These resources are both internal to the government in its laboratories or external to the government, through grants and contracts to universities and not-for-profit organizations.

We also need to define more fully, and put in place, a stronger government focal point for technology policy with authority for implementation and management of the policy.

Establishing an effective private sector input to all deliberations, activities, and programs that comprise our technology efforts is long overdue.

Lastly, we need to prioritize scarce resources and change our institutions to allow this to happen, both in the administration and congress.

Thank you.

RESPONSES OF ERICH BLOCH TO QUESTIONS SUBMITTED BY SENATOR DONALD W. RIEGLE, JR.

Question No. 1. I have been working on several U.S. government procurement cases, including one at EPA, which have adverse implications for the U.S. industrial and high-tech base. In these cases, our trading partners take advantage of our open procurement system to capture commercial market share in critical products and technologies in the U.S. market. There is a gap in the proper enforcement of U.S. procurement laws and lack of understanding about what this means to U.S. industries that are competitive and deserve the opportunity to supply the U.S. government with their products.

Did the Council on Competitiveness take a look at the issue of government procurement and where it fits into the technology/industrial base puzzle?

Answer. The Council on Competitiveness has not specifically focussed on the issue of government procurement. However, many other reports have pointed out the fact that we have not utilized government procurement as a means to enhance the country's competitiveness. Too many times and for no valid reason, there are government specifications, for a common use component differing from those existing in the civilian sector.

The consequence is that manufacturing processes as tools and equipment cannot be shared between the civilian sector and the government market. The harmonizing of civilian and government specifications should be a major focus of our attention.

Question No. 2. Last year, Congress passed the High Performance Computing Act to create a U.S. infrastructure for the future. In this legislation, we tried to deal with the issues of "Buy American" and reciprocal access to the federal funds of our trading partners. The idea here was to prevent this program from being undermined by foreign companies, who are often subsidized by their own governments, and yet still seek U.S. taxpayer dollars in order to get into our market. We were not successful on this issue.

What is your opinion of the High Performance Computing program and how it will contribute to ensuring that America has a world-class technology infrastructure as the Council's report suggests?

Has the Council identified ways to deal with the problem of foreign access to limited U.S. funded programs and how this undermines the opportunities of U.S. firms in their own market?

Answer. The high performance computing program is creating a much-needed infrastructure for the country. It is unreasonable to assume that a strict "Buy America" provision can prevail for such a program. This does not mean, however, that we should unconditionally open this program or similar ones to every foreign competitor. We need and must insist on a quid pro quo. If other countries do not open their market to our high tech products, there is ample reason not to open ours to theirs.

We should also be more knowledgeable in our assessment of what, "Buy America" means. The fact that a foreign company has an assembly plant in the U.S. does not assure that beyond simple jobs there is much of a contribution to the technology base of the country. Jobs alone to do not make for an adequate criteria; the content of jobs must be taken into consideration.

Question No. 3. In recent weeks, many Congressional Committees have been looking at the sale of LTV's aircraft and missile divisions to Thomsons of France and the Carlyle Group. There is much discussion about how this deal will further undermine our defense industrial base and the inability of U.S. firms to purchase a similar entity in France.

How should our government be dealing with this sale, in the context of what the Council's report recommendations and with the tools we already have, like Exon-Florio?

Answer. The issue that is exemplified by the LTV case is our feeble attempt to preserve a defense base for the country. This is being inadequately handled by the existing mechanisms within the administration. The Committee that is charged with this obligation, namely Committee on Foreign Investment in the United States (CFIUS) is not known for its aggressive stance, nor does it have the wherewithal to investigate cases that fall within its jurisdiction. The membership of the committee is woefully ignorant of technology matters. An amendment that would strengthen and modify existing legislation and implementation is long overdue.

RESPONSE OF ERICH BLOCH TO A QUESTION SUBMITTED BY SENATOR STEVE SYMMS

Question. I have heard that a foreign company in the United States whose parent company is located in another country has sat on U.S. trade delegations and can receive U.S. export assistance. Do you know if this is true and is this legal under federal Law?

If this is a standard practice in the United States, do you know if U.S. companies located in foreign countries receive the same benefits.

Answer. I am not familiar with the case or the legal policy that would pertain to it. This is a question that Fred Bergsten can answer.

PREPARED STATEMENT OF LAWRENCE W. CLARKSON

Good morning. I am Larry Clarkson, Vice President for Planning and International Development at The Boeing Company. I wish to commend the Committee for holding these important hearings.

International competitiveness is an issue that is very much on the minds of The Boeing Company. We are pleased with the growing recognition of the key role that the U.S. commercial aircraft industry plays in the economy, and attention on the part of policy makers in both the Congress and the Executive Branch to the hurdles we face in remaining competitive. This hearing provides an opportunity to discuss in greater detail the nature of those hurdles—and to begin to lay out a road map of how the U.S. Government can work with us to ensure the continued viability of the U.S. aerospace industry.

This morning I would like to focus my remarks around the competitiveness issue facing the most visible segment of The Boeing Company—Boeing's Commercial Aircraft Group. Of the Company's total employment of 141,000, approximately 85,000 men and women are engaged in designing, developing, producing and marketing our full family of commercial jet transports. Our products include the 737, 747, 757, 767, and our latest model, the 777, which is scheduled to enter service in 1995.

Mr. Chairman, The Boeing Company has been able to maintain approximately 60 percent of the market for large jet transports, in an increasingly competitive global market, while generating profits and equitable return for Boeing shareholders. Our market position can be attributed to a number of factors—engineering excellence, a propensity to take risks, an aggressive and far-sighted R&D program, a commitment to quality and good old-fashioned hard work on the part of Boeing employees.

Despite past success, The Boeing Company is not complacent about its future. Our mission is to be the number one aerospace company in the world—and to rank among the premier industrial firms as measured by quality, profitability and growth.

We understand that every market that has been won, can be lost; every technology that has been created, can be surpassed. We are continually cutting costs and improving quality to better design, build and support our products.

We also understand that we must invest today to preserve our position in tomorrow's marketplace. Along these lines, we are increasing our expenditures on research and development to keep us at the forefront of aviation technology. In 1991, Boeing invested $1.4 billion in research and development. In 1992, we plan to spend approximately $2 billion, primarily in support of the 777, the High Speed Civil Transport and other commercial jet transport programs that will better enable us to meet the requirements and expectations of our customers.

We are also undertaking capital improvements that are essential to the company's future competitiveness, including a 70 percent expansion of our Everett plant to accommodate 777 production. These and other investments in plant and equipment totalled $1.8 billion in 1991.

Finally, we recognize that remaining competitive requires us to adapt to changes in the market. We are continually exploring new opportunities and new ways of doing business—including international alliances. International collaboration is not a zero sum game. It can be a win-win situation, allowing us to maintain our competitive edge, provide jobs for our employees and generate a sound return for our shareholders.

Despite these ongoing efforts, The Boeing Company faces three interrelated hurdles to our future competitiveness. The first is the enormous capital requirements to develop and produce the new models that will satisfy changing customer requirements and enhance the safety of our products. The second is the rapid increase in what I will refer to as externally-generated cost drivers. The third is the potential for reduced access to or trade distortions in the global market—including the U.S. market which is our lifeblood either by virtue of the unfair trading practices of our competitors or protectionist pressures here and abroad.

Mr. Chairman, the cost of developing new airplanes has become staggering. Every time we move forward with a new program, we are virtually betting the entire net worth of The Boeing Company. We must make enormous front end investments for a return that will not be realized until many years later. Our 777 program to develop and manufacture the new 350-seat airplane provides a good example of the enormity of the challenge. We are spending billions of dollars to develop a new airplane, which involves over 1,500 suppliers and 800,000 different parts.

While the cost of developing new airplanes is enormous, the cost of not moving ahead is even greater. Our ability to maintain our position as a global aerospace leader depends fundamentally on capitalizing on new market opportunities. In instances where the market is limited or the barriers to entry prohibitively high for one company, international collaboration can ensure a role for Boeing and maximize opportunities for U.S. suppliers.

A good illustration is the High Speed Civil Transport (HSCT) program. Flying at nearly 2000 miles per hour, these aircraft could become the next major step in air travel, cutting travel times on many Atlantic and Pacific routes in half—while keeping ticket prices in the general range of conventional jets. HSCT is a massive undertaking that requires pre-launch research into environmental issues, such as protecting the ozone layer and reducing noise, and research into economic issues such as increasing fuel efficiency. Those who are involved in developing HSCT may revolutionize air travel. This is an instance where international collaboration provides a benefit to ongoing U.S. activities.

The second hurdle we face is the rapid increase in what I referred to as externally-generated cost drivers. A good example is the increasing burden on industry of providing health care coverage.

The Boeing Company believes that health care coverage is an immediate and real problem which must be dealt with, both in terms of access and cost. Unchecked rising health care costs may limit our ability to produce a competitively-priced product. Between 1985 ad 1991, Boeing's cost for medical care for employees and their families doubled. We estimate that in 1991, costs per employee will be in the range of $4200 for a total price tag of approximately $600 million.

Rising health care costs are a national issue—not a problem that is unique to Boeing. However, these costs have a direct bearing on the ability of Boeing—and other American companies—to compete globally. It's one of the many cost factors—which include regulatory issues, work force training and retraining, and environmental compliance—that government and business can no longer ignore. These rising costs will become particularly problematic for our suppliers who must accommodate these cost increases while downsizing defense-related operations.

The third challenge we face is maintaining continued access to the international market. We recognize that foreign sales are essential to generating the revenues required to develop and commercialize the products that keep us a highly competitive industry leader. Last year, more than three-quarters of our commercial aircraft orders—approximately $16.9 billion out of $20.6 billion in orders—were destined for overseas customers. Continued access to the international market is critical, particularly given the other competitiveness hurdles I outlined earlier.

Here we face two sets of problems. The first is unfair trading practices of our foreign competitors that distort trade and deprive us of market opportunities—at home and abroad. The second is the movement away from multilateral rules and the problems that this creates for export-oriented firms such as Boeing.

Mr. Chairman, the most formidable competitor for the Boeing Company has been and will continue to be Airbus Industrie. Just 22 years ago, Airbus launched its first aircraft—the A300. By 1991, Airbus had captured close to 30 percent of the worldwide market for commercial jet transports. Airbus' goal is to increase further its market share in the United States and abroad.

The Boeing Company thrives on competition. But Airbus is not a normal competitor. Extensive levels of past subsidization provided by the governments of France, Germany, the United Kingdom and Spain have enabled Airbus to develop a full family of aircraft without ever having made a profit, to price these aircraft without full cost recovery and to offer concessionary financing terms to customers.

We expect that the U.S. Government and the European Community will soon announce an historic agreement that will provide real disciplines over certain types of Airbus subsidization practices. The agreement is noteworthy in several respects. It includes a ban on production supports, which is the first instance of an outright prohibition on domestic subsidies. In addition, it provides strict terms and conditions on development funding, which historically has represented the lion's share of European government support for Airbus. The cap, terms and conditions on development funding define the maximum permissible government advance, which must be repaid with interest over 17 years from the first disbursement. The interest rate charged is above the GATT Subsidy Code standard in determining a subsidy—the cost of borrowing to Governments. As a result of the U.S.-EC aircraft agreement, the actual margin of subsidization for Airbus will be significantly lower, and may even be zero for a successful program which returns more in royalties to the governments.

We recognize that this agreement will not eliminate foreign government subsidies, but it should be viewed as a positive step in the direction toward a subsidy free environment. The agreement must be monitored and enforced, particularly the provisions related to development funding for new programs. It must also be multilateralized—and through the process subsidies' disciplines must be strengthened—so that all aerospace players and aerospace products are bound by comparable international rules. Furthermore, the bilateral agreement must be complemented by a strong Subsidies Code agreement coming out of the Uruguay Round, and by effective U.S. Government enforcement of the terms of the other agreement that governs aerospace trade, the OECD Large Aircraft Sector Understanding (LASU).

The LASU sets out the terms and conditions governing official export financing for large jet transports. The fundamental objective was to neutralize financing as a factor in sales competitions. Consistent with this objective, the U.S. Government believes that government support for sales in either the U.S. and European markets is prohibited because of the competitive disadvantage it would create for "domestic" firms which could not avail themselves of comparable official support. This view is no longer shared by the Europeans who are poised to use official financing to capture a larger share of the U.S. market. If this practice is not checked immediately, between $10 billion to $20 billion in U.S. market sales could be lost to the Europeans over the next eight years.

Mr. Chairman, Boeing's concerns about foreign subsidization and other unfair trade practices are not limited to Airbus. We are equally concerned about any government-supported entity that is not bound by the "rules of the game"—be it Taiwan in its effort to develop a new aerospace industry or the integration of the former Soviet Union's aerospace industry into the global market.

Let me state for the record that Boeing does not oppose the proposed venture between Taiwan Aerospace Company and McDonnell Douglas. We understand that international collaboration is a key strategy in the broader effort to remain competitive in the aerospace industry. Our concern is with the potential for the emergence of subsidized competitors, particularly in those countries that are not bound by GATT and OECD rules on aerospace trade. We believe that U.S. policy should dictate that as new players enter the market, they do so under established international disciplines. The costs to the U.S. aerospace industry of non-action in this area will be high—in terms of lost market share and lost jobs.

Mr. Chairman, our access to the global market could also be compromised by movement away from multilateral rules toward unilateral measures to resolve trade problems. Unfortunately, the continuing high trade deficit and a perceived deterioration in our technological preeminence have focused the spotlight on trade as a major cause of America's deteriorating competitiveness. The result is a growing dependence on trade policy and trade tools to address broader competitiveness problems facing U.S. industry.

Trade tools cannot solve fundamental competitiveness problems and in fact, misuse of trade tools can have the unintended effect of engendering a belief that the tools themselves are ineffective. Before implementing or legislating trade solutions designed to benefit a particular industry, we should be careful to assess whether trade tools, or other government policies or programs, are best suited to addressing an industry's problems.

Mr. Chairman, I would like to conclude my remarks this morning, by focusing in on those areas where we should be working together to overcome those hurdles to our future competitiveness.

U.S. trade policy tools are an essential element of our effort to maintain market share in an increasingly competitive aerospace market. The prescriptions are straightforward and require:

- Effective enforcement of new and existing trade agreements, including the U.S.-EC aircraft agreement and the Large Aircraft Sector Understanding.
- Expanding the disciplines of these agreements to all new entrants to the aerospace market.
- Maintaining our ability to use the U.S. trade policy tools designed to address unfair trade practices—Section 301, and the antidumping and countervailing duty statutes.
- Concluding the Uruguay Round with particular attention to strengthening the disciplines of the Subsidies Code.
- Resisting the temptation to use trade tools to solve broader competitiveness problems.

However, even the most effective trade policy will be insufficient to both counter foreign government policies and practices that characterize the international aerospace industry and address the internally and externally-generated cost issues we face. In the public policy realm, we must increasingly look beyond trade tools to enable us to remain competitive.

Here I would urge attention to three additional sets of issues.

The first is in the area of R&D policy. The lion's share of Boeing's research and development is funded through internally generated resources. Permanent extension of the R&D tax credit would clearly help us to continue to make these R&D investments. In addition, there is a body of research, which falls into the category of precompetitive generic enabling technologies, where an expanded government role could be critical to the industry's future competitiveness.

Along these lines, The Boeing Company strongly supports increased funding for NASA's aeronautical research and technology budget. As currently proposed, this budget will not support much needed funding in three critical areas—high speed technical issues, which are the foundation for the High Speed Civil Transport program I discussed earlier; aircraft noise, and advanced materials. Additional funding is also needed in areas such as NASA's construction and facilities budget to ensure the scientific infrastructure needed to perform critical research.

Second, we urge you and your colleagues to create an environment which will allow us to continue to take the types of risks that are required for us to remain a highly-competitive industry leader. We need a responsible fiscal policy to keep capital costs low. We need an educational system that will produce a highly skilled and motivated work force that will enable us, in turn, to stay at the cutting edge of technological advancement. And we need a regulatory framework that recognizes that the public good and cost competitiveness are not mutually exclusive goals.

Third, we need a competitively funded Eximbank program. We are increasingly turning to Eximbank to help us sell in developing countries and non-traditional markets such as Eastern Europe, where foreign export credit agencies provide support and where private capital is not available without an Eximbank guarantee. Unfortunately, Eximbank's funding authority is insufficient to meet this year's demand and anticipated demands for next year. The Coalition for Employment through Exports has estimated FY 1993 financing requirements of $14.5 billion, which will require $900 million in appropriated funds, $267 million more than the Administration has requested. Given the acknowledged role that exports play in this country's economic growth, it is essential that we not diminish our export capabilities for a lack of Eximbank support.

Mr. Chairman, The Boeing Company remains optimistic about the future. We have been in the business of building airplanes for 75 years and we do not intend to relinquish our position as an industry leader. We look forward to working with you to develop those policies that will position us to be competitive well into the next century.

Thank you.

RESPONSES OF LAWRENCE W. CLAKSON TO QUESTIONS SUBMITTED BY SENATOR LLOYD BENTSEN

Question No. 1. Section 301. Can you give us your views on how effective that 301 tool has been in recent years, and what changes, if any, we should consider to it? Also, how do you see it working if we get a Uruguay Round agreement?

Answer. Senator, in response to your question on Section 301, The Boeing Company believes that Section 301 is one of the more effective tools in our trade policy arsenal. Beginning in 1985, the Administration has used Section 301 in a deliberate fashion to advance its market opening objectives.

While Boeing supports continued judicious use of Section 301, we do not support an extension of Super 301. Given Boeing's strong interest in strengthening the rules-based multilateral trading system, we believe extension of Super 301 could compromise this effort. Furthermore, given the Administration's track record in addressing foreign unfair trade practices, extension of Super 301 does not seem necessary.

The Boeing Company is still unclear as to precisely how the use of Section 301 would be affected by the Dispute Settlement Code of the Uruguay Round. We are unwilling to relinquish the possible invocation of Section 301 to address GATT-covered subsidy and other trade problems, unless we get significant improvements in GATT rules and disciplines. We must continue to retain the ability to use Section 301 to address matters that are not addressed through the GATT.

Question No. 2. Subsidies. Where should we draw the line on subsidies, both in the United States and in international agreements? And if we cannot get the rest of the world to stop subsidizing their industries, what should we do in response?

Answer. The Boeing Company continues to support a U.S. policy objective that all government support for Airbus and for any other large commercial aircraft manufacturers should be eliminated. The one exception to this general principle is in the area of research support, which we believe should be permitted, under certain circumstances, under the GATT Subsidies Code. This type of research is typically undertaken by governments by virtue of the fact that its objective is to advance understanding of fundamental phenomenon and process, and is not directly related to commercial production of products. As such, there is no trade distortion because it clearly is at a pre-competitive stage.

This having been said, we understand that the United States is virtually isolated in its views on subsidies and that progress toward our ultimate goal of a subsidy-free environment will be incremental. Progress is being made toward greater disciplines over domestic subsidies. The U.S.-EC aircraft agreement for the first time includes, among other disciplines, a ban on a domestic support program—production supports. The proposed GATT Subsidies Code includes a presumption that certain domestic subsidies (over a certain threshold or those that fall into certain categories) cause adverse effects, representing a sea change in thinking about domestic supports. In exchange for these improvements, we have been willing to accept other countries' demands that some regional supports be allowed with caveats, although this should be viewed as a political concession rather than a fundamental philosophical issue such as the issue of the treatment of research activities.

As I noted in my testimony, we believe that the U.S. Government must look beyond trade policy tools and solutions to the U.S. aerospace industry's problems—particularly given that it will be impossible to eliminate foreign government involvement in this sector. In particular, we advocate a more pro-active technology policy, including greater funding for NASA's aeronautical R&T budget and permanent extension of the R&D tax credit.

Question No. 3. Airbus Agreement. Why not hold out for the elimination of all (Airbus) development subsidies? And why should we expect that, having once conceded that more subsidies are permissible, the EC will agree in the future to tighten disciplines on subsidies?

Answer. The U.S. Government and industry position has been and continues to be that *all* government support for Airbus, and for any other large commercial aircraft manufacturers, should be eliminated. That goal has not changed. This current agreement with the EC should be seen as a step toward that goal. It might theoretically be possible to "hold out" for the achievement of that goal and to take strong trade action against Airbus (such as a CVD action). In practical terms, however, it would have meant even more sales losses for U.S. manufacturers if we had closed the U.S. Market to Airbus, faced retaliation with closed EC markets, and competed against highly subsidized Airbus products in third country markets. A GATT case, if successful, could have lead to similar results. Alternatively, a GATT case would provide compensation for the U.S. in other trade areas leaving Airbus subsidies intact. It was the judgment of U.S. industry and the Administration that the U.S.–EC Airbus Agreement was a better alternative.

It remains to be seen whether the disciplines can be improved. The EC has already committed to multilateralize the agreement and to seek further disciplines in that process as other subsidizing countries subject themselves to limits. It is our intention to press for further improvements and to work with the U.S. Government and other countries to achieve them.

RESPONSES OF LAWRENCE W. CLARKSON TO QUESTIONS SUBMITTED BY SENATOR DONALD W. RIEGLE, JR.

Question No. 1. How will the proposed sale of LTV hurt U.S. competitiveness, manufacturing capabilities, and defense export opportunities of the U.S. aerospace industry?

Answer. Although The Boeing Company has not undertaken an analysis of the implications of the potential sale of LTV to Thompson CSF, we do have a fundamental concern about the purchase by foreign governments of U.S. manufacturing capabilities, particularly in a sector as significant as aerospace. While Boeing recognizes that international collaboration, including joint ventures, are an essential element of international competitiveness, we are concerned when such transactions are government owned and,as such, may not be bound by the disciplines and constraints of the marketplace. We believe our government should very carefully consider any proposed transaction of this nature.

Question No. 2. What is your view of the effect of the U.S.–EC Agreement on Airbus subsidies on the competitiveness (of) the U.S. aerospace industry?

Answer. On balance, we believe the effect on U.S. aerospace competitiveness will be positive. The agreement limits future Airbus development support from governments, substantially reduces the subsidy element of those supports, and disciplines any other type of subsidy to Airbus. This will help create a more nearly level playing field for the future, and thus help U.S. manufacturers by focusing future competition on technology, product quality, efficiency of production, customer satisfaction, after-sale support and other similar factors rather that on government supports.

PREPARED STATEMENT OF CHARLES A. CORRY

Thank you for inviting me to appear before the Committee this morning. My name is Charles A. Corry, and I am Chairman and Chief Executive Officer of USX Corporation. USX is one of the top 25 industrial companies in the U.S., with 1991 sales of $19 billion, and operates primarily in two industries, energy and steel.

Our Marathon Group represents approximately 70% of USX Corporation's total sales. It is the ninth largest integrated oil and gas company in the United States with exploration and production activities in 17 countries around the world. In 1991, foreign production represented more than one-third of Marathon's worldwide crude oil and natural gas production. Our U.S. Steel Group is the largest integrated steel producer and the largest steel exporter in the United States. Over the past two years we have exported an average of over one million tons per year, or just over 11% of our total shipments, to countries such as Japan, Korea, Canada, and Mexico.

I welcome the opportunity to discuss the competitiveness of U.S. industry, and to help identify ways that can ensure that global competition is fair and open. I will do so from the perspective of a businessman who has more than 30 years of domestic and international business experience. I would like to focus primarily on the steel industry, since it represents a vital segment of our manufacturing base, and since the health of the steel industry is, in my judgment, an excellent indicator of our competitive posture in the global marketplace.

Let me begin with the good news about the domestic steel industry. More than three-quarters of all American steel now is continuous cast. Continuous casting technology greatly minimizes the handling of steel, and thus reduces energy usage labor costs and increases overall productivity. It also increases the yield of finished steel products from raw steel. USX is now in the process of installing its final continuous caster at the Edgar Thompson Works in Braddock, Pennsylvania. Once this is complete, USX will be a 100% continuous cast steel company.

These changes in the domestic industry have not come easily. A single continuous caster costs upward of a quarter of a billion dollars, and takes up to two years to install. Overall, between 1987 and 1991 American steel producers invested over $10.2 billion in capital construction and modernization programs. USX alone invested approximately $2 billion in such efforts.

As a result of these investments, productivity of American steel plants has more than doubled over the past decade. Domestic steel manufacturers now require just 5.3 man-hours to produce a ton of steel. This is a record low in our industry. The 5.3 figure compares favorably with 5.4 man-hours per ton in Japan and 5.6 in Germany. Comparisons are even more favorable with other trading partners: South Korea averages 6.4 man-hours per ton; Taiwan's figure is 7.2; and Brazil's is 8.9.

Of all the major integrated steel producers in the U.S., I'm pleased to say that USX is the most efficient. Our company averages 3.5 man-hours to produce a ton of steel, down from 10.8 a decade ago. At our Gary Works facility, largest steel plant in North America, man-hours per ton shipped is just 2.7, among the lowest in the industry. This spring a five member team at our Gary Works plant won first place in the national Quality Cup competition sponsored jointly by USA Today and the Rochester Institute of Technology. We're very proud of our entire team at the Gary Works plant.

Because American steel plants are more productive, we are also able to offer our customers lower prices. U.S.-produced steel is now among the lowest-priced in the world. In 1990, for example, carbon steel products in the U.S. averaged approximately $520 per ton. This compared to a price range of $575 to $600 that prevailed in Germany, Japan, France, and the U.K.

Our industry has also taken major steps to provide for workers whose jobs have been lost as the industry has restructured itself in recent years to compete more effectively. Under the worker retraining program instituted by Congress in 1984, the steel industry has spent millions to assist displaced workers to obtain skills and opportunities to start over. For existing employees, the domestic industry during 1990 and 1991 spent almost $180 million to provide retraining in the operation of modernized equipment and the development of technical steelmaking skills.

Mr. Chairman, let me now turn to the not-so-good news. Overall, our manufacturing sector continues to decline. In 1983, one of every four private sector jobs was in manufacturing; now it is just one in five. These jobs have gone to the service sector, which increased total employment over the same period from 67 million to 85 million, an increase of more than 27%.

