

S. HRG. 108-456

**AN EXAMINATION OF U.S. TAX POLICY AND
ITS EFFECT ON THE DOMESTIC AND INTER-
NATIONAL COMPETITIVENESS OF U.S.-BASED
OPERATIONS**

HEARING

BEFORE THE

COMMITTEE ON FINANCE

UNITED STATES SENATE

ONE HUNDRED EIGHTH CONGRESS

FIRST SESSION

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JULY 8, 2003
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TUESDAY, JULY 8, 2003

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

The hearing was convened, pursuant to notice, at 10:05 a.m., in room 215, Dirksen Senate Office Building, Hon. Charles E. Grassley (chairman of the committee) presiding.

Also present: Senators Hatch, Lott, Baucus, and Bingaman.

**OPENING STATEMENT OF HON. CHARLES E. GRASSLEY, A U.S.
SENATOR FROM IOWA, CHAIRMAN, COMMITTEE ON FINANCE**

The CHAIRMAN. This is the first of two hearings we have on the issue of international competitiveness in U.S. tax policy. When we speak of international competitiveness, we usually think of international tax rules affecting foreign activities of U.S. companies.

However, there is another side to international competitiveness, and that is the concern of the ability of the United States-based businesses to compete in foreign markets and against foreign competitors here on U.S. soil.

Today's hearing is about the competitiveness of the U.S.-based businesses. Next Tuesday, we will hold a separate hearing on the competitiveness of U.S.-foreign activities.

Our review of international competitiveness has, in large part, been driven by the recent WTO ruling on the FSC/ETI tax regime. That regime in effect lowers the rate of income tax imposed on goods that are manufactured here in the United States and exported for sale in the foreign market.

The purpose of FSC/ETI was to allow U.S. manufacturers to compete with European manufacturers who do not pay EU value added taxes on their exports.

The WTO has ruled that FSC/ETI is an illegal export subsidy and has authorized the European Union to impose \$4 billion of sanctions against U.S. exports beginning next year. This morning, we will receive an update from the USTR on which products could be hit and when these sanctions could start.

We are faced with several choices, then. We can leave FSC/ETI in place and absorb the sanctions, but that would be devastating to the economy. Though I may not agree with every decision of the WTO, I think it is important that we continue to adhere to a rules-

based trading system. After all, if we want other nations to comply with WTO rulings that benefit us, it is only fitting to comply with rulings against us.

I believe that we should honor our WTO obligations, repeal FSC/ETI. But the next question is what to do with the \$50 billion of tax increases if we repeal it. Some have suggested that we use the proceeds to reform the international tax rules affecting foreign operations of U.S. companies. They claim that this is the best way to shore up the U.S. economy, grow U.S. jobs, and enhance international competitiveness.

But others have sounded a sober warning, that repealing FSC/ETI will be that \$50 billion tax increase on U.S. manufacturing and the U.S. jobs base at a time when manufacturing can least afford it. They believe the proceeds are better spent on tax relief here at home rather than abroad.

Proponents of international tax reform say that this claim is overstated, that FSC/ETI benefits very few companies and even fewer jobs, and that FSC/ETI is not significant in redressing the problems facing the U.S. manufacturing sector.

Now, these are opposing views, obviously. So the first panel in today's hearing will explore the problems facing American manufacturing, the significance of that sector to the overall economy, and what is happening to employment in the manufacturing sector.

We will then address what role, if any, the FSC/ETI regime plays in all of this, whether the regime should be replaced, and if so, what should replace it.

The second panel will focus on the ability of U.S.-based businesses to compete against foreign competition here on U.S. soil.

It is my privilege now to turn to my friend, Senator Baucus, our distinguished Ranking Member.

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

Senator BAUCUS. Thank you, Mr. Chairman. I deeply appreciate your remarks.

Today the Finance Committee hosts, as you said, the first of two scheduled hearings to consider the state of U.S. competitiveness at home and abroad. American companies face increasing international competition. They face it because the number of global competitors has increased, because we have increasingly opened our markets, and because technology increasingly renders our national borders irrelevant.

Competition is generally a good thing. We must ensure that we have policies in place so that the good does outweigh the bad.

Today's hearing will examine the domestic implications of our current international tax policy. We will look at the effects of that policy on the competitiveness of U.S.-based operations and we will look at the effect of that policy on investment in the U.S.

Last Thursday, the Bureau of Labor Statistics reported that unemployment jumped to 6.4 percent. For the first time in a decade, the number of Americans looking for work exceeded nine million people.

The manufacturing sector has been particularly hard hit. As this chart shows, the chart at my right, the unemployment rate in the

manufacturing sector, which used to be below the national average, has risen above the national average in this recession, shown by the orange line, which is the manufacturing sector.

Nationwide, millions of jobs have been lost. Since July of 2000, roughly two million jobs have disappeared from the Nation's economy. Once again, the decline has been even worse in the manufacturing sector. Since July of 2000, manufacturing employment has fallen by more than 2.6 million jobs.

More jobs have been lost in the manufacturing sector alone than in all of the sectors of the economy combined, as some sectors have actually produced new jobs in the same period.

This is an important point. Namely, if manufacturing jobs had held even, there would be a net increase in the number of jobs. It is just the decline in the manufacturing sector which has caused the net decline to be so great.

The Nation lost 56,000 manufacturing jobs last month alone. As the next chart shows, manufacturing jobs have declined continuously in each of the last 35 months.

As the next chart shows, the decline in manufacturing has been widespread. Every State in the Union, except for Nevada, has lost manufacturing jobs. That is, 49 out of 50 States have lost manufacturing jobs.

We need to do something about this. I might also add that in my State of Montana, also, manufacturing jobs, which is about 25 percent of our State's economy, has also experienced a significant decline in the number of jobs.

The loss of these jobs has nothing to do with America's work ethic. Our economy is made up of the hardest-working, most dedicated workers anywhere. Our Nation's firms have experienced historic sharp declines in manufacturing jobs due in part to increasing global competition and other related pressures on U.S. manufacturing.

These include non-tariff barriers and unfair trade practices. I might at this point note that the average U.S. tariff on manufactured goods coming into the United States is about 2 percent, whereas a tariff on our manufactured goods going to other countries can range from 15, 20, 30, to 40 percent. So, our country's tariff is much lower than other countries' tariffs on similar goods.

I might also add that other countries manipulate, I believe, their currency, forcing their currencies low, and our relatively higher dollar. I will not name countries which I suspect do this, but that is part of the problem here today. However, that does not obviate the need for our action today.

U.S. manufacturing jobs are especially important to the U.S. economy. That is because manufacturing jobs create jobs in supporting industries and other sectors, and manufacturing is one of the highest job creation multiplier effects. Every 16 million manufacturing jobs create another 9 million jobs in retail, wholesale, finance, and other sectors.

The recent steep job losses in the manufacturing sector, thus, affects the entire U.S. economy through reduced purchasing power, through decreased consumption, and through a shrinking tax base. So far, the U.S. Government has not done enough. This hearing today will be a good first step.

Another purpose for our meeting today is to fashion a response to an international tax case that the U.S. lost in the WTO. In a dispute brought by the EU, the WTO found that Foreign Sales Corporation and Extraterritorial Income Act, otherwise known as ETI, were impermissible export subsidy programs. It also found that FSC/ETI did not qualify under an exception to the subsidy rules for provisions to avoid double taxation of the same income.

As a result, the WTO has authorized over \$4 billion in sanctions against U.S. exporters. The EU threatened to impose these sanctions on January 1 of next year if we have not made significant process in complying with the WTO's ruling by the fall.

I am disappointed with this issue at many levels. I am quite disappointed that the EU ever brought this case. The GATT Commission earlier ruled that our regime was permissible. The EU bringing this case thereby violates our long-term agreement with the EU on our respective tax systems.

We had an agreement. They just willy-nilly, peremptorily, withdrew and changed their minds and brought this action. I think that is highly unfair, it is wrong, and frankly I am very disappointed that the U.S. Government has not fought that issue on the same basis, that is, the WTO.

I am very disappointed that the EU has, nevertheless, pressed the case as aggressively as it has. I believe this issue has contributed to the general souring of our usually close relationship with the EU and undermines support for the WTO in the United States. I do not want to understate that. I think that it has begun to undermine U.S. support for the WTO.

I am also disappointed with the administration, which has wholly ignored its obligations under the Trade Act of 2002. That Act required the administration to work to resolve this issue through WTO negotiations. As far as I am aware, the administration has done nothing on this score.

Instead, the administration chose to acquiesce, to bow to the EU, to seek repeal of the FSC/ETI and other changes in the Tax Code. Well, I think that is the wrong choice. It is clearly the wrong choice. We are past that point and we now are at the point where we have to debate the merits of the current strategy that we have drafted in U.S. tax law.

But if we are going to repeal FSC/ETI, we should make sure that we replace it with a worthy substitute. While examining alternatives, it is important to consider their effects on the U.S. economy in general, and in the manufacturing sector in particular.

Our proposed replacement legislation should partially offset the loss of tax benefits to U.S. exporting companies once FSC/ETI is repealed. But it should also provide benefit to all domestic manufacturers. This could provide a needed boost for the U.S. manufacturing firms.

A suitable replacement to FSC/ETI would satisfy the rules of international tax law, while seeking to maintain the health of the U.S. manufacturing base. What we need now is to choose the best plan for moving forward. To that end, I suggest a few guiding principles.

First, the EU is not required to impose the sanctions authorized by the WTO. Retaliation would hurt EU companies as much, if not

more, than U.S. companies and it would decidedly be unhelpful in bringing about a long-term solution. The only way to resolve this matter once and for all is by working toward a solution, not playing tit for tat.

The second principle to guide us through this matter, is do no harm. In replacing FSC/ETI, we should seek to create incentives for U.S. companies to retain their domestic operations.

This may sound obvious, but needs to be said because there are proposals under discussion that would do harm, and I believe there are workable options with far less drastic consequences. Those are the options that we should pursue.

By offering tax and financial incentives to U.S. manufacturing firms, we seek to neutralize the tax advantage that other countries have. Thus, we hope to allow U.S. manufacturers to provide their product at a competitive price and to keep jobs here in the U.S.

Finally, we must recognize that, whatever the solution to FSC/ETI, it needs to be done now. The EU has been authorized to impose sanctions at any time and is carefully watching what we do.

We must work together to create a new set of rules to replace the current system. Those rules should contain effective transition relief, perhaps along the lines of the transition relief that the United States afforded the EU in the bananas case.

We will need to confer with the EU on that end, but the EU should well understand that businesses will need some time to adjust to the new rules, and our agreement with the EU on that score will reassure businesses on both sides of the Atlantic. So, let us begin to do something to help our Nation's manufacturing sector.

Thank you, Mr. Chairman, for holding this hearing. I look forward to working with you in finding that resolution.

The CHAIRMAN. I want to compliment you on a very comprehensive statement.

Senator Hatch? I would call on Senator Bingaman, but I have been informed you did not want to make an opening statement.

Senator BINGAMAN. If I could just hear the witnesses, Mr. Chairman.

**OPENING STATEMENT OF HON. ORRIN G. HATCH, A. U.S.
SENATOR FROM UTAH**

Senator HATCH. Well, thank you, Mr. Chairman. I want to thank you for holding this hearing today. I am glad that we are here to learn more about the problems of American manufacturers. I am pleased that we are opening up the debate here on what we can do to increase the productivity, increase the wages for U.S. workers.

We have the most productive workers in the world. I hope that as we move forward with the phase-out of FSC/ETI, we keep our eyes on the real prize, and that is higher wages, more productivity, and better jobs for our citizens.

I believe the tax incentives for capital formation and for research, permanent incentives, are part of that solution. I hope that we can finally pass the kind of international tax reform provisions that Senator Baucus and I have worked on together over the years, reforms that, in our opinion, are sorely needed.

When U.S. companies try to sell their products and services overseas, they run into unnecessary tax impediments right from the start. Some of our big companies can invest millions of dollars for tax experts and tax planning to solve some of these problems, but for our small- and medium-sized companies and businesses, this hurdle is just too high.

And while Congress can stop corporate inversions to Bermuda, we cannot stop companies from just starting up in places like Germany or Ireland in the first place.

So we need a competitive Tax Code, a Tax Code that encourages entrepreneurs to establish companies right here in the United States. I hope that the testimony that we hear today will help point us in the right direction for corporate tax reform and more U.S. jobs.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Hatch.

It is first necessary for us to receive a status report on FSC/ETI from the U.S. Trade Representative's office. We have John Veroneau here who is going to present that status report. We would have you go first, then there might be a question or two of you before we go to the panel.

So would you proceed, Mr. Veroneau?

**STATEMENT OF JOHN VERONEAU, GENERAL COUNSEL,
OFFICE OF THE U.S. TRADE REPRESENTATIVE**

Mr. VERONEAU. Yes. Thank you, Mr. Chairman. Thank you for your leadership in calling this hearing today. I was asked to provide a quick update, as you mentioned, Mr. Chairman, before the hearing begins on the status of the case.

Also, let me say I appreciate your leadership and Senator Baucus' commitment to find a bipartisan solution to this FSC/ETI problem.

The FSC/ETI dispute has been with us for about three decades, going back to 1971 when the precursor to FSC was introduced into the Tax Code. The current dispute dates back to November of 1997, when the EU sought consultations and initiated a WTO proceeding against FSC in the WTO.

The EU claimed that this was a prohibited export subsidy. Unfortunately, consultations regarding this matter were not successful in finding a resolution. They sought a panel. A panel was empaneled, and the panel ruled that FSC, indeed, was an unfair and prohibited export subsidy.

In 2000, after appeals were exhausted and the appellate body upheld the panel decision, there was a commitment by the administration to comply with the ruling and the administration, working with Congress, developed ETI as a follow-on to FSC.

Unfortunately, the EU challenged the ETI fix as well and successfully challenged it before a panel. The panel ruled that it, too, was a prohibited export subsidy and an appellate body found affirmed the essential findings of that panel.

The EU then sought to retaliate against us in a certain amount, and that amount was ultimately determined by an arbitration panel, which found that the EU was authorized to retaliate in the amount of \$4 billion.

Earlier this year in April, the EU published a final list of the \$4 billion worth of U.S. exports that it would seek to retaliate against absent U.S. efforts to comply with this case.

I am not here, Mr. Chairman, to do the EU's bidding on this matter. In an ideal world, we would have lots of time to address this issue. But I am obviously obliged to provide my candid assessment to this committee as to the prospects for retaliation, and I would refer to the EU Trade Commissioner's statement in May as the best evidence that they are glad to hold off on retaliating in the short term in the hopes that we will comply with this ruling.

But I suspect that, by the end of this session, if we have not demonstrated serious progress in passing legislation to replace FSC/ETI, I think next January we face a very high likelihood of retaliation.

There are internal pressures within the EU to hold off on retaliation. It hurts consumers. Retaliation always has a certain amount of self-inflicted wounds associated with it, as we find ourselves.

But I think those internal pressures to stave off retaliation will be overcome if, by the end of the year, it is deemed that the U.S. Government, both the legislative branch and the executive branch, are not committed to enacting a replacement to FSC/ETI.

The CHAIRMAN. Thank you.

Senator Baucus?

Senator BAUCUS. Thank you, Mr. Chairman.

Mr. Veroneau, you heard my displeasure with the administration's failure to try to seek a WTO solution here. I am not going to go into that in any great length. The die is cast.

Mr. VERONEAU. Could I respond to that, Senator?

Senator BAUCUS. Yes.

Mr. VERONEAU. The phase that we are in in the Doha negotiations, different issues are at different phases. In the rules negotiation, we are at the issue identification phase. That was all that was determined to be concluded before the Cancun ministerial in September.

We have, in fact, identified this. In March of this year, we identified this issue, FSC/ETI, as an issue that the United States intends to pursue in these discussions. So, we have done, in my estimation, Senator, all that we could be doing at this point in time, given that the phase that we are in in the rules negotiation is simply issue identification.

Rules, as you know, is an area where we are playing more defense than offense, since this is the area affecting our trade remedy laws. So, we have not been anxious to press ahead in a rules negotiation since we are playing defense 99 percent of the time.

But we have identified FSC/ETI as an issue that we expect to address if and when the rules negotiations broaden. But we are, frankly, playing mostly defense in that area.

Senator BAUCUS. Well, frankly, that is news to me. I am almost astounded to hear what you just said. Because when I pressed the administration, particularly the USTR's office on this issue, I get nothing back. I get no indications that this issue will be pressed at all. This is the first time I have heard this.

Now, that is good news to hear this now. Does that mean if the U.S. prevails we will not need this replacement tax legislation?

Mr. VERONEAU. Senator, I think Ambassador Zoellick, at several meetings, has noted that we would identify this issue as part of those rules negotiations, but that does not change the fact that there is a timing problem.

Addressing FSC/ETI and its predecessors has been a negotiating objective for both the Tokyo Round, the Uruguay Round, and now the Doha Round. If past is prologue, we have not been successful in securing a change in this.

Senator BAUCUS. How high a priority is this with the administration at the WTO level?

Mr. VERONEAU. How high is FSC/ETI?

Senator BAUCUS. Is it at the top of the list or is it at the bottom of the list and just window dressing, just a talking point?

Mr. VERONEAU. It is not window dressing, Senator, but it is in the rules context. As a proponent of the Dayton-Craig amendment, I suspect you would agree that our primary goal in the rules negotiation should be to defend our trade remedy laws. If that is our primary goal, then there are limits to how much we can expect as demanders in the FSC/ETI context.

Senator BAUCUS. Well, I am very heartened to hear that it is high on the list, if I hear you correctly. Is that correct, it is high on the list?

Mr. VERONEAU. It is on the list.

Senator BAUCUS. It is not high?

Mr. VERONEAU. Well, what is high is the trade remedy. I think you would agree that preserving our trade remedy laws is probably a higher priority than securing a FSC/ETI change.

Senator BAUCUS. I do not agree with that.

Mr. VERONEAU. All right.

Senator BAUCUS. I do not, because as you well know, we had an agreement with the GATT council that our regime was clearly consistent with WTO rules. They just totally reneged unilaterally.

Mr. VERONEAU. I was not there for the birth of that. I would just say, Senator, that I think that the facts—

Senator BAUCUS. You do not have to be there at the birth. That is what happened.

Mr. VERONEAU. I think those are facts that seem to be in some dispute as to the extent of that agreement in 1981.

The other problem I should note, though, is there is a timing issue. I think if we were to announce today that we were abandoning efforts to comply with FSC/ETI legislatively and that we were seeking to address this solely through the Doha negotiations, I think we would be inviting retaliation, Senator, because there is a timing problem. When the Doha negotiations come to a conclusion is unclear.

Senator BAUCUS. Well, I am here to stiffen your spine and stiffen the spine of our USTR so that they proceed vigorously, as you have indicated that it has now on the list. I would just encourage you to raise it higher on the list, give it higher priority to address, while we in the meantime are also addressing replacement legislation.

Mr. VERONEAU. It is on the list, Senator.

Senator BAUCUS. On the list.

Mr. VERONEAU. It is on the list. I just want to be candid with you, though, that we do not foresee the ability to negotiate this as a way to stave off retaliation. Retaliation has been staved off heretofore because of a belief in the EC, in the EU, that this administration and this Congress are committed to finding—

Senator BAUCUS. Do you not think it would be better if we did have a WTO solution where we would not have to pass legislation which kowtows to the Europeans?

Mr. VERONEAU. In every negotiation there are trade-offs. We would presumably have to trade something for this fix.

Senator BAUCUS. That applies to everything else at the WTO, not just this issue.

Mr. VERONEAU. That is right, sir. So at some point in the negotiations there would be a question of, within the rules context, for instance, or maybe outside the rules context, what would we trade away for this.

Senator BAUCUS. Well, I am just re-expressing my disappointment with the administration for not being more vigorous about this. I am heartened to hear you say it is on the list. That was never told to me before. That is the first I have heard this.

Whenever I talked specifically with Ambassador Zoellick, he kind of pooh-poohs it, pushes it off to the side, as has the administration at other levels. But I am heartened to hear that now it is on the list. That is progress.

Mr. VERONEAU. I think, Senator, Ambassador Zoellick has noted that this is part of the issue identification, but that is the only stage we are at at this point.

The CHAIRMAN. All right. Senator Hatch?

Senator HATCH. Mr. Veroneau, in your opinion, how would the EU view legislation that provides a generous phase-out of FSC/ETI, say, over a 3- or 4-year period? Would such a phase-out trigger retaliation?

Mr. VERONEAU. That is an excellent question, Senator. As I said, I am in sort of a difficult bind here. I am not here to do the EU's bidding. I would like to have maximum flexibility.

I would say this. I think there is certainly an understanding that tax laws, especially tax laws of this complexity, always entail phase-outs. So, they will certainly be, and have to be, a phase-out, and Ambassador Zoellick has pressed that, and will press that vigorously with his counterpart, Commissioner Lemeigh. There were some statements earlier this year out of the Commission with regard to a House bill that provides for a five-, 6-year phase-out.

There was some suggestion that that would be, frankly, a bridge too far. So, I think there is certainly an understanding that a one- or 2-year phase-out is a normal tax legislative aspect. Beyond that, it becomes a little more cloudy, frankly, as to what would trigger retaliation and what would not.

But I assure you that Ambassador Zoellick intends to pressure very vigorously, understanding that this is complex legislation and will require an appropriate phase-out period.

Senator HATCH. Thank you.

Thanks, Mr. Chairman.

The CHAIRMAN. Senator Bingaman, do you have a question of Mr. Veroneau?

Senator BINGAMAN. No.

The CHAIRMAN. All right.

Senator BAUCUS. Mr. Chairman, might I just follow up briefly on the excellent question raised by Senator Hatch?

The CHAIRMAN. Yes.

Senator BAUCUS. There was a 5-year phase-out period in the bananas case. Whenever I raised this with Ambassador Lemeigh, I get the response, well, the U.S. is already at 2 years' sanctions, whereas this is not the case here with FSC/ETI. That is a distinction without a difference. I urge the administration—in fact, I ask you now, will you commit to trying to get, say, a five-year transition period?

Mr. VERONEAU. Ambassador Zoellick will vigorously advocate for the legislative solution that Congress devises. I cannot speak obviously for how the EU will respond, but I can assure you—

Senator BAUCUS. I am not asking how the EU responds. I am asking what you are going to press for.

Mr. VERONEAU. We will press for the legislative package that Congress passes and the President enacts. That is what Ambassador Zoellick will advocate for.

Senator BAUCUS. Do you personally think a 5-year phase-out is reasonable, needed, necessary?

Mr. VERONEAU. I am not a tax expert, Senator.

Senator BAUCUS. But you are a negotiator.

Mr. VERONEAU. Yes.

Senator BAUCUS. You are an American. You can negotiate for us.

Mr. VERONEAU. My candid sense, Senator, is that a one- or 2-year phase out is fully expected. There was a little bit of heartburn expressed earlier this year with regard to the 5-year phase-out of the House bill.

Senator BAUCUS. Europe got 5 years on bananas. Why can we not get 5 years?

Mr. VERONEAU. I cannot sit here and say that we cannot. My crystal ball is cloudy beyond 2 years, Senator, as to what would trigger and what would not trigger.

Senator BAUCUS. I just want to stiffen your spine, Mr. Veroneau. Be tough. Be an American. Fight for us.

Mr. VERONEAU. I am all for being tough and being American. Ambassador Zoellick will fight for and defend the legislative package that emerges from Congress.

Senator BAUCUS. Good. Glad to hear it. Glad to hear it. Thank you.

The CHAIRMAN. Thank you, Mr. Veroneau.

We are now fortunate to have at the table for testimony Dr. Robert E. Hall, Senior Fellow, Hoover Institute, Professor of Economics at Stanford, and chairman of the prestigious National Bureau of Economic Research, and Ms. Kathryn Kobe, chief economist and executive vice president, Joel Popkin Company, and former chairperson of the National Economics Club. Ms. Kobe has extensive experience in industrial economic analyses and is co-author of *Securing America's Future: The Case For A Strong Manufacturing Base*.

These two witnesses will provide us with an overview of the current economy, manufacturing's significance to the overall economy, and the challenges facing American manufacturing today.

Then we have Ms. Thea Lee, chief international economist, AFL-CIO. Ms. Lee will provide additional insights on the manufacturing economy, and specifically the impact of repealing FSC/ETI on manufacturing employment.

We are also fortunate to have with us executives of two global U.S. companies that have both U.S. as well as foreign manufacturing plants: James Berges, president of Emerson Electric, with 135 U.S. plants, including one in my home State at Marshalltown, Iowa, and 185 plants in Europe, Asia, and Latin America; and Mr. Bill Barrett, vice president of Applied Materials, a global semiconductor manufacturer based in Silicon Valley.

These last two will provide their insights on the state of the manufacturing sector, the factors that they consider in selecting a business activity location, and the effects of FSC/ETI repeal on those decisions.

I think we will start with you, Dr. Hall.

**STATEMENT OF ROBERT HALL, HOOVER INSTITUTION,
STANFORD UNIVERSITY, STANFORD, CALIFORNIA**

Dr. HALL. Thank you, Mr. Chairman.

My testimony is on understanding the evolution of U.S. manufacturing. Much of the story appears in Figure 1, which is on the second page of the printed testimony, which shows what has happened to the output of U.S. manufacturing.

The people who feel that there is a crisis in manufacturing have a problem with this figure because what it shows is that manufacturing output in the United States—these are products produced in the U.S.—has been growing rapidly, in fact more rapidly than other sectors of the economy in terms of the volume of output. That was particularly true in the 1990's.

What is also important, however, is that the U.S. economy entered a recession in early 2001 and recessions differentially affect manufacturing. As you can see in this figure, the decline in manufacturing output was about typical for a recession.

So, in other words, the overall health of manufacturing in terms of output is a very strong upward trend of products produced in the United States interrupted by a recession of about typical magnitude.

Now, a different perspective on manufacturing is shown in Figure 2, which shows the value of manufactured output as a fraction of total output. That fraction has declined substantially, but the reason it has declined is very simple. That is, that products produced in the United States have become exceptionally cheap, so we have very rapid growth of output, but a declining value of that output. That is because productivity growth has been so exceptionally rapid in manufacturing.