What's troubling about these statistics is that swapping a manufacturing job for a service sector job is not an even exchange. The average pay of a manufacturing job is $460 per week, compared with the average pay of $361 per week for the private sector as a whole. Therefore, when a worker loses his manufacturing job and has to take a service job instead, the worker suffers a pay cut of nearly 22%. That's pretty tough for a family to endure when it is just trying to make ends meet in these difficult times. Moreover, once a worker with manufacturing skills slips back into the service sector, it is very difficult and costly to retrain that worker for manufacturing again: manufacturing skills once lost usually remain lost.

The past year in particular has been a difficult one for the domestic steel industry. Here are just a few figures that show how hard our industry has been hit:

- For 1991, U.S. steel companies have experienced operating losses in excess of $2.5 billion.
- Industry operating rates for 1991 fell to 74%, from an 85% operating rate in 1990.
- The number of jobs in the domestic steel industry shrunk by an additional 20,000 during 1991, with total employment dropping to 183,200, down from 204,000 in 1990.
- Domestic steel industry shipments to the auto industry in 1991 totaled just 9.4 million tons, a decrease of one million tons from 1990. The 1991 figures represent a 25-year low for the domestic steel industry.

These figures show that despite the best efforts of the American steel industry, our markets continue to shrink and our operating losses continue to mount. Unquestionably, the economic downturn is a significant factor, but over the long run, if the American steel industry is to compete effectively in the global marketplace, we must fully understand what our competitors are doing, and we must be prepared to adjust our nation's trade and economic policies accordingly.

IMPACT OF TRADE DEFICITS

The domestic steel industry continues to find itself affected by the uneven playing field of international trade. Nowhere is the field more uneven than in the area of automotive manufacturing, where Japan's excess automotive manufacturing capacity is being used to target the American market. These imports directly endanger the domestic steel industry's position as the largest materials supplier to the U.S.

auto industry. Consider just a few telling statistics about the U.S.-Japan trade deficit:

- Over the past 10 years, Japan has accounted for nearly 40% of the overall U.S. trade deficit. Out of a total U.S. trade deficit of $1 trillion, Japan's share exceeds $400 billion.
- Our annual trade deficit with Japan exceeds $42 billion. Of this amount, nearly ¾—or $31 billion—is attributable to imports of automobiles and auto parts. A 1991 report by the Transportation Research Institute at the University of Michigan projects that if we continue on our present course there will be a 23% increase in the U.S.-Japan automotive trade deficit between now and 1994, to $38.15 billion.
- Over the past four years, our trade deficit with other countries has come down sharply—from $70 billion in 1987 to $28 billion last year (and virtually this entire amount is attributable to crude oil imports). However, the trade deficit with Japan remains stubbornly high; the U.S.-Japan trade deficit has come down only minimally during the past four years.
- Japanese manufacturers account for 30% of the U.S. auto market, and 10% of the European market (where Japanese auto imports are controlled). By contrast, only 3% of the Japanese auto market is supplied by non-Japanese manufacturers.

The U.S. automobile plant closings that we have been reading and hearing about over the past 24 months—GM alone is planning to close 21 plants, with expected layoffs of 74,000 workers—and the parallel retrenchment that the steel industry has been experiencing, threaten the long-term viability of our basic manufacturing sector. We have been the victims of unfair international trade practices, many of them stemming from Japan. These include, for example, dumping of below-market priced manufactured goods, exemption from regulation, discriminatory tax and certification systems, and closed distribution systems and dealer networks, all reflecting the anticompetitive relationship between Japanese vehicle and parts manufacturers and automobile dealers. Our nation simply cannot stand by while our manufacturing base disappears under an onslaught of underpriced Japanese cars and automotive parts.

In my judgment, major changes are needed in our trade and tax policies if we want to reverse these trends.

TRADE INITIATIVES

Last month, the domestic steel industry took steps on its own to confront unfair trading practices by our trading partners. On May 8, the six largest domestic steel producers announced the initiation of consultations with the Department of Commerce and the International Trade Commission preliminary to the filing of cases against unfairly traded steel. The companies are, in addition to USX, Armco, Bethlehem, LTV, Inland, and National. The cases under discussion involve dumped and subsidized imports of flat-rolled carbon steel products, including hot-rolled sheets, cold-rolled sheets, and galvanized and plate steel.

Our companies will show that certain of our major trading partners have been unfairly subsidizing their steel, and selling their flat rolled steel products at prices below value and in some instances below the costs of producing the product. We believe that subsidies are continuing in 12 countries, including Brazil, Mexico, Spain, and Turkey. In addition, new subsidy programs have been initiated in another 11 countries, including France, India, Indonesia, and Thailand. In developing countries, government-owned or government-controlled steel companies have become the rule: in such countries, nationally owned or operated companies increased their share of steel output from 32% to 55% between 1968 and 1986.

In just the last 12 years, we believe foreign countries have spent more than $100 billion to subsidize their steel industries. Europe alone spent more money on steel subsidies than the U.S. spent in putting a man on the moon. It is not uncommon to find foreign companies that sell steel in the U.S. at 60% less than its value. We also expect to prove that large unfair margins exist, and that these margins are causing substantial injury to our industry.

However, the industry cannot be expected to act wholly on its own to correct the nation's trade imbalances. We strongly believe that legislative action to strengthen our nation's trade laws is needed in addition.

Mr. Chairman, let me just briefly suggest a few steps that I believe should be undertaken.

First, we need to renew "super 301" authority under section 310 of the Trade Act for an additional five years, from 1993 through 1997. This power, which required

USTR to annually identify barriers and trade-distorting practices in our trading partners, and to initiate section 301 investigations on the basis of these findings, proved to be a useful tool. Congress should renew this provision without further delay.

Second, we believe legislation should be adopted that requires the initiation of a section 301 case aimed at Japan's systemic anti-competitive practices in auto parts. These practices prevent U.S. parts manufacturers from penetrating the Japanese distribution system. Such a proceeding would also determine whether Japanese auto parts are sold in the U.S. below their fair market value or cost of production. Should Japanese auto parts be proved to be dumped, appropriate duties should be imposed.

Third, we need more effective mechanisms for preventing circumvention of outstanding countervailing duty and antidumping cases. For example, the scope of antidumping orders should include parts and components supplied by companies in third countries that have historically supplied such parts to the original producer, particularly if such parts are included in products assembled in the United States or a third country.

Fourth, we need to take direct action to reduce the Nation's trade deficit, particularly that with Japan. We support legislation that would mandate that the trade deficit with Japan be reduced by a set percentage each year, such as 20%. To put teeth in this mandate, if Japan refuses to take the steps necessary to achieve the 20% annual reductions, its share of the U.S. car market should be reduced by 250,000 units per year over the next five years.

A reduction of 20% in the trade deficit would greatly improve the job picture in this country. A 20% reduction would shave $8 billion from the U.S.-Japan trade deficit, and this in turn would enable an additional 180,000 Americans to go back to work. Similar gains would be realized in the second, third, fourth, and fifth years as well.

At a minimum, Congress should consider requiring the President to negotiate voluntary restraint agreements with Japan regarding autos and light trucks. Such VRA's for Japanese auto imports would give the U.S. automotive industry the breathing room it needs to restore competitiveness.

Fifth, legislation is needed to bolster the rights of companies aggrieved by unfair foreign trading practices with a private cause of action in federal court to redress these grievances. Unfortunately, under our current trade law regime, the real injured parties—U.S. companies—are not allowed direct access to the courts to obtain immediate redress. Legislation has been proposed that would provide U.S. companies with the right to stop trade law violations without having to rely on the executive branch to impose discipline on our trading partners. There are alternative proposals that would direct the executive branch to negotiate new rules in this area with our trading partners.

If Congress proceeds with this legislation, it is important to provide for a private right of action for three particularly damaging foreign trading practices: customs fraud, dumping and subsidy violations. As I am sure you are aware, the steel industry has been substantially damaged over the past two decades by illegal dumping and subsidies, and we believe it is absolutely essential that these be included in an effective private right of action bill.

Finally, we also have to be attentive to decisions that are made in the international arena, and to ensure that our existing trade sanctions remain fully effective under the GATT. In this regard, I am strongly against the proposed dumping and subsidy code revisions that were circulated earlier this year by GATT Director General Arthur Dunkel.

For example, the Dunkel Draft would leave existing U.S. trade laws vulnerable to attack by GATT panels. It would also fail to close loopholes for dumping and subsidies, and leave many unfair practices in developed and developing countries completely untouched. In addition, the Dunkel antidumping proposals fail to explicitly recognize the cumulation of dumped imports from multiple countries when an injury determination is made. Current U.S. practices regarding cumulation would again be vulnerable to a negative GATT panel ruling. This runs the risk of further weakening our trade remedies.

I hope this committee will join with me in urging that these provisions be substantially modified at such time as the Uruguay Round negotiators resume their talks.

TAX AND OTHER INITIATIVES

We are concerned about the direction tax policy has taken in this country since 1982. Tax legislation since that time has been revenue driven with little consideration given to effects on international competitiveness even though our markets and our competitors are global. As a result, our current tax law is anti-competitive and gives our foreign competitors a distinct advantage. We need changes in several areas.

First of all, one of the most anti-competitive aspects of current tax law is the alternative minimum tax, or AMT, which went into effect in 1987.

The AMT was designed to insure that corporations with substantial economic income would not be able to avoid significant federal income tax liability. With the perception of fairness as an overriding objective, Congress did not sufficiently focus on the perverse impact the AMT would have on capital intensive companies and especially those which operate in cyclical industries such as energy, steel, motor vehicles, chemicals, airlines and others.

Our 1991 results provide a dramatic example of the impact of the AMT on corporations such as USX. In 1991, on a reported earnings basis, we lost $578 million, and had a corresponding substantial net operating loss for regular tax purposes.

Despite these financial and net operating losses, USX paid alternative Minimum Taxes for 1991. The primary reason for this result is that under the AMT framework, capital cost recovery is much slower than under the regular tax. USX capital spending has amounted to nearly $6.6 billion since 1987. Investment of this magnitude has and will continue to be necessary for us to maintain our international competitiveness, but the AMT depreciation treatment punishes these productive investments.

Prior to 1987, the cash flow effect of federal income taxes tended to be countercyclical. Taxes reduced corporate cash flow as taxable income increased and had a positive impact in loss years due to the ability to carry losses back to prior years and receive a current refund. This relationship changed drastically as a result of the AMT. What we now face is a tax system which is pro-cyclical in that it amplifies the negative cash flow effect of a recession on companies, thereby leading to slower economic recovery.

Second, we are deeply concerned over proposals for higher energy and environmental taxes which would jeopardize the ability of U.S. industry to compete internationally. These proposals would have anti-competitive impacts far beyond what energy tax proponents may realize and will put U.S. manufacturers, including USX, in a dangerous international competitive position.

During negotiations on the 1991 federal budget, Congress looked at a variety of energy and environmental taxes as potential revenue sources. These proposals included an increase in the motor fuel tax, a new BTU tax, taxes on "virgin" materials, new ad valorem energy taxes, and a carbon energy tax. Fortunately, other than a five-cent per gallon increase in the motor fuel tax, none of these proposals were enacted. We wish to re-emphasize our opposition to any renewed consideration of energy tax initiatives.

Third, we must have different tax treatment for our mushrooming environmental expenditures. EPA estimates that the domestic steel industry faces up to $5–6 billion in environmental compliance expenditures under the air toxics provisions of the 1990 Clean Air Act Amendments. In 1990 alone, the domestic steel industry invested more than a quarter of a billion dollars in air, water, and solid waste control. Although we recognize the need to clean up our environment, and we are committed to doing our part, these expenditures divert capital which would otherwise be available to improve the steel industry's competitive position. To mitigate this impact, the tax laws should be amended to allow the immediate expensing or enhanced depreciation of pollution control expenditures, and such expenditures should not be subject to the AMT.

Fourth, I am convinced that our present tax system must change if U.S. industry is to be world competitive. Virtually all of America's major trading partners already have a border-adjustable tax that is levied on imports and rebated on exports. Under the current tax system, American companies' sales are taxed twice. They are subject to U.S. income taxes on products manufactured here, and a value-added tax is imposed by most of the countries where American products are shipped. However, when foreign companies export products to our market, those sales are exempt from their home country value-added tax and there is no comparable U.S. tax imposed on these imports as they enter our borders. The adoption of a properly constructed border-adjustable tax would help put domestic industries on a more equal tax footing with most of our foreign competitors. Such a tax would have a further positive impact as it would apply to foreign companies which now largely escape U.S. taxes altogether. We support the concept of replacing the entire present income-based business tax system with a broad-based consumption type border-adjustable tax. If carefully crafted, this new approach would leave U.S. companies essentially revenue neutral as compared to the present system, but would finally impose comparable U.S. tax costs on foreign companies who choose to sell in our Nation's markets.

Finally, I hope Congress will address the issue of health care reform during the current session, and we appreciate your leadership in health care policy. In our industry, health care costs have risen by 177% over the past decade, and our annual health care bill now exceeds $1 billion. Many American automotive and steel plants employ older labor forces, often in urban areas, and thus are faced with staggering health benefit costs. By contrast, the newer Japanese transplant factories tend to employ largely rural, relatively young labor forces, with significantly lower health care costs. We hope Congress will take a close look at requiring the use of regional reimbursement schedules by hospitals and physicians, and the imposition of national spending targets and improved quality measurement systems.

Mr. Chairman, the American steel industry of 1992 is not the one that existed in 1972 or 1982. We are now in all respects world class. We have made the tough adjustments that we needed to make. We are efficient and we produce top quality products. But we are not operating in a vacuum. Our trade policies must provide us with a level playing field to compete fairly and effectively with our trading partners. Our tax policies must be restructured to enable us to remain fully competitive and productive.

Mr. Chairman, we need your help in remedying our Nation's tax and trade policies. We will accomplish the rest of the task on our own.

RESPONSES OF CHARLES A. CORRY TO QUESTIONS SUBMITTED BY SENATOR LLOYD BENTSEN

Question No. 1. Section 301. As you know, we strengthened Section 301 in the 1988 Trade Act and that law has been a key tool in getting other countries to open their markets to U.S. exports, whether we are talking about Super 301, or the Special 301 for intellectual property, or just the regular Section 301 authority.

Can you give us your views on how effective that 301 tool has been in recent years, and what changes, if any, we should consider to it? Also, how do you see it working if we get a Uruguay Round agreement?

Answer. All the various 301 provisions have indeed been reasonably effective in opening foreign markets to U.S. exports. In fact, just talking about the Super 301 provisions has had a definite impact in getting some specific markets open with Korea and Taiwan. Given these tools do seem to be working, I can't think of any particular improvements needed at this time except for extensions of expired provisions. With regard to the Uruguay Round negotiations, I would like to emphasize that the United States should not agree to anything that would in any way restrict the use of the 301 provisions.

Questin No. 2. Subsidies. In both the steel and aerospace industries, we have had serious problems with other countries's subsidizing their industries, and the U.S. industry has suffered as a result. Certainly both USX and Boeing have had experience with this problem and you have addressed that in your testimony.

The fact is that other countries see government support for industry as appropriate, much more than we do. So we have been isolated in fighting these subsidies, whether in the GAff or with the Airbus agreement.

And we may be beginning to see some new thinking in this country on this issue as we try to figure out how to compete in a world where government support for an important industry is more the rule, rather than the exception. For example, I understand that the President's Advisory Committee on Trade Negotiations last year essentially recommended that subsidies for basic research and regional development should be permitted under a new GATT Subsidies Code.

The question I have is this—where should we draw the line on subsidies, both in the United States and in international agreements? And if we cannot get the rest of the world to stop subsidizing their industries, what should we do in response?

Answer. Subsidies are contrary to our concept of the role and relationship of private business and government. Rather than continue our efforts to end subsidies around the world, which has been futile, we should accept the reality of subsidies in the economies of many other nations. These countries have determined that they will not relinquish the production of basic products to importers whether it is cheese, steel, or aircraft. Our trade laws must be cognizant of this reality. Duties appropriate to the subsidy should be assessed and remitted to the United States private producers who must compete with the subsidized foreign producer. This would truly keep the competitive field level for the market competitors. Current trade laws are unsatisfactory in several respects, the laborious procedures, the cost, and most of all, the lack of recompense to the injured domestic producer. New trade legislation with countervailing duties to the domestic producer to a private right of action would either cause the subsidies to end or more likely negate their impact in the competitive marketplace.

RESPONSES OF CHARLES A. CORRY TO QUESTIONS SUBMITTED BY SENATOR DONALD W. RIEGLE, JR.

Question No. 1. How does the U.S. steel industry fare as a supplier to the Japanese auto transplants operating in the U.S.?

Answer. I can't speak for the entire industry and specifically what other companies are experiencing. However, our view of the market tells us that American-produced sheet and bar steel is being utilized by Japanese transplants in increasing quantities. Having said this, I must point out that these transplants continue to use a substantial percentage of imported Japanese parts and components. The continuing reluctance to use domestically-produced parts and components harms American parts manufacturers and their steel suppliers.

Question No. 2. Congress is now debating whether and how to strengthen the on autos coming from Japan. How can the steel industry's experience with this issue be related to the Big Three?

Answer. It is quite clear that the steel VRA's provided the U.S. steel industry breathing room to continue the modernization and revitalization process it began in earnest over a decade ago. Given the dangerous and increasing import levels reached by 1984 when the first steel VRA program began, it is likely the American steel industry would not have survived these last several years without such a program. I am proud to say the industry kept its end of the bargain and invested heavily in new plants and equipment during the VRA period. That now makes us one of the lowest cost producers in the world. Overly aggressive "attack" trade practices by our foreign competitors can be so swift and devastating to an industry that the historical reliance on pure marketplace "free" trade solutions can result in the death of American businesses before anyone realizes what has happened. Since the auto industry is now going through an import situation not unlike the steel industry did in the early 1980's, we would expect they too would experience much the same experience and benefits from a VRA program that we have.

Question No. 3. Would the U.S. Steel industry support a permanent extension of "Super 301" authority rather than a five year extension? If not, what is your reasoning?

Answer. USX Corporation would support a permanent extension of Super 301 authority. We think it is an effective weapon and message to those countries who choose to engage in persistent predatory trade practices.

PREPARED STATEMENT OF THOMAS R. DONAHUE

Thank you for giving us this opportunity to express our view on ways to create a more competitive economy.

The competitive difficulties of the U.S. are reflected in trade deficits, job loss and lost earnings, and in the loss of leadership in critical technologies. The economic failures of the 1980s carry over into the 1990s. While the U.S. is still the world's leader in productivity, it has slipped to 13th place among industrial countries in terms of wage rates, and 17 million workers are partially or fully unemployed, thus involuntarily non-productive.

The issue of competitiveness cannot be isolated from the broad national issues of slow economic growth, weakened financial institutions, misdirected business investment and corporate reorganizations, unrealistic and self-damaging U.S. trade policies, and mercantilist trade policies of major foreign competitors.

To become truly competitive, America should pursue policies that:

- Employ fully the nation's productive labor force.
- Encourage a positive labor-management relationship through outlawing the pernicious use of striker-replacements.
- Encourage effective education and training schemes to retain and enhance skills, and maintain income for the unemployed.
- Address health care costs, and coverage, as well as quality of care.
- Use trade policy to foster U.S. employment and production.
- Use tax policy to encourage domestic production instead of foreign production.
- Put in place an industrial policy to assure continued leadership in critical new technologies and to enhance the conversion of the military-industrial complex and its employees to peace-time purposes.
- Maintain the nation's vital infrastructure to enhance transportation, communication and the environment.

WASTED RESOURCES

Unemployment is not only a personal tragedy for its victims, it is a terrible economic waste. The most efficient and competitive posture for the U.S. economy is in conditions of full employment with plant and equipment operating at high rates of capacity utilization.

Productivity and efficiency are badly compromised by the high and persistent unemployment. People out of work represent lost production and purchasing power for the American economy and a drag on its competitive ability.

There are 9.1 million people officially out of work, or 7.2 percent of the civilian labor force. But that number is only the beginning of the distressing story of unemployment. An additional 1.1 million persons were not counted as unemployed because they have become discouraged by their unsuccessful search and are tabulated separately as discouraged workers. Another 1.0 million are not counted because they have retreated from the official labor force count and show up in a lowered participation rate.

Also not counted as unemployed are 6.3 million part-time workers who want to work full time. These workers face hardships because their hours have been cut back in their current job due to slack business or because they can only find part-time work.

Counting the discouraged workers as unemployed and part-time workers (who want full time work) gives a count of 17.5 million workers who are suffering the hardship of total or partial unemployment.

Workers hardest hit by job loss are those in goods-producing industries, particularly construction and manufacturing. Since 1979, 2.8 million manufacturing jobs have been lost. Over the past three years, the rate of job loss has accelerated. Since January 1989, 1.3 million manufacturing jobs have been lost with 142,000 lost in the past year. In construction, 600,000 jobs have disappeared since 1989.

The largest loss is in durable manufacturing. Since January, 1989, 254,000 jobs have been cut in transportation, including automobile production. Electrical machinery production, which includes electronic equipment and computers, showed a drop of 225,000 jobs.

The cut in production of machinery has cost 196,000 jobs in that industry, and the decline in the fabricated metal industry caused a loss of 121,000 jobs. Nearly 100,000 jobs vanished in textile and apparel.

A decline of more than 50,000 jobs occurred in each of four industries including: primary metals, instruments, stone, clay and glass products, and lumber. Job losses also occurred in furniture production, printing and publishing, rubber products, leather goods, paper, tobacco, and petroleum.

The waste of human resources needs to be reversed and the Humphrey-Hawkins Act mandate of pursuing full employment policies immediately undertaken. That means expansionary monetary and fiscal policies, positive trade policy, training and education programs, public infrastructure expansion, and public service employment programs.

LABOR CONTRIBUTION TO COMPETITIVENESS

By far, the greatest contributions to productivity and competitiveness depend on labor. In looking at the 53-year period from 1929–1982, Edward Denison attributes 54 percent of American productivity growth to advances in knowledge and 26 percent to increased worker education. Only 15 percent is attributed to more capital per worker. Thus, policies and programs need to be directed towards enhancing worker education, training and cooperation.

Improved productivity depends upon **good labor relations.** The record is clear from the studies of Brown and Medoff that unionized industries and plants are more productive than non-union plants. This has been historically true. That productivity gain today is being even further enhanced by newer cooperative labor relations practices. The new participative labor-management programs work and do improve quality and productivity, and lower labor costs. These participative programs work best and last the longest where the workers are organized and where the jobs of the workers are secure, according to our own experience and the research of Maryellen Kelley and Bennett Harrison. Those cooperative programs involving workers in decision-making and problem-solving need a consistent sense of job security and a reward system linked to the increased productivity.

Over the past decade, that cooperation has been repeatedly threatened by employers who try to replace workers who strike to achieve a resolution of differences concerning the employment contract. The most recent example was Caterpillar, where 16,000 workers were told that they would be permanently replaced if they continued to exercise their right to strike.

This type of employer action destroys worker trust and their willingness to cooperate in improving quality and productivity. It undermines labor's contribution to competitiveness. No major industrial country permits and encourages the permanent replacement of strikers. It is important that the Senate quickly address this basic issue by passing the Striker Replacement bill, S. 55, that has already been acted upon by the House.

Education and Training Programs should focus on enhancing the education of all employees and encouraging their continued training, retraining and upgrading. The decline of Federal support for training that has occurred in the 80s must be reversed.

The U.S. lags far behind European nations and Japan in its efforts to provide training and retraining opportunities for workers to keep their skills up to date. Investment in human capital is a factor of production on which Congress can have an important impact. Not only does the U.S. spend less on job training, and retraining, than competitors (1988 expenditures per participant on training programs: Canada, $7,000; Germany, $7,200; UK, $5,000; France $4,600, US, $1,800); but of the funds spent, U.S. companies spend training funds overwhelmingly for those at the top of the corporate ladder.

There is a crying need for basic literacy training—25 percent of the labor force is at literacy levels of ninth grade or below, but only eight percent of U.S. firms offer employees training to improve writing and verbal skills. Meanwhile, employees with college degrees are 50 percent more likely to receive corporate training than non-college graduates; those with post-graduate degrees are twice as likely to get training as those with college degrees.

People in the lower half of the labor force are badly neglected by most U.S. firms—but not so by Japanese firms in the U.S. Such firms spend about $1,000 more per year training lower-level American workers than U.S. firms do.

Public policies need to be pursued that help workers increase their skills and that assure that training dollars be spent in a non-discriminatory manner. The current tax exemption for employer-provided educational assistance should be made permanent.

One important program that helps workers maintain skills is unemployment insurance. The unemployment insurance program needs to be strengthened with the appropriate extension of benefits during this recession so that workers with existing skills may have income to support themselves and to maintain their skill levels during this recession. It is a waste of investment in education and training if income support is not maintained. Further basic reforms in the financing and eligibility criteria are long overdue. Unless the basic formula for extended benefits is permanently changed, it will not fulfill its proper role in future recessions.

WAGES AND SALARIES

Competitive **salary comparisons** indicate that American executives are far in front, with U.S. executives being paid five to ten times more than executives in other leading industrialized countries. However, U.S. workers who also once held first place in wages and benefits, now have fallen to 13th place. Between 1980 and 1991, CEO pay shot up 294 percent, and as a multiple of average workers' wages, it rose from 42 times to 104 times the average.

The enormous increase in executive salaries raises product costs, but more important, the morale of the American workforce is jeopardized by corporations that feather the nests of those at the top and leave little for those at the bottom. Corporate greed has distorted the entire salary structure, as other executives at lower rungs of the corporate ladder also receive far more in compensation than do their counterparts elsewhere in the world.

We therefore strongly support the recent provision in the vetoed tax bill to cap corporate tax deductions for executive compensation at $ 1 million.

Hourly wages and benefits in manufacturing are now much higher in 12 European nations, including Germany, Sweden, Austria and Italy, than in the United States. German workers were paid 46 percent more than U.S. workers in 1990 and Swedish workers 41 percent more.

Japanese workers, far behind American workers a decade ago, are very close on pay. Wages and benefits in Japan were 86 percent of the U.S. level in 1990.

American workers were the only workers in manufacturing among the industrialized countries that suffered a loss in buying power in the five years from 1985 to 1990. Real hourly wages and benefits, that is hourly wages and benefits corrected for inflation, dropped two percent while real wages and benefits rose 19 percent in Germany, 14 percent in Japan, 12 percent in Italy and the U.K., 8 percent in Sweden and 3 percent in France.

According to the Census Bureau, in 1990, 18 percent of the workforce—more than 14 million Americans—earned wages below the official government poverty line for a family of four. In 1979, the proportion was 12 percent.

The pay of the American worker has slipped despite the fact that the United States still leads other industrialized nations in **productivity**, according to the Bureau of Labor Statistics (BLS) figures on Gross Domestic Product per employed person. These figures are arrived at by taking the total output of goods and services of a nation and dividing by the number of jobholders.

The BLS figures show that the average French worker produced 90 percent as much as the American worker in 1990, while German workers produced only 79 percent as much. Production by workers in Japan was only 77 percent of the level of U.S. workers and 71 percent in the United Kingdom. Korean workers were well behind at 43 percent.

It's time to reverse the trend in worker's real buying power, and pursue policies that lift the minimum wage, that develop worker skills, and that assures the maintenance of high-wage manufacturing jobs in the U.S.

HEALTH CARE COSTS

Health care is a critical element of competitiveness. We are all familiar with the estimated impact of the cost of a car. Clearly, when health care costs go up 15 percent a year, it places American industry at a competitive disadvantage with other nations where health care costs are controlled through national programs that also assure access of all citizens to quality health care programs. In order to enhance the nation's competitiveness, it is essential that health care costs be controlled and that all have access to quality health care.

Compare the cost and performance of the U.S. health care system to those of other industrial countries. While these systems have unique structures and differ on numbers of payers, all of these countries have achieved universal access to health care benefits and effectively controlled costs by setting budget targets and paying providers uniform rates. Taken together, the health care systems throughout the industrial world provide conclusive evidence that it is possible to provide coverage to all Americans far more effectively and at an affordable cost.

Per capita health care costs in the U.S. exceed those of Canada, (the next most costly industrialized country) by 43 percent, and those of Germany by nearly 100 percent. As a percent of Gross Domestic Product, the U.S. spends 12.4 percent for health care while such major competitive countries as Canada spend 9 percent, Germany 8.1 percent and Japan 6.5 percent.

In comparison to other industrialized nations, the U.S. health care system fails the tests of fairness and equity. It also fails the test of efficiency, which is apparent to both consumers and provides who are frustrated with red tape and paperwork. Even those who support the current system can no longer defend the excessive overhead and administrative costs associated with the present fragmented system.

In pursuing a "competitive" health care market, the U.S. has ended up with a system that operates on the principle of Social Darwinism. It punishes employers who provided health insurance to their workers by forcing them to, in effect, subsidize the health care of those who are employed by firms that seek a competitive advantage by refusing to provide such coverage. The system rewards purchasers with large groups or relatively young workers with short-term discounts, and it penalizes small employers and those with older, more experienced workers by forcing them to pay more for coverage. The system is replete with inefficiencies that have forced costs to rise sharply, and millions of Americans who are fortunate enough to be covered by health insurance have, as a result, suffered the financial burden of increased cost-shifting and reductions in benefits.

The view has long been held that, notwithstanding these structural flaws, the U.S. system provides care of higher quality. But this too has proved to be another myth advanced by those who oppose change. While we do have more technology than other industrial countries, it is virtually impossible to defend the high rates of surgery and diagnostic tests, the relatively small attention paid to preventive care (including the immunization of children), the lack of coordinated technology assessment and the duplication of equipment in the current system.

What is necessary is a fundamental restructuring of the nation's health care system in a manner that meets three essential goals: contain health care inflation; provide all Americans access to care; and improve the quality of services. We know, Mr. Chairman, of your interest in small group reform, but we believe that such action alone will weaken the effort for comprehensive health care reform.

TRADE

Any discussion of competitiveness must include an examination of the impact of international trade and investment on the domestic economy. While America's international trade position has improved somewhat in the last few years, the merchandise trade deficit remains at historically high levels and continues to cause hardship for millions of American workers and scores of communities. Since 1982, this country's trade shortfall has totalled more than $900 billion and has made the United States the world's largest debtor nation. It is widely acknowledged that the magnitude and persistence of the U.S. imbalance is both harmful and ultimately unsustainable. Unchecked, the deficit portends even more painful reductions in the living standards of working Americans, as the external debt of the United States continues to grow, be serviced, and ultimately repaid.

Totaling $66 billion in 1991, the U.S. merchandise trade deficit is unlikely to show additional improvement this year. The gains last year were due to particularly strong export growth, that is unlikely to continue because of stagnation and the deepening recession in the economies of major trading partners. Slower import growth also contributed to the shrinking of the U.S. trade deficit during the last year. Regrettably, the overall improvement is a direct result of America's recession that reduced the demand for imported and domestic goods. Should policies be put in place to bring about a strong recovery in the United States, imports will again surge into this market unless essential new trade policies are in effect.

While the U.S. trade balance improved last year with many major trading partners, it worsened with Japan and the People's Republic of China. In 1991, the $43 billion trade deficit with Japan accounted for 65 percent of the overall U.S. merchandise trade deficit. The $13 billion trade deficit with the People's Republic of China reflects a continuing deterioration in this country's economic relationship with a country whose policies have nothing in common with open markets, human rights or fair labor standards. The Administration's veto of legislation that would put conditions on the extension of "Most Favored Nation" status for China, is particularly tragic. We will continue to work with the Congress to reverse the shortsighted and harmful policy.

The impact of the U.S. trade deficit on employment has been severe, and has certainly contributed to the persistence of the recession. The $66 billion trade deficit accounts for the loss of 1.6 million jobs.

The discussion of what policies are needed to redress the economic impact of international trade and investment, all too frequently degenerate into a debate between so-called free trade and protection. For the AFL–CIO, the overriding issue in discussions of trade and development is not free trade versus protection, open markets versus closed markets, more investment versus less. Rather, we judge economic ties among nations by how they affect the lives of working people. If these growing relationships among nations result in economic growth, we are concerned with who will benefit—the tiny number of people on the top rungs of the economic ladder, or the vast numbers on the bottom and middle rungs. We have seen the tragic results of policies that ignore the interests of American workers. Those policies appear to be based on two complementary beliefs. First, that further trade and investment liberalization, under most any circumstances, is by definition good, and second, that the desires of U.S.-based commercial interests are identical to the interests of the nation as a whole. For the AFL–CIO, neither of these premises is valid and their use obscures issues that are of real importance, and prevents a realistic appraisal of what types of actions are needed to promote growth and employment. The U.S. should maintain a sense of national identity and responsibility.

A major administration trade initiative, the North American Free Trade negotiations has substantial implications for the competitiveness of U.S. industry and its workers. The AFL–CIO believes that the approach of the administration in this negotiation will encourage greater capital outflows from the U.S. to Mexico, bring about an increase in imports from Mexico, and reduce domestic employment. At the same time, it will do little to promote equitable economic development in Mexico, or improve the standard of living of the vast majority of Mexican citizens, unless there are explicit provisions within the agreement to do so. The Administration and many U.S.-based corporations argue that the transfer of hundreds of thousands of jobs south of the border is necessary if U.S. industry is to be competitive in the global marketplace. That argument however, is really an attempt to justify U.S. corporate desires to duck the question of productivity and competition and to get by in the short term with the easiest solution—cheap labor.

The transfer of production to Mexico under these circumstances turns the traditional concept of international trade on its head. Here industry competitiveness or a nation's comparative advantage is not determined on the basis of cost or quality of the completed product. Rather, comparisons can now be made of the cost for each stage of the production process with the decision for foreign or domestic sourcing depending on where the lowest wages are paid.

The historic strength of the U.S. economy has been based on a variety of factors including a well-educated, productive and well-paid workforce; ample capital and natural resources; innovative production techniques; strong managerial skills; and continued technological advances. Together, these elements have led to the high standards of living. This wealth and its continued growth requires improvements in the buying power of the U.S. worker.

Totally free trade however, permits a company to separate decent and justifiable wage levels from all other aspects of production. Mexico's single comparative advantage is the poverty that forces its citizens to work for subsistence wages. The skill, productivity and contributions of U.S. workers become irrelevant in this context and the growth of this exporting of jobs threatens one of the essential pillars of the American economy. For example, Walter Meade, in a study done for the Economic Policy Institute, found that Mexican workers in a Ford engine plant had productivity levels that were 80 percent of a comparable U.S. plant, yet the workers in Mexico were paid only 6 percent of U.S. wages. The differences in unit labor costs are clearly huge and make it virtually impossible for U.S. workers to compete in any realistic fashion.

Mr. Chairman, we urge you to pay particular attention to the emerging North American Free Trade Agreement, to insure that it improves and not harms the competitiveness of U.S. industry and its workers. We believe it important to support S. 109 introduced by Senator Riegle, that would permit amendments to the NAFTA if key issues are not adequately addressed by the administration. We believe that it is necessary for American workers to know that the Congress will fulfill its responsibility to review carefully this initiative and make changes should they be appropriate.

Beyond the question of the NAFTA, the AFL–CIO believes that the sunset last year, of the Super 301 provision of the 1988 Trade Act, eliminated an important governmental tool to open markets for U.S. products and to reduce unfair trade practices. We believe the leverage provided by Super 301 continues to be needed, and we urge your support for its extension.

Beyond the question of extending Super 301, there are two provisions contained in H.R. 5100, the Trade Expansion Act of 1992, which is currently under consideration in the House of Representatives that specifically address automotive trade issues with Japan. The first of these would require the administration to initiate a Section 301 case to examine the barriers to U.S. exports of vehicles and parts. Despite the variety of negotiations conducted between the U.S. and Japan on auto trade, from the Moss talks to the Structural Impediments Initiatives and the declaration from the Tokyo Summit in January 1992, access to the Japanese market remains limited. The initiation of the section 301 case would focus the trade negotiators of both countries on this industry which alone accounts for three-fourths of the U.S. trade deficit with Japan. We support this provision, and urge your support in the Senate.

The House bill also requires the Bush administration to negotiate a voluntary restraint agreement with Japan to cover passenger cars and light trucks that are imported from Japan or assembled in the U.S. by Japanese auto companies with low levels of U.S. content. The objective of this provision is strongly endorsed by the labor movement and we urge your support for this negotiation.

TRADE ADJUSTMENT ASSISTANCE

Despite assurances in the President's May 1, 1991, Action Plan to work with the Congress to develop adjustment programs in tandem with the NAFTA negotiations, the only visible administration activity thus far is its proposal to eliminate trade adjustment assistance. The AFL–CIO believes that Congress should reject that position and insure that TAA remains the principle vehicle for compensating and assisting workers who are injured by trade.

However, the Trade Adjustment Assistance (TAA) program requires major improvements in benefits, eligibility and funding if it is to provide real assistance to workers. TAA is the government's long-standing commitment to help workers who are injured by the trade policies which government makes and carries out. In 1962, 1974 and again in 1988, COSS recognized that workers injured by trade were entitled to special help. Cutbacks have gutted TAA during a decade of unprecedented need, often turning the government's commitment to workers into an empty promise. While the administration has not succeeded in totally killing TAA, the program has been scaled back drastically since 1981 and has remained scaled back throughout a decade of massively higher trade deficits and worker dislocation.

Even an improvement in eligibility provided in the 1988 Trade Act, which redressed the long-standing inequity of exclusion from coverage of trade-impacted secondary workers such as parts and supplies workers employed by independent companies, has remained an unfulfilled promise.

The AFL–CIO advocates comprehensive and substantial improvements in benefits payable under TAA, including (1) restoration of the 1974 wage replacement formula, (2) improved duration of benefits and benefit entitlement, (3) bridge benefits for workers near to retirement, and (4) an emphasis on targeted job creation.

Significant improvements are needed in eligibility for TAA. Workers deserve eligibility rules which are related to the injury they have sustained, not shifting political sands or a desire to reduce the budget deficit at their expense.

Workers injured by NAFTA or other administration trade initiatives must not be denied benefits because of inadequate funding for the TAA program. Benefits under TAA therefore IFS need to be an entitlement for workers injured by trade, not subject to yearly budget battles and repeated threats of cutback. The AFL–CIO urges the establishment of a TAA trust fund financed by an earmarked portion of future tariff revenues.

TAXES

U.S. tax policy not only raises funds for the Federal government, but also affects competitiveness by its specific provisions. Today's corporate income tax code was developed, for the most part, during the early post-WWII era when the U.S. economy was growing, and employment and real wages in U.S. manufacturing industries were on an upward trend. Those industries faced little international competition, international trade was a small part of the overall economy, and the U.S., secure and unchallenged in its role as the world's leading creditor nation, ran large trade surpluses year after year.

During this bygone era, corporations paid a far higher proportion of income taxes relative to individuals than is the case today. In 1951, corporate income taxes amounted to 40 percent of Federal income taxes. By 1991, the corporate share dropped to 17 percent.

These were the conditions that existed during the period when a tax code was developed which was extremely favorable to foreign investment by multinational corporations. The foreign tax credit generally enabled multinational corporations to reduce their U.S. income taxes dollar-for-dollar, for every dollar of income taxes paid to a foreign government.

More recently the tax avoidance by multinational corporations has been compounded by extremely permissive rules related to the geographic allocation of the research and development tax credit. These rules aid and abet the foreign manufacturing strategies of corporations which move jobs abroad at great cost both to U.S. employment and to a depleted U.S. treasury.

The deferral provisions of the tax code enabled multinational corporations to defer indefinitely the payment of U.S. income taxes on profits attributable to non-U.S. operations, unless and until those profits were remitted to the parent company in the U.S. A permissive tax code coupled with inadequate resources for IRS enforcement allowed multinational corporations to use transfer pricing, allocation of overhead, and intra-corporate interest payments to game the system with virtual impunity.

Not only do U.S. corporations avoid paying billions of dollars in U.S. income taxes as a result of transfer pricing; to add insult to injury, in recent years highly profitable foreign-based multinational corporations such as Toyota and Honda utilized the same or similar gimmicks to pay minuscule amounts of U.S. income tax.

When they close a U.S. facility and relocate outside the U.S., multinational corporations also are able to deduct most if not all of the costs of relocation as ordinary and necessary-business expenses. Subsequent costs for starting up and operating the new foreign facility, including U.S. head office costs which may be dramatically higher as a result of the relocation, also typically are deductible business expenses as well.

These and other tax code provisions, whatever their original rationale, clearly are undermining the competitiveness of the U.S. economy today. By draining billions of dollars from the U.S. Treasury, they have contributed to the sharp decline in the corporate share of the nation's overall tax burden; more importantly, they have deprived the nation of resources that are urgently required to meet the growing backlog of competitiveness-related public investment needs, in such areas as education, infrastructure, public health and child care.

Even worse, these outmoded tax code provisions lower the cost of foreign production as compared with domestic production, and contribute thereby to the continuing export of U.S. manufacturing jobs. Forty-five years ago, with growing manufacturing employment here at home and an unchallenged competitive position around the world, there may have been some rationale for using the tax code to encourage foreign investment by multinational corporations in order to encourage the rebuilding of war-ravaged economies and the development of underdeveloped economies abroad.

These rationales have long since disappeared with the decline of U.S. manufacturing strength and employment in industry after industry, the transition during the Bush-Reagan era to the world's largest debtor nation, and the emergence of massive, chronic trade deficits centered in manufactured goods. The time is long overdue to revisit and revise the corporate tax code, to repeal or greatly limit deferral, the foreign tax credit, deductions associated with relocation of operations outside the U.S., and overly permissive, inadequately-enforced transfer pricing and R&D allocation rules.

It is important to note that problems of U.S. competitiveness are not related to an overly high U.S. corporate income tax rate. The U.S. corporate income tax of 15/25/34 percent is well below Germany's 50 percent rate and Sweden's 52 percent rate. Even Japan has a higher rate at 35.5 percent.

The tax code has also harmed competitiveness by failing to curb, and indeed encouraging, speculative activity by U.S. corporations and investors to the exclusion of productive, job creating activities. The wave of corporate restructurings which peaked in the late 1980s—mergers, acquisitions, LBOs and the like—was and continues to be extremely damaging to the competitiveness of the U.S. economy, and the job security and living standards of American workers.

By allowing expenses related to these often destructive activities to be fully deductible, especially interest expenses associated with restructuring-related debt, the tax code has rendered yet another serious disservice to the competitiveness of the U.S. economy. Current proposals to further liberalize the tax treatment of acquisition-related "goodwill" and other intangible assets will make a bad situation even worse and should be rejected.

INFRASTRUCTURE

A nation can't be competitive internationally if its products can't get to market, if its workers can't reach their jobs and raw materials can't reach the plants.

America's infrastructure has long been an important factor as a fundamental basis for a modern, efficient economy. But the infrastructure has been neglected over the past two decades. The nation's roads, harbors, bridges, mass transit, and sewer and water facilities are decaying.

Spending on public facilities has dropped substantially over the past two decades. At 2.3 percent of gross domestic product in the 1970s, spending on infrastructure fell to 1.3 percent of gross national product in the 1980s.

An economist, David A. Aschauer, estimates that 50 percent of the drop in national productivity growth is due to the lower rate of public investment.

The passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in late 91 was an important measure in addressing the problems of the deteriorating transportation system. This is a good start, but the success of the measure will depend on adequate funding in coming years.

The U.S. must make a major commitment to improving infrastructure in the years to come. This means the whole range of public investments necessary to foster business investment, to protect the environment and to facilitate communication.

The national budget stalemate needs to be broken, because the economy can't go forward without needed public investments. The firewalls between defense and non-defense categories of the budget should be taken down immediately so that funds freed up by changing international political and defense realities can be put to use where needed in the economy on a timely basis. Further hampering the budget process through a balanced budget constitutional amendment will hamstring efforts to modernize the nation's infrastructure, and curtail overall economic growth.

Local matching requirements for federal infrastructure funds should be waived in view of the continuing tight budgets in many states and localities, or else some states will fail to take advantage of available infrastructure funds, thus worsening economic conditions.

The U.S. has gone through a long period of neglect of its infrastructure and the cost of inaction now is substantial. Infrastructure spending puts people to work. Each one percentage point of unemployment adds an estimated $33 billion to the deficit, $28 billion in less tax revenue and $4 billion in added welfare costs. Thus, the immediate deficit situation must be viewed in the perspective of lost production, an idle workforce and wasted opportunity. A speedup of such spending on already approved projects is desirable and would serve to mitigate joblessness while at the same time doing things that need doing anyway.

DEVELOPMENT OF TECHNOLOGY

Spending on research and development by the U.S. government, firms and other institutions compares well to spending by other nations. But much of U.S. spending goes for research for defense needs.

With defense research removed from the total, the U.S. outspends other nations, including Japan in absolute terms, but the U.S. spending is a smaller share of its Gross Domestic Product.

Firms are hesitant to commit funds to R&D because they may not be able to capture all the benefits of the research. Xerox Corporation, for example, pioneered important development of computer hardware and software that other companies profited from but which earned Xerox little money.

The Federal government currently funds the national laboratory system and a number of research organizations. A boost in funding for these organizations would be the best way to promote technology, in our view. We see little effect of the tax breaks for corporations in boosting private research and development. Instead, desirable research and development should be funded through grants or loans awarded through an industrial development bank.

INVESTMENT IN PLANT AND EQUIPMENT

Investment abroad by U.S. firms has become the goal of the State Department, the U.S. Treasury Department and trade policymakers. Rather than encouraging investment in Mexico and other foreign countries, policy should encourage U.S.-based firms to invest in the U.S. From 1980 to 1990, U.S. direct investment abroad nearly doubled from $215 billion to $421 billion.

Investment in the U.S. has been characterized by a huge amount of waste in the 1970s and 80s. Hundreds of billions of dollars have been frittered away in real estate speculation land corporate acquisitions and buyouts. The waste has contributed to the dire problems of he financial sector as well as underinvestment in manufacturing plant and equipment.

We believe that the economic environment of the 80s and 90s is the major problem for plant and equipment investment. The deep and long recessions, high real interest rates, and inadequate trade policies have created major uncertainty for firms and hindered expansion 1of manufacturing facilities.

INDUSTRIAL POLICY

America needs a coherent and comprehensive industrial policy to rebuild the U.S. economy, to speed up healthy, balanced economic growth, and to strengthen the nation's response to international economic competition. To maintain economic and national security and to meet international challenges, America needs its basic industries as well as new technology industries.

To modernize and revitalize the American economy, business, labor, community and government representatives should participate in a tripartite industrial policy board. Under the policy guidance of this board, a national development bank would invest public and private funds in necessary reindustrialization projects.

The bank should have authority to use loans, loan guarantees, and other tools to encourage new industries that have difficulty obtaining necessary financing, to aid defense industries in shifting to non-military production, and to assist older industries with special capital needs for modernization, expansion and restoration of their competitive position, subject to an adequate adjustment plan for adversely affected employees and communities. The bank should also direct its resources to specific geographic areas of the country that are most in need.

An industrial extension service patterned after the agricultural extension service could provide assistance to businesses which need to modernize or find new product lines in order to create or preserve well-paid jobs.

Government procurement at local, state and federal levels must also be harnessed to stimulate product development and the implementation of new technologies in furtherance of industrial policy goals.

CONCLUSION

The nation's competitiveness problem is multi-faceted. There is no one single major solution. The approach must encourage full employment, improved labor relations, better job training, health care reform, investment in new plant and equipment and in new technology, and appropriate tax and trade policy. This is a big agenda, but it addresses a fundamental problem facing the U.S.

PREPARED STATEMENT OF SENATOR ORRIN G. HATCH

[May 12, 1992]

Thank you, Mr. Chairma·. I will be brief in my remarks before the committee today.

I would like to thank you, Mr. Chairman, for conducting a hearing on this matter. There is no question that the issue of competitiveness is at the heart of the tough economic times that we are facing right now. Having read over the reports of both the Council on Competitiveness and the Competitiveness Policy Council, I was pleased to see that both organizations addressed the underlying issues of our nation's competitiveness problems such as education, manufacturing technology, and health care.

It is one thing to talk about trade policy as a way to improve the United States' ability to compete globally. Yet unless we can couple an improving trade status with a long-term refocusing on fundamental changes in education, health care administration, and manufacturing technology, the United States will continue to slowly and surely become more and more economically reliant on foreign suppliers.

Mr. Chairman, I will be the first one to admit that many sectors of the U.S. economy have been exemplary in leading the world in new technologies. No one would argue that the U.S. leads the world in areas such as aerospace technology, computer and software technology, and that we have one of the most sophisticated financial services sectors in the world. However, this nation was built on our ability to manufacture. We have witnessed the importance of a robust industrial base during our relatively short history. Our most recent display of manufacturing superiority was during the second world war.

Since that time, our focus has changed, and some sectors of the economy have become complacent. Not only that, but in an attempt to reassert ourselves globally, we have opted to use protectionist trade measures such as voluntary restraint agreements and import quotas in the name of giving various U.S. industries time to "retool" so that they can compete more effectively. The result of this approach has been much the same as applying a band-aid to a cut that requires stitches.

We must channel our resources into an educational system that focuses on manufacturing and training for the purpose of strengthening our industrial base. In addition, we must provide incentives for businesses to approach profitability from a long-term perspective by reinvesting in research and development. Otherwise, our competitive position, globally speaking, will continue to diminish.

I am pleased with the work that both the Council for Competitiveness and the Competitiveness Policy Council are doing, and I hope that their observations and recommendations can be put to good use. I look forward to hearing the remarks of Messrs. Bergsten and Bloch. Thank you, Mr. Chairman.

PREPARED STATEMENT OF SENATOR ORRIN G. HATCH

[June 2, 1992]

Thank you Mr. Chairman, I would like to make a few brief remarks today.

I am pleased with the effort the Finance Committee is making to address the issue of competitiveness. The series of hearings that you are conducting, Mr. Chairman, is helpful in terms of getting a better feel for how we might address some of the competitiveness challenges that we are currently facing and that we will continue to face in the future. I am also pleased to see some of our country's prominent business leaders testifying today. I believe they can give us a critically useful perspective to the policymaking process.

As I have said before, several sectors of the U.S. economy have been exemplary in leading the world in new technologies. In fact, Mr. Clarkson represents the aerospace industry's world leader, Boeing. Nevertheless, it seems that our nation's focus has changed over time, and some sectors of the economy have become complacent. I am concerned that because of this complacency, we are becoming evermore reliant on protectionist trade measures to deter the deterioration of our once mighty industrial base. I strongly believe that this protectionist approach is not the answer to solving our nation's competitiveness problems.

We must look beyond the immediate, short-term solutions to addressing the issue of U.S. competitiveness. For example, during last month's hearing on competitiveness in this committee, education, training, and health care were cited as areas on which we need to focus if we expect to be competitive in a global setting. More emphasis needs to be placed on building our industrial base from the ground up. For example, I have personally been involved in supporting training programs such as the Jobs Training Partnership Act (JTPA), the Youth Apprenticeship Program, and the Job Corps in an attempt to adequately train our nation's work force in order to compete in the world market.

In addition, we must continuously work to create incentives for industry to invest in R&D. One way we can do this is to provide more tax incentives for businesses and industries in an attempt to encourage U.S. firms to make a long-term commitment to improved manufacturing technologies. We cannot afford to continue heaping revenue-based tax disincentives upon our industries that force them into a situation in which they cannot look beyond an annual profit and loss statement.

Mr. Chairman, I want to welcome our distinguished witnesses here today, and I look forward to listening to their testimonies.

Prepared Statement of Ian M. Ross

INTRODUCTION

I am Dr. Ian M. Ross, President Emeritus of AT&T Bell Laboratories.

I have been asked to present my views on ways to improve U.S. competitiveness.