So then, turning to Figure 3, which documents the growth of these—

Senator BINGAMAN. Mr. Chairman? Where are these figures? I do not have that in front of me.

Senator BAUCUS. They are in his testimony. They are in his testimony.

Dr. HALL. Senator Bingaman, I have another copy here.

Senator BINGAMAN. Thank you.

Dr. HALL. All right.

Figure 3 on page 4 shows productivity. Productivity growth not only is most rapid in manufacturing compared to any other sector in the U.S. economy, but its growth has accelerated in recent years.

So, the performance of U.S. manufacturing on a trend basis has been truly exceptional. The health of this sector is outstanding, except for the significant effects of the recession that began at the beginning of 2001.

Now, because productivity growth has been rapid, Figure 4 shows the total amount of work that goes into manufacturing. This is the number of workers multiplied by the number of hours that each worker works, so it is an overall index. You can see that there is no trend there.

The manufacturing sector takes about the same amount of resources from our workers as it ever has, but once again you see a recession. That recession, again, in terms of hours of work, is about typical of the other recessions that are shown in that figure.

Now, another important fact about manufacturing and about produced goods in the United States is that there has been a big shift in the pattern of world trade, which is documented in Figure 5 on page 6, in which we get a larger and larger share of our manufactured products from other countries.

You can see that, prior to about the mid-1970's, the U.S. actually supplied more produced goods to the rest of the world than it absorbed from them. That changed rapidly, and all the more so, in the 1990's.

So, the 1990's were an interesting period when the output of our own products increased, yet in addition we are absorbing a large amount of imported products from other countries.

The reasons for that are well-known. The U.S. economy now buys many standardized, mass-produced products from the rest of the world and we supply the rest of the world, in exchange, with two things. One, is the specialized, high-tech products that we produce, and we borrow from them.

The U.S. has by far the best investment opportunities of any country in the world, and the result is that the rest of the world invests in us. So we get these products, in part, in exchange for the investments that the rest of the world makes.

Now let me turn to the current state of manufacturing. Figure 6 on page 7 of the written testimony gives a picture of what has happened in terms of employment in various manufacturing industries. This pretty much tells the story of this recession.

This recession was concentrated in capital goods. The two large industries that show the biggest decline there, and they are substantial declines, are machinery and computers. So, those are capital goods.

Also, the collapse of computer spending, which of course reached a very high level prior to the beginning of the recession at the beginning of 2001 has declined, and with that, the production of machinery. Other products, especially food, you can see that the employment has actually declined very little.

Finally, one industry, a small industry, what remains of it in the U.S., the apparel industry, of course, has been very severely af-

fectured during this period by the specialization of other countries, especially China, in producing mass-produced apparel.

So this reflects the various trends that I have talked about, together with the special factor of the recession. Let me just say that this collapse, this decline, is small in comparison to others that have occurred. So, let me conclude at that point since I have used up my time.

Thank you, Mr. Chairman.

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

The CHAIRMAN. Ms. Kobe?

STATEMENT OF KATHRYN KOBE, VICE PRESIDENT, JOEL POPKIN AND COMPANY, WASHINGTON, DC

Ms. KOBE. Thank you. My name is Kathryn Kobe. I am the chief economist at Joel Popkin and Company. I thank you, Mr. Chairman and Senator Baucus, for inviting me here today.

Generally, manufacturing, if you think of health of an economy as how many jobs it can create, is not very healthy. Manufacturing jobs have declined since the beginning of the recession by 2.2 million. Of the 3.1 million jobs that have been lost in the private sector, that is 70 percent of them.

However, even before the beginning, or the official beginning of this recession, manufacturing lost about half a million jobs between the middle of 1998 and the beginning of 2001. Currently, the number of manufacturing jobs is slightly below their levels in the 1961 recession.

Now, as Dr. Hall has mentioned, manufacturing has produced stellar gains in productivity, and one does expect to see relatively slow growth in employment when you see those kinds of gains in productivity.

But if market share is an important measure, market share for manufacturing, as far as its share of nominal GDP, has been slipping. It was producing about 20 percent of GDP in the early 1980's. By the early 1990's, that was down to about 17.5 percent.

It stayed pretty constant through most of the mid-1990's, but has now slipped again and the most recent data we have is 2001. It was 14 percent at that point. We anticipate that that share would slip further.

The question arises, is this cycle different from other recessions? We would say that it probably is looking somewhat different than other recessions have. For one thing, the recovery is not coming about the way past recoveries have been.

If you start looking at the recovery from the trough of the recession and track what manufacturing output looks like, you see that in the 1960's, 1970's, and 1980's, after about 17 months, manufacturing output had gained over 20 percent.

After the 1990 recession, it was much slower. As you will remember, that was called the "jobless recovery." But after 17, 18 months, output was up 7 or 8 percent. So far, it has been about a year and a half since the end of 2001. We do not have the official trough date for this recession, but that is the low point for the manufacturing IP.

However, it basically has not grown since then. It is up half a percent since then. Consequently, it is looking much worse than in

the past recoveries for manufacturing and we do not really see signs that this is starting to turn around.

Part of the question that was asked of me is, what is lost if we lose manufacturing from the U.S. economy? We think we would lose quite a bit. As Senator Baucus pointed out in his presentation, manufacturing does have a very high multiplier. It has got a lot of linkages in the U.S. economy.

Consequently, increased demand for manufactured goods causes increased demand for other parts of the economy. That is much more so than in any of the major service-producing sectors. It has also got a lot of links to the rest of the world. Manufacturing is the largest exporter to the world. Manufactured goods count for about three-quarters of all of the U.S. exports.

Through most of the past two decades, manufacturing has maintained a pretty constant percentage of manufactured exports in the world. It has been between about 12 and 13.5 percent, and that is through 2001.

However, in 2002, we did see an increase in total manufactured exports in the world, but U.S.-manufactured exports declined at that point. Consequently, the U.S. share of manufactured exports did show a bit of a decline, and its share dropped to about 11 percent.

Manufacturing has provided well-paying jobs and benefits to its workers. On average in 2001, salaries and benefits averaged about \$54,000 for manufacturing workers. That compares to \$45,600 for the average private, non-farm sector overall.

Manufacturing offers job opportunities across the educational spectrum. It has employed more than its share of workers with less than a college degree, but it also employs a relatively large percentage of college-trained employees as well.

In 2000, manufacturing had on its payroll 16 percent of the workforce without a college degree, and is the second-largest employer of that group in the country.

The first-largest employer of that group would be retail trade. There is a significant difference between the levels of wages paid in manufacturing in those paid in retail trade.

In fact, when manufacturing jobs are lost and those workers find other jobs, you find that they take a loss in pay at that point, in most cases.

But most importantly, manufacturing is a major force in inventing the future. They are the primary investors in R&D. They have produced and paid for probably 60 percent of the R&D in the economy over the past 20 years. The private sector still is producing about 60 percent of the R&D.

I will not go into how this innovation process is tremendously beneficial to the U.S. That is covered in our paper. But we think that would be a tremendous loss to the U.S. and would tend to make the U.S.'s growth rate slow from the growth rates we have enjoyed in the recent past.

I will bring my comments to a close at this point.

The CHAIRMAN. Thank you.

[The prepared statement of Ms. Kobe appears in the appendix.]

The CHAIRMAN. Ms. Lee?

**STATEMENT OF THEA LEE, CHIEF INTERNATIONAL
ECONOMIST, AFL-CIO, WASHINGTON, DC**

Ms. LEE. Thank you very much, Mr. Chairman, Senator Baucus, members of the committee. I appreciate the opportunity to testify today on behalf of the 13 million working men and women of the AFL-CIO, and the unions of the Industrial Union Council on the issue of U.S. tax policy and the state of American manufacturing.

We believe this hearing is timely, for several reasons. First, with 56,000 more manufacturing jobs lost last month, the 35th straight month of industrial job loss, it is clear the crisis in this sector is deep, prolonged, and requires immediate attention.

Second, the Senate will have an opportunity, through its debate on a replacement for the FSC/ETI, to boost manufacturing in the United States, while also bringing our Tax Code into compliance with WTO rulings.

My testimony will focus on four key points: the dimensions of the crisis in manufacturing, the arguments in favor of a manufacturing tax benefit to replace the FSC/ETI, critique of an alternative plan put forward by some in Congress to replace FSC/ETI with primarily offshore tax breaks, and the need to address the manufacturing crisis in a comprehensive way, including through health care reform and reform of our flawed trade policies.

Last Thursday, we learned that another 56,000 manufacturing workers lost their jobs in June alone. That was the 35th straight month of lost manufacturing jobs, the longest such stretch since the Great Depression.

This brings the total to 2.6 million manufacturing jobs lost since July of 2000. Manufacturing jobs made up more than 90 percent of the total U.S. job loss since March of 2001.

As this chart, which is included in my testimony, shows nearly every State in the Nation has suffered heavy manufacturing job loss, as Senator Baucus also said earlier.

Unless these trends are reversed, America's working families and the Nation's economy will continue to suffer serious and long-term damage. Manufacturing historically has been a major generator of good, high-skilled, well-paid jobs with strong linkages to jobs in non-manufacturing sectors, and it remains the mainstay of local and State economies throughout the Nation.

Because productivity growth, and therefore the potential for non-inflationary wage gains, has traditionally been greater in manufacturing than in services, the decline in manufacturing affects not only workers in manufacturing, but also contributes to the stagnation of all workers' wages.

Moreover, the massive scale of manufacturing plant closings and job layoffs is contributing directly to the serious fiscal crisis afflicting virtually every State in the Nation.

The current debate on FSC/ETI repeal gives Congress a crucial opportunity to help U.S.-based manufacturing by reorienting tax policy to help, rather than harm, this important sector.

Replacing FSC/ETI with incentives to create and support U.S.-based manufacturing jobs is vital for the health of the industry and our entire economy.

We believe that H.R. 1769, the Crane-Rangel-Manzullo-Levin bill, will help boost U.S.-based manufacturing, which is why the

AFL-CIO is strongly supporting it. We look forward to working with a broad, bipartisan coalition in both the House and the Senate to build support for that bill.

We are delighted to be here today on the panel with American manufacturers who share our objective of protecting and strengthening U.S.-based production.

Representative Bill Thomas, last year, put forward a proposal to repeal the FSC/ETI and replace it with a collection of corporate tax cuts, most of which would mainly benefit companies with overseas production facilities. We urge the Senate to reject that approach.

The Thomas proposal, quite simply, would ship more manufacturing jobs abroad. According to the New York Times, even supporters of the Thomas bill admit it would encourage American companies to invest and create jobs overseas.

This approach is entirely unnecessary and unacceptable, and goes in the wrong direction. It is bad enough that the bureaucrats at the WTO are requiring changes in our tax system, but it is even worse that some in Congress would respond to this challenge by making domestic manufacturing less competitive.

The Thomas approach, though it has not yet been formally reintroduced this year, appears to define enhancing American competitiveness as boosting the profitability of multinational corporations to produce anywhere they choose, so long as they keep an American mailbox. We strongly encourage the Senate to reject it.

Our existing tax system, through Foreign Profit Tax Deferral, the Foreign Tax Credit, and other provisions already places American-based manufacturers at a terrible disadvantage compared to multinational firms that generate most production offshore. These other tax policies also urgently need to be fixed.

The manufacturing tax benefit, taken alone, will have only a small effect on enhancing the competitiveness of U.S. manufacturing. It will improve our tax policy, but AFL-CIO believes Congress should make other significant policy changes as well.

As Senator Hatch said, America's manufacturing workers are the most productive in the world, but they operate under enormous competitive disadvantages resulting from several factors in addition to tax policy, such as unfair trade agreements, an over-valued dollar and foreign currency manipulation, as Senator Baucus said, inadequate investment incentives, health care costs not borne by overseas producers, and foreign government subsidies.

Unless these problems are addressed soon, American manufacturing capacity and jobs may end up permanently lagging and our economic strength may be permanently weakened. U.S. productivity and wage gains have been largely driven by the performance of our manufacturing sector, as Ms. Kobe said earlier.

We urge the Congress to start with passing a manufacturing tax benefit, but to make that only the first step of a more comprehensive effort.

Thank you very much for your attention.

The CHAIRMAN. Thank you, Ms. Lee.

[The prepared statement of Ms. Lee appears in the appendix.]

The CHAIRMAN. Now, Mr. Berges, then Mr. Barrett.

**STATEMENT OF JAMES BERGES, PRESIDENT, EMERSON
ELECTRIC, ST. LOUIS, MISSOURI**

Mr. BERGES. Thank you, Mr. Chairman, Senator Baucus, members of the committee. Good morning.

I am Jim Berges, president of Emerson. We are a \$14 billion global company headquartered in St. Louis, Missouri. Our annual revenues are 55 percent in the U.S. and 45 percent international.

We have 320 manufacturing facilities worldwide, with 135 of those in the United States. We employ over 100,000; 45,000 in the United States.

I would like to make a few simple points in my limited time this morning. First of all, as we have already heard, manufacturing in the United States has taken a body slam in the last 3 years due to the global economic downturn, sharply diminished capital spending, global over-capacity, and declining prices.

At Emerson, tragically, we have had to close 45 plants in the United States and eliminate 15,000 jobs during this time just to stay globally competitive in many of our markets. These plants and jobs, contrary to Dr. Hall's testimony, will not come back if and when the economy recovers. They are gone.

I can tell you that no plant closure decision is taken lightly by our management. It is extremely painful to lay off people who have devoted their lives to manufacturing and to leave communities that we have been part of for so many years. Frankly, I am more than sick of it.

At a time when manufacturing is in crisis, repeal of FSC/ETI, without some back fill for manufacturers in the United States, is like kicking a dog when he is down. Such a policy choice by Congress will impose a \$5 billion per year tax increase on the domestic manufacturing sector and provide one more disincentive, among many already, not to manufacture in the U.S.

Let me give you one example. At Emerson's Fisher Controls facility in Marshalltown, Iowa, we employ over 1,000 highly-skilled machinists and others involved in the production, sales, and marketing of industrial control valves for the oil and gas industry.

Forty percent of the production from this plant is exported. The FSC/ETI provides a \$4.4 million per year incentive to keep those jobs in Marshalltown. Emerson is the direct beneficiary of the FSC/ETI tax exclusion, but the benefits flow down to all of our domestic suppliers and to untold service industries in and around Marshalltown.

If FSC/ETI is repealed and no domestic manufacturing incentive is provided as a replacement, the Marshalltown facility will have to make up for the FSC benefits with cost cuts of over \$7 million to have the same after-tax earnings as before with the FSC benefit. This will likely mean lost jobs in Marshalltown.

Our view is that Congress should fashion a WTO-legal incentive for good public policy reasons, creating and maintaining high-paying domestic manufacturing jobs and a strong competitive industrial base in our country.

As Joel Popkin and Ms. Kobe have pointed out, economies without a growing and vital manufacturing sector are doomed to 1.5 percent growth annually. The argument that we should just get on with the conversion to a service economy does not hold water. If

you want to see the effects of 1.5 percent growth on an economy, just look at Japan and parts of Europe. It is not a pretty sight and not one that I want to be part of.

Emerson and many other manufacturers both large and small have worked with interested Senators and Representatives on a WTO-legal, revenue neutral manufacturing tax exclusion proposal as a replacement for FSC/ETI. Our ideas are based on the Canadian manufacturing and processing tax exclusion, which has existed there for over 30 years.

Under the proposal, all manufacturers and processors, including agricultural processors, would receive a lower tax rate on their qualifying business income.

The proposal is not export-dependent. It has been estimated to be revenue neutral. It has a short transition time and would be available to all manufacturers and processing done in the United States. This includes small- and medium-sized manufacturers and S corporations and partnerships, many of whom do not currently benefit under the FSC/ETI regime.

Pure and simple, the proposal is designed to help revitalize all U.S. manufacturing to provide incentives for investing in domestic manufacturing and to create jobs. The response we have received from policy makers from both parties has been very encouraging.

Copies of the proposal are attached to my written testimony. Mr. Chairman, I would ask that they be included in the record of today's hearing.

The CHAIRMAN. It will be included.

Mr. BERGES. As I have visited with key policymakers here in Washington, I am always asked, Emerson is a global company. Would you not rather see broad reform of our international tax laws? My response is simple. These are good ideas, and if you want to lower my company's international tax rates, fine. But it will not provide me any incentive to create or retain a single U.S. manufacturing job, period, full stop.

I do not mean to diminish the importance of international tax simplification and its role in U.S. global competitiveness. Congress obviously needs to address these important issues, but not at the expense of sacrificing our domestic manufacturing base.

Mr. Chairman, I appreciate the opportunity to talk to you about Emerson's perspective this morning, and we look forward to working with the committee on a solution to the FSC/ETI issue.

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

The CHAIRMAN. Senator Hatch is going to go, and he is going to submit some questions to the panel for answer in writing.

[The questions appear in the appendix.]

The CHAIRMAN. Mr. Barrett, would you proceed? Thank you, Mr. Berges.

STATEMENT OF WILLIAM BARRETT, VICE PRESIDENT, TAX AND TRADE, APPLIED MATERIALS, INC., SANTA CLARA, CALIFORNIA

Mr. BARRETT. Mr. Chairman, Senator Baucus, and members of the committee, I thank you for the opportunity to testify here today on these important issues.

Applied Materials makes the systems that produce virtually every new microchip in the world. Applied Materials was organized in 1967 and has become the global leader in the worldwide semiconductor equipment industry.

We compete in nearly every segment of the industry with both U.S. and foreign competitors in Japan and Europe. We currently employ about 13,000 people, 10,000 of which are in the United States. Approximately one-quarter of these employees are in the manufacturing sector, located primarily in Texas.

In fiscal year 2002, we had approximately \$5 billion in sales and \$1 billion in R&D expenditures. We have a global customer base and a global service operation.

The company has a relatively simple corporate structure, with R&D and manufacturing primarily in the United States, but we have an incredibly complicated product that uses high-level physics and chemistry.

When setting the stage for discussion of the U.S. taxation of multinationals, it is important to ask why companies operate offshore.

First and foremost, it is about accessing foreign markets. For Applied Materials, about 70 percent of our sales are exports. Following the sale to a customer, it is about servicing the product.

There is an interesting study that showed that 66 percent of U.S. multinationals are in the manufacturing sector, but 56 percent of their offshore operations are related to after-sale service of those products. These statistics are certainly consistent for Applied Materials. The statistics also show that U.S. multinationals still perform most of their manufacturing in the United States.

Companies also move offshore to access less expensive manufacturing when global competition and economic conditions reduce profit margins. This cost benefit analysis also includes tax considerations, but it is not the only consideration.

The global business environment is changing. We have had a major 3-year downturn in the semiconductor equipment industry. Customers are entering into global partnerships to reduce their costs of manufacturing.

Asia, and recently China, have emerged as lower chip manufacturing regions, which has put increasing pricing pressure on our products. This is forcing even Applied Materials to consider lower cost component manufacturing alternatives.

The FSC/ETI manufacturing benefit has historically produced about a 3 to 4 percentage point tax rate reduction for the company. In our best year, fiscal year 2000, that represented about \$100 million for us. But, as we all know, the FSC/ETI issue was found to be an unfair export subsidy under WTO rules.

The FSC/ETI issue, as well as Congress' desire to improve and simplify the U.S. taxation of international activity, has provided the catalyst for tax reform. In this environment, two views have emerged. H.R. 5095 was last year's bill in the House, and it would simplify the U.S. taxation of foreign operations and improved competitiveness of U.S. multinationals by repealing the Subpart F provisions which are antiquated and produce a tax disadvantage for multinationals operating offshore.

The bill would also reduced foreign Tax Credit complexity, increase the Foreign Tax Credit carry-forward period, and would

eliminate the Foreign Tax Credit limitation on the Alternative Minimum Tax.

The better view focuses on providing a manufacturing benefit to offset the tax increase that will result from ETI repeal. H.R. 1769 would produce that type of relief and it would exclude 10 percent of a U.S. producer's manufacturing profits. It would also include important transition rules.

Finding a suitable replacement to FSC/ETI for U.S. producers is important for the following reasons: repealing ETI without some offset would overturn 30 years of bipartisan U.S. tax policy; the repeal of FSC/ETI would be in response to a European threat of retaliation, not a change in U.S. policy.

With 6.4 percent employment, this is not the time to increase costs for U.S. producers. Repeal of FSC/ETI can be compared with an increase in tariffs, and economic studies clearly show that this will have a negative impact to U.S. employment.

Finally, there remains a significant U.S. manufacturing and production based in the United States that would benefit from this manufacturing credit.

I believe the differing views on tax policy can be reconciled, and I believe that many of my Silicon Valley colleagues think the same way.

Reconciliation can occur with a manufacturing tax rate reduction patterned after H.R. 1769; simplification and enhancement of the R&D credit patterned after H.R. 463 and Senate bill 664; repeal of the Subpart F trading provisions; and, finally, enactment of the homeland investment provisions patterned after Senate bill 596.

Applied Materials appreciates the opportunity to participate in this hearing. These are important tax reform topics that we believe are reconcilable. Simplifying the taxation of foreign income to help U.S. multinationals compete offshore is probably a good idea in the context of fundamental tax reform.

Enhancing the after-tax return for U.S. producers, in general, is an obvious good thing for the United States and should be included in international reform legislation. The centerpiece of any legislation must be to limit the tax increase in America's most competitive manufacturers.

Legislation along the lines of a production activity exclusion accomplishes this and it has our full support. Thank you.

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

The CHAIRMAN. Thank you very much, to all five people testifying this morning.

I am going to ask my first questions of Mr. Berges and Mr. Barrett, but if anybody else wants to chime in on the panel, please do that.

I want to take advantage of your two's decision-making processes as you decide to have a plant in the United States or jobs overseas.

What role, if any, does FSC/ETI play in that decision to locate a business activity in the United States versus overseas? Then let me have two subparts of that. If you move an operation offshore, do suppliers also move their operations offshore to follow you?

In regard to the second part, what do you mean when you say “FSC/ETI also benefits your suppliers?” I am not sure that was in both of your testimonies, but I think you could both respond.

Mr. BERGES. I would be happy to go first, Senator. First of all, if I go back to my example on Marshalltown, we have a \$4.4 million benefit there, which is \$7 million pre-tax. So if we were to look at moving jobs out of Marshalltown, we would first have to overcome that \$7 million incentive.

So, wherever we would go, just to be at parity with Marshalltown, would have to have \$7 million worth of lower cost just to be at break even. Then we have to go beyond that to get the savings that would justify shutting that facility and moving it.

In our decision-making process, the after-tax impact of the FSC is a powerful incentive for us to stay in the locations we are in and continue to export from there.

Second, the suppliers. Typically, when we move, our suppliers do not move with us. This is one of my biggest concerns. We typically develop a supply base in the country that we move to, which then hurts our suppliers. Our suppliers are ultimately also our customers. We provide capital goods to the entire industry in the U.S. Fifty-five percent of our sales are still here.

When we see the manufacturing base shrinking as a result of us moving and our suppliers losing jobs, it eventually has a vicious circle effect, comes back and bites us on demand for our products in this country.

So the proposal that we have talked about, and I even think the Crane-Rangel bill, benefits all manufacturers. You do not have to set up a DSC. All manufacturers would receive a credit so you would be able to spread this \$50 billion around to even the small and medium manufacturers who are our suppliers, and also our customers.

The CHAIRMAN. Mr. Barrett?

Mr. BARRETT. An anecdote. Each year, I have a review with our board of directors. One of the highlights is a review of the tax rate. The last 2 or 3 years, we have been following the progress of the WTO issues. I have been emphasizing, number one, the four percentage point tax rate benefit that the FSC/ETI provides.

I would really conclude by saying, if we wanted to make up that difference, if it was repealed, the only way to make up that difference would be to move substantive manufacturing offshore.

The decision for a company like Applied to move offshore may be more difficult than most. It relates a lot to the fact that we are a high technology. Intellectual property is a very, very big issue for us, so the decision to move offshore would not be an easy decision for the company to make.

Also, the decision relates to proximity to customers. Again, if we wanted to make up that difference, the four percentage point difference, and the company was willing to commit to a significant movement offshore, it would be close to the customer, making sure that we have the proper intellectual property rights protections, those sorts of issues.

The supplier issue is an interesting one, too. In these down times—I have been with the company 15 years—and never have I

seen more thought or investigation looking at alternative component manufacturers offshore.

Our machines are very big and bulky. A lot of components go into making that machine. But we are seriously looking at lower cost alternatives for those components, primarily in Asia.

The CHAIRMAN. Thank you.

My next question would be to the entire panel. It is taking off from Dr. Hall's testimony. Correct me if I am wrong, but it seems to imply that, by historical standards, that nothing is dramatically wrong with the manufacturing sector.

Yet, it seems like the testimony from Ms. Kobe and Ms. Lee claims the opposite conclusion. I would like to have some sort of discussion of the broad disparities of view.

Dr. HALL. I think it would be incorrect to say that it is my belief that there is nothing wrong. Rather, we are in the middle of what is, for manufacturing, a pretty serious recession.

It is like other serious recessions. If you look at all of my numbers for output in employment, what has happened after every previous recession is a recovery. Of course, there is a lot of speculation about when that recovery will occur. Each dismal, new employment number suggests that we have not had the recovery yet, yet forecasters are saying with some confidence that we will see it. It has always happened before.

I think that is the most important thing to understand, is that there are some very fundamental forces that bring about a recovery. It is a recovery in manufacturing, as well as elsewhere. But I would not want to diminish the problems that exist today in manufacturing as a result of what is a pretty serious recession.

Mr. BERGES. Senator, my disagreement with Dr. Hall revolves around a difference in this recession, which is the rate at which jobs are leaving this country. We have not only the effect of dropping demand in this country and eliminating jobs, but jobs are fleeing this country at a very high rate, most of them to China and other bases in Asia. This China capacity did not exist in the 1991–1992 recession. It did not exist in the 1981–1982 recession. This is a big difference.

Contrary to what he says about China specializing in standardized, mass-produced consumer goods, there are more wafer fabs being built in China today for high-end semiconductors than anywhere in the world.