I would like to address this subject by drawing on the work of the National Advisory Committee on Semiconductors (NACS), a Committee which I have chaired for the last three years. As you may know, NACS was created by the 1988 Omnibus Trade Bill to evaluate the health of the America's semiconductor industry and to propose a strategy to maintain its strength. The members—eight from industry and five from government were appointed by the White House. In February of this year the Committee issued its Third Annual Report which included a strategy for the semiconductor industry. This strategy, as the Report observes, applies to a much broader set of industries than semiconductors, and it is that perspective which I will share with you today. I would, therefore, like to acknowledge the work of NACS in formulating for a specific industry segment many of the concepts and recommendations which I am here presenting in a broader context.

To address the question of U.S. competitiveness, it is instructive to look at one major part of the American economic engine—its high-tech industries. Unfortunately, the trends in our high-tech sectors have not been good.

WE HAVE A PROBLEM WITH HIGH-TECHNOLOGY INDUSTRY

The overall electronics industry perhaps best illustrates the nature and the seriousness of the high-tech erosion. Electronics is the lifeblood of high-technology industry. Today, almost every high-tech sector is electronics-based, or dependent on electronics for its manufacture or operation. Yet, overall, the U.S. electronics industry has been losing about 3% of world market share per year since the mid-1980s, a market that today is about three-quarters of a trillion dollars, and is expected to be two trillion dollars by the beginning of the next century. The impact on American jobs, balance-of-trade, investment in R&D and plant, and the national store of knowledge and skills has been significant. The United States entered the '80s with a $20 billion trade deficit. By 1990, it had grown 500% to about $100 billion, with the deficit in manufactured goods equal to almost the entire amount, and electronic goods directly contributing at least 20% of the total. Today's weakness in the electronics sector is more than America bargained for. As J. Richard Iverson, President and CEO of the American Electronics Association, put it: "We're declining far more sharply than any of us really thought. It is obvious that American high-technology is at risk. This shrinking of the United States' market share must be reversed."

How did this situation in electronics come about? The problems started with the loss of on-shore manufacturing of consumer electronics products, and spread to most high-volume electronics industries, a category which includes consumer electronics and broadly covers lower-cost electronic equipment such as fax machines, printers and copiers, all of which are used in large numbers in the office and home.

The problem has spread more recently to other parts of the electronics industry. Although computer manufacturing may seem like a strong domestic industry, closer scrutiny shows that an increasing portion of the lower cost products are manufactured in the Far East, and for those still made in America, an increasing amount of the value-added is in components and subsystems from abroad. Our lower-cost telecommunications terminal products have largely followed the overseas route of consumer electronics.

As the U.S. manufacturing market share fell from almost 100% to zero in product after product, we were giving up much more than large and growing markets. We were also losing leading-edge technology drivers. Twenty years ago, the defense industry pushed state-of-the-art technology. Later, computers and telecommunications systems became the leaders. Now, high-volume electronics is increasingly becoming the dominant technology driver, and thereby exercising control over large portions of an underlying technology base, a base still needed for national security and our remaining high-tech industries. To give some examples: miniature TV has been a driving force in display technology; digital audio tape is a leader in storage technology; compact discs are driving laser technology, digital signal processor design, and optical storage techniques; camcorders are at the frontier of image processing power and miniaturization technologies. As a nation, we are presently facing lost skills in precision mechanics, storage media technologies, some branches of optics, copier-printer subsystems, ferromagnetics (i.e., audio and video heads), and display technology. And, of significant consequence, we have also lost high-volume manufacturing skills.

The history of electronics illustrates the process by which a major high-tech industry has been weakened. There is reason to fear that if we stay on our present course the erosion will continue. We could lose nearly all domestic manufacture of semiconductors and electronics, then automobiles and other high-tech industries, and eventually see the demise of our technology-based service industries. With high-tech industry gone, America could ultimately be forced to live on its natural resources, on the harvest of its land, and on the low-wage service labor of its people. This is not the tomorrow we want. The reasons for this gloomy forecast can be better understood by looking closely at the nature of high-tech industry.

ATTRIBUTES OF HIGH-TECHNOLOGY INDUSTRY

High-technology industry has at least nine key attributes that, to different degrees in different sectors of the industry, define its requirements and dynamics. The drive of corporations and nations to cultivate these attributes helps explain the past and predict the future; it also provides a basis for developing a national technology agenda.

The first attribute is the **large knowledge-base** needed by high-tech industry. Basic technology generation needs research, often over long periods. The development of new technologies such as genetic engineering or nuclear power can take decades. There is a need to acquire a deep experience base; characteristically, one finds a broad build-up of intellectual property in high-technology. This translates into heavy investment in R&D. To cite some examples, it can take $1 billion to bring to market an advanced electronic switching system for the telecommunications network, or a new jet engine for commercial airliners. In the semiconductor field, it takes about $200 million to develop a new generation product, such as a memory chip; and the need to invest is not diminishing: by the end of the decade, we expect this number to triple. On average, it takes about 12 years and over $200 million for a pharmaceutical firm to develop a new drug.

The second attribute of high-tech industry is the need for large capital investment. The advanced manufacturing equipment and complex process management required for production drives large capital demands across most high-tech industries. In the semiconductor industry, for example, a fabrication line can today cost about $0.5 billion; by the start of the next century, it is expected to cost about $2 billion. In the mid-1980s, the chemical industry had to capitalize at over $90,000 per worker, compared with an average of $43,000 for all manufacturing.

The third attribute is the **need for a highly-skilled workforce.** It is not always possible to apply the classical trade-offs of labor for capital; advanced equipment and automation are essential. Mechanization has always been a path to productivity; but the use of advanced manufacturing machinery is today often the only path to a high-tech product. Thus, high-tech production and service jobs will increasingly require technical literacy and strong basic skills. As a corollary, the labor market itself has split into the higher-wage, highly-skilled jobs that revolve around the core intellectual content of the product, and the low-wage, "tail-end" assembly jobs.

The fourth attribute concerns the **large economies of scale** inherent in many high-tech areas. Capital intensive manufacture and heavy investment in R&D tend to economies of scale, since large fixed costs must be amortized.[1] Even a "big ticket"

[1] This implies the need for high-volume manufacture, where high-volume encompasses flexible manufacture of different products from common platforms, and is not synonymous with mass production.

item such as a new commercial aircraft requires production of 400 to 500 units to break even.

The fifth attribute is **accelerated time—cycles.** In some high-tech sectors, the rapid pace of technological progress has compressed product life cycles to years and shortened the life span factories, thus amplifying the effects of economies of scale. Semiconductors and optical communications products—the underpinning technologies of the Information Age—double their price/performance every 12 to 18 months, a spectacular pace for any human endeavor. Technical progress is not new, but such speed and magnitude of progress has only been experienced in high-technologies during the last few decades.

The sixth attribute follows from the prior attributes: it is the need for **large market share.** In an effort to maximize market size, high-tech businesses must seek global markets and become fewer in number. To the economist this latter trend is called "fewness," and it reflects the simple fact that large market share cannot be held by many. High-tech sectors are increasingly ruled by a global business oligopoly. For example, about 12 major corporations supply over 80% of the world's telecommunications network products. The world's automobiles and commercial aircraft are produced by a relatively small number of giant corporations. Looking at the high-tech segments of the textile industry, we see that about 90% of all U.S. synthetic fiber is produced by 10 companies.

The seventh attribute is that there are **strong linkages, both horizontal and vertical,** in high-tech industries. There is a web of customer and supplier relationships that knit high-tech businesses closely together. Horizontal linkages are seen in the dependency of financial services on computers and communications, or of aircraft and automobile production on hundreds of subcontracted industries. A premiere example of horizontal linkages is provided by electronic systems, which, as already pointed out, are at the core of almost every high-tech industry, from aerospace to manufacturing, from medical to entertainment. And these linkages continue to grow: In the last decade, the cost of electronic systems in some American cars has tripled as a percentage of the total cost; at least one European car manufacturer already claims that 20% of its auto costs are in electronics; by the mid-1990s, it is projected that 30% to 35% of auto costs will be in electronic components and systems. Electronic systems are vertically dependent on advanced semiconductors and vice versa. Both are dependent on materials and manufacturing equipment and skills, and all are dependent on basic research, which, in turn, relies on the educational system for its talent, and on the prosperity of our society for its funding. These are important linkages; weakness in any link affects the strength of the whole.

The eighth attribute is the **importance of commodity, low-margin products.** There is temptation to exit low-margin,[2] high-volume, commodity-type areas, a temptation the U.S. yielded to in consumer electronics. We would prefer to work in higher-margin, but usually lower-volume, areas such as computers. But this, as already noted, is a dangerous strategy because high-volume, commodity production has many values: it generates large revenues needed to support investment, it advances our skills in high-volume manufacturing, and it increasingly drives leading-edge technology. Furthermore, there is growing evidence that high-volume commodities form a base for expansion into the higher-margin areas, such as demonstrated in the current challenge to the computer industry coming from high-volume electronics. Another example is found in the progression in the Japanese auto industry from economy cars to luxury class autos, or the advances made by Japan in multiple video and image areas (including film) from competencies in precision optics or micro mechanics gained from a base position in cameras. Indeed, it may not be possible to sustain a position in the higher-margin products without a strong position in that base.

The ninth attribute is concerned with the **barriers to entering or re-entering high-tech businesses.** If we were to talk to a classical economist, we might hear the following logic: If a country that is currently manufacturing an item finds it can be obtained cheaper elsewhere, it is in the best interest of the consumer to buy the product from the foreign supplier. Later, if the supplying country were to corner the market and raise the price, the buying country should simply go back into production. This logic encounters difficulties when the high-tech attributes are considered. In trying to re-enter a high-tech field, a manufacturer would lack the knowledge base, and would have to absorb large losses while building the market volume needed to compete. In modern economics, these are recognized barriers to entry into industries with large economies of scale. In particular, where technology moves very

[2] Commodities are not always low-margin; for example, there is often opportunity to establish good profit margins in the introductory phases of a commodity product.

rapidly, those who drop out of the race—or even fall behind for only a short period—find it very difficult to catch those who have continued to run. This pace affects business plans in major ways: long-term commitment and staying power is often essential to succeed in high-tech enterprise.

OBSERVATIONS BASED ON THE ATTRIBUTES OF HIGH-TECH

From these attributes, one can make two observations relevant to a technology agenda. First, there is an opportunity for a poor country, for an emerging country, to increase productivity, create wealth, and raise its standard of living by creating, through high-tech industry, a comparative economic advantage, regardless of the country's natural wealth. This opportunity becomes an imperative in most nations that care about their people. Facing established industry in advanced countries, the barriers to entry are high and can only be surmounted by a national initiative. Technical knowledge must be acquired by purchase (as in patent licensing), by negotiation (as perhaps a condition of doing business in the country), or even by ignoring intellectual property rights (which amounts to theft). Large investments must be made in R&D and in plant facilities. Operating losses must be sustained over a period of years while the emerging industries acquire markets and gain economies of scale. Markets must be made available by protecting home markets and subsidizing entry to overseas markets, even to the point of dumping. In the recent past, we have seen all of these tactics successfully employed to break the entry barriers. These are the actions that characterize how the "have-nots" become the "haves" in the high-tech game.

It is interesting to note that, according to this analysis, the emerging nations do not abide by the principles of free trade, despite the benefits that are supposed to accrue. Under the theory of free trade, all nations benefit by increased specialization in their areas of natural comparative advantage. Thus, under free trade, one might expect an emerging nation to improve its standard of living by more effective provision of agricultural products, handicrafts, and available raw materials. However, the standard of living would also increase in the advanced nation it traded with, and the standard of living gap would not be closed. Importantly, under free trade there is no way for the emerging nation to surmount the barriers to building high-tech industries, industries which offer a preferred route to economic equality. Thus, managed trade rather than free trade is in the emerging nation's best interests. As long as we have prosperity gaps between nations, and recognizing that populations are not generally free or able to migrate, we will not see free trade adopted worldwide. We should not criticize a nation for taking actions that are in the best interests of its people; we should, however, recognize what is happening and, if it is detrimental to our interests, take action on our own behalf.

The second observation relates to a threat to established high-tech industry in advanced nations. In effect, industries in these nations often find themselves competing against foreign governments. Given the tactics discussed above, they can find their overseas markets foreclosed and their domestic markets eroded. In consequence, the advanced nation's industry may be less able to afford investment. Thus, the industry falls behind, further eroding its position, and the process starts feeding on itself, potentially moving at a very rapid pace. Even though only a few industry sectors may be targeted by foreign competitors, the "linkage" and "commodity base" attributes can undermine strength in non-targeted sectors. Finally, once an industry is lost, the advanced nation is then itself faced with the barriers to reentry. This is how the "haves" become the "have-nots," and this is the course we are on!

I admit these observations may have been carried to the extreme. But even if only partially fulfilled, the future prospects for our standard of living appear at risk and should be considered unacceptable. Yet, on the present course, this is the outcome we will likely face, not by the malice of any group or institution, but because the dynamics of industry and world trade have changed significantly for high-tech products.

If permitted to continue, the effects of our present course could become so intolerable that the public will demand a change. At this point, the erosion would be so advanced that our only option will be to take drastic action. Foreign nations and current ideologies will be labeled the culprit. Too late for moderate measures, extreme positions will be seen as solutions, and the protectionists, many of whoa are already agitating, will take over.

Neither the current course nor the drastic alternative is acceptable. While there is ample evidence that the present approach is not working, we also recognize that massive government intervention and a protectionist retreat from the global marketplace is a mistake of major proportion. We are not the only advanced nation that has faced challenges to its high-tech industries. The U.K. and Europe have lost a number of high-tech industries, and Japan will face increasing challenge from the present and emerging Asian "tigers." But we are the nation which can seize an opportunity: the opportunity of arriving at an early understanding of the solution to the "have and have-not" problem. Therefore, we must find a better way.

THE BETTER WAY—A NATIONAL TECHNOLOGY AGENDA

The starting point for a national technology agenda is to declare that leadership in high- technology industries is a national objective. This must be a bipartisan objective, led by the President, supported by Congress, endorsed by business, and recognized as vital by the American people. The connection between leadership in high-tech industry and an increased standard of living must be understood and supported by all. The resultant benefits to all Americans must be proclaimed, perhaps debated, but ultimately accepted by the nation as a whole. This is not "picking winners and losers;" rather it is choosing to be a winner instead of a loser

THE ELEMENTS OF A NATIONAL TECHNOLOGY AGENDA

First, we must establish a level playing field for our high-tech industry, a field at least as favorable as that in other advanced nations:

- **We need to facilitate investment** in R&D, plant, and worker training. For more than a decade the real cost of capital to business—not just the interest on debt—has been higher, by a factor of two or more, for U.S. firms than for many foreign competitors. In consequence, our competitors are out-investing America in R&D and plant, and are investing for a longer term pay-off. We must employ a range of tactics aimed at making capital available at lower cost. Balancing the national budget and creating incentives for Americans to save will serve this objective. New tax and fiscal policies, such as investment tax credits, R&D tax credits, and accelerated depreciation schedules are needed. This will, of course, require difficult trade-offs—trade-offs of short- versus long-term gain, of consumption versus savings in order to create the proper environment of capital formation if our high-tech industry is to flourish.
- We need to **establish fair trade** in our global markets. Our persistent trade deficits cannot be totally blamed on the quality or inappropriateness of American products for foreign markets; a lack of reciprocal market openness has been a major factor. Washington's concern, in GATT and elsewhere, for America's business interest must match the concern of foreign capitals. Free trade is a commendable long-term objective, but fair trade is an immediate imperative.[3]
- We need to **strengthen our national education system** as a means to creating a globally competitive workforce. High-tech jobs are knowledge-intensive, not just in the research laboratory, but on the factory floor or at the business workstation. National technical literacy is a clear priority. However, we cannot wait for improvement in our school systems to produce results in the workplace, since this can take decades. We need to seek short-term remedies together with permanent, long-term cures.

Second, we must stimulate, and in some cases repatriate, our high-volume electronics industries. While high-volume electronics is not the only industry that we may want to bring back on-shore, it is a critical one, and exemplifies strategies that can be used for high-tech repatriation. Re-entering manufacture of mature products in the face of large, established foreign competitors is a very tough uphill fight. However, there are opportunities where the technology or the marketplace is going through major changes or discontinuities.

In these cases the barriers to entry are somewhat equalized for all players, providing openings for those with ingenuity and determination. Examples where technology discontinuities may be expected include broadband communications, intelligent vehicle and highway systems, advanced displays, speech and image processing, education systems, and HDTV.

There is the possibility, however, that relying on technology discontinuities will not be enough in some areas. With effectively zero U.S. manufacturing market share, and recognizing the large size and rapid growth of our foreign competitors, the barriers in consumer electronics may be too high to be surmounted, at least in a timely way, only by relying on emerging markets. We may need our government to ensure technology transfer from Asia for consumer electronics, and we may need to arrange import and export agreements on specific products while our manufactur-

[3] And we should not neglect the importance of a large and strong home market, where "home" can extend beyond our political borders, as organizations such as NAFTA demonstrate.

ing capability matures. Were we to decide on such action, such proposals must be embraced cautiously, with full understanding of the hazards, and with strict limitations on duration and scope.

Third, we must make changes to our culture to support the coordination of pre-competitive technology development, and to encourage the formation of consortia, alliances and collaborations. Other nations have benefited from the economies of cooperating in the early phases of technology development, even extending the benefits to the development and manufacturing phases; yet they have retained the ability to compete fiercely in the marketplace. We in the U.S. have been late to recognize this opportunity and to learn how to cooperate and compete at the same time. We have, however, made some progress in this direction. The Administration has concluded that it is proper for government to encourage and fund generic, pre-competitive technology. The task of identifying strategic technologies which are candidates for such treatment has already been accomplished: The White House, The Department of Defense, The Department of Commerce, and the Council on Competitiveness have published lists of strategic technologies with a remarkable consensus. And not only is there domestic agreement in these lists, but America's view is essentially the same as the Japanese and European Community view. So, again, there is no issue of picking winners and losers. What remains is to select areas that are appropriate for cooperative programs between government, industry and academia, and to make it work. In this, too, we have already made some progress, although there is still much to be learned from our successes and failures. Sematech has demonstrated that U.S. institutions can cooperate in developing generic technology for the semiconductor industry, thereby providing a model. But we do lack a process for selecting specific areas for cooperation.

We need at least a forum in which enthusiastic, knowledgeable, and influential members of government and business can meet and recommend suitable action. Importantly, forums without enthusiastic membership are doomed to fail.

On this point, I would like to echo the concerns voiced by Erich Bloch before the Senate Finance Committee on May 12. Any rules that mandate embargoed information or restrict participation of industry in formulating government programs of relevance to industry should be critically re-examined. While some inhibitions may be necessary to promote fairness, a spirit of cooperation and joi planning should be the guiding principle in industry-government relations.

Fourth, we need a renewed commitment to a total quality program, including high-quality manufacturing skills. We have erred in the past by not insisting on product quality as essential to customer satisfaction, corporate profitability, and international competitiveness. We have, in some cases, lost sight of customer needs in designing and delivering products. The Malcolm Baldrige award is an example of an instrument that can build quality awareness in U.S. business. We know today what has to be done and we have an increasing number of examples of success; what we need is total commitment.

This agenda is not foreign to the American way. We have long benefited from encouraging broad classes of industry such as aerospace and agriculture. What is proposed here is the encouragement of the very broadest class of industry, one that leads to improved living standards for all our people. This can be achieved by providing an environment that nurtures the basic attributes of the industry. No special targeting is needed.

How practical is this technology agenda? I believe we have the resources to carry out this program: Our basic science and technology is the envy of much of the world. Our research universities are the first choice for aspiring scientists and engineers from around the globe. Our North American market is large enough to provide a powerful competitive base. Our best factories meet world-class quality standards, and our best workers and managers can compete with anybody. Our productivity is still unmatched in many areas. Our country is rich in many natural resources, and our agriculture is without equal. With these assets, what can get in the way? What must we do?

Clearly, our national priorities must be reordered: A number of tough decisions must be made. To begin, the leaders of government, industry and academia must embrace the concept of leadership in high-tech industry as a national goal. This concept must be discussed and understood widely so that the electorate can support the Administration, the Congress and business in the actions that must be taken. We must decide to save and to invest adequately for the future of our industry, albeit at the expense of some short-term benefits. Economic advantage must be given proper weight relative to military advantage. We must, as a people, value wealth creation over consumption, and demand industry promotion as our ultimate goal. We must build a degree of understanding and trust between government and industry so they can work effectively together in the national interest. We must make the tough decisions, country by country, to establish conditions of fair trade that serve U.S. interests. Industry, with the support of government, must learn to cooperate in the pre-competitive phases of their activities while competing vigorously in the world marketplace. We must identify and implement short-term and long-term measures to improve our education and training. And all this must be done promptly, while we still have an asset base strong enough on which to build.

RESPONSES OF DR. IAN M. ROSS TO QUESTIONS SUBMITTED BY SENATOR LLOYD BENTSEN

Three questions were asked in the context of Mr. Fred Bergsten's recommendation for an agency to monitor "critical technology" in U.S. and main competitor countries:

Question No. 1. Should U.S. Government get involved in monitoring these critical technologies?

Answer. Government should take a healthy interest in the success of America's high-tech industry; therefore, Government must be knowledgeable of the Nation's strengths and weaknesses in critical technologies, and must understand U.S. competitive position. This assessment should be made with industry, not as an independent government activity. Recommendations and output should be clearly tied to an implementation mechanism, most logically a connection to cooperative efforts and consortia.

Question No. 2. What technologies are critical?

Answer. Critical technologies have already been identified by the Department of Commerce, Department of Defense and the White House, to name three important lists. The Council on Competitiveness has shown that a general consensus exists not only within the United States, but also with the views of the European Community and Japan. The identification of critical, strategic technologies is relatively straightforward—the challenge is in charting a course for attaining worldwide leadership in those technologies.

Question No. 3. How would we do this without picking "winners and losers?"

Answer. The identification of critical technologies with strong consensus has already taken place. These technologies support our Nation's high-technology enterprise, which is a major engine for economic growth and prosperity. Recognition that America's standard of living heavily depends on the long-term health of our high-tech industries is the important point.

RESPONSES OF DR. IAN M. ROSS TO QUESTIONS SUBMITTED BY SENATOR DONALD W. RIEGLE, JR.

Question No. 1. How would you characterize Japan compliance with the 1991 Semiconductor Agreement?

Answer. To date, Japan's compliance with the agreement has been disappointing. The 1991 agreement called for foreign share of Japan's semiconductor market to reach 20 percent by the end of 1992. As of the fourth quarter of 1991, foreign share had reached only 14.4 percent, up one-tenth of one percent from the previous quarter.

Clearly, Japan must do more to implement the 1991 agreement. On June 4, the Semiconductor Industry Association and the Electronic Industries Association of Japan agreed to a series of emergency measures designed to boost Japanese purchases of foreign semiconductors. If Japanese companies follow through on these commitments, significant progress towards a more open Japanese semiconductor market will be made. However, given that semiconductor market access has been on the U.S.–Japan bilateral agenda for over twenty years, Congress and the Administration should continue to monitor this problem closely.

Question No. 2. What effect does Japan's failure to allow foreign market share to increase above 14% have on the U.S. semiconductor industry?

Answer. In 1992, Japan's total consumption of semiconductors is projected to be $20.7 billion, or 35.5 percent of the $58.3 billion global semiconductor market. If U.S. share was 6% higher, a level consistent with Japanese compliance with the agreement, U.S. sales would be more than $1.2 billion higher. In turn, these sales would allow U.S. companies to invest an additional $147 million in R&D and $139 million in plant and equipment. U.S. employment in the semiconductor industry would increase by more than 5,400.

But the effects of Japanese non-compliance go well beyond lost sales:

—In order to remain competitive, U.S. companies must have access to all markets to recover their large expenditures on plant and equipment and R&D over a short product life cycle. The semiconductor industry is also characterized by "learning economics," a reduction in manufacturing costs associated with cumulative volume. The economics of this industry makes full access to the Japanese semiconductor market essential to the competitiveness of the U.S. semiconductor manufacturers.

—If foreign market share were to reach 20 percent, U.S. semiconductor companies would no longer be residual suppliers to Japanese electronics companies. U.S. semiconductors would be "designed-in" to a wide range of Japanese computers, autos, consumer electronics products, and telecommunications equipment.

—A closed home market gives Japanese firms a sanctuary, which reduces the uncertainty associated with investment in new capacity. This, in turn, has often triggered over-capacity and below-cost sales.

—Because the U.S. position in many high-volume electronics markets has eroded (America's No. 1 consumer electronics firm is No. 16 worldwide). U.S. companies will not be able to manufacture semiconductors for many electronics products without full participation in the Japanese market.

Question No. 3. Federal Advisory Committee Act.—In our first hearing on trade and competitiveness, the witness for the Council on Competitiveness cited concerns about the Federal Advisory Committee Act, saying that it is creating obstacles to industry-government cooperation. Given your experience with private sector advisor committees to the government, do you share those concerns?

Answer. Yes. From my perspective, there are actually two principal areas as of concern for persons invited to serve on Federal advisory committees: the Federal Advisory Committee Act, where, as a practical matter, the requirements for open meetings can seriously inhibit the open give-and-take that is necessary for a committee to successfully complete its work; and, secondly, unnecessarily burdensome and unclear provisions in and interpretation of the conflict of interest laws. Both the Federal Advisory Committee Act and the conflict of interest laws can have the effect of discouraging, even prohibiting, the most qualified people from participating in Federal advisory committees.

As you know, the Federal Advisory Committee Act specifically requires that advisory committee meetings be open to the public and that documents considered and generated by the committees be made public. Although in spirit these "openness" provisions of the Act have considerable merit, they tend to inhibit the smooth functioning of advisory committee work and, more damaging, chill the open discussion that would be of most value to the U.S. Government, especially where committees are considering U.S. technology policy as it relates to U.S. competitiveness.

Government officials and potential advisory committee members are also confronted by a bewildering array of conflict of interest restrictions which are difficult to understand and interpret. Of particular concern are those provisions of the laws which prohibit a person from participating on a committee if a company they work for stands to benefit from the committee's work. This is especially problematic for advisory committees because their members have often been selected to provide advice concerning problems in a particular field in which they themselves may be active both professionally and financially. In addition, the "revolving door" restrictions under the conflict of interest laws sometimes inhibit former advisory committee members from carrying out their private sector employment responsibilities—responsibilities which motivated their selection for the committee in the first place. To be sure, these restrictions apply to advisory committee members only to the extent that they are classified as "Special Government Employees"—which not all advisory committee members are—but even this distinction is not always clear.

I therefore believe that the Federal Advisory Committee Act and the conflict of interest laws should be revised in order to decrease the effects which currently prevent or discourage private sector cooperation with the Federal Government. Such changes would certainly help to meet the challenge of enhancing the Nation's international competitiveness.

I have three primary recommendations. First, the Federal Advisory Committee Act should be amended so that these committees working on issues regarding U.S. competitiveness may have the opportunity to share information and to tackle the problems faced by our country in the international economy. This means applying a common-sense rule allowing committees to hold non-public working sessions where discussions can be open and free-wheeling. That is how problems are solved in the private sector—and I suspect in government, too.

Second, the conflict of interest laws, as they apply to advisory committee members, should be made clear. Agencies that oversee advisory committees should accept the burden of determining whether a conflict might arise, and accept the consequences if indeed it does arise. In addition, agencies should redouble their efforts to make clear to advisory committee members their potential liabilities under the law.

Finally, agencies must not hesitate to grant exemptions and waivers freely under the conflict of interest laws to those individuals whose expertise is clearly needed on advisory committees. It is arguable, particularly in the work of committees seeking to enhance overall U.S. competitiveness, that a committee members' organization may well benefit from the work of advisory committee through a general improvement of the U.S. economy or even a specific sector of it, but responsible government officials again should use a common-sense approach and freely acknowledge that the contributions these committee members can make to Government policy-making far outweigh any direct financial benefit they or their employers might incur as a result.

It is clear that the Nation desperately needs the advice of industry experts on matters affecting U.S. competitiveness. It is also clear that there are numerous individuals in the private sector who want to work with the Government in an advisory role because they care about making our Nation more competitive. But if our laws make it difficult or impossible to do so, then the Nation cheats itself out of obtaining the best advice it can get. Changes must be made, therefore, and such changes can be made without sacrificing the spirit of the law.

Question No. 4. What is your view of U.S. efforts in DARPA and NIST to encourage the further development of the U.S. flat panel display industry.? What role has AT&T Bell Labs been playing or what will it be doing in this regard?

Answer. AT&T has been actively sharing with both DARPA and the Department of Commerce our plans for flat panel displays. They are very aware of AT&T's plans to establish an internal "Center of Excellence" for displays that incorporates product design and development, process development and supplier management in a single operation. We also recognize that Japanese industry has focused on flat panel display technology for the rest of the world. Therefore, we are planning to set up a TFT/LCD manufacturing alliance with a leading-edge Japanese manufacturer that provides rapid access to its processes and infrastructure. We've offered to include a limited number of America companies in the alliance.

Thirdly, we intend to maintain active research partnership with other industry leaders and the U.S. government to rebuild the U.S. infrastructure to leading-edge specifications. AT&T Bell Laboratories will be an active player in each of the three elements of our AT&T display strategy, including participation in the research partnerships.

COMMUNICATIONS

STATEMENT OF THE AMERICAN COUNCIL OF LIFE INSURANCE

This statement is submitted on behalf of the American Council of Life Insurance. The ACLI is comprised of 616 companies holding $1.4 trillion dollars in assets, which are 92% of the assets owned by the U.S. life insurance industry.

ACLI-member companies hold investments and insure risks predominantly in the U.S., although increasingly, U.S. life insurance companies have been trying to penetrate foreign markets. According to a 1991 ACLI survey of its membership, 39 companies are engaged in the active business of insurance outside the U.S. (compared to 13 companies in 1989), with 12 additional companies considering entry into international insurance. Recent efforts of the Congress to reduce trade barriers for service companies are to be commended. In addition, the Committee's hearings on international competitiveness are an important step in conforming U.S. trade and tax policy.

—First, the 1986 Act provisions, which cause immediate U.S. taxation for cross border underwriting income and all investment income, have increased our tax costs relative to our competition in foreign markets. No other country imposes immediate taxation on insurance income earned outside its borders through home-country controlled foreign subsidiaries. These changes apparently were enacted on the incorrect assumption that insurance income, including income from investment of necessary policyholder reserves and minimum required surplus, is inherently moveable income which can be routed through a tax haven or low tax jurisdiction to produce tax benefits. A survey of ACLI member companies indicates that companies have entered foreign markets using locally incorporated entities to expedite licensing and marketing. Using foreign subsidiaries to write cross border insurance is driven by market conditions and non-tax economic efficiencies. Today, for example, the opportunity to expand a U.K. life insurance company by opening a branch in France is for the purpose of avoiding the expense of start-up minimum capital in France, not to create a foreign base company in a tax haven to avoid tax.

—Our second concern relates to the extraterritorial effect of U.S. tax definitions of life insurance and annuities. The possibility that these rules may apply to products sold in foreign markets has a chilling effect on our ability to sell products which meet local customer needs, and may result in our being taxed in the U.S. on income which economically belongs to our foreign policyholders. These U.S. tax provisions were enacted to address U.S. tax policy concerns regarding the taxation of U.S. policyholders. They should have no bearing on the proper determination of taxable income of foreign insurance companies to the extent they are not selling policies to U.S. residents.

—Our third concern is a technical problem. In some foreign jurisdictions, life insurance companies invest their policyholder funds in foreign mutual funds. Generally, in the U.S., if a life company invests in a mutual fund, the income of the fund is treated as part of the income of the life company. However, in the foreign context the mutual fund may be treated as a separately taxable corporation with the result that the income of the fund "hopscotches" over the foreign life company and is taxable to the U.S. parent. The difficulty here is that this income really belongs to the policyholders and reserves have been set up in the foreign life company for this obligation. If the mutual fund income hopscotches over the foreign life company, then there is no offset of the deduction for reserves against the income—a clear mismatch of income and expense and one which we do not believe was intended by the 1966 Act.

—The final issue which we would like to bring to the Committee's attention is the threat that U.S. withholding taxes may apply to amounts paid to foreign policyholders by foreign branches of U.S. life companies. Through the efforts of this Committee and the Executive branch, barriers to entry have only recently been removed in certain foreign markets, particularly in the Far East. However, in some cases, we are only permitted to do business as a branch of a U.S. company. If a branch operates and invests solely in the foreign country in which the policyholder resides, then any income paid to the policyholder should clearly be beyond the U.S. taxing jurisdiction as foreign source income. Our foreign competitors do not have these tax uncertainties.

I. TAX REFORM ACT OF 1986: END OF DEFERRAL

The provisions regarding U.S. controlled foreign insurers enacted as part of the Tax Reform Act of 1986[1] were a departure from settled U.S. tax policy, predicated on a misunderstanding of the insurance industry and adverse to the ability of U.S. insurers to compete abroad. These changes were adopted without hearings. The legislative history articulates the House Ways and Means Committee's concerns:

> "[I]n particular, the committee believes that . . . [insurance] income may sometimes be earned through a foreign corporation in a tax haven country that bears limited substantive economic relation to the income, and that continued deferral of U.S. tax on such income encourages the movement of associated operations abroad at the U.S. Treasury's expense."[2]

Despite the tax haven reference in the Committee Report, the ~~1986~~ Act provisions were not limited to tax havens— or even focused primarily on tax havens—but applied world-wide to all sorts of jurisdictions, developed and less developed, industrialized and agricultural.[3] In the case of insurance operations, the result has been not only a heavy current U.S. tax burden but also excessive compliance costs. Companies are forced to comply with complex statutory provisions often in the absence of timely and clear administrative guidance.[4] Competitors controlled by non-U.S. business interests do not face such costs.

The Tax Reform Act of 1986 reversed established and consistent U.S. tax policy, and made U.S. deferral the exception rather than the rule for U.S.-controlled foreign insurers. The only deferral now available is for income from underwriting risks in the insurer's country of organization; there is no deferral for income from underwriting other foreign risks and no deferral for any investment income at all.

From the inception of the modern U.S. system of taxing foreign corporations controlled by U.S. taxpayers,[5] U.S. shareholders of controlled foreign corporations have included the income of such corporations in their U.S. tax bases currently only when profits have been repatriated through dividends. Absent dividends, current inclusions have been required only in the narrow circumstances specified in "Subpart F" of the Internal Revenue Code.[6] From the very first consideration of Subpart F, Congress has limited such current taxation to certain tax haven devices and to income from assets held abroad and not used in the taxpayer's trade or business.[7] Congress tailored these limited exceptions specifically because:

> "it appeared that to impose the U.S. tax currently on the U.S. shareholders of American-owned businesses operating abroad would place such firms at a disadvantage with other firms located in the same areas not subject to U.S. tax."[8]

Thus, at least until the Tax Reform Act of 1986, Congress acted on the premise that current U.S. taxation of ordinary business operations of controlled foreign corporations would place such corporations at a competitive disadvantage in relation to non-U.S. owned business competing in the same locales.

Also from the outset, Congress has always recognized that a potential abuse existed in the insurance of U.S. risks and legislated Subpart F provisions to include

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[1] P.L. 99–514 (1986).

[2] H.R. Rep. No. 99-426, 99th Cong., 1st Sess. 391, 392 (1985).

[3] The so-called "high tax exception" in Code section 954(b) (4) does not limit the application of the 1986 Act provisions to tax haven companies due to administrative interpretations and differences in tax bases.

[4] For example, only recently have proposed regulations been issued under Section 953. See Prop. Treas. Reg. §§1.953-1 et seq. (April 17, 1991) [generally retroactive to January 1, 1987].

[5] Revenue Act of 1962, P.L. 87-834 (1962)

[6] Technically, Subtitle A, Chapter 1, Subchapter N, Part II, Subpart F. Currently the Subpart F provisions are to be found in sections 951 through 964 of the Internal Revenue Code of 1986, as amended.

[7] See H.R. Rep. No. 1447, 87th Congress., Sess. (1962), reprinted in 1962-3 C.B. 405, 461, 462.

[8] H.R. Rep. No. 1447, 1962-3 C.B. at 461, 462; see also S. Rep. No. 1881, 87th Cong., 2d Sess. (1962), reprinted in 1962–3 C.B. 707, 785.

income from the insurance of U.S. risks currently in the income of the U.S. shareholders.[9] As a result, prior to the Tax Reform Act of 1986, U.S.-owned foreign insurers deferred income earned from underwriting non-U.S. risks; investment income earned on the unearned premiums, ordinary and necessary insurance reserves and certain capital and surplus associated with such operations was also deferred from U.S. tax.[10]

In legislating the Tax Reform Act of 1986, Congress took a different view of the U.S. tax system. No longer was deferral the rule, but it became the exception.[11] The House decided that insurance income was inherently "movable income" which should usually be subject to current U.S. taxation, regardless of whether it was earned by substantial foreign insurance companies managed and licensed abroad. As a result, Congress acted to tax currently all investment and underwriting income from all operations of U.S.-controlled foreign insurers (except for underwriting income related to risks located in the country of the foreign insurer's organization). The House Ways and Means Committee explained:

> "Insurance income generally represents the type of inherently manipulable income at which Subpart F is aimed, since such income can frequently be routed through a corporation formed in any convenient jurisdiction. (Indeed, several countries promote themselves as jurisdictions for the formulation of such corporations.) When a controlled foreign corporation insures risks outside of the country in which the corporation is organized, then it is appropriate to treat that income as if it has been routed through that jurisdiction primarily for tax reasons, regardless of whether the insured is a related or unrelated person. In all such cases, it is appropriate to impose current U.S. taxation under Subpart F."[12]

Thus, this simplistic analysis would lead one to conclude that a U.S.-controlled Belgian insurance company—regulated in both the U.K. and France—is inherently a U.S. tax avoidance vehicle to the extent that it insures French lives. Generally, the novel premise was that a taxpayer should be subjected to current U.S. taxation if it branched its operations into any other country, even if those operations were branched for good business reasons from another foreign jurisdiction.[13]

While recognizing the movable income problem, the Senate did not agree that insurance income was movable income inherently susceptible to abuse. As a result, the House provisions regarding insurance income were removed from the Senate bill.[14] The insurance provisions were returned to the bill in Conference and became law as the Tax Reform Act of 1986.[15]

As noted above, the 1986 Act ended deferral for investment income earned by controlled foreign insurance companies. Even though the Deficit Reduction Act of 1984 eliminated the separate taxation under Subchapter L of underwriting and investment income of U.S. life insurance companies, the 1986 Act created an artificial distinction between underwriting and investment income of controlled foreign insurance companies. Prior to 1986, investment income necessary to support the active insurance business was not subject to tax under Subpart F and appropriate limitations prevented gaining tax advantages from shifting surplus overseas.[16] Without any evidence of abuse, the House Ways and Means Committee Report concludes that the provisions:

> "often provide excessive opportunities for taxpayers to route income through foreign countries to maximize U.S. tax benefits."[17]

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[9] See H.R. Rep. No. 1447, 1962-3 C.B. at 464, 465; S. Rep. No. 1881, 1962-3 C.B. at 787, 788. This legislation responded to the perception that the U.S. life insurance industry was structuring its operations to place profits offshore in order to avoid the taxation of underwriting gains pursuant to the Life Insurance Company Income Tax Act Of 1959, P.L. 86-69 (1959).

[10] Section 954(c)(3)(B) and (C) of the Internal Revenue Code as it existed prior to the Tax Reform Act of 1986.

[11] "In the committee's view, several of the exceptions to current taxation under Subpart F are excessively broad under present law." H.R. Rep. No. 99-426 at 391.

[12] H.R. Rep. No. 99–426 at 395.

[13] Because movable income earned through a foreign corporation could often be earned through a domestic corporation instead, the committee believes that a major motivation of U.S. persons in earnings such income through foreign corporate vehicles often is the tax benefit expected to be gained thereby." H.R. Rep. No. 99–426 at 391.

[14] See S. Rep. No. 99-313, 99th Cong. 2d Sess. 363-370 (1986).

[15] See H.R. Rep. No. 99-841, 99th Cong., 2d Sess. 11-611-11-621 (1986).

[16] See Section 954(c)(3)(B) of the Code, prior to 1986.

[17] H.R. Rep. No. 99-426 at 393. The House Ways and Means Committee Report goes on to state that the proliferation of U.S.-controlled insurance companies in tax haven jurisdiction

Continued

The current inclusion of investment income is unjustified with respect to U.S. controlled foreign insurance companies.

Even the Treasury Department acknowledges that the 1986 Act went too far in taxing same-country investment income.[18] No other country imposes immediate taxation on insurance income earned through home-country controlled foreign subsidiaries.

II. EXTRATERRITORIAL APPLICATION OF U.S. DEFINITIONS OF LIFE INSURANCE, ANNUITIES AND SEGREGATED ASSET ACCOUNTS

Several provisions of the Code establish U.S. tax definitions in order to properly tax policyholders of an insurance company: Sections 72, 817 and 7702. These Sections define annuities, separate accounts, and life insurance, respectively, and serve their intended purpose when applied to policyholders generally subject to U.S. tax—e.g., U.S. citizens and residents. Nonresident alien policyholders of a CFC life insurance company are not, as such, subject to U.S. tax.[19]

Insurance products are specifically defined for the purpose of limiting the tax benefit to U.S. policyholders. Sections 72 and 7702 provide that contracts which fail to satisfy the requirements will not qualify as either annuity or life insurance contracts, respectively.

However, lack of basic qualification of its insurance contracts also can affect the taxation of the life insurance company. A company is a life insurance company under section 816(a) only if its life insurance reserves are more than 50 percent of its total reserves under section 816(b)(1)(B). There is no indication whatsoever that Congress intended to disqualify foreign life companies which sell products not conforming to U.S. tax definitions. No tax policy is served by applying policyholder directed provisions, either in classification of, or in measuring the taxable income of, controlled foreign insurance companies.

In order to compete abroad, U.S. controlled insurance companies must market the same or similar products. Some of these products will not qualify under U.S. tax definitions. No purpose is served in applying U.S. policyholder tax provisions to individuals who are not subject to U.S. tax, and would operate only as a restriction on the ability of U.S. companies to compete in the foreign insurance marketplace. This result operates against the best interests of U.S. tax and trade policy and makes no sense.

This is not to say that foreign insurance products need not qualify basically as life insurance or annuity products under the applicable foreign law. However, contracts that are issued abroad to nonresident policyholders and are recognized and regulated as life insurance or annuity contracts under the applicable foreign law should generally be respected as such under Subpart F.

Moreover, life insurance reserves must be permitted for foreign contracts or the issuing CFC will be taxed on economic income which does not belong to it and will not be able to market its products. Without an essential reserve deduction, the CFC would be treated as having profit from premiums and investment income set aside to meet obligations to policyholders. This result would grossly overstate a company's income from its insurance contracts and would necessarily require immediate termination of such business.

For policies which meet the U.S. definition of life insurance, Prop. Reg. §1.953-6 generally permits the interest and mortality factors used to compute reserves for U.S. tax purposes to be based upon the factors of the CFC's applicable foreign jurisdiction. This is the appropriate result, regardless of whether the products satisfy the U.S. policyholder tax provisions.

III. HOPSCOTCH

An additional U.S. tax impediment arises if a U.S. life insurance company controls a foreign life subsidiary which invests in a controlled foreign mutual fund to support foreign life risks insured. Such transactions are common in the U.K. insurance market where U.K. life companies invest in controlled unit trusts. Under a lit-

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"suggests" that many taxpayers were in fact taking advantage of the ability to earn investment income through foreign entities on which U.S. tax was deferred. *Id.*

[18] See letter from The Honorable Kenneth W. Gideon to The Honorable Thomas J. Downey (November 13, 1990), The Insurance Tax Review, Vol. 5, No. 3, p. 257.

[19] See (for section 7702) H.R. Rep. 432 (Pt. 2), 98th Cong., 2nd Sess. 1398–99, 1413 (fn 10), 1448-49 (1984); H.R. Rep. 861, 98th Cong., 2nd Sess. 1074-76 (1984)—under the Conference Agreement a failed contract is treated as a combination of term life insurance and a fund currently taxable to the policyholder; section 7702(g) and Rev. Rul. 91-17, 1991-9 I.R.B. 10; (for sections 72(s) and 817(h)) S. Rep. 169 (Vol. I), 98th Cong., 2nd Sess. 545-46, 580-581 (1984); H.R. Rep. 861, 98th Cong., 2nd Sess. 1053-56, 1076-78 (1984).

eral reading of Subpart F of the Internal Revenue Code, the foreign mutual fund may be treated as a separately taxable corporation, with the result that a deemed dividend leapfrogs, in a hopscotch fashion, from the foreign mutual fund over the foreign life insurer directly to the U.S. life company without offset against the associated life insurance reserve of the foreign life insurer. If the foreign life insurer directly purchased interests in the underlying publicly traded investments owned by the foreign mutual fund, there would not be a "hopscotch" of investment income to the U.S. life parent company. Our foreign competitors are not burdened with these tax uncertainties.

IV. WITHHOLDING TAXES ON AMOUNTS PAID TO NONRESIDENT ALIEN POLICYHOLDERS

The U.S. rules for taxing foreign policyholders of U.S. life insurers are very uncertain. Because of this uncertainty, there is a risk that amounts paid or credited to these policyholders will be subject to a 30 percent U.S. withholding tax in inappropriate situations. For instance, U.S. withholding tax may be imposed on policies issued by a branch which operates and invests solely in the foreign country in which the policyholders reside. This income, however, is not properly within the U.S. taxing jurisdiction and, therefore, should not be subject to U.S. withholding tax. Moreover, U.S. withholding tax may also be imposed in situations in which customers of competitors of U.S. life insurers—such as foreign life insurers or foreign branches of U.S. banks—are not subject to U.S. tax.

U.S. life insurers cannot compete if their policyholders are subject to a 30 percent U.S. withholding tax on income not properly within the U.S. taxing jurisdiction and in situations in which competitors' customers are not subject to U.S. tax. The rules for U.S. withholding tax should be clarified and rationalized to prevent these inappropriate results.

To summarize, in order that the U.S. life industry may continue to expand and compete in foreign markets, we urge this Committee to:

—Reexamine the 1986 Act changes which cause immediate U.S. taxation of income of foreign life insurance;
—Limit the U.S. policyholder tax provisions to U.S. policyholders of U.S. and foreign companies;
—Correct the "hopscotch" problem with respect to foreign life company investments in foreign mutual funds; and
—Support the position that U.S. withholding taxes should not apply to foreign branch policyholders.

STATEMENT OF THE AMERICAN PAPER INSTITUTE

This statement is presented on behalf of the American Paper Institute (API), the national trade association of the U.S. paper industry, whose members account for over 90% of the production of pulp, paper and paperboard in the United States.

The paper industry is a basic industry in the traditional sense. It is also a high tech industry, using state-of-the-art production processes. The U.S. paper industry ranks among the ten largest manufacturing industries in the United States, operating in every U.S. state, employing almost 700,000 people. Shipments of the U.S. paper and allied products industry totaled some $122 billion in 1991.

GLOBAL COMPETITIVENESS OF THE U.S. PAPER INDUSTRY

The industry is one of the nation's most globally competitive manufacturing industries, with paper and paperboard exports up more than 22% last year alone. The industry is a low cost producer, with large fiber resources, abundant sources of energy and capital, and top quality products, as well as good management. Between 1982 and 1991, capital investments totaled $98 billion, assuring that the U.S. paper industry's mills are among the world's most modern and efficient. These investments provided productivity gains totaling 41% over the past decade. On average, the industry's capital investments in the past decade were equivalent to 10.7% of annual sales, the highest such ratio of any U.S. manufacturing industry.

The U.S. paper industry is the world's largest. 1991 paper and paperboard production in the U.S. at 72 million metric tons (mt), was greater than that of the European Community and Japan combined. The industry is strong and has excellent growth potential in both domestic and foreign markets.

Recent cost comparisons of the U.S. paper industry with Japanese and other major producers of paper and paperboard show the U.S. industry in a strong competitive position. Two independent studies commissioned by the American Paper Institute—the first in May 1991, which focused on four printing/writing grades; the second completed in April 1992, focusing on kraft linerboard—concluded that, on a Tokyo-delivered basis, U.S. mills have a significant competitive advantage in manufacturing costs over Japanese mills, even when delivery costs are added.

A study released in June 1991 by Nomura Research Institute America, Inc. corroborated this finding for printing/writing papers, linerboard, various other packaging materials, newsprint and market pulp. More broadly, the Nomura study concluded that "the U.S. paper industry currently enjoys the best overall competitive position (in terms of cost structure) among the world's major producing regions—Canada, Scandinavia, continental Europe and Japan."

Several factors will affect the paper industry's ability to maintain its international competitiveness and to increase its global reach. Two areas are particularly critical: one is a matter of domestic legislation and regulation—specifically, the need for U.S. tax policy which would not disadvantage U.S. firms vis-a-vis their foreign competitors; the other is a matter of U.S. trade initiatives—specifically, the need to gain greater access to foreign markets for U.S. exports.

THE U.S. TAX SYSTEM HINDERS THE PAPER INDUSTRY'S GLOBAL COMPETITIVENESS

The key to the U.S. paper industry's global competitiveness today is its long term pattern of capital investment in plant and equipment. But, certain provisions of the U.S. tax code penalize companies which have continued to make significant capital expenditures in new and improved plants and equipment.

For these companies, the Alternative Minimum Tax (AMT) increases the cost of capital and discourages investment at the same time that these firms are suffering a reduction in cash flow and earnings resulting from the recent downturn in the economy. A modification of the AMT to reduce this unwarranted penalty on investment is critical to the future health and growth of capital intensive industries such the U.S. paper industry.

Other features of the U.S. tax system also impact significantly on the ability of U.S. firms to compete internationally. The tax treatment of U.S. multinational companies puts American business at an unfair disadvantage in the international marketplace. Recent legislation made extensive and drastic changes in the tax treatment of foreign source income of U.S. corporations. These revisions—coupled with changes in IRS interpretation of regulations—have not only made this tax treatment extraordinarily complex, but have also significantly increased the tax burden on U.S. firms attempting to compete with foreign companies.

Changes are needed in the way U.S. multinationals are taxed in order to reflect the fact that U.S. industry competes in a global arena and, therefore, needs a level playing field in order to maintain and expand its share of world markets.

Turning to the trade arena:

THE IMPORTANCE OF EXPORTS TO THE INDUSTRY

Exports are an increasingly critical component of the U.S. paper industry's health and growth. In 1991, industry exports totalled a record 19.4 million mt—up 11% from the 1990 record—with a value of $9.7 billion. Of the industry's major exports, wood pulp reached 5.7 million mt, with a value of $2.8 billion. Exports of U.S. kraft linerboard (the primary material used in the manufacture of corrugated shipping containers) were up 16.7% in 1991, to 3.1 million mt. U.S. exports of bleached kraft paperboard rebounded in 1991 to 742,545 metric tons. U.S. exports of printing, writing and related paper surged by about 40% in 1991 to 846,052 metric tons and newsprint exports, at 674,198 metric tons, rose by about 39% in 1991.

In 1991, exports accounted for more than 60% of U.S. production of market wood pulp, about 18% of kraft linerboard output, and almost 19% of bleached paperboard production. On average, demand for paper and paperboard in other regions is growing at a faster rate than in the United States. The newly industrialized countries of East and Southeast Asia offer particularly fertile growth opportunities for the exports of the U.S. paper industry in the decade ahead.

THE U.S. PAPER MARKET IS AN OPEN MARKET

The U.S. paper market—the world's largest—remains one of the most open in the world. The U.S. has the lowest tariffs on paper products of all industrialized countries. Most paper and paperboard products enter the U.S. duty free. Imports of pulp, paper and paperboard continue to be significant. In 1991, paper and paperboard imports, at 10.6 million metric tons (mt), accounted for 13.9% of U.S. consumption. In addition, the U.S. has an open distribution system which is equally accessible to foreign and domestic producers.