We see competition out of China on all of our high-tech products. It is highly skilled, highly engineered. This is not Japan, 1952, selling toys over here. These are real serious, high-tech competitors. The jobs are moving over there. They are going to stay over there. They are not going to come back.

Dr. Hall, relying on previous recessions, I think, is ignoring the rate at which China is developing as a highly sophisticated economy.

The CHAIRMAN. Ms. Lee?

Ms. LEE. If I may just agree with Mr. Berges here. I think one of the differences between this and previous recessions is the impact of the global sourcing decisions and the huge propensity to import in the U.S. economy right now. That is what puts in real dan-

ger the recovery from the recession and the job creation potential in the recovery.

If, as consumers begin to spend more money, if they are spending money on imports at the same rate that we are seeing right now and we are seeing the kind of growth in the merchandise trade deficit, including in the advanced technology products, the areas where we traditionally thought the United States had some comparative advantage, then I think that the potential for the U.S. economy to come out of the recession in a healthy way and to replace the manufacturing jobs that have been lost is really in question.

The CHAIRMAN. Go ahead, Ms. Kobe.

Ms. KOBE. I was just going to make one point. It has been the 1980's since we have seen this level of job loss. Even then, you will not quite match what we have seen in the last couple of years here.

I think that was also a period in which manufacturing was restructuring due to some competitive issues from abroad, but we also did not get all of those jobs back. I think there is that danger going on again here.

The CHAIRMAN. Very sobering testimony.

Senator Baucus?

Senator BAUCUS. Just to follow on, just very briefly, because I have a few questions. Not long ago, some would suggest that, well, it is all right if we lose manufacturing capacity because of future services, so why not just go with the flow? What is wrong with that argument?

Ms. KOBE. Well, I think services provides a fair amount of new types of jobs in this economy. No one is discounting the advantages that services provide in the U.S. But manufacturing provides a lot of positive impacts in the U.S. as well, and one of those is the innovation process that I spoke of earlier in which manufacturing is a key player. I think our trading partners recognize that.

You can look at the new auto policy that China is putting out. It wants, as part of its guarantees to have foreign manufacturers in China, that they bring some of their R&D facilities to China as well.

People recognize the fact that rapidly changing part of the manufacturing sector, the high-tech goods that the U.S. is well-known for exporting, is an important part of what the U.S. has had as an advantage.

Senator BAUCUS. Does anyone else want to comment on that? Mr. Berges?

Mr. BERGES. Yes. I would just like to quote out of the study that Ms. Kobe—if it has not been entered into the testimony, it ought to be—co-authored. They took the industrial production of various countries against non-industrial production, and there is a very nice correlation. When industrial production is not growing, the rest of the economy is only growing 1.5 percent.

The multiplier effect of these industrial jobs is enormous. So when the manufacturing industry is growing, the multiplier effect on the service industry is huge.

Senator BAUCUS. Yes. As a rhetorical question, I agree with your response very much.

Ms. Lee, briefly?

Ms. LEE. Just briefly. I agree with all of those: the productivity growth, the linkages, the high wages, the trade balance impact of manufacturing jobs makes them unlike the service sector.

But the third thing is what I started to say, too, which is that it is not clear that the United States has any kind of permanent comparative advantage in services, and that those jobs are now also starting to go overseas.

Senator BAUCUS. Correct. It is like the old thing years ago. Well, do not worry about Japan, because they do not produce software. We do software, they do hardware. Now, everybody does everything. It is clear.

Ms. LEE. Our service sector surplus was \$69 billion in 2001. In 2002, it fell to \$49 billion.

Senator BAUCUS. Right.

Mr. Berges, you have talked a bit about the Canadian solution. I am just curious of the degree to which the Canadian approach and/or the Crane-Rangel bill that I am on, too, will offset the loss created by repeal of the FSC/ETI.

Mr. BERGES. Well, our studies have determined that if applying the Canadian effect to the ratios that we have suggested would be revenue neutral for the Treasury, but would still provide the \$5 billion annual benefit. It is going to spread it around some. Right now, the \$5 billion benefit is focused on large companies that can afford to set up a DSC and do a lot of exporting.

There is a secondary effect to the suppliers. What we are proposing is a broad-based credit for all manufacturers. So, Emerson, for instance, will take a haircut. We will not get nearly the benefit out of the Canadian tax proposal that we get out of the FSC/ETI. But our suppliers, our smaller suppliers and our smaller customers will get a benefit. We think, indirectly, that is going to help us enormously by helping revitalize the economy.

Senator BAUCUS. Mr. Barrett?

Mr. BARRETT. Yes. The PAE, the Crane-Rangel approach, my estimates are that it would provide about half the benefit that we currently receive from FSC/ETI. So, I think it is important to combine that with the enhancement to R&D that I mentioned before.

Also, on the prior point, the value of high-tech related jobs, about 20 percent of our expenditures of sales is related to R&D. It might be helpful for the public record. There was a study that was put together by Pricewaterhouse that shows that linkage between manufacturing-related jobs and the high-value, high-paying jobs that it generates.

Senator BAUCUS. I think the Chairman will put it in the record. I am pretty sure he will.

[The information appears in the appendix.]

Senator BAUCUS. I might ask, too, there is some question of whether this replacement legislation should apply to C corporations or also to partnerships and other non-corporate entities.

Mr. Berges, your view?

Mr. BERGES. Well, we have proposed that it in fact applies to S corporations, pass-through entities like S corporations and partnerships who currently do not benefit from the FSC/ETI regimen. But, again, pointing out to you that many of our suppliers are S cor-

porations and partnerships that are small, family firms. We think it is vital that we keep them viable in this country as well.

Senator BAUCUS. Does anybody disagree with that?

[No response.]

Senator BAUCUS. Does anyone want to amplify?

Mr. BERGES. Yes.

Senator BAUCUS. You just did.

Mr. BERGES. I did.

Senator BAUCUS. You have amplified. All right. Good.

It is a minor point, but Ms. Kobe, I wonder if you could comment on Dr. Hall's hours point. I am sorry. I do not mean to mischaracterize your testimony. But he essentially pointed out that the hours of manufacturing are not much different from the hours in other sectors. I understand, Ms. Kobe, you have got a comment on that.

Ms. KOBE. I looked at Dr. Hall's hours chart briefly. The source of those data are the same as the source of my employment data: they both come out of BLS's CES survey. They show essentially the same pattern.

I think if you go and look at his data carefully, you will see that you would have to go back to the early 1960's to find hours numbers that are quite as low as are shown at the current first quarter number that is at the end of his chart.

Senator BAUCUS. But you all agree that manufacturing is very depressed and it is so serious, there is a real question of the degree to which jobs will come back from overseas. I do not want to mischaracterize anybody, but you would almost have to go to extraordinary lengths to maintain a manufacturing base in this country.

Dr. HALL. I profoundly disagree with that.

Senator BAUCUS. Oh, good. What do you have to say?

Dr. HALL. First of all, I think the notion that it is manufacturing against services is not the right—

Senator BAUCUS. Nobody is going against services. They are both.

Dr. HALL. Yes. Anyway, if you ask what the U.S. is really good at, it is good at producing ideas. The ideas get embodied in Mr. Barrett's wonderful machines, and they get embodied in lots of services and software type products, entertainment products. All over the map, that is where the U.S. has its comparative advantage in world trade.

What is happening, is a transformation in which there is a growth in the idea-producing sector of the U.S. economy, whether it is services or goods, and a replacement in the more boring products, the ones that are made in China.

If you look even in the chip industry, the Chinese are entering the boring part, but Applied Materials is still in the exciting part of that industry. That will continue to be the U.S. posture.

So, there will be a transformation of the U.S. economy toward more and more employment in the idea-producing industries, and less and less employment in apparel, which has practically disappeared, and in the strict manufacture of chips, another thing which the Chinese will take over. But that does not restrict the number of jobs that will be available in the United States.

Senator BAUCUS. But they are not going to be as high-paying jobs, across the average. If that is the case, then why are other countries not pursuing a service-based economy rather than a manufacturing economy? Say, Japan, China, et cetera.

Dr. HALL. Because they cannot compete with us. We own that part of the world economy.

Senator BAUCUS. They cannot compete with us in what sectors?

Dr. HALL. Well, software is a very good example. The U.S. completely owns the worldwide software business.

Senator BAUCUS. That is not true. What about all of the software engineers in India?

Dr. HALL. Well, they work for us.

Senator BAUCUS. The jobs are not here. They do not pay taxes.

Dr. HALL. Well, it is a very small fraction.

Mr. BERGES. No, that is not true. It is growing at an enormous rate over there.

Senator BAUCUS. Anyway, you guys have different points of view. We are not going to resolve that here. I appreciate it. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Senator Bingaman, by order of arrival, then Senator Lott.

Senator BINGAMAN. Thank you all very much for being here.

Mr. Berges, you have proposed this broad-based credit for all manufacturers. I think it is a very constructive proposal. I am concerned, though, that since our main focus really is, we want to incentivize retention and creation of high-wage jobs of any kind in this country. Why should it not be even broader than what you have proposed and cover service sector jobs, too, to the extent that they can qualify?

Mr. BERGES. Well, Senator, I certainly do not have any problem with that. If there was to be legislation that lowered the corporate tax rate for everybody, I would certainly support that.

What we tried to target was a revenue-neutral proposal that would specifically address the FSC/ETI repeal, so we kept it inside of the \$50 billion bound. If Congress wanted to go beyond that, we certainly would not reject it. I certainly think it would be great for the U.S. economy if that happened.

Senator BINGAMAN. And your proposal is patterned after what has been in place in Canada for the last 30 years, as I understand it.

Mr. BERGES. Thirty years. Yes, sir.

Senator BINGAMAN. Do we have good comparative data as to what has happened to the manufacturing sector in Canada under that tax regime as compared to what we have seen here in the last 3 years?

Mr. BERGES. My understanding is that the manufacturing tax credit in Canada was a very, very successful program. It was put in place to keep flight from happening to the U.S., actually, was the threat at the time. The flight slowed dramatically during the time of this regime.

In fact, it is so popular, what the Canadian government is now doing is similar to what you just suggested. They are going to restructure the Tax Code for all corporations, whether they be manu-

facturing or service related. So, my understanding is that it was very successful.

Senator BINGAMAN. But they have that tax credit for manufacturing in place now still in Canada.

Mr. BERGES. Yes, but they are going to repeal it and replace it with a broader restructuring.

Senator BINGAMAN. Right. You have cited what has happened in your company in the last 3 years where you have had to close 45 plants in the U.S. We could look at what has happened in Canada in the last three years and whether or not companies manufacturing in Canada have had to close at that same rate.

Mr. BERGES. My understanding is, they have not. I do not have the statistics here in front of me, but there was a great deal of concern of flight out of Canada to the United States and frankly to Mexico. My understanding is that the manufacturing sector in Canada has done very, very well, particularly in the last 10 years.

Senator BINGAMAN. Ms. Lee, did you have any thoughts about this question of whether we should try to fashion a tax system that would provide an incentive to keep either manufacturing or service sector jobs here in this country?

Ms. LEE. Well, we do believe that there are unique advantages to the manufacturing jobs, and there is an importance to retain that sector specifically. As Mr. Berges said, if there were unlimited funds, then all jobs are valuable, and we value the service sector jobs as well and we organize many of those jobs.

But I think that we see the manufacturing sector in a particular crisis and we see that those jobs are particularly valuable to the overall health of the economy. So, we think it is warranted to target some assistance to those sectors. That is the sector that has been, I think, the most vulnerable, certainly, to the pressures of globalization.

Senator BINGAMAN. All right.

Let me ask about Ireland and the tax structure that they have put into place. I think there is a lot of high-tech manufacturing that has moved to Ireland. I know when I recently got a cell phone, it was a U.S. manufacturer, but it was manufactured in Ireland.

I had a choice of either buying a phone manufactured in Ireland or a phone manufactured in China, but there are no cell phones manufactured in this country, as far as I could tell.

Mr. Barrett, have you looked at the tax structure in Ireland and compared that to our tax structure as it relates to the high-tech industry to see what they are doing that we are not doing?

Mr. BARRETT. Yes. We have not moved manufacturing in any significant way offshore. We do have a couple of subsidiaries, one in England and one in Israel, that we acquired, but that is the extent of our offshore manufacturing.

We have looked at Ireland in the context of a distribution center that distributes product throughout Europe. Indeed, historically they would provide concessions, a tax rate concession, for companies to invest in Ireland.

They changed their law a couple of years ago. They now have a 12 percent corporate tax rate. So, that is basically how they attract companies. But, yes, we have looked at it in the context of distribu-

tion. We are doing the same thing in Asia, and looking at Singapore as a distribution hub.

Senator BINGAMAN. I will stop with that, Mr. Chairman.

Senator LOTT. Mr. Chairman?

The CHAIRMAN. Senator Lott?

Senator LOTT. Thank you, Mr. Chairman. As a matter of fact, I went to Ireland last year to take a look at what they did. It is very interesting how they, for a while at least, became an economic miracle. They had a 10-year plan and they achieved it in 8 years. They cut the corporate tax in half, as I recall.

Mr. BERGES. It is 10 percent, I think.

Mr. BARRETT. It is 12, now.

Senator LOTT. And they cut the capital gains about two-thirds, I think. They also changed their education system. It is a very interesting thing, what they did there. They targeted their education system toward emphasis on high-tech training that would fit in with that.

Then they also intentionally, as Mr. Berges said, wanted to become the doorway for the United States into the EU. It worked beautifully. By the way, they went from a country of only 2.8 million people to 4 million, now. Something like 59 percent of the population is under 30. It is an amazing thing. I think we ought to emulate that.

Mr. BARRETT. The expatriates came back when they saw what was happening.

Senator LOTT. Well, the young people came back from Boston.

Senator BAUCUS. How did they finance all that?

Senator LOTT. Well, they did the tax cuts and immediately started—there are some 500 U.S. companies there. They had such an influx of industry and the creation of jobs, that the revenue went way up. It is a novel idea. We might try that sometimes in the United States. [Laughter.]

Senator BAUCUS. That is novel.

Senator LOTT. You ought to take a look at Ireland.

Senator BAUCUS. But I understand also the current generation really bellied up to the bar and almost taxed themselves to pay for the education for their next generation of kids.

Senator LOTT. Right. They have free education, kindergarten through college.

Senator BAUCUS. Right.

Mr. BERGES. Senator, I believe that the EU set up Ireland 10 or 15 years ago as a special development zone, much like they did as part of Spain.

Senator LOTT. They made off like bandits. Ireland and Spain are doing great now and they are still getting money from the EU. That will not last much longer.

But thank you all for your testimony. It has been very interesting. I guess the focus has been, what do we do to try to deal with the impact of eliminating the FSC and ETI. I have heard suggestions that you go with the Crane-Rangel proposal, which I guess would be to cut the corporate rate by 3 percent. Is that right?

Mr. BARRETT. It is 3.5 percent on manufactured products.

Senator LOTT. So it is 3.5 percent. Then there has been the Hatch idea about the R&D proposal. Then there is the Thomas proposal that is much, much more complicated, shall we say.

I did not hear a lot of you indicating you thought that was the solution, although I am not sure if we know exactly what he is planning at this point now. Knowing Congressman Thomas, it will be interesting and innovative when we do see what he finally proposes.

But what worries me, and I want to ask a broader question here, today you are just trying to say, how can we minimize the damage that this is going to do. But I do not think we are addressing the long-term, bigger question of, why are we continuing to lose these manufacturing jobs, and what can we do in a bigger sense?

I do not want to just offset what you might lose here. I would like to do something that would stop the loss of manufacturing jobs, or all jobs, to other countries around the world.

That has been driven, I guess, by all of the regulatory burden you have to put up with in America, the excessive tax burden you have to put up with in America, health care costs in America, the labor cost because you have got people in other parts of the world working at sub-minimum wage rates, a combination of all of those.

But, in a broader sense, I am interested, Mr. Berges, Mr. Barrett, Ms. Lee, if you all have got some answers to that, because I do not want to just stop the bleeding that might occur by removing the FSC and the ETI. I would like for us to get on the offense and stop losing these jobs.

Of course, I always vote for the trade packages. I also am very much an advocate of "buy America." Unlike most Americans, including my own wife and kids, I drive an American vehicle. But I do not know how much longer I can continue to do that if the cost is higher, the fuel efficiency is not as good, and the product is not as good.

Ms. Lee?

Ms. LEE. Well, Senator Lott, thank you for the question. Certainly, we do believe that the trade policies overall have been misguided in the sense that they have created the wrong economic incentives, both for manufacturers and for governments of other countries, that we have designed these policies, in our view, to facilitate U.S. companies, multinational corporations, taking the jobs offshore and bringing the goods back into the United States, facing very, very low tariff rates.

At the same time, we have done very little to ensure that the companies that move offshore are respecting the basic rights of their workers, treating the environment right, and so on.

So the fact that we have regulation in the United States, we think, is a good thing. We have regulations that protect the safety and health of the workplace and the environment, and so on.

But we do not want those regulations to provide an undue burden on domestic manufacturers, and for that reason we do believe that we need to address that issue in our trade policies as well.

In our view, current trade policies have been designed to address the concerns of corporations producing offshore, but not to address the concerns of creating and retaining strong jobs at home. So, that is certainly one of the issues.

I think the over-valued dollar has put our domestic manufacturers at a terrible disadvantage. It is starting to come down, but it is not coming down against China or Japan, some of the places where we have the most severe trade problems. So, that is certainly an issue that we think would go a long ways to helping the long-term competitiveness of American manufacturers.

Senator LOTT. Mr. Berges?

Mr. BERGES. Well, I agree with Ms. Lee and the comments you made about the cost of doing business in the U.S. Certainly, you did not include on the list the tort system. It is a very expensive impediment that we have here that does not exist in the rest of the world.

I guess, to your list, I would also add what Senator Baucus talked about, the disparity of tariffs around the world, and encourage the Trade Representative to get on his horse and get some of these free trade agreements accelerated. When we passed fast track, U.S. industry was pleased with it. But so far, we have got Singapore and Chile, I think, which is not exactly—

Senator BAUCUS. And Bahrain.

Mr. BERGES. And Bahrain. Not exactly the largest trading partners that we have. You would much see it focused on larger—Brazil, for instance, would be a terrific place to start, and Thailand, and other places where there are significant barriers to U.S. products, get those things down, get those tariffs down, and to work on the non-tariff barriers as well.

Mr. BARRETT. It is interesting, because China is a big area of focus for the semiconductor industry. It has just been amazing. If you have been to Shanghai recently, it is just an amazing transformation. I went there in 1993 and it was completely different, very few high rises. It looks like the Emerald City now, 10 years later.

I think that, in the long term, it is good that these countries like China are emerging. I think it is going to enhance the overall market for semiconductors, and in our business, also. So I think, long term, it is a very good thing.

The complication of the Tax Code is a bugaboo for me. It has been that way for years, because I am the guy in the trenches doing the tax return. I think there is a lot we can do in terms of simplification in the tax area, in general.

Hopefully, this exercise that you are going through now will serve as a first step for some longer term thinking on what would be a simpler, more direct, less complicated corporate tax system.

Senator LOTT. Well, I know my time has expired. I would like for us to do it, rather than longer term, in the shorter term, because we have got a problem now. I think we have put it off too long already. I do think we need legal reform, and I hope business, industry, and agriculture will get more serious in dealing with that need for legal reform.

I do think we need some more common sense as it applies to regulations, including environmental and other problems in this country. The enemy is us, in many respects. I agree we should be a lot more aggressive with our trading partners. I think they make out like bandits.

They jerk us around all the time and they have done it in Democrat administrations and Republican administrations. I worried about this problem in discussions with President Reagan, President Clinton, and probably need to do it with President Bush.

I think it is time we tell these countries, they stop their barriers, their tariffs, or else we are going to act immediately and punish them severely. But I do not think we do that. I hope that Ambassador Zoellick will get a lot more aggressive, and do it quickly.

So I think, overall, you all need to give us this information now, not longer term, because we are paying a tremendous price. We are going to wake up 1 day and take the necessary action, but the horse is going to be out of the barn and gone. But it is a good exercise. Maybe this FSC/ETI matter will drive us to think more innovatively about the future.

Thank you very much, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Lott.

I am going to have to say thank you. We would like to continue this discussion, but we have got one more panel and we have a vote coming up shortly. So, I want to just say thank you.

It is our good fortune to have representatives of two foreign corporations that have made significant investments in the United States. We have Mr. Alex Spitzer, senior vice president of the Swiss-based Nestle Company. He is going to provide his views on investing in the United States, the impediment to foreign investment, and Treasury's earnings-stripping proposal.

Then we have Mr. Mark Russell, vice president of the Swedish firm Electrolux, to provide us his views on both the earnings-stripping proposal, the repeal of FSC/ETI, and the effect of both on the company's investments in the United States.

I am going to start with Mr. Spitzer.

STATEMENT OF ALEX SPITZER, VICE PRESIDENT, NESTLE HOLDINGS, NORWALK, CONNECTICUT

Mr. SPITZER. Good morning. My name is Alexander Spitzer. Mr. Chairman, Senator Baucus, and members of the committee, I am grateful for this opportunity to share with you my personal views on international tax policy as it relates to U.S. operations of multinational firms, and in particular any impediments in the Tax Code that may serve as a barrier to attracting international investment into the U.S. manufacturing base.

I am senior vice president of Taxes for Nestle USA, and have held the top job in the company for the last 18 years. Also, from 1996 to 2002, I served as president of the Organization for International Investment, OFII.

As you may know, OFII is the leading business association representing the interests of U.S. subsidiaries of foreign-based companies.

Nestle is a 140-year-old Swiss public company that is the world's largest food business. For more than 100 years, Nestle has been growing its presence in the United States, where our 43,000 American employees manufacture a large range of products such as Baby Ruth, Butterfinger, Poland Spring water, Coffee Mate, Haagen-Dazs ice cream, Friskies pet food, and many more.

We have 73 manufacturing operations in 33 States and support a \$2.5 billion annual payroll. In 2002, our U.S. employees manufactured \$18 billion in products, including \$600 million worth of exports. This March, Fortune Magazine named Nestle USA "America's most admired food company for the sixth consecutive year.

Nestle USA is just one example of the thousands of U.S. subsidiaries that make significant contributions to the American economy. Let me share with you five key statistics.

Fact one, employment. In 2000, 6.4 million American workers were employed by U.S. subsidiaries of foreign firms. Over the last 5 years, U.S. subsidiaries' employment has increased by more than 30 percent. These jobs are distributed across a range of industries, with 43 percent of the jobs in manufacturing.

Fact two, compensation. U.S. subsidiaries of foreign companies support an annual payroll of \$330 billion. In 2000, compensation per employee was 15.4 percent, or \$6,800 higher at U.S. subsidiaries than at all private sector businesses in the U.S.

Fact three, exports. U.S. subsidiaries exported a record \$165 billion of merchandise in 2000, 21 percent of total U.S. exports.

Fact four, taxes paid. U.S. subsidiaries' Federal tax payments have grown from \$6 billion in 1991 to \$28 billion in 2000, accounting for 14 percent of all corporate tax payments.

Fact five, investment in research and development, plant and equipment. In 2000, U.S. subsidiaries invested \$30 billion in research and development and \$150 billion in plant and equipment in the United States.

As the above statistics clearly show, U.S. subsidiaries make a significant economic contribution to the United States and, therefore, are appropriately included in today's discussion of the competitiveness of U.S. operations.

Mr. Chairman, as you know, the relationship between the U.S. Tax Code and competitiveness has recently become a prominent topic. Unfortunately, many commentators have chosen to define competitiveness in "us versus them" terms, pitting companies based in the United States against companies based abroad.

By including two U.S. subsidiaries in this hearing, you have rejected this narrow definition of competitiveness and have properly framed the discussion. After all, it is the success and profitability of all business activity in this country of both domestic and foreign companies that most directly impacts the health of the U.S. economy.

The tax system clearly has an impact on the competitiveness of U.S. operations. In my opinion, the desired goal for the United States is simple, to have a tax system that promotes job-creating investment. A tax system that is even-handed and non-discriminatory for both U.S. and foreign-based multinationals will spur the greatest amount of economic activity and growth.

There has been a lot of debate over the last year concerning the so-called earnings stripping rules that limit the deductibility of interest paid by United States subsidiaries to foreign related parties.

Some have proposed more sweeping changes in this area that could seriously harm existing and new investments in the United States. This committee has wisely chosen to appropriately focus

any further proposed changes to abusive transactions. This concludes my remarks.

Mr. Chairman, I want to again commend the committee for calling this hearing. Thank you for inviting me to add perspective of United States subsidiaries of foreign companies to the broader context of the hearing.

I would be happy to answer any questions.

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

The CHAIRMAN. Mr. Russell?

**STATEMENT OF MARK RUSSELL, VICE PRESIDENT, TAX,
ELECTROLUX HOME PRODUCTS, CLEVELAND, OHIO**

Mr. RUSSELL. Mr. Chairman, Senator Baucus, members of the committee, thank you for the opportunity to voice the views of the Electrolux Group on United States tax policy.

Electrolux is a Swedish-based multinational and is the world's largest producer of appliances and equipment for indoor and outdoor use. In the United States, Electrolux is often identified with vacuum cleaners, but our product line goes well beyond that.

Electrolux is our biggest brand, but there are many other famous brands in the group including Eureka, Frigidaire, Poulan, Husqvarna, and Weed Eater.

We had worldwide sales in 2002 of \$14 billion, and in the United States our sales were \$5.5 billion. The four largest manufacturing operations of 111 worldwide are located in the United States and account for 23 percent of the total value of Electrolux's production.

In the United States, we employ 20,000 workers in dozens of States and we purchase raw materials such as steel and plastics and other finished components from domestic suppliers in the range of \$1.5 to \$1.75 billion per year. In the past 5 years, we have invested \$700 million in plant and equipment in the United States.

With respect to international competitiveness, first, any changes to United States laws governing international tax should not impede the creation of United States jobs and investment of debt and equity capital into the United States by foreign companies, which have a capital structure which has evolved for legitimate purposes and is consistent with the recognized arm's length standard.

Second, legislation should not target or discriminate against companies which were founded abroad and have deep historical ties to their countries of incorporation.