INCREASED ACCESS TO FOREIGN MARKETS: THE INDUSTRY'S PRIME TRADE OBJECTIVE

In contrast to the openness of the U.S. market, U.S. paper producers face significant tariff and non-tariff barriers in foreign markets. This is the case not only in the developing countries which, as a matter of policy, tend to protect local paper industries, but also in the industrialized and newly industrialized countries which have well established paper industries. *Increased access to foreign markets is the U.S. paper-industry's primary international trade objective.*

FOREIGN TARIFFS ON PAPER INDUSTRY PRODUCTS ARE MUCH HIGHER THAN IN THE U.S.

Foreign tariffs on paper and paperboard products are much higher than they are in the United States. Please see the attached table, comparing U.S. and foreign tariffs on our industry's most important paper and paperboard products.

The two EC tariff levels (6% and 9%) shown for kraft linerboard reflect the long-standing tariff discrimination by the European Community against kraft linerboard and other kraft paperboard grades—such as saturating kraft and uncoated bleached kraft paperboard—which contain less than 80% softwood fiber content (9% duty), versus those with more than 80% softwood content (6%). The EC Commission, despite its promise to resolve this issue, continues to maintain this discriminatory treatment in its tariff schedule despite its nominal adoption of a worldwide definition of kraft products which was agreed to in the Customs Cooperation Council—and which omits any reference to fiber content. This problem has been identified in the 1992 *National Trade Estimate Report on Foreign Trade Barriers* as impeding U.S. exports of paper and paperboard products to the EC.

While Japanese tariffs on most paper products have been sharply reduced in recent years through bilateral U.S.–Japan trade negotiations, the U.S. paper industry seeks the elimination of all remaining Japanese tariffs on paper and paperboard products.

THE U.S. PAPER INDUSTRY IS CALLING ON MAJOR TRADING PARTNERS TO JOIN IN ELIMINATING TARIFFS ON PAPER PRODUCTS

The Uruguay Round Market Access Negotiations—Under the Aegis of the General Agreement of Tariffs and Trade (GATT): The U.S. industry believes that tariffs are a distorting element in the trade relationships among the industrialized countries. In the Market Access Negotiations, the U.S. paper industry has proposed that the U.S. and all other industrialized countries—but especially the European Community and Japan—eliminate all tariffs on paper industry products (a so-called "Zero-for-Zero" Tariff Option). The industry also seeks significant tariff cuts and tariff "binding," on paper industry products by the developing countries. Other trade objectives of the industry in the Uruguay Round include: imposing greater discipline over such unfair trade practices as government subsidies to foreign competitors, and providing more expeditious settlement of trade disputes between countries. The industry looks to the Uruguay Round as an important means to achieve these objectives.

North American Free Trade Agreement Negotiations (NAFTA): Among the U.S. paper industry's major foreign country markets, Mexico ranks as the third largest. In 1991, U.S. paper industry exports to Mexico reached 1.2 million metric tons, with a value of $963 million.

The U.S. paper industry believes that it could benefit from the establishment of a free trade area between the U.S. and Mexico which would eliminate tariffs on all paper industry products. As the attached tariff table shows, Mexico currently applies a 10% tariff on most imports of paper and paperboard. What the table does not show is that tariffs on some paper products can be raised at will, because Mexico—despite its accession to the GATT (in 1986)—has not "bound" these tariffs at the current applied rate.

By contrast, most paper and paperboard products from Mexico enter the U.S. duty free under the U.S. Generalized System of Preferences (GSP). The U. S. paper industry believes that the Mexican government should agree to an expeditious phase-out of its tariffs on paper industry products. We are concerned that, so far, the Mexican government has not agreed to U.S. requests to place paper in the category for short-term tariff elimination.

The members of API and Industry Sector Advisory Committee (ISAC No. 12) will want to carefully assess any final agreement which is reached by the U.S., Mexican and Canadian governments before the industry could endorse the outcome, but the industry is strongly supportive of this negotiating initiative.

FOREIGN NON-TARIFF BARRIERS ARE ALSO A PRIME CONCERN FOR THE U.S. PAPER INDUSTRY

The EC "1992" Program: The U.S. paper industry is closely watching the European Community's implementation of its plan to complete the integration of the internal EC market—the so-called "EC 1992" program. A unified EC market has the potential to benefit the U.S. paper industry, but only as long as EC integration results in trade expansion rather than trade contraction.

The U.S. paper industry is working closely with a U.S. government inter-agency Task Force tracking the development of EC directives implementing the Program. Of concern to the U.S. paper industry are EC directives dealing with technical standards and testing and certification procedures. Our industry is seeking assurance that tests and certifications conducted in the U.S. will be recognized in the European Community as well. The industry has asked the U.S. government to urge the EC to adopt early "mutual recognition" agreements with the U.S. which will permit U.S. laboratories and other entities to be recognized in the EC as accredited bodies which can test and certify U.S. products for sale in the EC. We are encouraged that discussions between the EC Commission and the U.S. government on these issues are moving in a positive direction.

A Framework Directive regarding standards for food packaging is of particular concern as one of its specific targets is paper and paperboard packaging. Implementing directives on acceptable materials in food packaging, test methodologies, and the like, are currently being drafted by a Council of Europe Expert Committee. Our industry's concern is that those directives not impose restrictions which would hinder exports of U.S. paper and paperboard for food packaging, or exports to the Community of foods packaged in the U.S. U.S. food packaging currently meets strict U.S. Food and Drug Administration requirements, as does food itself, in order to be sold in the United States. Our industry believes that this should qualify U.S. food packaging and packaged foods for sale in the EC as well.

While all countries are seeking solutions for management of solid waste, the U.S. paper industry is concerned that current EC proposals on packaging and graphic paper waste can have a trade-distorting effect.

The American Paper Institute has provided extensive comments to the U.S. government on these EC initiatives.

The U.S. Paper Industry Welcomes the Recently Signed U.S.–Japan Agreement on Measures to Substantially Increase Imports of Foreign Paper Industry Products in Japan: As the world's second largest consumer of paper and paperboard after the United States, Japan should be an important market for U.S. producers—a market in which our industry has sought for several years to overcome an array of structural barriers which sharply limit access for U.S. paper and paperboard products. The U.S. paper industry views the U.S.–Japan Agreement on measures to substantially increase imports of foreign paper industry products in Japan, signed on April 23rd, as a very significant achievement. We believe that, if properly implemented, the provisions of this agreement should result in meaningful and significant increases of U.S. exports of paper and paperboard to Japan. We stress, however, that implementation of commitments undertaken by the Japanese government will be the test of whether or not the Japanese market is opening.

The backdrop to this Agreement is a trade picture in which, despite Japan's fiber deficiency and substantially higher Japanese production costs for most paper industry products, in 1991 Japan produced 29.1 million mt of paper and paperboard. Japan's imports from all sources represent only a tiny fraction of its consumption of paper and paperboard—4.1% in 1991. This is the lowest import penetration level in the world.

Imports from the *U.S.* accounted for just 2.1% of Japan's consumption of paper and paperboard last year. Japan's imports of kraft linerboard from the U.S. amounted to 105,000 mt in 1991, the lowest level in a dozen years and a sharp drop from the 165,000 mt imported from the U.S. in 1983. (Japan consumed 5.4 million mt of linerboard last year.) By contrast, the U.S. exported 3.1 million mt of kraft linerboard worldwide in 1991. Japan's imports of U.S. kraft linerboard accounted for only 1.9% of Japanese demand last year, down from 5.4% in 1983. Imports of printing/writing papers from the U.S. last year represented only 0.3% of the Japanese market of 9.3. million mt for these papers.

There is clearly much room for growth to bring the degree of penetration of the Japanese market by U.S. paper and paperboard Producers up to a level that we believe is consistent with the U.S. industry's cost and quality competitiveness as well as its performance in other international markets.

The kind of "systemic" barriers which deter U.S. paper industry exports to Japan are "invisible" barriers imbedded in the Japanese "system." The U.S.–Japan Agreement contains numerous measures which the U.S. paper industry believes address many of the structural impediments to paper industry imports.

Of particular importance in the recently concluded Agreement is the commitment by the Japanese government to encourage major Japanese corporate end users of paper and paperboard, as well as distributors and intermediate users, to increase imports of foreign paper-products and to adopt and implement open and non-discriminatory purchasing practices for purchases from both domestic and foreign suppliers.

In addition, the Japanese government has committed itself to encourage Japanese producers of paper and paperboard, distributors, converters and printers to establish and implement internal Antimonopoly Act compliance programs.

A significant achievement in this *five year* agreement is that it will be reviewed twice a year by both governments. The two countries have agreed that several yardsticks, including the level of import penetration, will be used to evaluate progress.

Acting on a separate commitment, undertaken by the Japanese government in a joint communique by Prime Minister Miyazawa and President Bush in Tokyo in January 1992, the Japan Fair Trade Commission has begun an in-depth survey of conditions in the Japanese paper sector from the competition policy perspective. The U.S. paper industry believes that, if the JFTC investigation is conducted with the serious intent to assure that anti-competitive practices will not be tolerated, it will be an important step toward opening up the Japanese market.

Industry executives serving on the International Business Committee of the American Paper Institute, and on its Asia Subcommittee, have worked closely with U.S. negotiators at every step throughout the months of consultations between the U.S. and Japanese governments leading up to the Agreement. The U.S. paper industry believes that the far-reaching agreement is an outcome of the tireless commitment of President Bush and his negotiating team—led by the U.S. Trade Representative's Office and assisted by several other government departments—to increase access to the Japanese markets for U.S. exports. Our industry welcomes the interest of Congress in trade matters affecting our country and our industry.

U.S. paper and paperboard producers are prepared to be long-term suppliers of top quality products to Japanese customers. We are cautiously optimistic that today we are seeing the beginning of a new chapter in our industry's efforts to sell our products in the Japanese market. We will continue to work closely with the U.S. government as we go forward from here, assessing results in the Japanese market in the coming monks.

CONCLUDING REMARKS

The U.S. paper industry stands today as a global competitor of the first rank—an industry which can make an important contribution to the reduction of the United States' trade deficit. The key to this contribution lies in changes in the U.S. tax system and elimination of barriers to access to foreign markets. The negative impact of the Alternative Minimum Tax, and the U.S. tax treatment of foreign source income, put U.S. businesses at a serious competitive disadvantage, by preventing American companies from fully exploiting situations in which American industry enjoys a cost of production advantage. Substantive reform of these tax provisions is an essential ingredient of a long-term program to maintain our global competitiveness.

In addition to the U.S.–Japan Agreement on the paper sector, our industry strongly supports the broader multilateral and bilateral trade initiatives which the U.S. Administration is pursuing—the Uruguay Round and NAFTA negotiations and the U.S.–EC ongoing dialogue on the "EC 1992" program. We are hopeful that all of these initiatives will result in agreements which will unlock foreign market doors and help the U.S. paper industry reach its fullest export potential.

ATTACHMENT—COMPARATIVE TARIFF RATES ON SELECTED PAPER AND PAPERBOARD PRODUCTS

[Rates of Duty (percent)]

Product	U.S.[1]	Canada[1]	E.C.	Mexico[2]	Japan	Korea[2]
Newsprint	Free	Free	Duty Free Quota—9% above quota.	15	Free	11
Printing Paper:						
Uncoated	Free	6.5	9.0	10	4.6	11
Coated	2.5	6.5	9.0	10	4.1	11
Writing Paper	2.4	6.5	9.0	10	4.6	11
Kaft Linerboard	Free	6.5	6.0/9.0[3]	10	2.5/3.5[4]	11
Bleached Paperboard:						
Uncoated	Free	6.5	9.0	10	2.5/3.5[4]	11
Clay Coated	Free	6.5	8.0	10	Free	11
Resin Coated	Free	6.5	8.0	10	Free	10

[1] On January 1, 1993, under the U.S.–Canada Free Trade Agreement, these rates will drop to zero for all paper products in U.S.-Canadian trade. In 1992, U.S. and Canadian duties on each other's paper products are 80% less than those in the chart above.
[2] Applied tariff rates, not GATT-bound.
[3] 6% for Kraft products containing at least 80% softwood; 9% for those containing less.
[4] Depending on basis weight.

The Committee on Finance of the United States Senate

Hearing
on
The Competitiveness of the U.S. Tax System

Testimony

on behalf of

The Independent Petroleum Association of America

The Domestic Petroleum Council

The National Stripper Well Association

The California Independent Petroleum Association

The Rocky Mountain Oil and Gas Association

The Permian Basin Petroleum Association

The Texas Independent Producers and Royalty Owners Association

The Oklahoma Independent Petroleum Association

The Independent Petroleum Association of New Mexico

The New Mexico Oil and Gas Association

The Louisiana Association of Independent Producers and Royalty Owners

The Illinois Oil and Gas Association

The North Texas Oil and Gas Association

West Central Texas Oil and Gas Association

The Kansas Independent Oil and Gas Association

The Energy Consumers and Producers Association

Submitted
by
Craig G. Goodman
May 12, 1992

The Committee on Finance of the United States Senate

Hearing on The Competitiveness of the U.S. Tax System

May 12, 1992

Mr. Chairman, members of the Committee, my name is Craig Goodman, and I am pleased to submit this testimony on behalf of the numerous organizations listed on the front cover of this testimony. These organizations collectively represent the vast majority of independent oil and gas producers, large or small, operating in the United States today. Because of the unique significance of crude oil both to the U.S. and world economies, we believe our comments on the competitiveness of the U.S. tax and fiscal system are important to the long-term economic well-being of the United States as well as to its competitive position in the global economy.

New research[1] indicates that over the last three decades, the U.S. tax code has been reformed in a manner that produces numerous regressive and anti-competitive impacts. The most onerous impacts occur because of the conflicting structure of the regular and the alternative tax systems and because of overly complicated and restrictive capital and non-capital investment cost-recovery provisions. Additional anti-competitive impacts have been created by higher taxes on capital and income from capital, artificial allocation rules, foreign and domestic "ring-fence" and exploration-loss-recapture rules, and rules which effectively bar cost recoveries or tax certain income twice. Each of these structural impacts increases both the costs and risks for U.S.-based taxpayers to do business anywhere in the world. Importantly, no country in the world penalizes new investment capital - - except the United States!

The majority of those represented by this testimony do business solely or primarily in the United States, many by patriotic preference, some by operational necessity. Yet, the cumulative effects of the changes to the U.S. tax code since the inception of tax reform have become so onerous that the statistically average U.S. geological prospect is no longer a competitive use of capital for a majority of U.S.-based producers. In essence, the U.S. tax code is encouraging the depletion of America's resource base and is placing U.S.-based producers at severe competitive disadvantages, both domestically and internationally.

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[1] **Impacts of U.S. tax reform on investments in depletable assets:** *The Microeconomic Impact of the U.S. Tax System on Domestic Petroleum Extraction, A Quantitative Analysis of the Post-Tax Reform System of Take in the United States*, Goodman, Gordon and Youngblood, 1990; *The Impact of the Omnibus Budget Reconciliation Act of 1990 on Investments in Domestic Petroleum Extraction*, C. Goodman, 1991; **Impacts of U.S. tax reform on investments in depreciable assets:** *Economic Report of the President*, January 1989 (Washington, D.C.: U.S. Government Printing Office), p.92; *An Analysis of the Alternative Minimum Tax: Equity, Efficiency, and Incentive Effects*, A. Lyon, 1991; *AMT Depreciation: How Bad is Bad*, Arthur Andersen, 1991; *Approaches to Efficient Capital Taxation: Leveling the Playing Field vs. Living by the Golden Rule*, Goulder and Thalmann, National Bureau of Economic Research Working Paper #3559, December 1990; *Tax Neutrality and Intangible Capital*, Fullerton and Lyon, National Bureau of Economic Research Working Paper #2430, November 1987.

Tax Reform and U.S. Capital Depletion Policy

Over the last twenty years, political concerns about equity and efficiency have motivated a "reform" of the U.S. system of income taxation. This reform has come primarily in the form of slower cost recoveries in the regular tax code and the creation of a new form of taxation called the alternative minimum tax (AMT). Contrary to traditional principles of income taxation, at the margin, the incidence of this new tax falls directly on capital itself rather than on the income generated from that capital. Consequently, the various tax reform acts between 1969 and 1986 have increased substar ia'ly the economic impact of U.S. income taxation on virtually all U.S. investments.

However, no industry is more negatively affected by these tax policies than the U.S. petroleum industry, especially those taxpayers whose income is derived primarily from domestic wellhead revenues - - America's independent producers. Virtually every major expenditure that keeps a U.S. petroleum firm from liquidation is now subject to alternative minimum taxation. These new tax policies were enacted in response to events that occurred in the early 1970s.

As a penalty for the foreign embargoes and price spikes of the 1970s, time-honored rules allowing recovery of sufficient funds to replace depleting reserves were eliminated for more than 70% of all U.S. oil and natural gas production. Remaining cost recoveries were also drastically restricted. Provisions enacted as part of the Tax Reform Act of 1986 (TRA) virtually repeal traditional drilling cost recoveries (IDC expensing) and reverse many other historical tax policies intended to maintain, enhance or replace domestic production and reserves. Today, significantly less than 30% of U.S. petroleum production qualifies for less than one-half of the traditional allowance for capital depletion, if and only if multiple limitations are met.

Modern U.S. capital depletion and investment recovery policies have virtually ignored the collapse of the post-tax-reform markets for crude oil and natural gas[2]. These policies also undermine recent "clean air" legislation which is intended to promote new environmental investments[3] and to encourage greater utilization of abundant U.S. natural gas reser :es.

New research on the AMT also suggests that it is somewhat disingenuous to call this new form of taxation a "minimum tax". On the margin, the impact of the AMT is more in the nature of a "maximum tax" or a "tax penalty" than a "minimum tax".

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[2] The Budget Reconciliation Act of 1990 did recognize and reverse slightly the long-term negative trend in U.S. capital depletion policy; however, it did not neutralize the severe competitive disadvantages of the AMT on the majority of U.S.-based producers. See *The Impact of the Omnibus Budget Reconciliation Act of 1990 on Investments in Domestic Petroleum Extraction*, supra note 1.

[3] See *Counterproductive Economic Policy: The Regular and Alternative Minimum Tax Treatment of Pollution Control Equipment*, J. McCallum, (Washington, D.C.: American Council for Capital Formation Center for Policy Research, April 1991).

U.S. taxpayers must always pay the higher of either regular tax liability or AMT liability in any given year. To avoid being labeled a "direct tax on capital", thereby passing constitutional muster, a credit for AMT payments is provided to those taxpayers that pay regular income taxes in the future.

However, the majority of U.S. oil and gas producers are currently AMT taxpayers. Moreover, producers that attempt to avoid liquidation by drilling to replace depleting reserves are likely to remain subject to the the AMT in the future. Consequently, these producers never fully recover the capital they must invest to continue operating because AMT credits are not available to them. Those lucky enough to use AMT credits still never fully recover their investment capital after the time-value of money is considered.

The current U.S. definition of "taxable income", which now includes drilling costs and asset depletion, represents a major departure from the historical structure of the U.S. system of income taxation as well as from its constitutional underpinnings.[4] In the U.S. today, a long-term AMT producer is no longer guaranteed a return of, much less a return on, new drilling capital.[5]

We submit that the United States no longer can afford flawed capital depletion and investment recovery policies. New estimates of the federal tax revenues lost by these policies exceed $1.1 trillion[6]. Moreover, the failure to provide timely and adequate cost recoveries places U.S.-based independent producers at a severe competitive disadvantage domestically, and places U.S.-based multinationals at a severe competitive disadvantage internationally.[7]

New capital depletion and investment recovery policies must allow U.S.-based taxpayers to earn competitive, risk-weighted, after-tax returns of and on both depletable and depreciable capital. The evidence presented in this testimony demonstrates persuasively that such policies will increase U.S. economic activity, employment, income tax collections, U.S. social wealth, and improve our trade balances. We also believe that our testimony provides strong evidence that continuation of current capital depletion and recovery policies will only further erode U.S. economic strength, U.S. world-market share, U.S. petroleum production and the standard of living for all Americans. America's independent petroleum producers urge this Committee to revise U.S. tax policies consistent with the recommendations included at the end of this testimony.

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[4] See *U.S. Petroleum Income Taxation: 1890-1990*, Oil and Gas Tax Quarterly, vol. xxxix, (Dec. 1990).

[5] *Ibid.*, at p. 306, *et seq.*

[6] See Goulder and Thalmann, *supra* note 1.

[7] **For international comparisons.** See *Taxation Effects on the Competitiveness of U.S. Oil and Gas Investments: Promoting Stability in the 1990's*, Flaim, Gordon and Hemphill, 1989; *U.S. International Tax Policy for a Global Economy*, Price Waterhouse, 1991; *The International Competitiveness of the U.S. Petroleum Licensing System*, R. Gordon, 1988; *U.S. and Canadian Tax and Fiscal Treatment of Oil and Gas Production*, C. Goodman, Working Paper, U.S. Department of Energy, May 1989; GAO/GGD-90-75, July 1990, at pages 97-110; *See also* testimony of The American Petroleum Institute, July 17, 1991. **For domestic comparisons,** *see supra* notes 1, 3 and 4.

Domestic Anti-Competitive Impacts of U.S. Capital Depletion Policy

The primary focus of this testimony is the competitive disadvantages imposed by the U.S. tax and fiscal (take) system on U.S.-based taxpayers that compete against other U.S. or foreign-based taxpayers operating within the United States. Many of the anti-competitive impacts of the U.S. take system occur because its structure imposes an economic burden on the capital invested to find new oil and natural gas reserves as well as on the revenues generated from the sale of these assets.

By increasing tax liability "up-front", before income is generated, investment capital and its time-value are lost to higher taxes. Consequently, both the cost of capital and the amount of risk sustained by U.S.-based taxpayers are higher. At current price levels, average field sizes, and well depths, the resulting financial burdens imposed on the majority of U.S.-based producers exceed 100% of the total expected social worth[8] of new oil and gas investments.

Since the OPEC-controlled price collapse of 1986, virtually every major non-OPEC producer of crude oil other than the United States has reduced the economic impact of their take systems on new petroleum investments.[9] Failure of U.S. policies to incorporate the post-tax-reform realities of the world petroleum markets has placed U.S.-based producers at a severe competitive disadvantage both domestically and internationally.

Most of the anti-competitive impacts of the U.S. take system occur because:

(1) a U.S.-based taxpayer is subject to both regular and alternative minimum taxes while its U.S. competitor is subject only to regular taxes;

(2) a U.S. taxpayer is subject to both regular and alternative minimum taxes while its foreign-based competitor is only partially subject to U.S. regular taxation; or

(3) a U.S.-based taxpayer is fully subject to the regular U.S. tax system while its foreign-based competitor is only partially subject to the U.S. tax system.

The anti-competitive impacts demonstrated in the following charts apply to the vast majority of the domestic petroleum industry. As mentioned, a majority of U.S.-based oil and natural gas producers pay both regular and alternative

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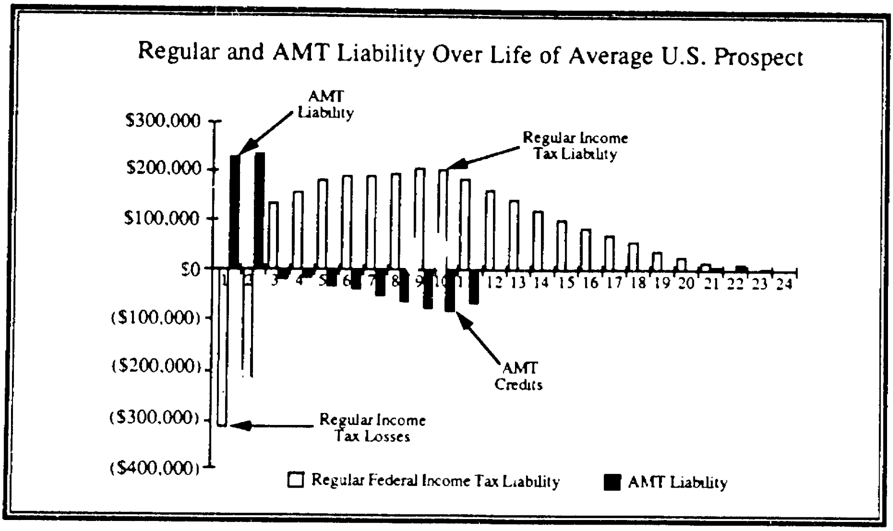
[8] "Social worth" which is synonymous with "social wealth", is the value of crude oil or natural gas produced minus the costs of finding it, producing it and getting it to market. In economic terms it is the actual wealth added or the net revenues generated by an investment, before multiplier effects. Total claims or financial burdens are the sum of all payments by the taxpayer to landowners, state and federal governments. The charts in this testimony do not include payments for state and local income and property taxes or indirect overhead expenses. Policies that take more than the social worth of an investment render that investment unprofitable, and discourage substantial wealth creation.

[9] *See generally* note 7 *supra*

minimum taxes, yet compete against other U.S. taxpayers paying only regular income taxes or foreign-based taxpayers only partially subject to regular U.S. income taxation.[10] The following chart demonstrates the difference in the timing of income tax liability between the regular U.S. system and the alternative U.S. system.



This chart shows both the regular income tax liability and the added burden of the AMT on the statistically average U.S. geological prospect. As can be seen, AMT liability occurs during the first two years because the taxpayer is investing money in new drilling over this period. For regular tax purposes, drilling costs are treated as an expense. For AMT purposes, however, a substantial portion of these investment dollars are treated as "taxable income".

As is also shown, it takes an AMT taxpayer approximately 11 years to recover the "up-front" AMT tax that results from a new drilling investment. Contrary to the intent of the law, recovery of the "up-front" AMT payment is not guaranteed. Only if the taxpayer eventually becomes profitable enough to pay regular taxes is a credit provided to recover the "up-front" AMT tax on drilling capital.[11] *Under this structure the taxpayer lends the government money, interest free, by paying taxes before income is earned, and gets paid back only if he is sufficiently profitable.* Experience has shown that for many independents, the AMT credits are not available or are unusable, and the AMT thus becomes a direct tax on the capital invested to maintain and replace America's depleting oil and gas reserves.