I would like to briefly touch upon FSC and ETI. Legislation which repeals ETI should be designed to help sectors of the United States economy that currently benefit from ETI, and thus should include foreign-owned companies which manufacture products in the United States.

The FSC/ETI regime has been a factor in our decision to maintain and expand our production in the United States. Other countries offer subsidies and incentives to entice companies to locate operations there or have lower tax rates.

For example, Mexico and Canada have recently reduced their marginal tax rates at 32 percent and 33.4 percent respectively, which compares to the marginal income tax rate in the United States of 39 percent when you consider State and local taxes. Without some alternative to the ETI regime, it would be more difficult

for foreign-owned companies to justify further expansion in the United States.

Representatives Crane and Rangel have introduced H.R. 1769, which would repeal current-law ETI benefits for transactions after the date of enactment. This legislation recognizes the need to assist those companies that currently benefit from ETI by providing transition relief until 2008.

In addition, it would provide a permanent new deduction which reduces the effective corporate rate for United States manufacturers.

As the Senate Finance Committee continues its deliberations on repeal of the ETI regime, it should not rule out transition relief and corporate rate reduction for those companies making products in the United States.

With respect to earnings stripping, Electrolux believes that beyond the context of inversions, the policy considerations related to earnings stripping are not clear.

In particular, Electrolux believes that reforms to Section 163(j) should target abusive transactions and not penalize legitimate business transactions. Electrolux would not be affected by the earnings stripping proposal supported by this committee and the full Senate because it has not entered into any transactions which can be defined as an inversion transaction.

Electrolux commends the committee for addressing earnings stripping in this narrow context. However, both the Treasury's earnings stripping proposal and H.R. 5095, as it was introduced in the 107th Congress, raised serious policy concerns.

Both of these proposals unfairly target for adverse Federal tax treatment foreign-owned enterprises that engage in legitimate arm's length transactions of the sort that United States-owned businesses commonly undertake, both in the United States and abroad.

In so doing, both proposals would serve to penalize those various companies that are importing jobs into the United States. Both proposals are discriminatory, violate the arm's length standard, and would be in direct conflict with United States treaty obligations, including the United States-Sweden treaty.

Because it is very common for United States multinational corporations to capitalize their foreign subsidiaries in significant part with debt as well as equity, these proposals create a substantial risk of retaliation by our treaty's partners.

Let me close by saying, as the committee works to address repeal of ETI international tax reform, it should consider other incentives to encourage investment in the United States, and also remove the various disincentives.

Electrolux commends the Senate Finance Committee for including a provision in S. 1149, the Energy Tax Incentives Act of 2003, which would provide a tax credit for manufacturers of energy-efficient appliances, including clothes washers and refrigerators.

This credit serves two purposes. First, the credit encourages investment in designing and manufacturing appliances which would save energy. Second, the credit encourages companies like Electrolux to continue manufacturing products in the United States.

As Congress continues its consideration of the legislative response to the WTO ruling of the ETI regime as a prohibited export subsidy, Congress should consider the role foreign-owned companies with substantial United States operations play in the United States economy.

I would be happy to answer any questions the committee may have.

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

The CHAIRMAN. I will ask one question and then submit the rest for answer in writing so my two colleagues can get in their questions before they have to go vote. The vote started about two minutes ago.

My question for each of you would be, how would the FSC/ETI repeal affect your future expansion plans for your United States operations?

Mr. RUSSELL. Well, I think the way we analyze capital investment, you do it on an after-tax cash flow basis, so any future investment or continued investment has to generate positive cash flow. Therefore, any increase in tax liability obviously would affect cash flow and it would affect future investment.

The CHAIRMAN. Mr. Spitzer?

Mr. SPITZER. That is true for us. As I mentioned, we have \$600 million in exports annually, which is substantial. But Chairman Thomas' bill and the changes he has proposed to 163(j) would be very negative to companies like Nestle.

We borrow to build factories and create jobs in the United States, and that is all. What would happen as a practical matter, is that our borrowing costs would go up and we would end up paying less taxes, not more, if the proposals by Chairman Thomas and the Treasury came to fruition.

The CHAIRMAN. Thank you. Senator Baucus?

Senator BAUCUS. Briefly, what advice do you have for us in Congress and the President to make investment more attractive here in the United States for your companies, that is, to set up more United States subsidiaries here?

Mr. SPITZER. As I said in my oral and written testimony, non-discrimination and fairness between international foreign-based companies and United States-based companies.

As a practical matter, though, I think the most effective way to bring industry into the United States or keep it here is just to abandon the corporate income tax and we could all get productive jobs. But, as a reality, probably some sort of manufacturer-based credit or incentive.

Senator BAUCUS. Where is the non-discrimination today, as you see it, if any?

Mr. SPITZER. I see it, because we are a foreign-based company. 163(j) is one situation, the administration of transfer pricing rules—not the rules themselves but the administration of them—the penalty regimes.

There are many situations from a pure tax perspective where we are disinventing foreign investment into this country. If we could have some alleviation there, I think it would create more manufacturing, more jobs in this country. It is included in my written testimony.

Senator BAUCUS. Mr. Russell?

Mr. RUSSELL. I would agree with what Mr. Spitzer said. I think we have to, as Senator Lott indicated, do something drastic in terms of cutting the corporate rate, or providing a manufacturing credit. I think that is the simplest and easiest thing for management to understand.

As you decide on where you are going to create plants and jobs, that obviously is a key factor in the decision process. I saw a study the other day. We have the highest corporate rates of any of the G-7 countries, and I think we need to do something about that to lower rates or to provide a manufacturing credit or we are going to further drive manufacturing jobs offshore.

Senator BAUCUS. Thank you. Thank you very much.

The CHAIRMAN. The Senator from New Mexico.

Senator BINGAMAN. Thank you.

Let me just ask, Mr. Russell. You indicate problems with H.R. 5095, and also significant problems with what the administration has proposed as part of their budget, indicating that, in your view, both of those proposals would result in increased losses of manufacturing jobs in the United States.

I am just wondering, for example, in the case of the proposals from the administration, what is the impetus behind those? I mean, we, of course, just finished a major debate here on the so-called Jobs and Growth package. You are saying that you believe what they said in the budget proposal we received from the administration will lose us jobs. What is the impetus behind it? At least, what would you expect the administration would say in justification for their proposal?

Mr. RUSSELL. Well, I think the way I have heard it explained is that the Treasury is concerned about inversions and it is concerned about people creating debt in low-tax countries and siphoning off some of the tax base into the low-tax countries.

They have used that as their policy justification for applying it as a broad-based measure to everybody that is foreign-owned, and without what I believe is any empirical evidence of it. Therefore, I think that rather than targeting it to inverted companies, as you folks have considered in the past, that this is something they feel is an abuse without actually having any empirical evidence. I think that is the impetus for it.

Senator BINGAMAN. It would seem to me that this is a very complex area of the tax law. At least, it seems so to me. I do not know. Maybe it is easy for you folks. But it seems to me very complex. It would seem that sitting down with representatives from some of the key companies that work on these problems, and trying to get some consensus on simplifying the law and dealing with the abuses that both of you are talking about and are indicating you support dealing with, would be the right way to proceed.

Has there been any effort to do that by Treasury, to actually sit down and come up with some consensus proposals for solving these problems?

Mr. RUSSELL. Well, I can tell you that we have met with folks from Treasury and we have offered some suggestions to them about how they could target the abusive situations and exclude us. We

have made some written statements to that effect and have had no response from the Treasury on that.

Mr. SPITZER. I agree with Mr. Russell. We have met with Treasury a number of times. We would be happy to try to resolve any abusive situations. We have asked Treasury for evidence and data of abusive situations, other than inverters.

Companies like Nestle that have been doing business in this country for 13, 15 years before the income tax, investing in this country. We only invest and we only borrow to invest in businesses and plants. The reason we have guaranteed debt, is so that our parent can help us get the lowest possible borrowing rate, which allows us to invest more.

There is no abuse going on in long-term, legitimate investors in this country like Electrolux and Nestle. There are always a few bad guys out there, but Treasury has not been able to entertain any discussions with us to get to the problem.

If there is an abusive situation, we are happy to try to help resolve it because we do not like it any more than anyone else.

Senator BINGAMAN. Thank you very much, Mr. Chairman.

The CHAIRMAN. Thank you very much, gentlemen.

Mr. SPITZER. Thank you, Mr. Chairman.

Mr. RUSSELL. Thank you.

The CHAIRMAN. The committee is adjourned.

[Whereupon, at 12:00 noon the hearing was concluded.]

A P P E N D I X

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

Senate Finance Committee

Hearing on An Examination of U.S. Tax Policy And its Effect on the Domestic and International Competitiveness Of U.S.-Based Operations

July 8, 2003

**Statement of William C. Barrett
Vice President, Tax and Trade
Applied Materials, Inc.
3050 Bowers Avenue
Santa Clara, California**

Mr. Chairman, Senator Baucus, and Members of the Committee, I thank you for the opportunity to testify here today on this important set of issues. I am Bill Barrett, vice president of tax and trade for Applied Materials.

Description of Applied Materials

Applied Materials, Inc., was organized in 1967 to supply the then-newly emerging semiconductor industry. In the 35 years since then, Applied Materials has become the global leader in the worldwide semiconductor equipment industry. We compete in nearly every segment of the industry, including atomic layer deposition, chemical vapor deposition, physical vapor deposition, electroplating, etch, ion implant, rapid thermal processing, chemical mechanical polishing and others. In short, Applied Materials makes the systems that produce virtually every new microchip in the world. Applied Materials competes both with other U.S.-based companies and foreign companies in Europe and Japan – many of which benefit from far more favorable tax regimes than we do in the United States.

The semiconductor equipment industry develops, manufactures, markets, and services semiconductor wafer fabrication equipment and related spare parts. Our customers include both companies that manufacture semiconductor devices for use in their own products and companies that manufacture semiconductor devices for sale to others. More than 70 percent of our sales are outside the United States, with major markets in Taiwan, Japan, Europe, Korea and, increasingly, China. Our FY2002 sales were \$5.06 billion, and we spent more than \$1 billion on research and development – nearly 21 percent of our net sales. Headquartered in Santa Clara, California, Applied Materials currently employs 13,000 people with research and manufacturing located primarily in California and Texas.

The semiconductor equipment industry is integrated with numerous companies occupying critical niches and supply chains. At each component stage, companies must keep pace with rapid technological change and product cycles to survive. As these cycles repeat and new products and markets are created, residual markets from prior product cycles remain and as a result, over time the absolute market size and opportunity increases. At present, however, the semiconductor equipment sector is experiencing its worst downturn in history. Industry sales today are less than half of what they were at their peak three years ago.

Capital Investment Decision Making

Successful multinational companies expand offshore to increase global sales revenue and market share. To be successful outside the United States, a multinational must work closely with customers and adapt its corporate structure to accommodate customers located in foreign markets. Historically, the U.S. semiconductor equipment industry has serviced global markets with U.S.-based manufacturing and U.S.-based research.

A successful company is in the business of selling product and increasing financial return to its investors, and when tax rates reduce potential return, they play an increased role in the decision-making process. A company that makes sensible investment decisions based on after-tax returns – decisions that improve the ability to competitively price products – stands a good chance to improve its global market share.

U.S. multinational capital investment decision-making is influenced by both tax and non-tax factors. U.S. tax laws that increase the after-tax cost of doing business may impact the geographic location of investment. In turn, the location of capital investment has a direct impact on exports and export-related jobs for exporters. This is also true for U.S. supplier companies that support U.S. manufacturing and research activities. The various sectors within the semiconductor equipment industry tend to be closely linked and interdependent so that investment decisions by one sector will have a multiplier effect on where future geographic income will be earned.

When product lines mature, or components of a product can be produced more efficiently offshore, specific segments of manufacturing may migrate offshore. U.S. companies move to offshore production after consideration of not only labor costs, but also other costs of manufacturing in a foreign location.¹ The total costs of manufacturing in any location must be analyzed, and taxes are certainly one of those costs.

Competing Views On International Tax Reform

Two competing – but not necessarily incompatible – views of U.S. international tax reform have emerged. These views generally track with the location of a U.S. multinational's manufacturing, research and development locations. Companies with

¹ Labor, logistics, capital costs, regulatory, intellectual property protection, political stability, currency stability, are all examples of costs that must be considered when analyzing alternate site locations. See Haroldene Wunder, *The Effect of International Tax Policy on Business Location Decisions*, Tax Notes International, December 24, 2001. In 1993, Applied Materials moved its volume manufacturing to Texas from California to reduce its cost of manufacturing. California versus Texas tax costs factored into that decision.

established offshore profit-making operations generally support the approach embodied in last year's House bill H.R. 5095 and in this year's H.R. 285.

H.R. 285's simplification provisions address important areas such as: repeal of the subpart F trading provisions; allocation of interest expense on a worldwide basis; reduction of foreign tax credit baskets; extension of the foreign tax credit carryforward period; and repeal of the alternative minimum tax foreign tax credit limitation. These provisions would lower the current U.S. tax on offshore profits that are properly earned pursuant to bilateral transfer-pricing principles.²

Also included in last year's H.R. 5095 was a repeal of the exclusion for extraterritorial income (ETI), which would increase the U.S. corporate tax rate for U.S. manufacturers. Taxpayers that benefit from the ETI exclusion are companies that manufacture or develop products in the United States and export their products overseas. For many U.S. manufacturers, the geographic location of research and development also corresponds with the location of manufacturing. An increased tax rate for U.S. manufacturers reduces their competitiveness, and could cause multinationals that currently manufacture in the United States to migrate activities to offshore locations. Although ETI is no longer sustainable following the WTO decisions, the underlying purpose of ETI remains – the maintenance of at least some level of U.S. competitive balance of tax policy relative to our foreign competitors.

In contrast to the approach in H.R. 5095, the Jobs Protection Act of 2003 (H.R. 1769) provides a partial replacement to the eventual repeal of ETI. H.R. 1769 would reduce the effective U.S. corporate tax rate on U.S. production profits. It is important to note that this legislation, while mitigating the impact of ETI repeal to U.S. exporters, still represents a significant tax increase on many of America's most competitive manufacturers. H.R. 1769 also includes important transition provisions that would ease the pain from ETI repeal. In overturning three decades of established U.S. tax policy, appropriate transition mechanisms are in order.³

The importance of a healthy domestic manufacturing base to overall U.S. economic vitality is hard to overstate. Accordingly, it is imperative that any repeal of ETI provides a "soft landing" to this change in U.S. tax policy. Raising taxes on American manufacturers is rarely a *good* idea. To impose an additional \$5 billion annual burden, at a time when domestic manufacturers have lost an average of 100,000 jobs per month for the past two and one-half years and when the United States faces yawning and growing merchandise trade deficits, is a *spectacularly bad* idea.

² Importantly, it is because bilateral transfer pricing enforcement is so much better than it was in the 1960s that many of the reform proposals are possible.

³ The EU recognizes the principle of transition in phasing out tax programs either because they are to be repealed as a matter of policy or because they are unlawful. For example, in January 2003, the European Commission ruled that certain Member State tax programs are inconsistent with the EU's state aid rules, which are the rules against unfair, market-distorting subsidies. The decision gives the offending Member States (Belgium, Luxembourg, Netherlands, Ireland, and Portugal) almost eight years of transition. Similarly, the U.S. Congress in the past has provided significant tax reform transition relief (*e.g.*, see 5 year IRC §936 transition provisions).

In addition to some type of ETI replacement, improvements to the U.S. R&D tax credit are under serious consideration by the House and Senate (H.R. 463 and S. 664). Reducing the tax rate on U.S. manufacturing profits (patterned after H.R. 1769) in combination with improvements to the R&D credit (patterned after H.R. 463 and S. 664) represents a partial offset to the increased tax burden (approximately \$5 billion per year) on U.S. manufacturing profits that will result following a repeal of ETI.

Applied Materials believes international tax reform goals can be reconciled with other tax policy viewpoints. Reconciliation within Congress, and the U.S. high-tech multinational community, is possible if international tax reform is founded on the following:

1. Reduced rate of tax on U.S. manufacturing profits patterned H.R. 1769.
2. R&D credit enhancements patterned after H.R. 463 and S. 664.
3. Subpart F repeal for trading income and foreign tax credit simplification measures patterned H.R. 285; and
4. Enactment of the "homeland investment" provisions to encourage investment of foreign earnings in the United States.

Fundamental Tax Reform Should Remain the Long-Term Goal

In theory – and in practice – lower corporate tax rates attract investment. The emergence of Ireland as a high-tech growth area in the EU is a good example. Closer to home, we see businesses moving operations from high-tax states to lower-tax states. The trade multiplier effect resulting from significant tax reform is very important as well. The larger economic benefit gained from reduced tax rates is not necessarily reduced tax costs, but rather increased trade and the leveling of cross border balance of payments.

Understanding these basic macro economic principles provides focus for the direction of tax reform. Tax reform should hold to the principles of simplification, increasing fiscal transparency, and trade promotion. Simplifying the corporate tax system benefits corporations and the economy, simplifies Internal Revenue Service audits, unburdens the courts, and simplifies the tax legislative process. Fiscal transparency improves both federal and local governments ability to predict tax revenue.

Alternative Corporate Tax (ACT)

A dramatic and comprehensive solution to the international tax reform is the Alternative Corporate Tax (ACT).⁴ The fundamental elements of ACT are: (1) the gross margin on exports is not taxed; (2) imported inventory is deductible, except for purchases from related foreign entities; (3) no deduction for salaries and wages; (4) accelerated write-off for capital assets; (5) passive income is not taxed; (6) income earned offshore is not taxed;⁵ (7) a credit for OASDHI paid by a corporation against tax liability; and (8) a significantly reduced corporate tax rate.

⁴ ACT was developed by Ernie Christian, Gary Hufbauer, and other members of the Center For Strategic Tax Reform/Cost Recovery Action Group. ACT is a variation of subtraction method VAT.

⁵ Post-ACT election, income earned offshore would not be subject to U.S. taxation and therefore, foreign earnings could be repatriated without U.S. tax and reinvested in the U.S. economy. This aspect of ACT is similar to the Homeland Investment Act (H.R. 767 and S. 596) and carries with it economic stimulus cited

ACT has several advantages over the current income tax system. ACT is much simpler to compute because: foreign earned income is not taxed, which also eliminates complicated foreign tax credit calculations; other credits, such as R&D, would be eliminated; and alternative minimum tax would be eliminated.⁶ In addition, because both profits on exports and offshore profit earned by related foreign entities are not taxed under ACT, U.S. transfer pricing and offshore intangible transfer issues would be minimized.⁷

Conclusion

Applied Materials appreciates the opportunity to participate in these important Senate hearings on U.S. international tax reform. The state of the economy, World Trade Organization rulings with respect to FSC and ETI, and the willingness of Congress to simplify the taxation of foreign operations present a convergence of events that compels meaningful international tax reform. In an increasingly competitive global marketplace, enhancing the after-tax return to U.S. manufacturers is an important step forward in making the United States *the* preferred choice for locating investment, pursuing economic opportunity and creating jobs.

by various economists (e.g., James P. Lucier, *The Homeland Investment Act – Congress Cures Up A Second Blockbuster Tax Reform This Year*, Prudential Securities Equity Research, June 23, 2003).

⁶ Note also that “inversions” would no longer be relevant for companies that elect ACT. In addition, because the tax base is broadened (i.e., salaries and wages are not deducted), there should be less incentive to implement aggressive tax planning.

⁷ More or less profit on an export sale, and more or less offshore profit, matters less because export profits and offshore profits are not taxed under ACT.

APPLIED MATERIALS



July 17, 2003

Committee on Finance
Attn: Brad Cannon
219 Dirksen Senate Office Building
Washington, D.C. 20510

Re: William C. Barrett Response to Senator Hatch Questions

Attached are responses to Senate Hatch's questions that were sent to me July 10, 2003 after my testimony of July 8, 2003. I have restated the question followed by a response.

I would again like to thank the Senate for the opportunity to participate in these important discussions on U.S. international tax reform. I would also like to emphasize that Applied Materials believes a tax rate reduction for U.S. manufacturers, patterned after H.R. 1769, is a good idea for the U.S. economy. Manufacturing tax relief will help keep manufacturing jobs in the United States and imparts a positive message to U.S. workers and the U.S. economy.

Sincerely,

A handwritten signature in cursive script that reads "William C. Barrett".

William C. Barrett
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Question 1: Mr. Barrett, you mentioned the importance of enhancing the research credit and of moving toward fundamental tax reform as outlined in the Alternative Corporate Tax proposal. Do you think these changes would represent a smart way to use the revenue from repealing FSC?

In my testimony I advocated a package that included a manufacturing credit (patterned after H.R. 1769), subpart F trading provision repeal, an improved R&D credit (patterned after S. 664 and H.R. 463), and tax-free repatriation of earnings (patterned after S. 596).¹ A combination of manufacturing credit and improved research credit would benefit Applied Materials because we perform most of our manufacturing and research in the United States. I included subpart F trading provision repeal and homeland investment in my proposal in the interest of comity and reconciling differing viewpoints on whether it is better to reduce the tax rate on domestic manufacturing activity or tax rate reduction for income earned offshore. Within my four-part proposal, a manufacturing credit and improved research credit would most benefit Applied Materials.

I believe enhancing the research credit and Alternative Corporate Tax (ACT) represent two different policy directions for Congress. I would categorize the improvements to the research credit embodied in S. 664 as important improvements to the old (current) corporate tax system. I would also categorize the foreign reforms in H.R. 5095 as merely improving and simplifying the existing complicated tax code. ACT represents the new, and simpler, way of taxing corporations (see the attached appendix that explains in greater detail the merits of ACT).

I believe ACT provides a longer term solution for reducing the tax rate on U.S. manufacturing as well as a solution to the U.S. taxation of foreign operations – it solves both issues. However, in the short term, a reduced tax rate for U.S. manufacturers is the most important action that Congress should take and is low risk. A manufacturing tax rate reduction is low risk because, if companies retain functions in the United States as a result of the manufacturing tax rate reduction, manufacturing wages remain in the United States and the corporation generates tax revenue in the United States from the U.S. manufacturing function. Without manufacturing tax relief, manufacturing and sourcing of components will likely migrate offshore. Any offshore migration will displace U.S. workers and tax revenue will leave the United States. Importantly, the type of manufacturing rate reduction as proposed in H.R. 1769 is revenue neutral.

¹ Note that a reduced tax rate on offshore earnings is in effect a “territorial” taxation approach, patterned after “capital import neutrality” (CIN) tax systems like the Netherlands. One has to ask the question if S. 596 produces the type of positive benefit that the estimates project, then why doesn’t the U.S. adopt a “territorial” system for future offshore earnings as well.

Question 2: Mr. Barrett, I've been pushing for years to make the research tax credit permanent. Congress usually extends it for a year or two at a time, but I know that a lot of businesses just can't plan around a tax incentive that is so unpredictable. Can you tell us how this on again, off-again research credit impacts your company's decision to put resources into research and development?

Research and development into new products is the life-blood of Applied Materials. As I mentioned in my testimony, Applied Materials makes the machines that make semiconductors. Intel is one of our largest customers, but we have a global customer base. Semiconductor chip technology is geared around smaller dimensions of both conductive and non-conductive materials that will allow semiconductors to perform more tasks, as well as perform tasks more efficiently. Those tasks include numerical, digital photography, logic, and voice. Applied Materials' research is focused on delivering the "processes" that will enable our customers to produce the next generation of semiconductors for the next generation of applications. You may have seen recent Company press releases announcing new 90 and 65 nanometer machine capabilities – 100 nanometers is roughly 1/1000 the width of a human hair.

Applied Materials invests in technology because it is an essential element of our business model. The Company has never diminished its commitment to research because of research credit permanency. However, over the years the research credit has provided additional funds to support our U.S. based research and development, or to provide additional funds for technology related acquisitions. If the research credit did not exist, and the Company needed funds to continue its research and development, we would obtain those funds through public debt or equity offerings, or federal funding such as DARPA.

From a shareholder perspective, the research credit provides about a 2-percentage point tax rate reduction and has contributed to our relatively stable effective tax rate. Increasing our bottom line by 2-percentage points increases market capitalization and shareholder value. In effect, through the research credit, the U.S. government partners with industry in innovation and wealth creation.

Question 3: Mr. Barrett, can you tell us how our international tax system makes it harder to sell U.S. products and services overseas? And in particular, can you explain in some more detail how the so-called base company rules hurt U.S. companies?

The base company rules were enacted in 1962, primarily in response to perceived transfer pricing abuses (i.e., cross border allocation of income). Bilateral transfer price enforcement is vastly different than it was 40 years ago and with the specter of severe penalties for improper transfer pricing, in general U.S. companies resource the proper cross border allocation of income.

The base company rules are designed to tax *foreign* income related to activity occurring outside a controlled foreign corporation's country of incorporation. For example, CFC1 [Irish distribution entity] buys parts and resells the parts to CFC2 [German sales company]. CFC1 profits, properly earned under Irish/German transfer pricing rules, would be taxed in the United States. Similarly, profits earned in Ireland by CFC1 attributable to services performed by its engineers outside of Ireland would be taxed in the United States. In this example, profits that were not earned in the United States are currently taxed by the United States.

In the above example, the U.S. multinational may restructure its CFC1 operations to avoid the base company rules by simply selling the parts directly to the German customers. However, this will take time and resources to reconfigure financial accounting systems and may be inconsistent with business models – German customers typically like to deal with a German entity. The direct sale into Germany might also produce a “permanent establishment”/transfer pricing issue for the company.

Many U.S. multinationals look to centralize functions in regional hubs or service centers. The base company rules imposes a U.S. tax on foreign subsidiaries that operate outside their country of incorporation and therefore are penalized, without redesign of their operations, for operating in the most economical manner. U.S. multinationals are forced to either incur additional costs or needlessly duplicate functions in multiple countries.

Do the base company rules make it harder to sell products and services? The base company rules have the potential to make U.S. multinationals less competitive when foreign multinational competitors are not exposed to the same type of deemed taxable income rules.

Question 4: Mr. Barrett, we've seen some cases in the past few years where a foreign company bought a U.S. company so they could do an end-run around our outdated international tax rules. Do our uncompetitive tax rules turn U.S. firms into takeover targets?

The Daimler-Chrysler merger is probably the most famous of these foreign takeovers. It is my understanding that this merger, with Daimler the surviving parent, was designed in part to avoid the U.S. taxation of international operations. Acquisitions of this nature are possible without triggering a U.S. tax if the U.S. entity does not represent fifty percent or more of the value of the combined entities. Otherwise, a merger in which U.S. shareholders own more than fifty percent of the combined [foreign] entity would be subject to tax on the gain of their U.S. shares given up in the merger. However, as we have witnessed with "inversions", the exit tax may be palatable to shareholders to avoid future U.S. taxation of foreign earned income.

There is another perspective on takeovers and inversions that does not receive enough attention. As profit margins decrease, a company's tax liability becomes increasingly important. If that company's primary competitors are foreign, products are of equal quality and the effective corporate tax rate for that foreign competitor is lower, the competing foreign company does possess a competitive pricing advantage if foreign profits are not taxed in the home country. It is my understanding that this is situation for Stanley Works. I suspect there are a number of Stanley-like companies who are competing with low-margins and are smaller than potential foreign acquiring companies. It may be that the only way for this type of company to survive is to be acquired by a foreign company and avoid U.S. taxation of foreign operations rules in the future.

In a sense, this question and analysis brings us full circle to the first question. With a new corporate tax system patterned after ACT, the complexity and philosophical debate surrounding outdated taxation of foreign operations tax rules fades away. ACT taxes profits from domestic sales and does not tax profits earned offshore. Tax planning to avoid our arcane and outdated international tax rules, including the design of inversion transactions where a foreign entity becomes the surviving parent corporation, would be become obsolete.

Appendix - Summary of Alternative Corporate Tax (ACT)

ACT, as proposed by the Center for Strategic Tax Reform, is an elective system for corporate taxpayers. ACT is a variant of the Subtraction Method Value Added Tax (SMVAT). The following chart briefly compares H.R. 5095 and ACT. This demonstrates how ACT is a fundamentally different way of taxing corporations. The key elements of ACT are (1) receipts less purchases are taxed, (2) wages and salaries are not deducted, (3) exports are not taxed, (4) other than purchases from related parties, imported parts and components are deductible, (5) foreign operations are not taxed, (6) credits, such as the R&D tax credit, would not exist, and (7) there is a credit for social security taxes (OASDHI).

Issue	H.R 5095	ACT
Offshore incorporations -- "inversions"	Depending on stock ownership, treated as U.S. corporation or punitive exit taxes. Complexity increased.	Place of incorporation not relevant. Corporation is taxed on domestic activity. Simplification and fiscal transparency improved.
Foreign tax credit complexity	Reduces the number of separate FTC computations to 3. FTC carryforward period from 5 to 10 years. Simplification improved.	There would be no foreign tax credit. Simplification and fiscal transparency improved.
Corporate Alternative Minimum Tax Complexity (ALTMIN)	Eliminates the foreign tax credit ALTMIN limitation. Simplification improved.	There is no foreign tax credit with ACT. Simplification and fiscal transparency improved.
Perception of corporate tax shelter abuse	Economic substance and business purpose principles codified. No simplification or fiscal transparency improvement because these principles already exist in case law.	Tax base is consistent across industries and tax base is broadened (wages and salaries are not deducted). Opportunity for manipulation through aggressive tax planning significantly reduced. Simplification and fiscal transparency improved.
Tax credit complexity (other than foreign tax credit)	No provision.	No tax credits. Simplification and fiscal transparency improved.
Related party cross border pricing of products and services	No provision.	Exports are not taxed. Except for purchases from related parties, imports are allowed as deduction for U.S. purchaser. Because under-priced imports

		produce a lower tax deduction for purchaser, incentive for aggressive transfer pricing is minimal. Simplification and fiscal transparency improved.
Taxation of controlled foreign corporation trading income	Repeals outdated deemed dividend provisions related to offshore trading activity (i.e., subpart F trading provisions). Simplification improved.	Foreign activity not taxed. Simplification and fiscal transparency improved.
Trade stimulation	Repeals 5.25% export credit for U.S. manufactured goods, increasing the U.S. corporate tax rate. In theory, U.S. trade would be reduced in the short term because, with a higher U.S. effective tax rate, foreign inward investment will go down and demand for U.S. employees and U.S. capital will go down. In other words, U.S. multinationals will be inclined to invest more offshore.	Should be stimulative to U.S. economy in the short term because exports are not taxed. This should stimulate foreign inward investment, which in turn should increase demand for U.S. employees and U.S. capital.
Fiscal transparency	Most of the complexity would remain in the U.S. tax code. Therefore, the many variables impacting the computation of corporate tax liabilities will remain.	Tax revenue should be much easier to predict when there are fewer elements of taxable income. Foreign and domestic sales, corporate expenditures - other than salary and wages - are the key elements in computing taxable income. Simplification and fiscal transparency improved.

Several months ago, I attempted a rough comparative analysis of ACT to the existing corporate tax system. I did this analysis in part because I was concerned that the proposed 15 percent ACT tax rate, with its broadened tax base, was too high for most taxpayers when compared to the existing corporate tax system with more deductions and credits. The analysis also considered the loss of stock option benefit that would not be

deductible under ACT (i.e., salaries/wages not deductible under ACT). My rough analysis revealed the following:

1. For a high product margin (e.g., 50 percent) company, the ACT tax rate compared favorably to the tax liability computed under current tax law.
2. With lower product margins (e.g., 35 percent), non-deductible wages increase the ACT tax liability relative to the current tax system. This suggests that the 15 percent ACT tax rate is too high to make ACT an attractive alternative for lower margin/high export companies.
3. Reducing the ACT tax rate to 11-12 percent resulted in ACT comparing favorably to the (cash) tax liability computed under the current corporate tax system for the lower-margin companies.
4. Finally, I tried to predict how a high margin (e.g., 70 percent)/high wages company might fare under ACT. ACT produced a favorable tax result, but this was somewhat surprising, because (intuitively) one might assume that nondeductible salary/wages would produce a higher ACT relative to the current tax system. However, the favorable ACT result occurred because the high margin exports reduce taxable income disproportionately relative to the high wage/salary add back and the OASDHI credit mitigates the loss of wage/salary deduction.

Transition Issues

Deferred Tax Assets & FAS 109

In the absence of transition relief from the current corporate tax system to ACT, companies with significant net deferred tax assets (e.g., non-deductible inventory reserves) booked at the U.S. statutory rate of 35 percent, will be required to write down the deferred tax asset, increasing the effective tax rate in the first ACT year. In contrast, companies with net deferred tax liabilities (e.g., excess tax depreciation) would revalue their liability to a lower effective tax rate in the year of election and experience a one-time tax rate reduction.

Deferred tax assets represent a prepayment of tax and arise because current income tax accounting rules limit accrual basis tax deductions. For many "new industry" high-tech companies, technology and products change at a rapid pace. As such, warranty and inventory reserves can be large and are not deductible for tax purposes until paid, resulting in deferred tax assets. In the absence of transition relief, many companies might not support ACT if their net deferred tax assets are significant.

Other Tax Attributes

Companies with significant tax attributes, such as excess foreign tax credits and net operating loss carryovers, must weigh carefully the loss of these tax attributes against the ACT tax liability in the year of transition. As in the case of deferred tax assets discussed above, to the extent a company has realized tax rate benefit for these attributes in their financial statements, the tax rate reduction that was previously recorded must be reversed in the ACT election year in the absence of transition relief.

In summary, the following are advantages and disadvantages of ACT:

Advantages	Disadvantages
1. ACT is much simpler – no subpart F, foreign tax credit, investment in U.S. property (IRC §956), ETI, R&D credit, and IRS audits would be simpler and shorter.	1. Deferred tax assets booked at 35 percent must be written down creating a one-time P&L expense.
2. Tax rate would be significantly reduced as long as manufacturing and R&D is retained in the U.S. and profit margins remain high.	2. Excess foreign tax credits might go unutilized.
3. IRC §367 offshore intangible transfer issues are reduced because the incentive to invest in the U.S. increases.	3. If a company's business model gravitates to more offshore manufacturing and fewer U.S. exports, global tax liability could increase ACT.
4. U.S. transfer pricing issues are significantly reduced.	4. Foreign transfer pricing issues become more important.

Do we want a greatly simplified system that attracts U.S. investment or do we want to improve, refine, and simplify the current tax code, patterned after H.R. 5095 and ETI replacement legislation? My personal view is that the United States should simplify the corporate tax code as soon as possible, but there will be transition issues. Moreover, highly paid tax consultants, as well as in-house corporate tax people, will have to be re-deployed to more productive duties. When I compare this to simplification, a comparable cash effective tax rate, unburdening of the IRS and the courts, it seems clear to me the U.S. must go in the direction of ACT.



Committee On Finance

Max Baucus, Ranking Member

NEWS RELEASE

<http://finance.senate.gov>

For Immediate Release
Tuesday, July 8, 2003

Contact: Laura Hayes
202-224-4515

OPENING STATEMENT OF SENATOR MAX BAUCUS

**FINANCE COMMITTEE HEARING ON COMPETITIVENESS IN INTERNATIONAL TRADE,
STRENGTHENING AMERICA'S ECONOMY**

Today, the Finance Committee hosts the first of two scheduled hearings to consider the state of U.S. competitiveness at home and abroad.

Today, American companies face increasing international competition. They face it because the number of global competitors has increased. They face it because we have increasingly opened our markets. And they face it because technology increasingly renders our national borders irrelevant. Competition is usually a good thing. But we must ensure that we have policies in place so that the bad does not outweigh the good.

Today's hearing will examine the domestic implications of our current international tax policy. We will look at the effects of that policy on the competitiveness of U.S.-based operations. And we will look at the effect of that policy on investment in the U.S. This is an important hearing. And it comes at a difficult time in the U.S. economy.

Last Thursday, the Bureau of Labor Statistics reported that unemployment jumped to 6.4 percent. For the first time in a decade, the number of Americans looking for work exceeded 9 million people. The manufacturing sector has been particularly hard hit. As this chart shows, the unemployment rate in the manufacturing sector, which used to be below the national average, has risen above the national average in this recession. Nationwide, millions of jobs have been lost. Since July of 2000, roughly 2 million jobs have disappeared from the nation's economy.

Once again, the decline has been even worse in the manufacturing sector. Since July of 2000, manufacturing employment has fallen by more than 2.6 million jobs. More jobs have been lost in the manufacturing sector alone than in all sectors of the economy combined, as some sectors have produced new jobs in the same period.

The nation lost 56,000 manufacturing jobs last month alone. As this next chart shows, manufacturing jobs have declined continuously in each of the last 35 months. And as this next chart shows, the decline in manufacturing employment has been widespread. Every state in the Union, except for Nevada, has lost manufacturing jobs. 49 out of 50 states have lost manufacturing jobs.

We need to do something for the manufacturing sector. I've seen where we have lost jobs in Montana. And in my state, we cannot afford to lose these jobs. The loss of these jobs has nothing to do with America's work ethic. Our country is made up of the hardest-working, most dedicated workers anywhere. Our nation's firms have experienced historic, sharp declines in manufacturing jobs due, in part, to increasing

global competition and other related pressures on U.S. manufacturing activity. These pressures include non-tariff barriers and unfair trade practices.

U.S. manufacturing jobs are important to the U.S. economy. Manufacturing jobs create jobs in supporting industries and other sectors. And manufacturing has one of the highest job-creation multiplier effects. Every 16 million manufacturing jobs create another 9 million jobs in retail, wholesale, finance, and other sectors.

The recent steep job losses in the manufacturing sector thus affect the entire U.S. economy through reduced purchasing power, through decreased consumption, and through a shrinking tax base. So far, the government has not done enough. This is an important issue. This is a continuing problem. We need to do something about it. And this hearing today will be a good first step.

Another purpose for our meeting today is to fashion a response to an international tax case that the United States lost in the WTO. In a dispute brought by the European Union, the WTO found that the Foreign Sales Corporation (or FSC) and Extraterritorial Income Act (or ETI) were impermissible export subsidy programs. It also found that FSC/ETI did not qualify under an exception to the subsidy rules for provisions to avoid double taxation of the same income. As a result, the WTO has authorized over \$4 billion in sanctions against U.S. exporters. The EU has threatened to impose these sanctions on January 1, 2004, if we have not made significant progress in complying with the WTO's ruling by the fall.

I am disappointed with this issue on many levels. I am disappointed that the EU ever brought this case, thereby violating our long-term agreement on our respective tax systems. I am disappointed that the EU has pressed the case as aggressively as it has. I believe this issue has contributed to a general souring of our usually close relationship with the EU and undermined support for the WTO in the United States.

I am also disappointed with the administration, which has wholly ignored its obligations under the Trade Act of 2002. That Act required the administration to work to resolve this issue through WTO negotiations. As far as I am aware, the administration has done nothing on this score. Instead, the administration chose to seek repeal of FSC/ETI and other changes to the tax code. While I think that's the wrong choice, we're past the point where we can debate the merits of that strategy.

But if we're going to repeal FSC/ETI, we should make sure that we replace it with a worthy substitute. While examining alternatives, it is important to consider their effects on the U.S. economy in general, and the manufacturing sector, in particular. Our proposed replacement legislation should partially offset the loss of tax benefits to U.S. exporting companies once FSC/ETI is repealed. But it should also provide benefit to all domestic manufacturers. This could provide a needed boost for U.S. manufacturing firms.

A suitable replacement to FSC/ETI would satisfy the rules of international tax law, while seeking to maintain the health of the U.S. manufacturing base. What we need now is to choose the best plan for moving forward. To that end, I suggest a few guiding principles.

First, the EU is not required to impose the sanctions authorized by the WTO. Retaliation would hurt EU companies as much if not more than U.S. companies and would be decidedly unhelpful in bringing about a long-term solution. The only way to resolve this matter once and for all is by working toward a solution, not playing tit for tat.

A second principle to guide us through this matter is the "Do no harm" principle. In replacing FSC/ETI, we should seek to create incentives for U.S. companies to retain their domestic operations. This may sound like an obvious goal. But it needs to be said, because there are proposals under discussion that would do harm. I believe there are workable options with far less drastic consequences. Those are the options that we should pursue.

By offering tax and financial incentives to U.S. manufacturing firms, we seek to neutralize the tax advantage that other countries have. Thus we hope to allow U.S. manufacturers to provide their product at a competitive price and to keep jobs here in the U.S.

Finally, we must recognize that whatever the solution to the FSC/ETI matter, it needs to be done now. The EU has been authorized to impose sanctions at any time and is carefully watching what we do. We must work together to create a new set of rules to replace the current system.

Those rules should contain effective transition relief, perhaps along the lines of the transition relief the United States afforded the EU in the Bananas case. We will need to confer with the EU on that issue, but the EU should well understand that businesses will need some time to adjust to the new rules. Our agreement with the EU on that score will reassure businesses on both sides of the Atlantic. So let us begin today to address this issue, and to do something to help our nation's manufacturing sector.

Mr. Chairman, thank you for holding today's hearing. I look forward to working together with you to come to a resolution on this issue – a resolution that will allow us both to strengthen our nation's economy and to meet our international obligations.



United States Senate Finance Committee
Hearing on

International Competitiveness: The View from Within – Tax Policy and Its Effect on
the Domestic and International Competitiveness of U.S.-Based Operations

Tuesday, July 8, 2003

James G. Berges
President
Emerson
St. Louis, Missouri

Chairman Grassley, Ranking Member Baucus, and Members of the Committee:

Good morning. I am Jim Berges, President of Emerson.

We are a \$14 billion global company headquartered in St. Louis, Missouri.

We manufacture and service such products as industrial valves, measurement controls and software for the petrochemical, pharmaceutical and other process industries; air conditioning compressors and components for the HVAC industry; network power equipment for the telecommunications industry; and motors and appliance controls for the home appliance industry. (We do not manufacture radios and televisions sets under the Emerson brand name. That is a different company, unrelated to ours.) Our products employ advanced technology for the benefit of our customers – our R and D spending is about 3.8% of sales, among the highest of our industrial peers.

Our annual revenues are 55% from domestic sales, 45% from international sales.

We have 320 manufacturing facilities worldwide: approximately 50% of our production and payroll is derived from the 135 plants we operate in the United States. We have 185 manufacturing facilities located in Europe, Asia, and Latin America. We employ over 100,000 people.

I would like to make a few simple points in my limited time this morning:

1. U.S. Manufacturing in Crisis

Manufacturing in the United States has taken a body slam over the last three years due to the global economic downturn, sharply diminished capital spending, global overcapacity, and negative price (i.e., year-over-year price declines for manufactured goods).

At Emerson, tragically, we have had to close 45 plants in the United States and eliminate 15,000 jobs in the last three years just to stay globally competitive in many of our markets.

I can tell you that no plant closure decision is taken lightly by our management. It's extremely painful to lay-off people who often have devoted their lives to manufacturing and to leave towns where we have been a vital part of the community. Frankly, I am tired of it.

I'm sorry to say that among the casualties of these actions have been an Emerson Appliance Motor facility in Senator Lott's state of Mississippi and two facilities in Senator Lincoln's state of Arkansas.

2. Importance of FSC/ETI for Manufacturing Investment Decisions in U.S.

At a time when manufacturing is in crisis, repealing FSC/ETI, without some back-fill for all manufacturers in the United States is like kicking a dog when he's down.

Such a policy choice by Congress will impose a \$5 billion per year tax increase on the domestic manufacturing sector and provide one more disincentive, among many already, to not locate, or maintain, manufacturing in the U.S.

Let me give you just one example: Emerson's Fisher Controls facility in Marshalltown, Iowa.

We employ approximately 1000 highly skilled machinists and others in Marshalltown in the production, sales, and marketing of precision industrial valves for the oil and gas industry. 40% the product from the plant is exported.

The FSC/ETI provides a \$4.4 million/year incentive to keep these jobs in Marshalltown, Iowa. Emerson is the direct beneficiary of the FSC/ETI benefit, but the benefits also flow down to all our domestic suppliers and our ability to supply customers, both domestic and for the export markets.

If FSC/ETI is repealed, and no domestic manufacturing incentive is provided as a replacement, the Marshalltown facility will have to make up for its lost FSC benefits with either new sales of at least \$50,000,000 per year – unlikely in a very soft global market – or through cost cuts of \$7m to deliver the same after-tax earnings, which likely would mean lost jobs. Conversely, if some form of equivalent benefit remains available, savings of \$7m would have to be available at another location just to be at parity with Marshalltown, a powerful incentive to stay there.

In establishing the DISC, the FSC, and ETI, Congress directed these incentives to businesses that make things in the United States in order to offset border adjustable-VAT rebates in countries such as the Members of the EU.

The FSC/ETI provides an important incentive for job creation for domestic manufacturing and production, at a time when manufacturers face negative price and

increasing costs in health care, unpredictable litigation judgments, and, until recently, a strong dollar.

Our view is that Congress should fashion a WTO-legal incentive for these same good public policy reasons, i.e., creating and maintaining high paying domestic manufacturing jobs and revitalizing a strong, competitive, industrial base in our country.

As Joel Popkin has pointed out in his recent study, "Securing America's Future: The Case for a Strong Manufacturing Base," -- economies without a growing and vital manufacturing sector are doomed to 1.5% growth annually; the argument that we should just get on with the conversion to a service economy does not hold water. If you want to see the effects of 1.5% growth on an economy just look at Japan and parts of Europe -- not a pretty sight and not one that I care to be part of.

3. The American Manufacturing Jobs Proposal

Emerson, and many other manufacturers, have worked with interested Senators and Representatives on a WTO-legal, revenue neutral, manufacturing tax exclusion proposal as a replacement for the FSC/ETI.

We have shared these ideas broadly within the business community and with Members and staff of this Committee. I have also visited with key decision makers at the U.S. Treasury, the Commerce Department, and the White House on this proposal, as have other companies—both large and small—who share our perspective.

Our ideas are based on a Canadian manufacturing and processing tax benefit, which has existed in Canada for 30 years.

Under our proposal all manufacturers and processors, including agricultural processors, would receive a lower tax rate on their qualifying business income.

The proposal is not export dependent, has been privately estimated as revenue neutral, it has a short transition time, and would be available to all manufacturing and processing done in the United States: this includes small and medium sized manufacturers and pass-through entities like S corporations and partnerships—many of whom do not currently benefit under the FSC/ETI regime.

Pure and simple, the proposal is designed to help revitalize all U.S. manufacturing, to provide incentives for investing in domestic manufacturing, and to create jobs.

The response we have received from policymakers—from both parties—has been very encouraging. Copies of the proposal are attached to my written testimony and, Mr. Chairman, I would ask that this be included in the record of today's hearing.

4. International Tax Reform

As I have visited with key policymakers here in Washington, I am often asked, "Emerson is a global company. Wouldn't you rather see broad reform of our international tax laws?" My response is simple. These are good ideas and if you want to lower my company's international tax rates, fine. But it won't provide me any incentive to create, or retain, a single U.S. manufacturing job. Period. Full stop. In fact, lower effective tax rates at our international subsidiaries could actually encourage more job movement out of this country.

I don't mean to diminish the importance of international tax simplification and its role in U.S. global competitiveness. Congress obviously needs to address these important issues, but not at the expense of sacrificing our domestic manufacturing base.

Mr. Chairman, I very much appreciate the opportunity to share Emerson's perspective with the Committee this morning.

We look forward to working with this Committee as you continue your consideration of the FSC/ETI issue and the need for vibrant job creation in the our country.

We would urge that significant incentives for domestic manufacturing and job creation be the logical replacement for the FSC/ETI.

Thank you for your time and attention.

COALITION FOR AMERICAN MANUFACTURING JOBS

America Can Revitalize Manufacturing Jobs *A Proposal to Rebuild and Strengthen American Manufacturing and Address the WTO Challenge to the FSC/ETI Tax Regime*

- ✓ Repeal of the FSC/ETI Tax Regime – Congress, the Administration and the business community recognize that the FSC/ETI tax regime must be repealed. Several alternatives have been discussed. The proposal described herein is a replacement regime focused on revitalizing the American manufacturing sector in a manner that is WTO-legal.
- ✓ Permanent Benefit for Manufacturing and Processing Activities in the United States -- The proposal provides a permanent exclusion for active business income from domestic M&P. M&P is defined as the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The assembling of component parts of manufactured products is considered manufacturing. M & P would include farming, fishing, logging, and mining. In addition, it includes the production of films, tapes, records, and computer software (including software produced by the taxpayer and integrated in products manufactured by the taxpayer). In the case of a taxpayer that manufactures a product and installs it for first use by a customer, the installing is considered part of manufacturing and the related costs are direct M&P costs.

M&P does not include construction; providing electricity, water, and other utilities for sale; extracting oil or natural gas; operating an oil or gas well; and the leasing or licensing of any property not manufactured or processed by the taxpayer.
- ✓ Calculating the Benefit – A manufacturer would exclude about 15% of its M & P Income from gross income. M & P Income is defined as Active Business Income (ABI) multiplied by an M & P percentage.
 - Active Business Income (ABI) does not include passive or portfolio income, or any gain on the sale of assets. ABI does include leasing or licensing income from the company's products manufactured or processed in the US. M & P percentage is the percent of a taxpayer's active business income associated with M & P expressed as a fraction -- the sum of M & P domestic direct labor and capital cost over the sum of ALL domestic labor and capital cost.
 - Benefit is Available to Individuals and Pass-Through Businesses
 - Tax Rate Reduction – According to a technical analysis done by PricewaterhouseCoopers (see attached), the 15-percent exclusion is equivalent, for example, to a 5-percentage-point cut in the 35% corporate tax rate on M&P income. This analysis assumes the proposal is revenue neutral with the repeal of the FSC/ETI tax regime.
- ✓ WTO-Legal -- This proposal is not export-contingent and thus is WTO-compliant.
- ✓ Advantages of the Proposal
 - Proposal provides a strong incentive for companies to manufacture and keep jobs in the US—over the past two years the manufacturing sector has lost over 2 million jobs.
 - Treats all American manufacturers equally, notwithstanding location of headquarters. Thus, multinational companies would not receive a smaller rate reduction than wholly-domestic companies.
 - Proposal benefits small and mid-sized manufacturers. According to NAM data, more than 97% of the 1992-97 growth in the exporter population came from small and mid-sized manufacturers. These companies that are recent users of the FSC/ETI tax benefit have an enormous stake in the repeal of the benefit and the replacement.

Contact: Sandra Swirski/Anne Urban, Venn Strategies at 202/466-8700

June 23, 2003

M&P EXCLUSION

Technical Explanation

Overview

The bill provides a new exclusion from gross income of income earned from the manufacturing and processing in the United States of goods for sale, lease, or license (the “M&P exclusion”) and repeals the existing extraterritorial income exclusion. The amount of the M&P exclusion is 15 percent of qualified M&P income. The exclusion is allowed under both the regular tax and alternative minimum tax, but it does not affect payroll taxes. It is effective for taxable years beginning after December 31, 2003.

Determination

Computation: The M&P exclusion equals 15 percent of qualified M&P income. Qualified M&P income equals the active business income of a taxpayer multiplied by the M&P percentage of the taxpayer.

Active business income: In general, active business income is taxable income (determined without regard to the M&P exclusion, dividends received deduction, and net operating loss deduction), excluding investment income (such as dividends, interest, rents, royalties, and any gain or loss on dispositions). However, income from the lease or license of property manufactured or processed by the taxpayer in the United States is includible in active business income.

Active business income does not include any income from a business outside the United States. For this purpose, income whose source is determined under section 863(b) is not considered income from a business outside the United States. The “United States” includes the Commonwealth of Puerto Rico and the U.S. Virgin Islands.

All expenses must be apportioned between active business income and all other income. The taxpayer’s active business income is determined on an aggregated basis—that is, the aggregate of all income in excess of the aggregate of all losses. If this computation results in a negative number for a taxable year then active business income is deemed to be zero for that year.

M&P percentage: In concept, the M&P percentage is the fraction of active business income that is attributable to manufacturing or processing.