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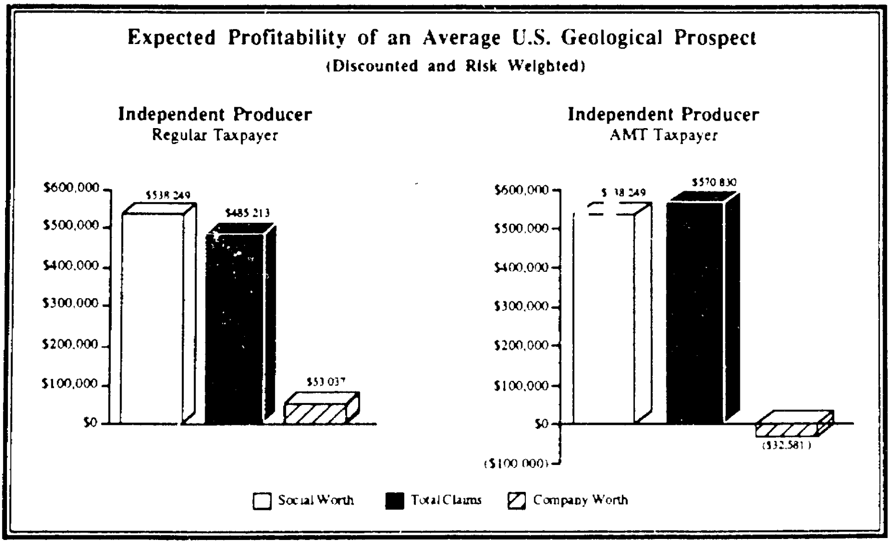
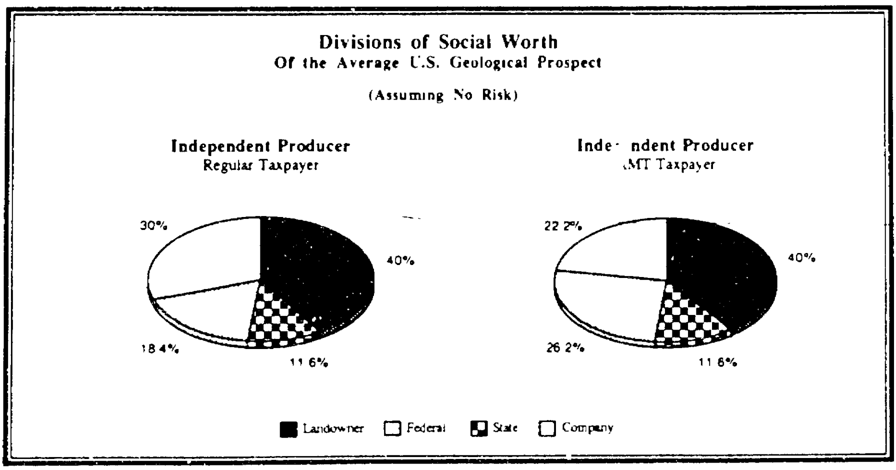
[10] For anti-competitive impacts of the U.S. take system on non-petroleum firms *see* notes 1, and 3, *supra*. For anti-competitive effects of the U.S. take system on petroleum firms *see* notes 1, 4 and 7, *supra*. *See also* testimony of The American Council for Capital Formation, June 6, 1991, and the testimony of The American Petroleum Institute, July 17, 1991.

[11] The statistically average U.S. geological prospect operated by a U.S.-based independent producer switches from AMT to regular tax-paying status in year three of the project assuming the taxpayer stops drilling.

Today, a regular taxpayer exploring for crude oil in the United States can expect a profit in an amount that is almost identical to the expected loss of a competing AMT taxpayer on the exact same investment. Shown below is a side-by-side comparison of the expected after-tax economics of an identical investment made by an AMT taxpayer and a regular taxpayer.

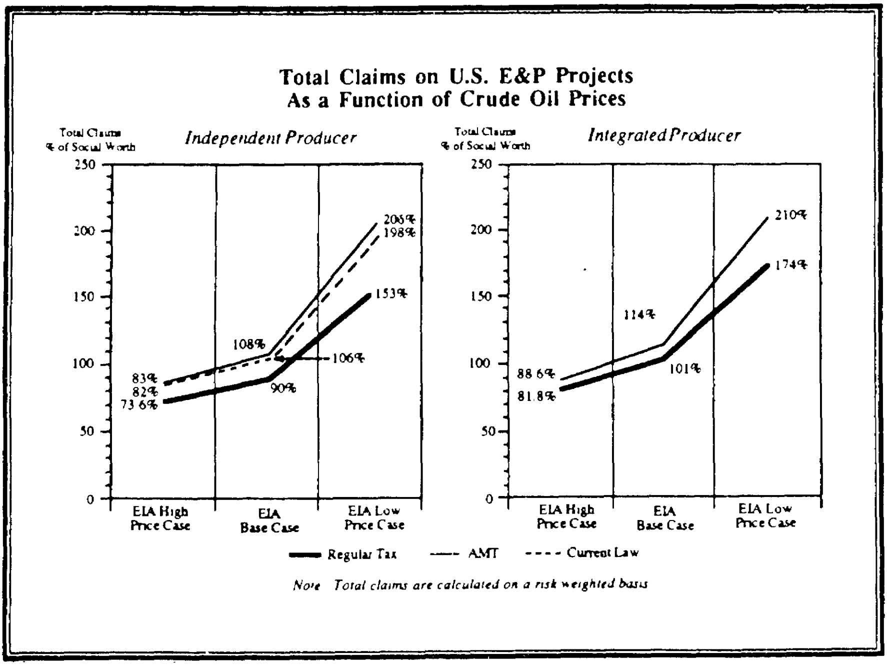


The revenues generated by this investment, if undertaken, would be divided in the manner shown in the following pie chart. As shown, when a taxpayer moves from a regular tax position to an AMT position, this investment is rendered unprofitable because the federal government's share of the net revenues generated from the investment increases over forty percent, from 18% to 26%.



Principles of tax neutrality require that the underlying economics of a project not be affected differentially by the tax code, however, both the bar and pie charts show that different taxpayers are treated very differently. Under current U.S. capital depletion and investment recovery policies, after-tax economics do not approach similarity until investments become far more profitable. In essence, on the margin, our tax system allows more-profitable taxpayers to make higher after-tax returns than less-profitable competitors, on the exact same investment.

The following chart shows that as crude oil prices decline, the percentage of the net revenues taken by the U.S. tax and fiscal system increases dramatically for every type of U.S. producer. The chart also shows that at any given price level, the after-tax return to an AMT taxpayer will always be lower than the return to a regular taxpayer, on the exact same investment. Consequently, U.S.-based taxpayers subject to the AMT cannot make a competitive rate of return on the statistically average U.S. geological prospect.



It should also be noted that AMT capital depletion and investment recovery policies have the same regressive economic impact when either revenues or profitability decline and as the costs of production increase.[12]

[12] For the regressive impacts as a function of total revenues and profitability, See *The Impact of Corporate Minimum Taxation on U.S. Petroleum Extraction*, C. Goodman, (Washington, D.C.: American Council for Capital Formation Center for Policy Research, April 1991).

These tax policies have also contributed to a marked decline in U.S. crude oil production. Since the Tax Reform Act of 1986, crude oil production in the United States has declined over 1.7 million barrels per day, despite interim price increases of more than 100 percent. Exploration and development in the United States, measured by the drilling rig count, footage drilled, reserves replaced, and seismic crew activity, remain near record lows.

This lost production alone equates to a measurable loss in wealth to U.S. society, before multiplier effects, of $160 billion to $250 billion[13], a loss in Federal and State revenues of more than $50 billion, plus hundreds of billions of dollars in S&L-related losses, trade deficits, increased military spending and economic multiplier effects. At $20 a barrel, the United States spends $60 billion dollars annually o imported crude oil. By 1995, the U.S. is projected to export over $100 billion a year in sorely needed capital just for this one vital commodity. Moreover, when the wealth effects derived from investments in depreciable assets are also considered, the negative impacts on the economy, the U.S. cost of capital and federal tax collections are stunning.[14]

International Impacts of U.S. Capital Depletion Policy

No other single commodity contributes as much to the wealth of nations as crude oil. According to a pre-tax-reform Joint Tax Committee survey, the U.S. petroleum industry as a group pays more taxes to both the U.S. and world governments than any other industry sampled: over two times more than the next highest taxpaying industry domestically, and over three times more than the next highest taxpaying industry worldwide.[15]

Historically, the sheer economic power of the United States has motivated other countries to model their tax codes around ours. In the last three decades, however, America's status in the world economy has declined dramatically. After decades of being the world's largest lender of capital, the United States is now the world's largest debtor nation. Over the last five years alone, the U.S. has been forced to borrow over $100 billion annually from abroad[16] just to finance its trade deficit, much of it related to the importation of crude oil.

During the evolution of U.S. tax reform, the United States has gone from an unparalleled economic superpower with a 40% share of the world's total production, to one of several regional economic powers fiercely competing for market share.

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13 See *The Microeconomic Impact of the U.S. Tax System on Domestic Petroleum Extraction, A Quantitative Analysis of the Post-Tax Reform System of Take in the United States*, supra note 1.
14 *See generally* notes 1 and 6 *supra*
15 Industry samples of 1983 taxes paid attached. *See also* Joint Committee Print JSC-40-84, Nov. 28, 1984.
16 See *U.S. International Tax Policy for a Global Economy*, Price Waterhouse, 1991.

In the process, the U.S. has also lost more than 28% of its global-market share. During the same time, the U.S. share of the world's total direct investment has declined 38% while foreign direct investment in the United States has increased thirty-fold (3000%).

New research[17] concludes that both the recent slow-down in U.S. economic growth and the erosion of America's competitive position in world commerce can be related directly to the lack of neutrality and the long-term neglect of U.S. capital depletion and investment recovery policies which culminated in the Tax Reform Act of 1986. This Act increased taxes on both capital and income from capital, severely inhibited cost recoveries, created numerous inefficiencies from its lack of neutrality, and caused a substantial increase in the U.S. cost of capital. It is estimated that the federal government has lost more than $1.1 trillion in present value tax receipts over what would have been collected if the Tax Reform Act of 1986 had never passed.[18]

Over the same period, the U.S. foreign tax code has also severely limited the ability of U.S.-based firms to recover the costs of new capital investments both at home and abroad.[19] While the coalition represented by this testimony is concerned primarily with the anti-competitive impacts of capital depletion policies on U.S. investments, these same flawed policies are causing anti-competitive impacts internationally.

When the U.S. petroleum take system is compared to foreign systems, identical extraction investments earn higher after-tax returns elsewhere.[20] Recent comparative studies of the U.S. take system demonstrate remarkable anti-competitive impacts.[21] <u>At virtually every level of geological risk and at any level of crude oil prices, an oil and gas investment in the United Kingdom will yield its investor a higher after-tax return than a similar investment would in the United States, solely because of the structure and operation of the U.S. take system.</u>[22] A recent study completed under contract with the Argonne National Laboratories concluded that:

> *When compared to foreign systems, the U.S. system now in effect does not equitably share risk, favors large projects (which the U.S. has fewest of) is quite regressive over a wide range of price and cost assumptions and is inflexible, i.e. incapable of*

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[17] *See generally* note 1 *supra.*

[18] Goulder and Thalmann, National Bureau of Economic Research Working Paper #3559, *supra.*

[19] *U.S. International Tax Policy for a Global Economy, supra* note 15.

[20] See: *Taxation Effects on the Competitiveness of U.S. Oil and Gas Investments Promoting Stability in the 1990's*, Flaim, Gordon and Hemphill, 1989.

[21] *Ibid.* See also *The International Competitiveness of the U.S. Petroleum Licensing System*, and *U.S. and Canadian Tax and Fiscal Treatment of Oil and Gas Production*, Working Paper, U.S. Department of Energy, *supra.*

[22] *Ibid.*

> *automatically adjusting to changes in world oil markets. These conditions favor a flight of drilling capital abroad and are reflected by a radical downturn in domestic drilling activity, 75% fewer rigs operating in 1988 than in 1981.*[23]

Similar results were found in Canada after the OPEC price collapse. Immediately after the collapse, Canada provided cash grants for new drilling expenses, implemented tax and royalty holidays and numerous other take reductions to avoid damage to its natural resource base. Now, Canadian gas is flowing into the United States, putting U.S. producers at a double competitive disadvantage, one because of transportation rate disparities,[24] the other because of take disparities. With current concerns about competitiveness, cle n air and the U.S. standard of living, we can no longer afford flawed capital de le ion and investment recovery policies.

Recommendations to Improve the Competitiveness of the U.S. Tax System

Competition comes in many forms and forums. The competitiveness of a tax and fiscal system, however, is measured by its impact on the after-tax rate of return on capital invested domestically or internationally by businesses headquartered within its boundaries. Capital is a scarce resource that theoretically has no national boundaries and pledges its allegiance solely to a risk-weighted, after-tax rate of return.

As demonstrated by the charts on pages 5-7, rates of return are greatly affected by the economic burdens[25] governments impose on capital and the income generated from capital. On the margin, after the underlying economics of an investment are computed, government take policies will basically determine whether capital is competitively employed.

In Theory

In my personal opinion, eliminating completely the anti-competitive impacts of the U.S. tax code on both domestic and international investments, would require a significant restructuring of U.S. corporate income taxation. Essentially, it would

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[23] Flaim, Gordon and Hemphill, *supra* note 20.

[24] See *Statement of George Yates For The IPAA Before the House Subcommittee on Energy and Power Regarding Natural Gas Legislation on S 341, H R 779, H.R 1301 and H R 1543*, June 5, 1991.

[25] There are many types of financial and non-financial economic burdens that are placed on new investments. Generally, these burdens take the form of taxes, levies, fees and royalties (take). However, non-financial economic burdens such as regulatory restrictions, barriers to market entry, and environmental restrictions also affect rates of return. Legislative and regulatory uncertainty, risk of appropriation, relative standards of living and the quality and education of available labor markets also enter into the equation. However, the scope of this testimony is limited to the competitiveness of the U.S. tax and fiscal system.

require a uniform/low-rate tax structure that allows immediate and complete cost recoveries without a distinction between expenditures for labor or capital and without a distinction between debt or equity sources of funds.

Such a tax structure would essentially eliminate the conflicting regular/AMT structure of current law and reduce the time it takes a U.S.-based taxpayer to recover new investments anywhere in the world. Since tax revenues from new investments would take several years to recover from the switchover, new, easily-identified, non-regressive, consumption-based taxes could be earmarked both to reduce the current deficit and to reduce and eventually eliminate the national debt before being phased-out. These measures would return both equity and efficiency to the U.S. system of capital and capital-income taxation. These measures would also increase the U.S. savings rate, and reduce the U.S. o . of capital.

In Practice

Within the next few years, the sheer magnitude of the losses in both social wealth and global-market share will likely force a revision in U.S. tax laws. Given recent political developments, these measures may not be as far off as originally thought. Given also the enormous wealth effects that inure to the benefit of U.S. society, however, it is realistic to consider revising the U.S. tax code to at least improve the competitiveness of investments within the United States and to improve conditions for U.S. companies that also must compete in the global marketplace.

Revising U.S. capital depletion and investment recovery policies, particularly those embedded in the AMT, is a realistic, extremely low-cost, high-yield policy option. The federal government can improve expected economics of new U.S. investments at virtually no "real" cost. Since the AMT imposes tax liability before income is generated, a change that shifts the tax burden back to the income and off of the investment doesn't actually lower the total taxes that would be paid over the life of the project, it merely collects the tax when it's due, not "up-front". By moving the tax from the investment capital to the project's income, the project becomes marginally profitable, thereby yielding disproportionately greater increments of wealth to U.S. society.[26]

Consequently, the most important tax policy recommendation of the U.S.-based independent petroleum industry is to eliminate the existing AMT tax penalties on drilling costs and asset depletion contained in Sections 56 and 57 of the Internal Revenue Code.

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[26] If U.S. tax policy renders the statistically average U.S. geological prospect marginally economic to an AMT taxpayer (75% of the domestic industry), the prospect would generate over $12.5 million in "actual" new wealth to U.S. society, of which $2.5 million would go to the federal treasury, and $1 million would go to the state treasury. Yet, this does not occur because the investor faces an expected loss solely because of the impact of the AMT. *See also* notes 1, 4, and 12, *supra*.

The following measures are also strongly recommended:

1. Shorten the recovery periods for new investments in depletable and depreciable assets for both regular and AMT taxpayers, and repeal artificial limitations on the use of percentage depletion.

2. Repeal the artificial exclusion of oil and natural gas exploration expenses from the existing research and experimentation credit, and reinstate an investment tax credit for selected energy and environmental investments.

3. Equalize the treatment of new and existing tax credits between the regular and AMT systems, and allow AMT credits to be used against any subsequent tax liability.

These measures, coupled with accelerated depletion allowances for "stripper" production and enhanced oil recovery investments, would allow investments made to properly manage our domestic resource base to be a competitive use of capital for a majority of U.S.-based producers. By overcoming past failures to foster competitive capital depletion policies, these measures would reduce existing competitive disadvantages for U.S.-based taxpayers that compete either in the United States or abroad. These recommendations will also increase U.S. economic activity and employment, lower budget and trade deficits, and increase U.S. social wealth.

Conclusion

In order for petroleum extraction firms to replenish their capital structure and in order for America to replenish its petroleum resource base, investments to maintain, enhance and replace America's depleting capital must be competitive with other investments. Taxing capital, and raising taxes as prices and profits fall is clearly contrary to the basic precepts of U.S. income tax policy. However, virtually every major expenditure that is now made to prevent the liquidation of U.S. oil and natural gas reserves is considered a "preference item" for which a tax penalty is incurred.

Unless U.S. capital depletion and investment recovery policies change to reflect the risks and realities of the modern crude oil market, the proven crude oil reserve base of the United States will continue its gradual liquidation. The U.S. independent petroleum industry urges Congress to remove the existing barriers to timely and adequate cost recoveries for investments to maximize America's depleting resource base. We submit that benefits from revising these antiquated policies to both U.S. society as well as to federal and state treasuries are quite significant and far exceed their costs.

Global Income Taxes Paid by Industries Sampled in 1983

(Thousands of Dollars)

	U.S. income before tax	Foreign income before tax	Worldwide income before tax	Current U.S. tax expense	Current foreign tax expense	Current worldwide tax expense
Aerospace	3,287,418	373,107	3,660,525	459,337	201,611	660,948
Beverages	1,688,161	577,327	2,265,488	316,120	301,673	617,793
Broadcasting	1,081,109	209,552	1,290,661	199,818	79,957	279,775
Chemicals	1,164,100	3,416,300	4,580,400	[illegible]	2,433,900	2,422,800
Computers and office equipment	***6,842,475***	***4,972,408***	***11,814,883***	***1,796,91[illegible]***	***2,702,044***	***4,498,961***
Construction	59,386	195,035	254,421	429	74,134	74,563
Electronics and applicance	**3,952,658**	**1,482,062**	**5,434,720**	**290,863**	**598,646**	**889,509**
Financial institutions	2,862,830	3,460,057	6,322,887	182,040	1,354,023	1,536,063
Food processors	3,810,004	1,309,634	5,119,638	987,286	511,118	1,498,404
Glass and concrete	605,401	180,435	785,836	105,754	85,754	191,479
Instruments	2,256,478	659,639	2,916,117	739,600	330,291	1,069,891
Insurance	1,755,975	48,800	1,804,775	174,398	58,491	232,889
Investment companies	979,855	680,650	1,660,505	91,478	137,383	228,861
Metal manufacturing	(1,341,203)	16,600	(1,324,603)	25,396	40,300	65,696
Metal products	286,113	318,686	604,799	43,296	133,960	177,256
Mining	(485,812)	145,328	(340,484)	(18,861)	70,961	52,100
Motor vehicles	**5,759,186**	**1,281,402**	**7,040,588**	**202,308**	**527,330**	**729,638**
Paper and wood products	759,318	118,263	877,581	(3,846)	66,917	63,071
Petroleum	***19,255,863***	***22,171,133***	***41,426,996***	***4,094,087***	***13,303,397***	***17,397,484***
Pharmaceuticals	2,301,842	1,549,400	3,851,242	626,033	608,331	1,234,364
Retailing	**5,067,076**	**288,367**	**5,355,443**	**1,015,447**	**125,630**	**1,141,077**
Rubber	618,089	283,821	901,910	121,366	194,260	315,626
Soaps and cosmetics	2,027,044	513,380	2,540,424	720,699	266,857	987,556
Telecommunications	**11,072,260**	**127,117**	**11,199,377**	**530,913**	**96,978**	**627,891**
Tobacco	3,083,254	539,760	3,623,014	1,041,548	150,751	1,192,299
Transportation						
Airlines	(272,024)	169,123	(102,901)	(58,828)	4,464	(54,364)
Railroads	**2,164,765**		**2,164,765**	**71,899**		**71,899**
Trucking	1,283,557	7,82[illegible]	1,291,381	442,768	4,278	447,046
Utilities (electric and gas)	**7,158,433**		**7,158,433**	**505,298**		**505,298**
Wholesalers	947,776	9,200	956,976	329,472	13,806	343,278
Average, All Companies	90,031,387	45,104,410	135,13[illegible],797	15,021,935	24,477,216	39,499,151

Source: Joint Committee Print JSC 40-84, Nov. 28, 1984

STATEMENT OF THE INSTITUTE FOR RESEARCH ON THE ECONOMICS OF TAXATION

The Committee on Finance is to be highly commended for undertaking this ongoing inquiry into factors affecting the competitive status of American business in the world economy. As the Committee's press release announcing these hearings makes clear, there is no single policy initiative—no silver bullet—that will suffice to assure American businesses a larger share of world markets. A great many things need to be done to enhance competitiveness. Among these things are significant revisions in the federal income tax to reduce the excessive cost of saving and capital formation, of new business enterprise, of implementing technological progress and innovations in products and production processes, and of undertaking business activity abroad.

My testimony focuses primarily on the influence of tax policy on competitiveness and on a limited number of tax policy changes that would reduce, if not eliminate, tax barriers to more effective participation by American businesses in the world market place.

OVERVIEW

The Institute for Research on the Economics of Taxation (IRET) has a long-standing interest in the issues, especially the tax policy issues, concerning competitiveness. This interest stems from our recognition of the changes that have been occurring in the economic world and the need for our policy makers to identify and respond to the opportunities and challenges those changes present. The world economy is growing rapidly and becoming increasingly diversified and complex with every passing day. Economic progress in the United States depends critically on the capacity of U.S. businesses to compete effectively in a world-wide market, not merely here at home in the domestic market. In a very real sense, national borders have simply vanished so far as the production and marketing of an ever-increasing number and variety of products and service. The extraordinary advances in communication and transportation technology that have occurred in just a few decades have enormously expanded the scale of markets with respect to production as well as distribution. Production of a great many of the products Americans take very much for granted has been globalized in the literal sense; before these products get to our shelves, they have undergone processing in several, not just one or two, national jurisdictions. The concept of localized production of an entire product, or even of large portions of it, has become meaningless. American content, per se, is no longer a relevant variable in assessing American competitiveness.

For this very reason, the volume of our exports, imports, and trade balance do not serve as useful indicators of our economic performance. It is no longer meaningful, if it ever was, to rely on the trade balance as a measure of the effectiveness of our international economic policy. Our economic well being does not depend in significant degree on the excess, if any, of our merchandise exports over our merchandise imports. Our domestic economic activity depends to a significant extent on how successful are the foreign operations of American multinational businesses; by the same token, the success of those foreign operations depends in significant part on how productively and efficiently our businesses operate here at home.

The interconnections between economic progress at home and the competitiveness of American businesses everywhere in the world has been extensively explicated and documented. IRETs Spring 1989 conference on this very subject brought out the positive influence of the foreign operations of U.S. businesses on domestic employment, output, and economic growth. The conference established, on the basis of the actual experience, that constraining American business investment and operations abroad doesn't expand their U.S. domestic investment and operations; it merely allows other nations' businesses to expand their share of the foreign markets. Materials presented at the conference showed that, on the contrary, the foreign operations of American businesses served to expand domestic production and employment.

An IRET conference entitled "U.S. Foreign Tax Policy: America's Berlin Wall," held in the fall of 1990, focused on how the present federal tax provisions bearing on foreign source income affect the competitive position of a broad cross section of American multinational businesses vis a vis that of foreign multinational companies. The case studies presented by the tax executives of a number of major companies along with the analyses by other tax experts of the impact of a wide range of our foreign tax provisions on U.S. businesses' foreign operations afforded a chilling exposition of the difficulties our tax laws cast up. (The published proceedings of this conference are available to members of this Committee upon request). Taken together, the two conferences show how importantly our economic progress depends on the competitiveness of American businesses throughout the entire world market and how severely that competitiveness is impaired by existing U.S. federal tax laws.

My thesis is that some rudimentary improvements in our tax laws that will bring them in closer conformity with basic canons of taxation would also enhance the competitive position of U.S. business to the benefit of the nation as a whole and that of all of our partners in the world economy. This is not to say that tax considerations are the only determinant of competitiveness nor that the market position of American business in the near and long term will depend solely on tax policy. Far more basic factors will be at work, and many other public policy developments will also have an important bearing on how well or how poorly U.S. business fares in the world market place. Notwithstanding, tax policy has an extremely important role to play. This Committee has the opportunity to make a signal contribution to the Nation's economic progress by moderating, if not entirely eliminating, the existing tax barriers to efficiency, growth, and competitiveness.

THE CONCEPT OF COMPETITIVENESS

Effectively dealing with the competitiveness issue requires focusing on the business unit. An *economy* is neither competitive nor noncompetitive. A *nation* doesn't compete in the international marketplace. Economic units—businesses—compete. Competitiveness, therefore, refers to how profitably a business unit operates, how fast and for how long it grows, what share of the relevant market its production and sales represent and whether that share is growing or shrinking. The principal determinant of a business's competitive position is its costs relative to those of other businesses operating in the same market.