The *denominator* of the M&P percentage is the sum of total labor cost and total capital cost (including labor and capital costs capitalized into cost of goods sold) determined, for administrative convenience, without regard to whether the labor and capital are employed in activities that produce active business income. Total labor cost equals the salaries and wages paid to employees of the taxpayer; it does not include other forms of remuneration, such as contributions to retirement plans and the employer's share of payroll taxes. Total capital cost equals (a) 10 percent of the original cost of the taxpayer's depreciable property used during the taxable year and still on hand at year-end plus (b) the annual rental cost of rented property.

The *numerator* of the M&P percentage is the sum of M&P labor cost and M&P capital cost. M&P labor cost is 1.3333 times the salaries and wages paid to employees who predominantly are engaged directly in the taxpayer's M&P activities. M&P capital cost is 1.1765 times the portion of total capital cost of assets which predominantly are used directly in the taxpayer's M&P activities. (The purpose of the multiplicative factors—i.e., 1.3333 and 1.1765—is to augment direct costs for other costs that may be administratively difficult to allocate to M&P but are necessary for M&P.)

In general, product research, engineering design of products, receiving and storing raw materials, production, assembly, handling, inspection of goods produced, line supervision, quality control and production control, packaging of goods produced, maintenance and repair of production facilities, and pollution control are examples of activities in which labor is directly engaged and capital is directly used in the taxpayer's M&P activities. In general, storing and shipping finished goods, purchasing, selling, reselling, administration, clerical work, personnel affairs, accounting and similar data processing, and providing services to customers are examples of activities that are not "direct."

Pass-Through Businesses.—The M&P exclusion is available to pass-through and other noncorporate businesses. It is calculated at the entity level and passed through to owners.

Manufacturing and Processing

To be qualified M&P income, the taxpayer's income must be from manufacturing or processing. Manufacturing or processing is the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The assembling of component parts of manufactured products is considered manufacturing. It

includes farming, fishing, logging, and mining. In addition, it includes the production of films, tapes, records, and computer software (including software produced by the taxpayer and integrated in products manufactured by the taxpayer). In the case of a taxpayer that manufactures a product and installs it for first use by a customer, the installing is considered part of manufacturing and the related costs are direct M&P costs.

Qualified M&P income does not include income from construction; providing electricity, water, and other utilities for sale; extracting oil or natural gas; operating an oil or gas well; and the leasing or licensing of any property not manufactured or processed by the taxpayer.

Effective Date

The M&P exclusion is effective for taxable years beginning after December 31, 2003. Repeal of the extraterritorial income exclusion is effective for taxable years beginning after December 31, 2005.

As a transitional measure, the M&P exclusion is reduced by two-thirds for the first taxable year beginning after December 31, 2003 and by one-third for the first taxable year beginning after December 31, 2004. The exclusion of extraterritorial income is reduced by one-third for the first taxable year beginning after December 31, 2003 and by two-thirds for the first taxable year beginning after December 31, 2004.

End



SENATOR JIM BUNNING
STATEMENT FOR THE RECORD
SENATE COMMITTEE ON FINANCE
INTERNATIONAL COMPETITIVENESS:
THE VIEW FROM WITHIN
8 July 2003

Thank you, Mr. Chairman.

I want to compliment you for holding this hearing. The current situation in which we find ourselves as a result of the W.T.O. decisions in the F.S.C. and E.T.I. cases presents us with many challenges as well as an occasion to examine how our tax system influences business decisions of American businesses.

I am greatly looking forward to the input from our witnesses today and anticipate that the Committee will be able to take advantage of the expertise and experience we gain today as we grapple with the issues before us in the coming weeks.

It is obvious that our economy is not where we would like it to be – as evidenced all too painfully by the unemployment numbers that we see reported everyday. As the Committee charged with primary responsibility for the tax and trade policies of this country, we address issues every day that are fundamental to the economic health of this country. It is our job to examine how our current tax and trade policies influence the country's economic growth and to recommend new policies that can increase and encourage greater growth. We made a great stride toward helping our economy get back on track through our role in the passage of the Jobs and Growth Tax Relief Reconciliation Act of 2003 and we are now presented with an opportunity to continue that work.

Again, I commend the Chairman for taking the lead on this matter by holding this series of hearings and I thank our witnesses for taking the time to share their expertise and opinions with us as we examine these important policy matters.

I look forward to an informative and enlightening exchange of ideas.

Thank you.



U.S. SENATE COMMITTEE ON

Finance

SENATOR CHUCK GRASSLEY, OF IOWA - CHAIRMAN

<http://finance.senate.gov>

Opening Statement of U.S. Senator Chuck Grassley, of Iowa
 Chairman, Senate Committee on Finance
 Hearing on International Competitiveness: The View Within Tax Policy and Its Effect
 on the Domestic and International Competitiveness of U.S.-Based Operations
 Tuesday, July 8, 2003

Today, we convene the first of two hearings on international competitiveness and U.S. tax policy. When we speak of international competitiveness, we usually think of the international tax rules affecting the foreign activities of U.S. companies. However, there is another side to international competitiveness. It concerns the ability of U.S.-based businesses to compete in foreign markets and against foreign competition here on U.S. soil. Today's hearing is about the competitiveness of U.S.-based businesses. Next Tuesday we will hold a separate hearing on the competitiveness of U.S. foreign activities.

Our review of international competitiveness has, in large part, been driven by the recent WTO ruling on our FSC-ETI tax regime. The FSC-ETI regime in effect lowers the rate of income tax imposed on goods that are manufactured here in the U.S. and exported for sale in foreign markets. The purpose of FSC-ETI is to allow U.S. manufacturers to compete with European manufacturers who do not pay EU VAT taxes on their exports.

The WTO has ruled that FSC-ETI is an illegal export subsidy, and has authorized the EU to impose up to \$4 billion a year in sanctions on U.S. exports. This morning, we will receive an update from USTR on which products could be hit and when those sanctions could start. We are faced with several choices. We can leave FSC-ETI in place and absorb the sanctions, but that could have a devastating effect on the U.S. economy. Though I may not agree with every decision of the WTO, I think it is important that we continue to adhere to a rules-based trading system. After all, if we want other nations to comply with WTO rulings that benefit us, it is only fitting to comply with rulings against us.

I believe we should honor our WTO obligations and repeal FSC-ETI. But the next question is what we should do with the \$50 billion raised by FSC-ETI repeal. Some have suggested that we use the proceeds to reform the international tax rules affecting the foreign operations of U.S. companies. They claim that this is the best way to shore up the U.S. economy, grow U.S. jobs, and enhance our international competitiveness. But others have sounded a sober warning that repealing FSC-ETI will be a \$50 billion tax increase on U.S. manufacturing and the U.S. jobs base, at a time when manufacturing can least afford it. They believe the proceeds are better spent on tax relief here at home, rather than abroad. Proponents of international tax reform say this claim is overstated, that FSC-ETI benefits very few companies and even fewer jobs, and that FSC-ETI is not significant in redressing the problems facing the U.S. manufacturing sector.

Given these opposing views, the first panel in today's hearing will explore the problems facing American manufacturing, manufacturing's significance to our overall economy, and what is happening to employment in the manufacturing sector. We will then assess what role, if any, the FSC-ETI regime plays in all this, whether the regime should be replaced, and if so, what should replace it. Our second panel will focus on the ability of U.S.-based businesses to compete against foreign competition here on U.S. soil.

Understanding the Evolution of U.S. Manufacturing

Robert E. Hall

Hoover Institution, Stanford University

Testimony before the Senate Finance Committee

July 8, 2003

I am grateful for the opportunity to present testimony on the evolution of U.S. manufacturing. My expertise is in the operation of the U.S. economy. I serve as the McNeil Joint Senior Fellow of the Hoover Institution at Stanford and Professor in Stanford's economics department. I also serve as the chairman of the committee of the National Bureau of Economic Research that maintains the generally accepted chronology of the U.S. business cycle.

Figure 1 charts the growth of the volume of goods produced by U.S. manufacturers, on a log scale. Growth has occurred at a constant rate (a straight line on the log scale) with occasional interruptions from recessions. Recent experience is no exception. Growth was slightly above normal through 2000, became negative during the recession that began in early 2001, resumed growth at the end of 2001, and paused in early 2003. The recession of 2001 is deeper than that of 1990, in terms of the production of manufactured goods, but not as deep as a number of earlier recessions.

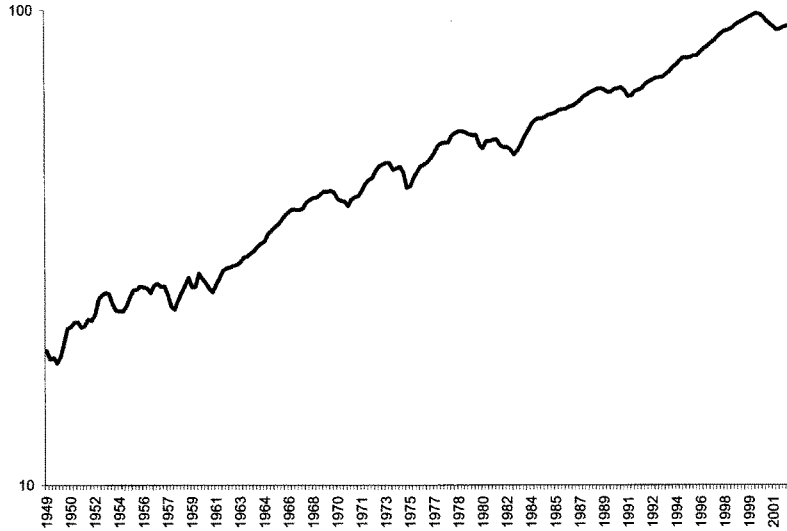


Figure 1. Index of Output of U.S. Manufacturing, Log Scale
 Source: Manufacturing output index, Bureau of Labor Statistics

The important lesson of Figure 1 is that the United States has a manufacturing sector that has grown steadily over the past 50 years, with particularly rapid growth in the years before the current recession. There is no sign in the data on output of the onset of chronic ill health in manufacturing. Rather, the normal growth of manufacturing output has been interrupted recently by a recession of fairly typical magnitude.

Figure 2 looks at the manufacturing sector from a different perspective. It shows the fraction of Gross Domestic Product that the goods produced by the manufacturing sector (or imported from foreign manufacturers) account for. The fraction has declined steadily. The decline reflects a profound alteration that is occurring in the United States and all other advanced economies—produced goods are becoming rapidly cheaper and account for declining fractions of spending, even though the volume of goods is expanding

rapidly. Spending is shifting toward the services that are becoming more expensive—health, education, and housing. Rapid productivity growth in the manufacturing sector is the key to this transformation.

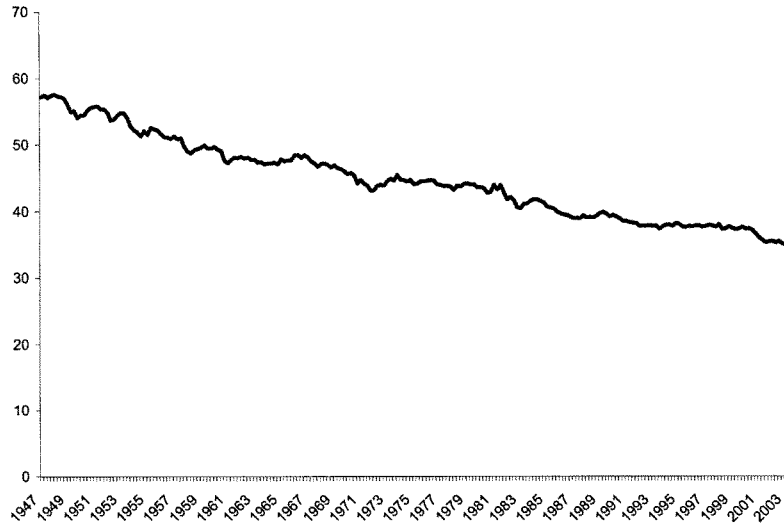


Figure 2. Manufactured Products as a Percent of Gross Domestic Product

Source: National Income and Product Accounts, Table 1.3. Gross Domestic Product by Major Type of Product

Figure 3 shows the record of productivity growth in U.S. manufacturing since 1949. Except for a pause in the late 1970s and a brief decline in recessions, including the one that began in 2001, growth has been steady and rapid. Manufacturing leads all other sectors in productivity growth.

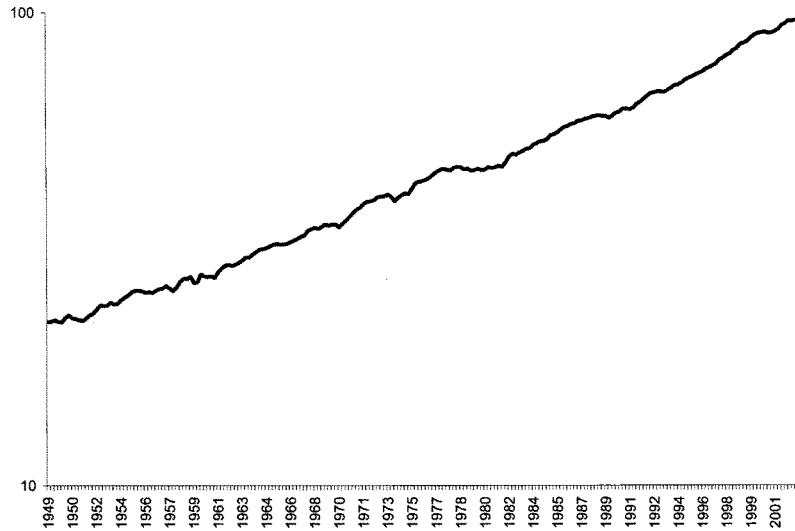


Figure 3. Productivity in Manufacturing, Log Scale

Source: Output per hour in manufacturing, Bureau of Labor Statistics

One of the important implications of rapid productivity growth in manufacturing is that employment in the sector has remained roughly constant over the past 50 years—a constant workforce has produced a rapidly growing volume of goods. Figure 4 shows an index of the total amount of work performed in manufacturing, measured as annual hours of work of all workers. Although the amount of work performed declined in the recent recession, the decline was no greater than in previous recessions.

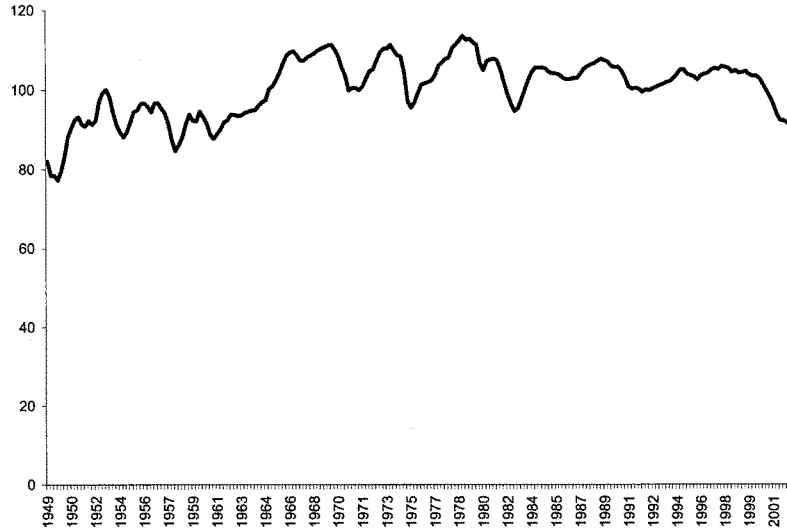


Figure 4. Labor Used in Manufacturing, Index of Total Hours of Work
Source: Bureau of Labor Statistics

My final comment about trends in manufacturing deals with U.S. trade in manufactured goods with other nations. Figure 5 shows net imports of manufactured goods (goods imported less goods exported), as a fraction of total goods used in the U.S. economy. Before 1970, the United States was a net supplier of goods to other countries. Since then, the United States has been a net purchaser. The fraction of goods purchased abroad rose particularly dramatically over the past four years. The primary factor underlying the trend toward importing goods is the successful specialization of countries like China in producing standardized, mass-produced consumer goods. The United States, by contrast, specializes in services and intellectual property. Another important factor is that the United States offers by far the most attractive investment prospects of any country in the world and thus attracts huge inflows of capital. The inflow of goods from other

countries reflects the use of those capital inflows to finance purchases of plant and equipment within this country.

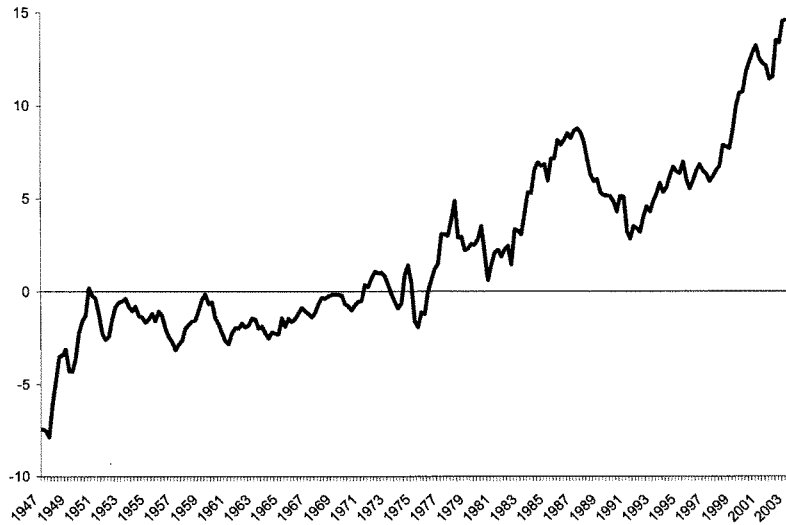


Figure 5. Net Imports of Manufactured Products, as a Percent of U.S. Production

Source: National Income and Product Accounts, Table 4.1. Foreign Transactions in the National Income and Product Accounts, net imports of goods as a percentage of the goods component of GDP, Table 1.3

Let me now turn to the current state of manufacturing. The conclusion of my review of the data was that the U.S. manufacturing sector was on its normal trend of rapidly growing output and constant employment, together with the decline that began around the end of 2000 associated with the recession. Figure 6 breaks down manufacturing employment into 8 subsectors and tells more about the nature of this recession. Most consumer-goods industries, such as food and furniture, suffered fairly small employment reductions. The auto industry cut back a fair amount, despite the surprising continuation of

high levels of sales. Capital goods—machinery and computers—saw reductions of about 20 percent in employment, abnormal even for a recession. And apparel employment declined by an astonishing 40 percent (this is the smallest of the sectors, however).

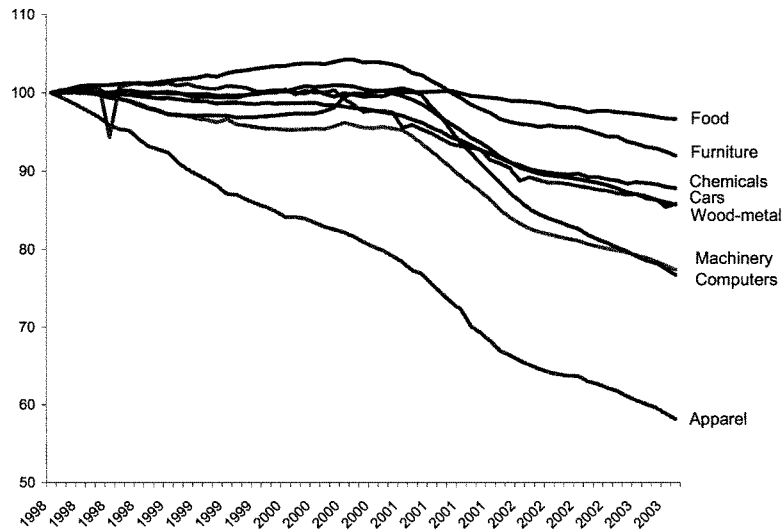


Figure 6. Employment in Manufacturing Industries, January 1998=100
Source: Bureau of Labor Statistics, payroll employment data

The figure confirms a standard view about this recession—at its center is a dramatic decline in business capital goods spending, especially for computers. This category of spending reached high levels in the late 1990s and then fell, along with the stock market. In addition, as the employment figures for apparel demonstrate, an acceleration of the process of importing some types of low-tech goods from low-cost countries rather than producing them at higher cost in the United States contributed to employment and output declines.

These shocks, while disturbing to the workers and owners in the affected industries, are not large by historical standards. The changes in employment in armament industries in the demobilizations from World War II and the Korean War dwarf them. Based on past experience, we can say with some confidence what is in store for the next few years, as the economy recovers from the shocks that caused the recession. Capital-goods spending will gradually recover and employment will rise in that sector, but only quite slowly. Workers laid off from industries suffering permanent declines, such as apparel, will be absorbed, but only gradually, in other, growing sectors, many outside manufacturing.

The Federal Reserve has pursued an aggressive policy of low interest rates during the period of slack following the recession. This policy is exactly right for the circumstances. The policy has stimulated one non-manufacturing sector—homebuilding—and permitted that sector to absorb some of the workers who lost jobs in manufacturing. The policy will also stimulate spending on business equipment as the economy recovers.

Questions for Robert E. Hall**From Senator Orrin G. Hatch**

Question: Professor Hall, I know in the past you've been a supporter of letting businesses immediately deduct the full cost of business equipment. I've been a big believer in moving toward expensing, because I'm convinced that when workers have more equipment to work with, they're more productive. And as we all know by now, productivity growth is the real key to long-lasting wage growth. Can you explain how equipment expensing helps American workers? And do you think that equipment expensing would improve the long-term prospects for U.S. manufacturing?

Professor Hall's answer: Expensing investment is the key to a consumption tax. By removing investment from the tax base, the tax falls on consumption, the best measure of a taxpayer's ability to pay. In addition, taxing consumption provides the right incentive for capital formation. Our current income tax biases business away from capital. The harm is greatest in capital-intensive industries, which are typically in the manufacturing sector.

Question: Professor Hall, Ms. Lee, and Ms. Kobe, I would like to ask all of you economists this next question. Given that the U.S. must repeal its FSC/ETI export tax incentive, and that we cannot replicate the benefits of that incentive, doesn't it make sense to you as economists that we should replace it with tax provisions designed to increase productivity and capital formation?

Professor Hall's answer: I certainly agree. I am in favor of improvements in the tax system that would move it toward a consumption tax, which provides the optimal incentives for productivity improvements and capital formation. These changes should not target any particular sector, but should be available to business in general.

Question: Professor Hall and Ms. Kobe, you both mentioned in your testimony the significance of productivity growth to the manufacturing sector. In your view, what are the tax policies this Committee should pursue to help ensure continuing productivity growth?

Professor Hall's answer: First, as I stressed in my testimony, American manufacturing has an outstanding record of recent productivity growth. To sustain and improve that record, we should move toward a broad, uniform consumption tax, with expensing of investment at the business level and further reductions in the taxation of dividends and capital gains, to build upon the improvements that Congress has enacted recently.

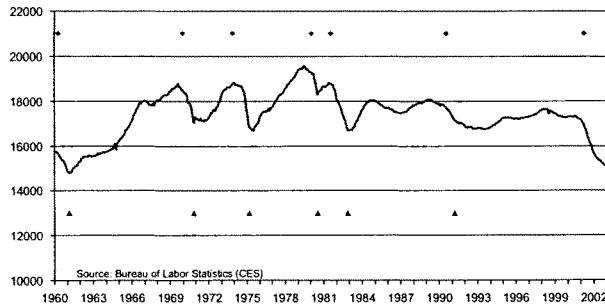
"Please review these questions expeditiously and provide answers, in writing, to Brad Cannon at the Committee on Finance, 219 Dirksen Senate Office Building, Washington, DC, 20510, by July 22, 2003. Please also send your answers to brad_cannon@finance-rep.senate.gov via email and include each question with the answer."
Brad Cannon, (202) 224-4515.

Testimony Before the Senate Committee on Finance
July 8, 2003

Good morning, my name is Kathryn Kobe and I am the Chief Economist of Joel Popkin and Company. We are economic consultants based here in Washington, DC. Joel Popkin and Company recently completed a white paper on the importance of manufacturing to the U.S. economy for the Council of Manufacturing Associations. This testimony is drawn from the research JPC conducted for that paper. The executive summary of the paper is appended.¹

I have been asked to outline the current state of manufacturing in the U.S. The basic data on job losses in manufacturing paint a stark picture of a sector that is struggling for survival. In March 2001, the U.S. reached the official end of the economic expansion that began in March 1991 and entered its first recession in over a decade. Since the beginning of the recession, the number of manufacturing jobs has plummeted, declining by 2.2 million jobs between March 2001 and June 2003. That is over 70 percent of the 3.1 million jobs lost in the private sector during that time period. However, the manufacturing sector was losing jobs well before the official start date of the

Chart 1: The Number of Manufacturing Jobs in the U.S.
(in thousands)



¹ The full paper is available for download from the JPC website, www.jpcecon.com.

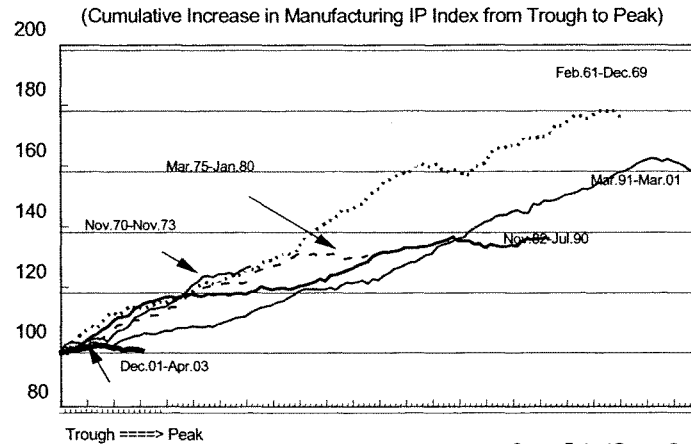
downturn. The sector lost almost a half million jobs between 1998 (when the number of manufacturing jobs peaked for this expansion) and early 2001.²

How unusual is this job loss during a recession? The chart above tracks the number of manufacturing jobs in the U.S. between January 1960 and June 2003. Along with the number of jobs the chart shows the peaks and troughs of the business cycle (peaks are marked by the diamonds at the top of the chart and troughs by the triangles at the bottom of the chart). It is clear, that manufacturing employment in the past has shown steep declines during the periods of recession and tended to recover relatively quickly once the trough of the recession had passed. However, beginning in the 1980s, the number of jobs gained during the recovery period has been noticeably smaller. During the most recent expansion manufacturing jobs showed few gains, in March 1991 there were 17.1 million manufacturing jobs and by March 1998 (the high point for manufacturing jobs during the expansion) the total was only 17.6 million. The number of jobs lost during the most recent recession has not been matched since the early 1980s; and the current level of manufacturing jobs is lower than it was at the trough of the 1961 recession.

Manufacturing has been a significant success story in the area of labor productivity. Consequently, a stable level of manufacturing jobs or even a reduction in manufacturing jobs might reflect growth in productivity without a decline in manufacturing output. However, manufacturing's share of GDP has also fallen over this time period. In 1991, the manufacturing sector produced 17.4 percent of U.S. GDP. Manufacturing had already faced a significant amount of competition and restructuring during the decade of the 1980s and had seen its share of GDP slip from 20 percent in 1982. However, the sector's share of GDP did stabilize during the early 1990s, fluctuating in a relatively narrow range. In 1995 the manufacturing sector was still producing 17.4 percent of a growing nominal dollar GDP. Since 1995, manufacturing's share of GDP has shown sharp declines and by 2001 (the latest information available) its share was only 14.1 percent. While the 2002-2003 estimates will not be available until next spring, other measures of the manufacturing sector would indicate that its share may have declined further since then.

² The data on the number of jobs in manufacturing was revised on June 6, 2003 when the BLS changed to using the North American Industrial Classification System (NAICS) for its Current Employment Survey Statistics. The chart and the numbers in the text are based on a consistent definition of manufacturing based on NAICS. Under the old definition, manufacturing has a larger number of jobs, primarily because publishing was a part of manufacturing under the old definition. However, the size of the decline in the number of manufacturing jobs is similar regardless of which data are used.

Chart 2: Manufacturing Industrial Production Growth during Recent Expansions



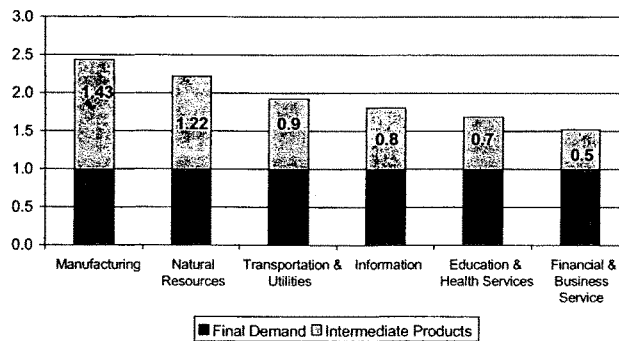
The NBER has not yet set a date for the trough of the recession that began in March 2001. However, if one assumes that the trough was at the end of 2001 and compares the growth in manufacturing output over the past year and a half with the growth in manufacturing output during the early part of other recent expansions, there is a noticeable difference in the pattern. Chart 2 compares manufacturing output of this expansion to those of the previous five expansions, using the industrial production index for manufacturing. The chart shows the growth in output from trough to peak of the respective economic expansions.³ In the expansions during the 1960s, 1970s and 1980s, manufacturing output rose about 23 percent during the first 17 months of recovery. The recovery from the 1990-91 recession took twice as long to reach that point – over 30 months. That was one reason the early portion of that expansion is often referred to as the "jobless recovery." The recovery in manufacturing output during this expansion is lagging even the poor start of the 1991 recovery. Manufacturing output is up less than 1.0 percent over the past 17 months compared with about 7 percent the previous recovery. By all of these measures the sharp decline in manufacturing

³ Peak and trough months are determined by the National Bureau of Economic Research's Business Cycle Dating Committee. That Committee has determined that the peak of the last expansion, and thus the start of the most current recession was in March 2001. It has not yet determined the date for the trough of the recession. For this analysis, December 2001 has been chosen as the most likely date for the trough month.

appears to be more than just part of the usual cyclical pattern of a downturn in the economy.

A dynamic economy is constantly undergoing changes and readjustments. What benefits has the manufacturing sector contributed to the U.S. economy that are potentially at risk as the sector downsizes? The first is manufacturing's many links to the rest of the economy. The manufacturing sector has the highest multiplier of any major sector in the economy. That means that for each dollar of final demand for manufactured products, an additional \$1.43 worth of goods and services is needed to

Chart 3: Multipliers for Selected Sectors of the Economy

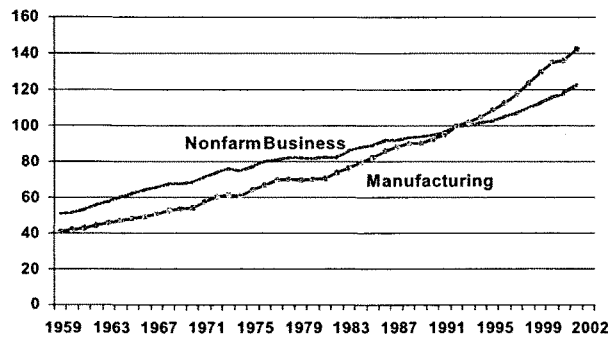


Source: Bureau of Economic Analysis

produce that output. Those additional goods and services come from other manufacturers in the form of parts and supplies, and from sectors of the economy outside of manufacturing. The major service-producing sectors has significantly smaller multipliers. An increase of a dollar in the final demand for information services requires only \$0.80 worth of additional output from other sectors of the economy, an increase in the demand for financial and business services requires even less additional output, \$0.50 worth. Consequently, when the demand for manufacturing output grows it produces more secondary demand for other goods and services than does any other major sector and when manufacturing demand shrinks, so does the demand for the goods and services that are needed to support it.

Manufacturing has long led U.S. industries in productivity growth. Gains in productivity raise a country's standard of living. In the past fifteen years – which include both years of economic expansion and recession – output per hour in the U.S. private non-farm economy rose at an average annual rate of 1.9 percent. That productivity performance was substantially a result of gains in manufacturing labor productivity, which rose 3.1 percent per year.⁴ In the same timeframe, total nonfarm multi-factor productivity – the productivity of labor and capital combined – advanced 0.9 percent annually. For the manufacturing sector the rise was 1.6 percent per year. Durable manufacturing turned in an exceptionally strong multi-factor productivity increase of over 2 percent per year, reflecting the technological breakthroughs in the manufacture of high-technology electronic goods.

Labor Productivity in U.S. Nonfarm Business and Manufacturing
(1992=100)



Source: Bureau of Labor Statistics

Manufacturers are the major dynamo of R&D. Over the past 20 years, manufacturing has performed almost 60 percent of all R&D in the United States. The National Science Foundation estimates total U.S. R&D spending in 2002 at \$291 billion.⁵ Of that amount, R&D performed by private industry is estimated at \$213 billion.

⁴ Bureau of Labor Statistics, U.S. Department of Labor, Productivity and Costs

⁵ "Slowing R&D Growth Expected in 2002," National Science Foundation *InfoBrief* (NSF 03-307), December 2002.

Detailed 2002 R&D totals by industry have not yet been published, but R&D performed by manufacturing industries is estimated at \$127 billion, more than 60 percent of the total private R&D, and about 45 percent of all R&D performed in the United States.⁶ In 2000, manufacturing industries financed (as well as performed) about 55 percent of all private R&D.⁷

The process through which R&D promotes economic prosperity is multi-faceted and complex. The first avenue is through direct benefits to firms from their R&D investments. Those direct benefits, or the potential benefits a rival might gain from R&D, are the primary driver of firm-financed R&D. Inventions being turned into innovations and those innovations producing an incentive for other innovations is what William Baumol, in his book *The Free-Market Innovation Machine*, refers to as the cumulative nature of innovation or as "innovation breeding."⁸ However, not all the positive impacts of R&D accrue just to the firm that is financing it. The second path by which R&D makes an impact on the economy is through "spillovers" whereby R&D performed by one firm benefits other firms without direct compensation for the innovation. The third is the feedback from R&D and its spillovers to improve manufacturing products, processes, and distribution networks. The fourth is through the widely discussed multiplier – the effect of one industry's investment on other industries.

R&D spillovers are an important factor in this process. Spillovers come about when parties derive benefits from the R&D without having to fully compensate the company conducting the research. Spillovers are often characterized in one of three ways, but these pathways often interact and increase their combined effect.⁹ One way is through "market spillovers," in which the marketing of a new product creates benefits to market participants other than the innovating firm. Often this is through a new technology that is embodied in products newly developed or improved by R&D. However, because producers fail to capture all of the improvements in the prices they charge for those new goods, cost-free benefits accrue to competitors and customers, or are handed back to suppliers.¹⁰ A second kind is termed a "knowledge spillover." This is the transmission of knowledge from an R&D activity that can be used by other

⁶ Estimates of manufacturing sector R&D are based on detailed 2000 distributions applied to 2002 industry totals.

⁷ The remainder of the funding came primarily from the federal government; however, the federal government's financing of R&D performed by industry has been virtually unchanged in recent years.

⁸ *The Free-Market Innovation Machine*, William J. Baumol, Princeton University Press, 2002.

⁹ "The Importance of 'Spillovers' in the Policy Mission of the Advanced Technology Program," by Adam B. Jaffe, *Journal of Technology Transfer*, Vol. 23 (2), pp. 11-19.

¹⁰ The potential for market spillovers of R&D has been quantified in a forthcoming NIST paper, "Inter-Industry Diffusion of Technology That Results From ATP Projects" (GCR # 03-848).

economic agents in a virtually cost free manner. A third kind is a "network spillover." It occurs when R&D benefits are enhanced in value by the development of a related set of technologies. Thus, extra benefits may accrue to an innovation if related technological innovations also take place. For example, the existence of a modem allows greater benefits to be derived from computers, and the more people one can communicate with in that network the greater those benefits.

It is widely recognized that spillover effects are magnified the more interdependent the parties are and the closer their geographic proximity. A recent paper by Michael Orlando discusses the importance of proximity, both technological and geographical, to the spillover process. He finds that spillovers within a manufacturer's own very narrow sector tend to be much less sensitive to distance than are those from outside that narrow sector, although a combination of geographic and technological nearness seems to be advantageous. However, the impact from spillovers originating outside the manufacturers' narrow sector tend to decrease rapidly with distance.¹¹ Therefore, firms are more likely to benefit from spillovers when R&D takes place geographically near to them than they are if it occurs on the other side of the world, especially with regard to the benefits from more generalized R&D.

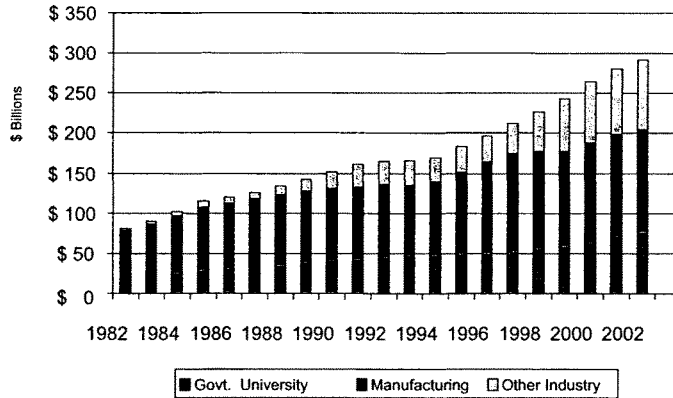
But recent numbers show weakness in manufacturing's R&D efforts. Manufacturers accounted for 62 percent of private R&D in 2000 – \$124 billion – and manufacturers financed 90 percent of that total themselves.¹² However, the \$11 billion increase in R&D spending between 2000 and 2002 represents only half the recent pace of R&D spending. In real terms, spending on R&D by all of private industry barely changed in 2002. And the National Science Foundation reports that manufacturing R&D input has barely grown for the past decade, only 5.6 percent (0.5 percent per year) in the 1989-1999 period. So while at 62 percent the manufacturing share of industry R&D is still high, that is much weaker than past performance. Manufacturing's share was 80 percent just 10 years ago and 95 percent 20 years ago. At first glance, one could conclude this is a result of the rapid growth of the services sector, and as Chart 5 shows there is an increase in non-manufacturing R&D.¹³ However, the slowdown in the real

¹¹ "On the Importance of Geographic and Technological Proximity for R&D Spillovers: an Empirical Investigation," by Michael J. Orlando, Federal Reserve Bank of Kansas City, July 2000.

¹² The remaining funds come from federal government sources. "U.S. Industrial R&D expenditures and R&D-to-Sales Ratio Reach Historical Highs in 2000," National Science Foundation *InfoBrief* (NSF03-306), December 2002.

¹³ Detailed tables on nonmanufacturing R&D indicate a large proportion of the expenditures take place in the network industries, trade and information services.

Chart 5: R&D Expenditures by Performing Sector



Source: National Science Foundation

growth of total R&D and the slowdown in goods-related R&D will impact the beneficial effects of the externalities that accompany new innovations in manufacturing.

There are also indications that the U.S.' R&D expenditures as a share of the total R&D conducted by industrialized countries have begun to shrink. In 1984, the United States accounted for about 48 percent of total OECD R&D expenditures (in real terms) but by 1998 that share had fallen to less than 44 percent. And while the United States still spends more, by far, on R&D than any other OECD nation, it ranks only fifth in the world when ranked on R&D expenditures as a percent of GDP.¹⁴

If the U.S. manufacturing base shrinks too much this innovation process is put at risk. A very small and diffuse manufacturing sector does not promote the same level of R&D activity. As the U.S. manufacturing base downsizes it promotes a shift in R&D and investment to other global centers where the critical mass necessary to conduct it exists and is growing. If this happens, a decline in the U.S. long-term economic growth rate is all but assured. National Institute of Standards and Technology economist Gregory Tassej puts the importance of domestic R&D into a broader perspective:

Changes in competitive dynamics are altering the reward/risk ratio for R&D investments within and between technology life cycles. As life cycles compress, R&D at the company level no longer can exist in isolation of a

¹⁴ *Science and Engineering Indicators--2002*, National Science Foundation, Chapter 4.

supporting network. Corporations increasingly require access to R&D conducted by other firms in their supply chains and to the broader technology infrastructure provided by a national innovation system. If domestic R&D resources are not available, U.S. companies do not hesitate to form research partnerships with foreign companies, outsource R&D overseas, or directly invest in foreign research facilities. These research relationships often lead to follow-on foreign manufacturing relationships. Thus, the maintenance of an effective domestic R&D network is essential for attracting domestic and foreign R&D funds and subsequent manufacturing, which increases domestic value added and hence economic growth.¹⁵

This importance of the role of R&D also is recognized by the U.S.' trading partners. As part of its proposed auto policy, China would require international auto makers to foster R&D facilities within China.¹⁶

The ability to fund new private R&D spending comes largely from the profits that a company can plow back into its business. Thus, the available cash flow of manufacturing firms is closely linked to their ability to perform R&D work as well as make new capital investments. One measure of the cash flow available for such investments is the depreciation charges of a company plus the profits it retains rather than distributes as dividends to its shareholders.¹⁷ Between 1999 and 2001, this measure of manufacturing corporate cash flow fell by almost 20 percent, to 25 percent of total corporate cash flow in the United States. In the late 1980s manufacturing accounted for almost 40 percent of all corporate cash flow in the U.S. economy. This puts severe limitations on companies' abilities to make the necessary investments to spur future innovations and growth. Cash flow varies with the business cycle and thus the recession is one of the reasons for the recent slowdown in R&D. Although it is not the only reason.

One area in which innovations have helped the U.S. is in its manufactured exports. Manufacturing R&D is an important driver in spurring growth in U.S. exports. Exports of R&D-intensive goods are a growing share of overall goods exports by the United States. In 1980 exports of such goods accounted for about 19 percent of all manufactured exports in the United States; by the late 1990s that share had grown to

¹⁵ "R&D and Long-Term Competitiveness: Manufacturing's Central Role in a Knowledge-Based Economy," by Gregory Tassef, National Institute of Standards and Technology, February 2002, p. 9.

¹⁶ "China's New Auto Policy Favors Local Companies," *Wall Street Journal*, June 3, 2003.

¹⁷ In the early 1990s, manufacturing was paying out almost 30 percent of all corporate dividend payments to shareholders in addition to retaining enough earnings to fund its investment programs. Manufacturing's share of dividend payments declined to about 20 percent of the total corporate dividend payments in 2001. Bureau of Economic Analysis, U.S. Department of Commerce.

about 27 percent.¹⁸ However, by definition goods high in R&D content are those embedding new and better ideas. The world buys U.S. exports because they are "the better mousetrap." To maintain the growth in such goods requires a sizable continuous stream of investment in R&D, and a sizable manufacturing sector to innovate, produce, and sell those goods abroad.

The United States is the world's largest exporter of manufactured goods. In 2001, it exported almost \$600 billion worth of goods. U.S. manufactured exports have more than doubled since 1990, and manufactured goods account for 82 percent of the United States' total merchandise exports and three-quarters of all its exports. Through most of the past two decades U.S. manufactured exports as a share of world trade have remained relatively constant – 13 percent in 1980, 12.1 percent in 1990 and 13.5 percent in 2001. At the same time trade has become an increasingly important part of the economies of the United States and other nations around the world.¹⁹ But despite the growth in goods exports, the merchandise trade deficit has been negative since 1976. Goods exports as a share of U.S. GDP peaked at about 8 percent in late 1997 but has retreated to about 6 percent since then. This reflects declining goods exports in 1998 (due to the Asian currency crisis), some recovery in growth in the 1999-2000 period, and then a sharp decline in goods exports in 2001 and 2002. This last decline partially reflects the impact of the recession on our trading partners and the terrorist attacks in the United States in September 2001; but that is not the only cause. While the decline in U.S. exports in 2001 corresponded to a decline in total world trade, the same cannot be said for 2002. World merchandise trade increased 4 percent last year, while U.S. merchandise exports continued to decline.²⁰ Consequently, after two decades of relative stability, the U.S. share of world manufactured exports declined to about 11 percent in 2002. That reflects a worsening of the U.S. position vis-à-vis other nations producing manufactured exports.

America's success as an exporter has prompted other countries to build their own base for manufacturing exports. As world trade burgeoned in the 1990s, increasing from \$4.2 trillion to \$7.9 trillion, manufactured goods as a share of total world exports also increased from about 70 percent of the world's merchandise trade to about 75

¹⁸ R&D intensive goods as defined in this case are biotechnology, life science technologies, optoelectronics, information and communications, electronics, flexible manufacturing, advanced materials, aerospace, weapons, and nuclear technology.

¹⁹ The U.S.'s manufactured imports share of world trade has grown tremendously during this time period increasing from 11.2 percent in 1980 to 15.4 percent in 1990 and was 19.4 percent in 2001. *International Trade Statistics, 2002*, World Trade Organization.

²⁰ "Trade Recovered in 2002, but Uncertainty Continues," WTO, April 2003.

percent. U.S. businesses and consumers have benefited from the availability of many foreign-manufactured products; thus, traded goods have become an increasingly large share of the American market. The sum of U.S. exports and imports of manufactured goods are now equal to 40 percent of U.S. domestic production of manufactured goods. In 1987 that share was 20 percent.²¹

Continued growth in U.S. exports is vital to enabling the United States to trade with the rest of the world.²² Exports earn foreign currency, and foreign-currency earnings support jobs and allow the United States to purchase foreign-made imports. The International Trade Administration estimates that 1 in 5 manufacturing jobs is tied to exports of manufactured products, and for each of those manufacturing jobs there are 1.3 non-manufacturing jobs tied to manufactured exports.²³

The strong U.S. dollar overseas is blamed for handicapping export growth and encouraging the growth of imports. The recent weakening of the dollar should be helpful to U.S. goods manufacturers. A rise in their exports should follow. But the balance of trade impact of the dollar's recent decline will probably not be as large as some have anticipated. That is because the decline is being driven by the 17 percent depreciation of the dollar against "major" currencies of the world – those that are traded on exchanges outside of their own countries. But those countries only account for 56 percent of U.S. trade. The other 44 percent reflects trade with countries, such as China, whose currencies are not defined as major currencies. If one looks at exchange rates applicable to the other 44 percent of U.S. trade, as shown in Chart 6, it is clear that the dollar has been increasing in value against them – 2 percent in the past year.²⁴ Imports from those countries account for 46.5 percent of U.S. imports, but only 40.7 percent of U.S. exports. The differential for China is even larger. China bought 3 percent of U.S. exports in 2002, but was the source of 11 percent of U.S. imports.²⁵ In the absence of the Chinese government's intervention in the value of its currency against the dollar, U.S. exports to China would presumably be higher and imports from China lower.

²¹ Based on U.S. Department of Commerce data on manufactured exports and imports and manufacturers' shipments.

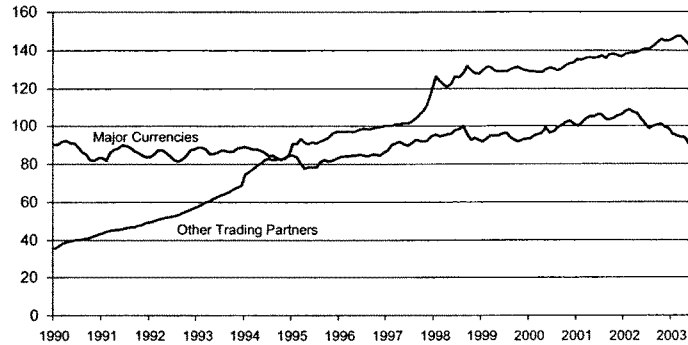
²² The U.S.' large current account trade deficit is sustainable only as long as foreign investors are willing to continue to buy assets in the U.S. in the form of stocks and bonds. The U.S.' strong economic base and stable political situation have been the basis for attracting that investment in the past. However, there are never any guarantees that foreign investors will continue to accumulate dollar holdings in their foreign exchange reserves at the same rate they have in the past.

²³ "U.S. Jobs from Exports," International Trade Association, U.S. Department of Commerce, 2001.

²⁴ Many of the currencies in this index are pegged to the dollar and the exchange rate for those currencies show little month-to-month variation. The other currencies in the index tend to devalue against the dollar.

²⁵ In general China's exports and imports boomed in 2002, each growing in excess of 20 percent overall. WTO figures show China was virtually tied with France for the spot of fourth largest exporter of merchandise in the world in 2002.

Chart 6: Federal Reserve's Nominal Dollar Indexes



U.S. exports of services have grown significantly in recent years, but were still less than half the size of goods exports in 2002. Consequently, it is doubtful the United States can depend solely on trade in services to offset a serious decline in goods exports. In addition, U.S. providers of business services are facing increasingly strong competition as foreign producers of services begin to staff U.S. call centers and provide programming services to U.S. companies. These jobs represent U.S. service imports and offset U.S. service exports. Consequently, the solution to the trade deficit is unlikely to be found solely with service sector exports.

There are several other benefits that manufacturing provides the U.S. economy. A further discussion of those can be found in "Securing America's Future: The Case for a Strong Manufacturing Base" on JPC's website.

The final comment for this testimony returns to where it began. Jobs are lost when the manufacturing sector shrinks. What type of jobs are lost and what sorts of adjustments do those workers face? Manufacturing provides well-paying jobs with benefits to its workers. In 2001, salaries and benefits averaged about \$54,000 in the manufacturing sector compared to an average of \$45,600 for the private sector

overall.²⁶ Manufacturing offers job opportunities to workers across the educational spectrum – employing more than its relative share of the workforce with no more than a high school diploma, but also employing a large number of college-trained employees. In 2000, manufacturing had on its payrolls 16 percent of the workforce without a college degree, the second largest employer of that group in the country.²⁷ However, manufacturing also employed 12 percent of the workforce who had at least an associate's college degree, the second largest employer among the major industries of that group as well.²⁸

Two factors have made the manufacturing sector attractive to workers with all levels of education. One is the pay and benefits, and the other the educational and training opportunities provided by employers. The latest Labor Department surveys on employer training were conducted during the early and mid-1990s. Those surveys indicated over half of manufacturing employees needed training to qualify for their jobs. About 13 percent of the workers received formal job training, 30 percent received informal job training, and 26 percent trained in a school environment.²⁹ About 38 percent of manufacturing workers also took skill-improvement training, the majority receiving their training through either formal or informal on-the-job-training. Manufacturing and infrastructure industries were leaders in the percentage of training time, about 40 percent of formal training time, that was devoted to production, communications and quality training.³⁰ However it is accomplished, training provides an important investment in human capital needed for future growth and productivity improvements. But as manufacturing downsizes, there is a growing scarcity of entry-level openings in manufacturing. While the average age of workers in manufacturing is only slightly higher than it is for the nonfarm economy as a whole – 41 years compared to 38 years – the distribution of workers is noticeably different. In 2000 (before the latest job losses), 19 percent of workers in manufacturing industries were below the age of 30, whereas for the economy as a whole, 28 percent of workers were younger than 30.³¹

²⁶ Average compensation per full-time-equivalent employee. Bureau of Economic Analysis, U.S. Department of Commerce.

²⁷ Retail trade is the largest employer of workers without college degrees. BLS reports that in December 2002 wage levels in manufacturing were \$17.33 per hour compared to \$9.57 per hour in retail trade.

²⁸ The largest employer of people with less than a college degree is the retail services industry and the largest employer of people with at least an associate's degree is the educational services sector. *Current Population Survey 2000*.

²⁹ *How Workers Get Their Training: a 1991 Update*, Bureau of Labor Statistics, U.S. Department of Labor, August 1992. Some workers received more than one type of training.

³⁰ "1995 Survey of Employer Provided Training," Bureau of Labor Statistics, U.S. Department of Labor, Table 5.

³¹ Calculations from the 2000 *Current Population Survey*

This reflects the lack of job growth in the manufacturing sector in recent years but also presages a potential skill shortage for the future. When the older manufacturing workers retire there may not be anyone to replace them since there has not been a steady stream of younger workers encouraged to enter the pipeline and gain the important job-specific skills.