Many things influence those costs; some of these influences are basic economic phenomena and others are the products of public policies. Much as they sometimes might wish to, public policy makers can't directly alter the basic economics; they can, however, augment business costs by instituting policies that warp and distort the functioning of the private market system. Where this occurs, of course, it is not because policy makers wish to impair efficiency and competitiveness, but because they tend to ignore the effects of their actions on private economic performance.

Public policies that raise business costs impair the competitiveness of the affected businesses by eroding the profitability of the existing scale of their operations. The response of these businesses is to curtail operations to the point at which some minimally acceptable rate of profit can be realized. When their adjustments to their higher costs have been made, these businesses will have relinquished sales to businesses of other countries. The businesses experiencing the cost increase will have lost market share. The consequences of shrinking market share include less efficient production, hence lower levels of output, employment, and real wages.

The key to enhanced competitiveness is reduction in costs relative to those of other market participants. The central focus of public policy efforts to increase American businesses' competitiveness must, therefore, be on the impact of public policies on business costs.

To a distressing extent, the escalation of American business costs is attributable to public policies. With few exceptions, government spending programs raise the costs of production inputs to the private sector, because government either preempts these resources, bidding up their costs in private uses, or through transfer programs, raises their reservation prices for productive employment. The expansion of government spending, moreover, is a prime mover for raising taxes, which year after year are a higher and higher part of total business costs and also exert upward pressure on the supply prices of production inputs. However worthy the objectives of these government spending programs, policy makers should not overlook the costs these programs impose and the consequences of these higher costs. As indicated, these consequences are not confined to the owners of the affected businesses, but are borne throughout the nation.

As the Committee is aware, many public policy developments in recent years have acted to increase the costs of production for much of the business community. In most cases, these policy initiatives were addressed to what were perceived to be urgent social or environmental problems. Unfortunately, many, if not most, of these initiatives were adopted without a careful assessment of their costs. Realistically, one must assume that more such initiatives will be undertaken in the future. The greater is their number and scope, the more urgent it is to ameliorate their adverse impact on business efficiency and competitiveness by reducing the cost-increasing impact of the federal tax system.

TAX NEUTRALITY: THE UNDERLYING CRITERION FOR A PRO-COMPETITIVE TAX POLICY

Enhancing competitiveness gives a particular focus to tax policy but one that is consonant with the more fundamental objective of minimizing tax impediments to efficiency and economic progress. Successful pursuit of this objective does not call for extending tax subsidies to businesses with respect to any of their activities. Instead, it calls for conforming the tax system more closely than at present with the requirements for tax neutrality.

Tax neutrality is defined in terms of the impact of a tax or tax provision on relative costs and prices. A perfectly neutral tax system would not alter any of the cost or price relationships that would prevail in an efficiently functioning private market, free of influence from government actions or policies.

No tax ever devised has been perfectly neutral. An inherent property of every tax is that it raises the cost or price of the thing that is taxed relative to the costs or prices of other things. Every tax, in other words, has an excise effect. As an operational matter, neutrality in taxation means that taxes distort relative prices and costs to the least possible extent.

As applied to the income tax, neutrality calls for designing the tax so as to alter in the same proportion the costs and prices of all alternatives confronting taxpayers. Thus, the tax should raise the cost of saving in the same proportion as the cost of consumption and of each form of saving and of consumption to the same degree. It should raise the cost of any particular employment in the same proportion as it increases the cost of doing any other kind of work. It should increase the cost of capital services in the same proportion as it raises the cost of using labor services in production processes. It should have the same proportionate effect on the cost of any one kind of capital use as it has on that of any other.

The existing income tax severely violates these tax neutrality conditions. An income tax, per se, is inherently at odds with neutrality because the tax increases the cost of activities that generate income subject to the tax compared to the cost of all other activities. It is inherently biased, therefore, against labor—against the use of one's time and energy to earn wages, salaries, and other personal compensation that fall within the purview of the tax and in favor of uses that produce nontaxable rewards, i.e., "leisure." The tax as now imposed in the United States, in addition, is severely biased against saving and in favor of current consumption uses of current income. Because of rate graduation, it increases the cost of activities that enhance one's productivity, hence earnings. It discriminates against long-lived capital and in favor of shorter-lived facilities. It favors financing corporations' capital requirements with debt as opposed to equity. It raises the cost of using capital services proportionately more than it raises the cost of using labor services. And so on. In varying degrees, these same deficiencies are to be found in the income taxes of other nations.

These shortfalls from the standard of tax neutrality induce misallocation of production inputs, i.e., lead to less than the most efficient uses of these inputs. This efficiency loss, in turn, raises costs of production and thereby impairs competitiveness. Enhancing competitiveness, accordingly, calls for efforts to make the tax system, particularly the income tax, more nearly neutral.

It is regrettable that tax legislation during the past decade has, with few exceptions, moved the tax system away from rather than toward neutrality. The Economic Recovery Tax Act of 1981 made material contributions toward reducing the tax-induced extra cost of saving, capital formation, and market-directed personal effort. Since then, we have experienced a long string of revenue-driven tax enactments that have raised the cost of work, saving and capital formation, and innovation, and enormously complicated the income tax and made compliance and enforcement vastly more costly. Virtually the only exceptions were the individual and corporate income tax rate reductions enacted in the Tax Reform Act of 1986, and as the Committee well knows, the individual rate reductions have not been maintained. The result, it should come as no surprise, is that American businesses confront greater competitive challenges in the world market place than otherwise would be the case.

If enhancing competitiveness is truly an urgent goal of public economic policy, policy makers should give high priority to moving the federal tax system into closer conformity with the requirements of tax neutrality. Doing so will allow American businesses to operate more efficiently, hence to compete more effectively in both the domestic and foreign markets. Policy makers should keep clearly in mind that the nation's economic progress depends as much on how effectively our businesses compete in foreign markets as on their performance in the domestic market And in both domestic and foreign markets, efficiency and growth depends significantly on minimizing tax distortions of the signals cast up by the market's operations, hence on minimizing tax impediments to the most productive allocation of production inputs.

The tax revisions called for to ameliorate the distorting impact of the tax system are wide ranging and vast in scope and number. The types of tax changes suggested in the following discussion are only a few of the large inventory of revisions that would create a tax climate far more conducive than at present to the efficient functioning of a free market economy.

A PRO-COMPETITIVE TAX AGENDA

Initiate Efforts to Integrate the Individual and Corporate Income Taxes

One of the major violations of the neutrality criterion in the existing income tax is the imposition of the income tax on income generated by corporate businesses, in addition to taxing corporate distributions to individual shareholders and capital gains these shareholders may realize upon disposition of their equity interests. The corporate tax represents an additional layer of tax on earnings that in economic reality are those of the individual shareholders. As such, it is a highly punitive excise on corporate shareholders and on conducting business in the corporate form. It not only raises the cost of capital for corporate business relative to unincorporated forms of business organization, it also increases the cost of capital throughout the economy. As a result, the labor force is employed with smaller amounts of capital, hence is less productive than it otherwise would be, hence confronts a lower demand for its services and at lower real wage rates than would prevail in the absence of the tax. The burden of the tax, therefore, is far from confined to wealthy shareholders; its major burden is imposed on labor. Indeed, the economic distortions generated by the tax impose costs on the entire economy.

An often overlooked cost of the corporate income tax is the cost of compliance and of administration and enforcement that it imposes. In a recent IRET Policy Bulletin, "Competitiveness and the Taxation of Corporate Income," Bill Modahl, Director of Tax Affairs for Digital Equipment Corporation, cites an Arthur D. Little study undertaken for the Internal Revenue Service, estimating a compliance cost of over 60 cents per dollar of revenue. Modahl also refers to academic research producing estimates of deadweight losses of around $150 billion annually for the economy as a whole resulting from a tax that raises perhaps $105 billion.

The long-standing rationale for the corporate income tax is that in the absence of the tax, individuals would use the corporation as a means of sheltering their earnings from the individual income tax. With the present individual and corporate tax rates, this is no longer valid, if ever it was. In any event, the answer is to allocate corporate-generated earnings to individual shareholders as those earnings are realized. That such allocations can be made without significant increases in complexity or compliance and administration-enforcement burdens was demonstrated by David F. Bradford and the U.S. Treasury Office of Tax Policy staff in *Blueprints for Basic Tax Reform,* first published early in 1977 and reissued in 1984 by Tax Analysts of Arlington, Virginia, 1984.

Tax integration is not a matter of equalizing the tax treatment of differing forms of corporate financing. It's true objective is the elimination of the corporate income tax as a separate levy.

Complete elimination of the corporation income tax may well not be a realistic prospect for the near term. Progress toward this end, however, can be initiated as part of an agenda to make the U. S. tax system more nearly neutral, hence less of an impediment to competitiveness. One step in this direction is the proposed change in the tax treatment of capital gains, discussed below. A companion measure would be to provide for the deduction by the corporation of dividends paid with respect to net new issues of its common stock.

Repeal or Modify TRA86's Foreign Tax Provisions

Elimination of the corporate income tax would, of course, make moot many of the thorny issues that arise in attempting to apply the tax neutrality standard to the foreign-source income of U.S. multinational companies. Until corporate-individual income tax integration is a reality, close attention should be given to the barriers to effective competition that are erected by the present U.S. foreign-source income tax provisions.

TRA86 made extensive and drastic changes in the tax treatment of the income derived from foreign operations of U.S. multinational companies. These changes not only made this tax treatment extraordinarily complex, thereby greatly increasing compliance costs, but also significantly increased the cost of capital employed in the foreign operations. Moreover, the reasons given for the changes conform with no acceptable criteria relevant to the taxation of foreign-source income. In an era of expanding economic opportunities in a broadening world market place, it is difficult to rationalize the imposition of new and substantial tax barriers to effective competition by U.S. businesses with foreign competitors, both at home and abroad.

The tax neutrality standard calls for excluding entirely from the purview of the federal income tax the income or losses sustained by American businesses on their foreign operations. This territorial principle should have guided the changes made in 1986 in the foreign tax provisions, given the then rapidly growing perception of the competitive disadvantages of U.S. businesses. TRA86, however, moved in the opposite direction. It intensified the highly protectionist cast of the U.S. foreign tax provisions that has increasingly, over the years, characterized these provisions. In a paper produced for the IRET conference, **U.S. Foreign Tax Policy: America's Berlin Wall**, Dr. George Carlson of Arthur Andersen and I pointed out the fallacies of the analysis adduced to rationalize the long-standing federal tax policy approach to the tax treatment of income produced by U.S. multinationals in their foreign operations. Our paper also pointed out that this tax protectionism is virtually the same as trade protectionism, with the same sort of adverse effects on the efficiency and productivity of the U.S. economy.

A further change in direction is called for in the interests of tax neutrality and to reduce the tax-imposed limitations on the ability of American businesses to compete with foreign businesses.

Realistically, the territoriality approach is not likely to be adopted in the near term. It should serve, however, as a guide to changes that should be made in the foreign tax provisions. Interim reform measures should include repeal of the TRA86 multiple basket treatment of differing types of foreign earnings, expense allocation rules, the passive foreign investment company provisions, and the expanded reach of Subpart F.

Let me quote some of Modahl's observations on the latter score.

> "Many types of active business income . . . now . . . fall within the passive definitions, and therefore suffer accelerated taxation. This is becoming a worse problem with the technological revolution, because an increasing proportion of value added in world trade is accounted for by intangibles, income from which may fall within passive definitions even though it represents active business income. . . . To the extent Subpart F applies to wholly foreign transactions, precluding avoidance of foreign taxes, we may be shifting tax revenues from the U.S. fisc into foreign coffers. Current U.S. taxation of Subpart F earnings may induce shifting the site of foreign operations to higher-tax jurisdictions so that foreign income eventually comes back to the U.S. carrying substantial foreign tax credits. . . . The rationale for the United States attempting to preclude its multinationals from minimizing foreign tax is elusive. Perhaps it can be viewed as some sort of foreign aid out of the pockets of U.S. business, transferring revenues to foreign treasuries where they would not otherwise have collected them . . ."

Remaining tax barriers to U.S. companies selecting low-tax jurisdictions in which to undertake their foreign operations should be critically examined, looking to their early repeal or modification.

As the Committee is aware, one of the most difficult and contentious issues in the tax treatment of foreign earning of U.S. multinationals arises at the state level in those states relying on the so-called unified business theory to tax corporations doing business in their jurisdictions. In effect, the application of this theory allows these states to extend the reach of their taxes to income outside of their jurisdiction. Apart from the constitutional issues involved, this tax treatment raises the aggregate tax load on foreign operations of U.S. companies. Adding insult to this injury is the IRS regulation (1.861-8(e)(6)(i)) that requires U.S. multinational corporations paying taxes to such states to allocate a pro rata amount of the state taxes to their foreign source income. My colleague, Dr. Michael Schuyler, points out in IRET **Byline** No. 98, "The IRS's Unlegislated Tax on Foreign-Source Income," that "The regulation is an unlegislated, back door increase in the federal income tax on the foreign earnings of these companies." Legislation to prevent this result should be part of the agenda to enhance American businesses" competitiveness. Congressman William M. Thomas has introduced H.R. 1429 that would explicitly allow U.S. business taxpayers to deduct from their U.S.-source income their payments for state and local income and franchise payments. The bill is a useful step.

Expanding the presence of American businesses in foreign markets, an integral part of enhancing these businesses' competitiveness, very often is best served by assigning U.S. employees to the foreign operations. In many cases, the employee's compensation costs multiples of the amount for his or her employment in the United States. U.S. and foreign taxes paid on behalf of the employee by the employer make up a substantial fraction of the additional cost the employer incurs.

The territoriality principle should apply to the employee's foreign source income no less than to his employer's. Under present law, this principle is recognized only to a limited degree by the provision of a foreign earned income exclusion of $70,000. Given the costs of employment in many foreign jurisdictions, this exclusion is too low to allow many of the technical and managerial personnel to maintain a living standard comparable to that they would have in employment in the United States. The exclusion, therefore, should be materially increased. Doing so would reduce the cost to American companies of relying on American personnel in the companies' foreign operations and would thereby certainly enhance these companies' competitive position.

Reduce Payroll Tax Rates

One of the major impediments to growth, market efficiency, and international competitiveness is the artificial escalation of unit labor costs resulting from government policies. Payroll taxes are major offenders in this regard. They increase the employer's total compensation costs, hence curtail the amount of labor services demanded by employers. At the same time, payroll taxes raise the price that employees demand for their services, thereby curtailing labor supply. It is impossible to reconcile payroll taxes that impose these excise effects with the widely-professed desire by public policy makers to improve the competitive position of American business in the world market. Reducing both payroll tax rates and the compensation base to which they apply should receive high priority in a pro-competitive tax program.

Payroll tax reduction necessarily implies significant changes in the existing Social Security and Medicare programs. The track records of both urges that these programs should be phased down, with responsibility for provision of retirement income and of medical care insurance for older persons shifted back to the private sector. As the Committee knows, several members of Congress have developed proposals for privatizing both of these functions, without jeopardizing the situations of current beneficiaries or of persons who would become beneficiaries in the succeeding one or two decades. One of the important byproducts of implementing these proposals would be significant increase in personal saving and enhancement of the individual's responsibility for his or her own economic well being.

Moderate the Income Tax Bias Against Individual Saving

The tax bias against saving in the existing income tax can and should be eased by various tax changes, such as expansion of IRAs and reducing constraints on their use and substantial liberalization of employer-provided pension plans, including 401(k) and similar provisions.

Neutrality in the income tax treatment of saving and consumption calls for either excluding income that is saved from taxable income while fully taxing all of the gross returns on the saving, or including income that is saved in the tax base while fully exempting from tax all of the returns on the saving. The Bentsen-Roth IRA proposal combines both, giving the individual taxpayer the choice as to which approach better serves his or her needs. The exclusion from employees' taxable income of employers' contributions to retirement income plans conforms with the former approach to neutral tax treatment of saving. Limits on the amount of employees' income that may be saved in this way and excluded from taxable income are arbitrary and should be eased, if not eliminated.

Reduce the Marginal Tax Rate on Capital Gains

Neutral tax treatment of saving calls for the complete exclusion of capital gains from taxable income, given the fact that the saving invested in capital assets comes from after-tax income. Not only does taxing capital gains violate the neutrality criterion, it also distorts the signals cast up by the financial markets and impairs the efficiency with which these markets operate by immobilizing capital assets. As a first step toward neutrality in this respect, the rate at which capital gains are taxed should be significantly reduced. To prevent the effective rate from escalating thereafter, the basis of capital assets should be indexed by the inflation rate.

An alternative approach to moderating the tax bias against saving in this regard would be to provide rollover treatment for all capital gains, deferring the tax on realized gains to the extent they were reinvested in other eligible assets, reducing the basis of the new assets by the amount of the deferred (indexed) gain.

Improve Capital Recovery Provisions

Tax neutrality requires expensing of outlays for depreciable business property or, equivalently, multiple year deductions in such amounts that the present value of the deductions equals the amount of the costs incurred to acquire the property and put it into use. The ACRS provisions and the increase in the investment tax credit enacted in 1981 roughly approximated expensing for a wide variety of depreciable property. TEFRA in 1982 rolled back much of the benefits of the 1981 legislation, and TRA86 repealed the investment credit and further curtailed ACRS. Since 1981, the tax law has moved in the wrong direction with respect to production facilities.

As the Committee has heard on many occasions, the 1986 revisions of the capital recovery provisions raised the cost of capital, particularly for machinery and equipment. The occasion for reconsideration of capital recovery allowances, however, is far more substantial than the percentage increase in capital cost for any particular kind of depreciable property wrought by the TRA86 or the comparison of U.S. provisions with those of other countries. The issue isn't whether the cost of capital is higher in the United States than in other countries. The real concern should be that the cost of capital here is higher than it would be if the capital recovery provisions in the federal income tax conformed more closely with the neutrality standard. These provisions should be revised to conform more closely with the neutrality requirements presented above, no matter by how much doing so would reduce the cost of capital here or in comparison with that of businesses in other countries.

Although expensing may not be deemed to be feasible, in view of the current and prospective budgetary situation, the so-called "neutral cost recovery system" could provide tax treatment equivalent to expensing without significant revenue loss for many years. The neutral cost recovery system calls for writing off the cost of depreciable property over a period of years with annual deductions the present value of which equals the amount paid for acquiring the property and placing it in service. Any number of write-off patterns would be possible, subject to the constraint that the present value of the deductions equals the price paid for the property. The basis of the property each year would be adjusted for inflation to assure equality in constant dollars between the discounted value of the deductions and the cost of the property.

Short of this basic revision in the tax treatment of capital recovery, a useful first step would be provide a significant first-year deduction for capital outlays. Unlike the President's timid, time-constrained proposal, the deduction might be 100 percent of the first, say, $200,000 of capital outlays in the taxable year, plus, say, 10 percent of any additional outlays in the year. An alternative approach might be to maintain the present write-off schedules for depreciable property and to provide a significant additional deduction when the property is retired and replaced. Neither the additional first-year or terminal year deductions should be treated as a preference item for alternative minimum tax purposes.

Reduce the Alternative Minimum Tax

The alternative minimum tax on corporations, enacted as part of TRA86, is in effect a special additional excise on corporate business growth. In most cases, AMT is triggered by additions to the company's stock of depreciable assets, because the capital recovery allowances for ordinary tax purposes exceed those allowed for AMT purposes during the first several years after the property is acquired. The ordinary tax capital recovery allowances, as pointed out above, are a retreat from neutral tax treatment of investment in depreciable property; the AMT allowances are wholly arbitrary. Moreover, as many businesses have discovered during the economic slowdown and recession, AMT applies a double whammy: when profits and the resulting ordinary tax liability shrink, the AMT kicks in. A substantial number of companies realizing losses in the past few years have incurred substantial AMT liabilities, primarily because they had sought to add to their production capability before the recession hit them.

This anti-growth excise effect should at the least be moderated, by drastically reducing the AMT rate or by substantial modifications in the designation of preferences, particularly in the case of capital recovery allowances. It would be desirable, for example, to replace the AMT system of allowances by those used for ordinary tax purposes, so that significant capital outlays would no longer trigger the AMT's imposition.

Provide Expensing of Research, Experimentation, and Development Outlays

R, E, and D outlays differ from other capital outlays primarily with respect to the greater risk their undertaking involves. In the usual case, a substantial amount of such outlays result in no direct income-generating results. For this reason, requiring the write off of these outlays over some specified period of years is entirely arbitrary. For R, E, and D, as for investment in depreciable property, tax neutrality calls for expensing. While it may be feasible in the case of depreciable property to approximate expensing with extended period write offs, as suggested above, it is more difficult to do so in the case of R, E, and D. As a first step, therefore, some significant fraction of R, E, and D expenditures, say 50 percent, should be expensed.

Short of this, the present R and E credit should be made permanent and should apply to all R and E outlays, not merely to incremental expenditures, and not merely to outlays for so-called basic scientific research. The objective of the credit is to facilitate innovation in products and production processes and to implement these innovations. Distinctions between pure and applied research, experimentation, and development do not belong in the Internal Revenue Code and are not appropriately made by the Internal Revenue Service.

CONCLUSION

Beyond doubt, the agenda of tax revisions delineated above would result in a substantial reduction in federal tax revenues, whether measured by the conventional static revenue estimating techniques or by more realistic dynamic revenues estimating methods. Rather than viewing this revenue effect as a draw back or as limiting serious consideration of the proposals, the focus should be on the effects of the proposed tax changes on the performance of the U.S. economy. It is difficult, if not impossible, to make a case that the results would be anything but highly salutary.

One of the highly desirable results of the decrease in federal tax revenues that would result from implementation of this agenda would be the strong pressures that would be exerted for curtailing federal outlays. As I've stated above, federal spending programs themselves impair the economy's efficiency and erect barriers to effective competition by American businesses in the world marketplace. If nothing else were needed by federal policy makers to signal the need for the most rigorous reevaluation of federal spending, the mere fact that outlays will be 25 percent or more of GNP this year should ring alarm bells. Over the last several years, the fiscal policy has been to have revenues chase after spending. This is topsy-turvy fiscal policy. What is needed is the creation of a tax system that will least impair the efficiency and growth of our economy, and a budget policy that constrains spending to no more than that tax system generates in revenues. I respectfully urge the agenda presented above as a modest beginning effort to the attainment of that tax system.

STATEMENT OF THOMAS S. MOYNIHAN, C.P.A.

Thank you for the opportunity to submit this written recommendation for long-term growth and competitiveness of the United States' economy. I wrote an abbreviated recommendation for your last meeting but did not receive a reply. I am going to give you a "total package" this time.

The most important point is that the current U.S. tax system has outlived its usefulness. It is a far greater hindrance to economic growth than any other factor.

One way to correct this is by instituting a 20% VAT. This would penalize the foreign corporations that inflate their transfer price and make a mockery out of our tax system. If the foreign corporations adjust their price after implementation of the VAT, they would have to pay back taxes and penalties for fraud. The VAT should be levied on all goods (not services) except materials used to build a house. This would simplify the VAT rules significantly. Even food and medical supplies would be subject to the VAT.

Another way to correct our tax system is to place a two dollar per gallon tax on gasoline. It is pathetic that 5% of the world's population uses 25% of the world's oil. This tax would also help contain the explosive growth potential this plan has. Of course alternative, reusable energy sources would be developed more quickly.

The big offset to these revenue raisers would be that anyone making less than $ 50,000 (jointly filed) would not pay an income tax, hence, no income tax return would be filed unless the taxpayer had his/her own business. This would only be done for VAT/FICA purposes only. Everyone above $ 50,000 would pay a 25% flat income tax on their earned income only. Interest, dividends, capital gains, royalties, and rental income would not be taxed. This would significantly increase the amount of savings Americans would generate. This increased savings would cause increased consumption each year and, of course, increased tax revenue.

Why does a VAT promote such negative feelings from tax payers? That's because some politicians keep saying they will institute a VAT in addition to our income tax system. Some politicians even say a VAT is regressive. It is if you add it to our income tax system. It is just the opposite if you replace our income tax system with the VAT. Everyone from middle class down would have an incentive to increase their earnings. This would raise their standard of living, increase savings, increase consumption, and of course, increase federal revenues. In this plan a VAT is progressive, not regressive.

A 20% investment tax credit should be enacted to help spur investment in business assets. The revenue offset to this could be higher corporate taxes (I do not believe corporations should be taxed at all because domestic corporations pay their share plus the foreign corporations' share)—this would be open to discussion. This is an invest or pay plan.

The next move that should be made is the privatization of all public schools. Any governmental agency would not be able to bid on the schools. Tax credits for each student would be taken on the parent's state tax returns. This would save states money, improve our children's education, and give choice to the parents/student as to where the student attends.

The final move to make would be to put both the employee's and the employer's portion of the Social Security tax into the employee's Social Security Individual Retirement Account for 25 years. After 25 years, the employer would no longer make contributions. The employee's percentage would increase to 10% of his/her wages. Poor and rich alike would be able to accumulate small/large accounts' and provide more money and security than our Social Security system could ever provide. The employee and spouse would be taxed at a 50% rate for all withdrawals. This revenue would be used to pay the interest on the national debt. Once the revenue became larger than the interest, the interest, the debt, and the revenue should be taken off budget. At this point a thirty year payment plan should be implemented to pay off the national debt.

I do not have the resources available to calculate what the VAT rate, the flat tax rate, or the gasoline tax should actually be but the important item here as that the revenue to be raised should be the same amount as is currently collected. This way this plan is not anti-growth. The increase in revenue will come as our standard of living rises.

As for reducing expenditures, The Heritage Foundation's "A Lawmaker's Guide To Balancing the Federal Budget" is an excellent starting point for this. I do believe however, that once the economy starts growing significantly that the federal government should layoff a significant amount of its work force.

In summary, this plan helps simplify federal taxation, improves our education system, updates an old tax system, and eventually pays off the national debt. I don't think you've received too many of these proposals. I hope you give it serious consideration.

A significant factor to keep in mind is that the baby-boomers are reaching their peak earning years. The SSIRA idea would add hundreds of billions of dollars in savings quickly. No other vehicle currently exists that could/would pay off the national debt. An important concept with this idea is national savings deficit. This idea would create a huge national savings surplus.

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