The information available on the impacts on workers who have been displaced from their jobs comes from BLS' Displaced Workers Survey. Plant closures accounted for 50-60 percent of the job displacements in manufacturing for workers with three or more years of tenure during the period from January 1993 through December 2001.³² That compared with 45-50 percent for the non-manufacturing sectors of the economy. On average each year from 1993 through 1998, 177,000 manufacturing workers with three years or more of tenure lost their jobs due to plant closures. From January 1999 through December 2001 that rate increased to 230,000 workers per year.³³ The rate of reemployment for long-tenured employees (three years or more at their jobs) in manufacturing is also relatively low. Less than half of those workers return to manufacturing jobs; the rate of re-employment in non-durable manufacturing is even lower, with only about a quarter of those losing jobs in non-durable manufacturing re-employed in non-durable manufacturing.³⁴ Long-tenured, full-time manufacturing employees who do find new full-time jobs, in any industry, tend to take a pay cut. The latest information on the impact on pay of a job loss has not yet been published, but in 1998, that loss of pay averaged about 10 percent, over twice as large as the average for re-employed workers overall.

Manufacturing provides a base for many important activities in the U.S. economy. While manufacturing will probably never disappear entirely, one can not determine how much of the sector can disappear before the critical mass that fuels the innovation process is lost. Under any circumstances, the loss of a large part of the manufacturing sector will be felt throughout the U.S. economy.

³² The reason for plant closures cannot be identified in these surveys. Consequently, all of these job displacements cannot be positively linked to outsourcing overseas. However, many of the industries with increasing import penetration shares are also industries in which a large percentage of the job losses are due to plant closures.

³³ *Displaced Workers Survey*, Bureau of Labor Statistics, U.S. Department of Labor.

³⁴ These rates cover workers who lost their jobs due to plant closures, lost shifts or slack work. Consequently, the rates of re-employment among workers whose jobs were lost due to plant closures is undoubtedly somewhat lower than these.

Securing America's Future:

The Case for a Strong Manufacturing Base

A Study by Joel Popkin and Company, Washington, D.C.
June 2003

Prepared for the NAM Council of Manufacturing Associations

EXECUTIVE SUMMARY**“Securing America's Future: The Case for a Strong Manufacturing Base”**

A Study by Joel Popkin and Company

U.S. manufacturing is the heart of a significant process that generates economic growth and has produced the highest living standards in history. But today this complex process faces serious domestic and international challenges which, if not overcome, will lead to reduced economic growth and ultimately a decline in living standards for future generations of Americans.

Manufacturing's innovation process is the key to past, present and future prosperity and higher living standards. The intricate process starts with an idea for a new product or process, prompting investments in research and development. R&D successes lead to investments in capital equipment and workers, and to “spillovers” that benefit manufacturing and other economic sectors. This process not only generates new products and processes, but also leads to well-paying jobs, increased productivity, and competitive pricing. Yet while this process produces wealth and higher living standards, most of it is hidden from view and poorly understood.

Manufacturing's innovation process provides enormous benefits for the entire U.S. economy:

- **Grows the Economy** - Manufacturing growth spawns more additional economic activity and jobs than any other economic sector. Every \$1 of final demand for manufactured goods generates an additional \$0.67 in other manufactured products and \$0.76 in products and services from nonmanufacturing sectors.
- **Invents the Future** - Manufacturers are responsible for almost two-thirds of all private sector R&D – \$127 billion in 2002. Spillovers from this R&D benefit other manufacturing and nonmanufacturing firms. R&D spillovers are enhanced by geographic proximity.
- **Generates Productivity Increases** - Manufacturing productivity gains are historically higher than those of any other economic sector – over the past two decades, manufacturing averaged twice the annual productivity gains of the rest of the private sector. These gains enable Americans to do more with less, increase our ability to compete, and facilitate higher wages for all employees.
- **Provides More Rewarding Employment** - Manufacturing salaries and benefits average \$54,000, higher than the average for the total private sector. Two factors in particular attract workers to manufacturing: higher pay and benefits, and opportunities for advanced education and training.
- **Pays the Taxes** - Manufacturing has been an important contributor to regional economic growth and tax receipts at all levels of government. During the 1990s, manufacturing corporations paid 30-34 percent of all corporate taxes collected by

state and local governments, Social Security and payroll taxes, excise taxes, import and tariff duties, environmental taxes and license taxes.

Meanwhile, other nations, recognizing that a strong manufacturing base is the proven path to a world-class economy, have been learning from the American example and are forging their own innovation processes to compete with ours.

America's manufacturing innovation process requires a critical mass to generate wealth and higher standards of living. If the U.S. manufacturing base continues to diminish at its present rate that process may deteriorate beyond repair and with it the seedbed of our industrial strength and competitive edge.

The most serious challenges to the long-term viability of the U.S. manufacturing base and the innovation process that underlie it are:

- **Loss of Jobs** - U.S. manufacturers historically lead the way in an economic expansion, but are still struggling to recover from the recent recession. Since July 2000, manufacturing has lost 2.3 million jobs, many of which have been outsourced or relocated overseas. Manufacturing output has shown virtually no growth since December 2001 – the official end of the recession – in the weakest manufacturing recovery since 1919.
- **Loss of Export Potential** - Manufacturing exports as a share of GDP have contracted since 1997, reflecting the strong dollar overseas, the impact of the recession on our trading partners, the terrorist attacks in the United States in September 2001, and increased global competition. The U.S. trade deficit has ballooned to historic highs – reflecting an increase in purchases of foreign-made goods, especially from countries which do not freely float their currencies.
- **Investments are Going Elsewhere** - U.S. manufacturing's share of capital investment and R&D expenditures, once a dominant feature of our nation's commitment to progress, is diminishing. While U.S. manufacturers conduct two-thirds of private R&D, their R&D spending between 2000 and 2002 grew at only half the pace of the previous decade.
- **Needs More Skilled Workers** - Despite the loss of 2.3 million jobs, manufacturing is facing a potential shortfall of highly qualified employees with specific educational backgrounds and skills, especially those specific skills needed to produce manufactured goods. If the skills and knowledge of the American workforce do not improve it will be detrimental to manufacturing's competitive edge and to the prospect for economic growth.
- **Faces Dramatically Rising Costs** - The cost of doing business in the United States is rising dramatically, in large measure because of significant costs related to healthcare, litigation, and regulation. As a result, many U.S. manufacturers shut down or move production overseas to countries where they do not face, to the same extent, those kinds of impediments to reducing productions.

U.S. manufacturing's innovation process leads to investments in equipment and people, to productivity gains, to beneficial spillovers, and to new and improved products and processes. This intricate process generates economic growth and higher living standards superior to any other economic sector. But serious challenges threaten to undermine the critical mass of manufacturing necessary to maintain a dynamic innovation process. **If the U.S. manufacturing base continues to shrink at its present rate and the critical mass is lost, the manufacturing innovation process will shift to other global centers. Once that happens, a decline in U.S. living standards in the future is virtually assured.**

I. Introduction

Manufacturing has long been recognized as the engine of our economic growth. Over half of the acceleration in labor productivity over the past 10 years can be attributed to strong gains in total factor productivity in the manufacturing sector. Productivity growth is the major contributor to our prosperity: our tangible wealth and standard of living. Manufacturing's contribution to U.S. prosperity may be most visible in the enviable position of the United States in Gross Domestic Product (GDP) per capita: In 2002, the United States ranked 40 percent above the average for the 15 countries in the European Community, 35 percent above Japan and 20 percent above Canada on a GDP per capita basis.¹

But there has been concerned discussion, if not alarm, voiced recently that the growth engine is losing steam. U.S. Representative Vernon Ehlert of Michigan recently stated: "Manufacturing in the United States is in trouble [and] the public doesn't even understand what manufacturing is. We have to revitalize the public perception."² This paper is a first step toward accomplishing that.

Manufacturing can be described as the set of activities that transform agricultural and mineral resources into finished goods. This process usually involves several steps within manufacturing, as the sector encompasses all activities from the first transformation of raw materials to the final assembly of finished goods.

The U.S. manufacturing sector should not be taken for granted. It is at the heart of a process that is critical to the health of the U.S. economy — the process of generating prosperity, *i.e.*, wealth and real income gains. Because this process — basically an innovation process — is intensely interactive, its maintenance requires a

¹ GDP per capita in Purchasing Power Standards, Eurostat, April 15, 2003. This is based on per capita GDP measured using purchasing power parities (PPPs). PPPs are country price relatives and are considered a more accurate way of producing comparable GDP numbers than using market exchange rates. The Organization for Economic Co-operation and Development (OECD) and Eurostat (the European statistical agency) produce the PPP measures. Luxembourg has a per capita GDP measure that is higher than all of the other countries including the United States. However, it is in a unique situation in that almost a quarter of all its workers are frontier workers; they produce goods and services that appear in Luxembourg's GDP but are not residents of the country and therefore are not included in the population count that is used to produce the per capita number.

² *Manufacturing and Technology News*, Annandale, Va.: Publishers and Producers, April 1, 2003, p. 3.

strong, growing manufacturing sector. It is perhaps easiest to understand this innovation process by tracing the interactions beginning with an initial component: research and development. R&D is diffused through the economy in numerous ways. The most obvious direct linkage is through the production of new goods, and of improved quality in existing goods. Successful R&D not only affects the kinds of goods that flow to consumers but also enhances the labor and capital inputs used to produce them. As capital goods are improved in speed, accuracy, and quality they rely on new processes to make their utilization most efficient. Reaping the benefits of such improvements in manufacturing processes requires that human capital (skills) keep pace, largely through education and training. But this R&D-driven process does not stop there. It is magnified by "spillovers," channels by which an innovation in one area freely stimulates those in other areas.

Large and frequent innovations, the hallmark of U.S. manufacturing, require a certain mass of interconnected activities which, like a snowball rolling downhill, grows in size as it proceeds toward final consumers. The snowball effect requires substantial R&D, enough to be sure of significant successes after writing off failures. The successes must be frequent enough to keep the ball rolling through interactions among the different parties to the process. As size and frequency of innovations rise, spillovers are magnified. Their impact is significantly enhanced by proximity — most importantly geographical closeness — enabling the transmission of products and ideas upstream and downstream among suppliers and customers. The vehicles for those transmissions are sales transactions, face-to-face discussions of ideas and needs, professional meetings of scientific professionals and scientific literature written in a common tongue, etc. To establish this process of wealth generation throughout the economy and maintain its momentum requires a certain immeasurable mass of all these activities.

The plethora of economy-wide benefits manufacturing produces can be classified into five broad categories, presented in Section II of this paper. However, the continuation of those benefits lies in doubt if manufacturing shrinks to a point where the process that generates jobs and wealth breaks down. Section III identifies some

troublesome signs of potential breakdown. The final section summarizes the current state of manufacturing and the danger posed to future American prosperity.

II. U.S. Manufacturing's Significance to Economic Prosperity

Manufacturing transforms raw materials into finished goods. The importance of these activities is obvious in a broad array of statistics and analyses that show the essential role the domestic manufacturing base plays in U.S. economic growth. Manufacturing's benefits to the economy can be summarized into five broad categories discussed below. The first is the most obvious, the direct links between manufacturing growth and growth in the rest of the economy. Those links can be seen in the growth generated in other sectors of the economy when there is an increase in the demand for manufactured goods; in the role manufacturing plays to generate growth in the basic infrastructure of the economy; and in the importance of the manufacturing base in generating exports. The second broad category of benefits flows from productivity-enhancing investments made by manufacturers in capital equipment and, even more importantly, in R&D. The third category of benefits flows from the productivity gains that make possible increases in the standard of living. The fourth consists of benefits to the U.S. labor force (1) accruing directly from the wages and benefits good manufacturing jobs provide, and (2) from the education and training investment in human capital that is needed to maintain the process. Finally, a strong manufacturing sector results in substantial consumer benefits. Chief among those are more and better products available at prices that are little changed over the past decade. Each of these five categories of benefits is discussed below, followed by a short section on how these benefits manifest themselves in the economies of individual states.

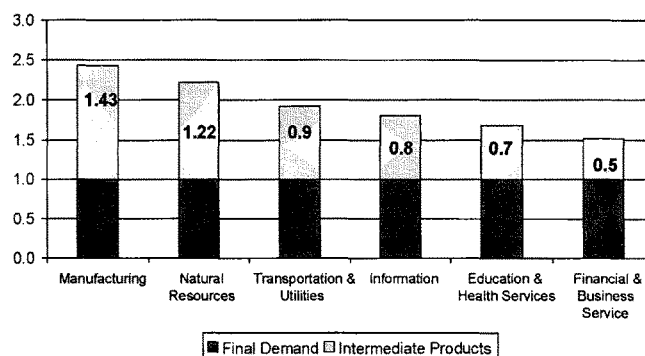
A. Manufacturing's Direct Links to Economic Growth

The manufacturing sector is the heart of the innovation process not only because of its direct role in producing and commercializing innovations but also because its direct and substantial links to other sectors spread those impacts throughout the economy. These links work both backward to mining and other raw material producing sectors, and forward into the transportation and trade sectors that are delivering the goods to final consumers. Thus, as manufacturing output grows it requires more inputs, and in turn spurs the creation of jobs, investments, and innovations in other sectors of the economy. This effect can be quantified in a number, referred to as a "multiplier,"

that shows how much intermediate and final output is generated by a dollar's worth of final demand for manufactured products.

The Commerce Department's Bureau of Economic Analysis (BEA) calculates multipliers for each major sector of the economy. The most recent set of data, released at the end of 2002, show the manufacturing multiplier is 2.43: \$1 in final demand manufactured products and \$1.43 for intermediate products and services.³ The natural resource producing sector has a multiplier of 2.22, almost as large as manufacturing. However, the multipliers for the major service-producing sectors are much smaller (1.8 for information services, 1.7 for education and health services, and 1.5 for financial and business services.)⁴ This multiplier effect also means that an increase in the demand

Chart 1: Multipliers for Selected Sectors of the Economy



Source: Bureau of Economic Analysis

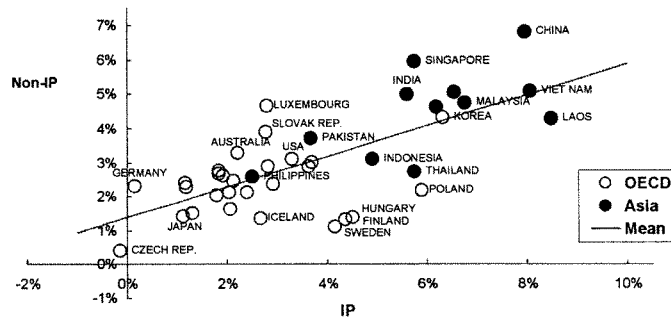
³ An alternative way to describe this relationship: To satisfy a dollar's worth of final demand for manufactured products generates demand of \$1.67 from manufacturing (some of it for final products and some from intermediate parts and components) and \$0.76 from other sectors of the economy.

⁴ These multipliers are calculated from the latest benchmark I-O matrix, the first incorporating the North American Industrial Classification System (NAICS). The change to the new classification system provides a more detailed look at the multipliers for the service-producing sectors.

for manufactured products increases the demand for both manufacturing and non-manufacturing jobs.

The importance of the larger multipliers associated with manufacturing and mineral processing can be seen by looking at the relationship between real growth in manufacturing, mining and utility output (IP) and the real growth in the other sectors of the economy (non-IP). That relationship is shown in Chart 2 for 40 economies within the Organization for Economic Co-operation and Development (OECD) and Asia. The positive relationship is significant by statistical tests. For every 1.0 percentage point rise in manufacturing output, non-industrial production rises by almost a half percentage point. The result suggests that economies with no growth in manufacturing would experience economic growth of less than 1.5 percent per year, reflecting the lower growth-generating power of the non-industrial sectors. During the 1990s the U.S. economy grew at an enviable rate of 3.2 percent per year, on average, very similar to its average rate of growth over the past 50 years. A drop to a 1.5 percent GDP growth rate, less than half of what the United States has recently experienced, would have many adverse consequences on America's prosperity.

Chart 2: OECD and Asian Countries
 10-Year Average Growth of Industrial Output (IP)
 and Non-Industrial Output (Non-IP)



Source: OECD and Asian Development Bank

The size of the multiplier does not capture all of manufacturing's impact, only those that can be quantified by measuring inter-industry transactions. The multiplier does not capture the externalities produced by the right kind of linkages, spillovers being one of the more important examples. These links are much more difficult to quantify, but a conceptual framework provides a better understanding of how the parts, together, may be stronger than each individual part alone. Cohen and Zysman, in their book *Manufacturing Matters: The Myth of the Post-Industrial Economy*, state it this way:

What matters to us most are the links that promote ongoing market adaptation and technological innovation. Advanced computers and telecommunications equipment depend on innovation in electronic devices. An expanding telecom industry provides a market for computers and microelectronics components. Japan's early advantage in certain advanced semiconductor products — for example, CMOS (complementary metal on silicon) memory chips [footnote omitted] — was built on its market position in consumer electronics. This instance suggests a broader conclusion: advantage in a national economy is embodied not simply in the capacities of specific firms but in the web of interconnections that establishes possibilities for all firms.

Technological innovation depends on a series of subtle and complex interconnections. Knowledge of auto manufacturing or airplane manufacturing promotes innovation in machine tools, and advances in machine tools permit production innovation in many other industries. The wide-spread technological interplay involving small improvements may be even more important than the dazzling breakthroughs.⁵

In his book *The Free-Market Innovation Machine*, William Baumol refers to this process as the cumulative nature of innovation or as "innovation breeding."⁶ The importance of this process in generating investment and R&D will be discussed later in this paper.

One particularly important link is between manufacturing and the distribution networks: communications, transportation, utilities and trade. Those infrastructure networks are the vital link between the production of goods and services and their delivery to buyers. Such networks are much more capital-intensive than other service-

⁵ *Manufacturing Matters: The Myth of the Post-Industrial Economy*, Stephen Cohen and John Zysman, Basic Books, Inc. Publishers, New York, 1987, p. 102.

⁶ *The Free-Market Innovation Machine*, William J. Baumol, Princeton University Press, 2002.

producing industries, requiring capital and other manufactured goods to construct and maintain them. Thus, the production of goods drives the demand for infrastructure and the growth of infrastructure fuels the demand for manufacturers, creating synergies for investments in both sectors.

Most products hauled by the major modes of transportation in the country are tied to manufacturing. About 70 percent of all ton-miles of products carried by trucks are manufactured products, and they account for 87 percent of the value of goods hauled by trucks. For rail transport, about 80 percent of the value of products transported are manufactured goods.⁷ If the raw materials being transported for input into the manufacturing process are also considered, these percentages are higher still. Manufactured goods require a good transportation system which, in turn, promotes improvements in the transportation networks.

Transportation networks are not the only infrastructure impacted by the manufacturing industry. Modern communications networks are also an increasingly important tool in improving efficiency. Basic mail and telephone networks have always been, and continue to be, important in connecting manufacturers to their suppliers and customers. However, manufacturing is making more intensive use of communications networks to increase its efficiency. In 2000, 38 percent of manufacturing plants used electronic networks to place online orders for materials and supplies. Of those plants, 83 percent used either the Internet or Electronic Data Interchange to process their transactions.⁸ In 2001, 18 percent of manufacturing shipments, worth \$725 billion, were sold online through electronic networks.⁹

The manufacturing sector's recognized need for, and innovative use of, infrastructure makes it profitable for infrastructure producers to make investments. However, improvements in infrastructure are not limited to just the users in manufacturing — those improvements provide benefits to everyone. Infrastructure

⁷ 1997 *Commodity Flow Survey*, Census Bureau, U.S. Department of Commerce, Table 7.

⁸ *E-Stats*, "Detailed Tabulations of Manufacturing E-business Process Use in 2000," Census Bureau, March 2002.

⁹ *E-Stats*, "E-Commerce 2001 Highlights," Census Bureau, March 2003.

networks are strategic assets for an economy. They must link major producer and consumer markets, be operated at high-utilization rates and have access to state-of-the-art technological innovations. Consequently, innovations in one sector are likely to fuel innovations in the other sector, and both sectors will develop better methods of using those innovations most effectively.

Manufacturing also directly links the U.S. economy to other economies around the world. The United States is the world's largest exporter of manufactured goods. In 2001, it exported almost \$600 billion worth of goods. U.S. manufactured exports have more than doubled since 1990, and manufactured goods account for 82 percent of the United States' total merchandise exports and three-quarters of all its exports. While U.S. manufactured exports as a share of world trade have remained relatively constant through most of the past two decades — 13 percent in 1980, 12.1 percent in 1990 and 13.5 percent in 2001 — trade has become an increasingly important part of the economy of the United States and that of other countries around the world.¹⁰

America's success as an exporter has prompted other countries to build their own base for manufacturing exports. As world trade burgeoned in the 1990s, increasing from \$4.2 trillion to \$7.9 trillion, manufactured goods as a share of total world exports also increased from about 70 percent of the world's merchandise trade to about 75 percent. U.S. businesses and consumers have become the buyers for many foreign-manufactured products; thus, traded goods have become an increasingly large share of the American market. The sum of U.S. exports and the imports of manufactured goods is now equal to 40 percent of U.S. domestic production of manufactured goods. In 1987 that share was 20 percent.¹¹

Continued growth in U.S. exports is vital to enabling the United States to trade with the rest of the world. Exports earn foreign currency, and foreign-currency earnings

¹⁰ The United State's manufactured imports share of world trade has grown tremendously during this time period increasing from 11.2 percent in 1980 to 15.4 percent in 1990 and was 19.4 percent in 2001. This reflects the strong import competition that U.S. manufacturing companies have faced over the past 20 years. *International Trade Statistics, 2002*, World Trade Organization.

¹¹ Based on U.S. Department of Commerce data on manufactured exports and imports and manufacturers' shipments.

support jobs and allow the United States to purchase foreign-made imports. The International Trade Administration estimates that one in five manufacturing jobs is tied to exports of manufactured products, and for each of those manufacturing jobs there are 1.3 non-manufacturing jobs tied to manufactured exports.¹²

Manufacturing R&D is an important driver in spurring growth in U.S. exports. Exports of R&D-intensive goods are a growing share of overall goods exports by the United States. In 1980 exports of such goods accounted for about 19 percent of all manufactured exports in the United States; by the late 1990s that share had grown to about 27 percent.¹³ However, by definition goods high in R&D content are those embedding new and better ideas. The world buys U.S. exports because they are "the better mousetrap." Maintaining the growth in such goods requires a sizable continuous stream of investment in R&D, and a vibrant manufacturing sector to innovate, produce and sell those goods abroad.

B. Manufacturers' Capital Investments and R&D are Key To Growth

Manufacturers' investment in physical and human capital, R&D, and productivity are intertwined and together provide substantial economic benefits. This is the method by which innovations become an integral part of the economic process and lead to widespread improvements in productivity. A simplified schematic of the innovation process is shown in Figure 1.

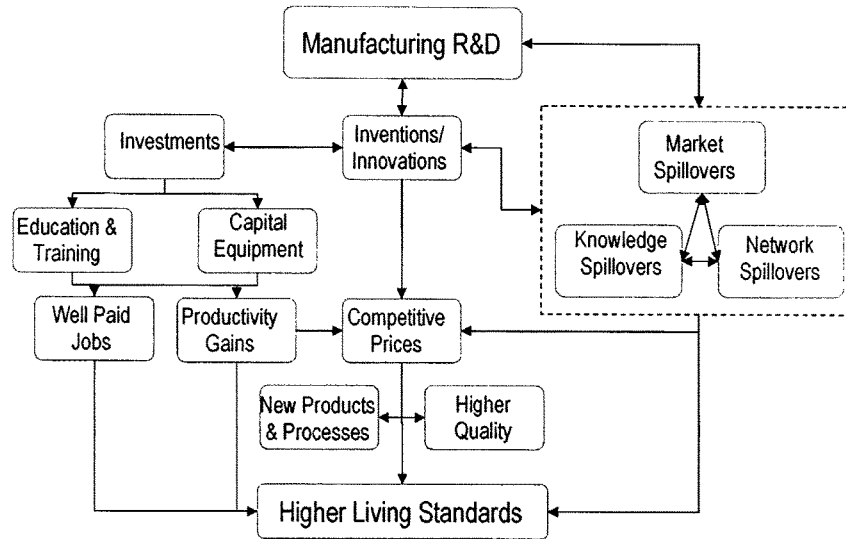
Investment in new equipment provides each worker with more and better capital with which to work. This is often called "capital deepening" or an increase in the ratio of capital to labor.¹⁴ Capital deepening accounted for about half the growth of labor productivity during the late 1990s.¹⁵

¹² "U.S. Jobs From Exports," International Trade Association, U.S. Department of Commerce, 2001.

¹³ R&D intensive goods as defined in this case are biotechnology, life science technologies, opto-electronics, information and communications, electronics, flexible manufacturing, advanced materials, aerospace, weapons, and nuclear technology.

¹⁴ A recent study published by the Federal Reserve finds that perhaps as much as two-thirds of recent gains in plant level multi-factor productivity in manufacturing between 1972 and 1996 can be attributed to technological advances embodied in capital equipment. "The Production-Side Approach to Estimating Embodied Technological Change," by P. Sakellaris and D. Wilson, March 2001.

Figure 1: Manufacturing Matters
Its Innovation Process Generates Wealth



A thorough quantitative investigation of the relationship between manufacturing and economic growth was conducted in the early 1990s for the World Bank by J. Bradford De Long and Lawrence H. Summers.¹⁶ The study covered the period from 1960 to 1985, and looked at the behavior of a cross section of 61 nations at various stages of development. It confirmed the relationship and identified capital investment in equipment as a key contributor to manufacturing's importance as a growth generator.

In addition to producing a steady stream of improved capital equipment for other industries to use, manufacturing firms themselves have been significant investors in capital equipment. Over the past 20 years, manufacturing industries have accounted for

¹⁵ "Information Technology and Productivity: Where Are We Now and Where Are We Going?" Stephen Oliner and Daniel Sichel, Federal Reserve Board Working Paper, May 2002.

¹⁶ "Equipment Investment and Economic Growth: How Strong is the Nexus?," by J. Bradford De Long and Lawrence H. Summers, October 1992.

20–30 percent of new investment in equipment and 8–12 percent of new nonresidential structures.¹⁷

Even more important, manufacturers are the major dynamo of R&D. Over the past 20 years, manufacturing has performed almost 60 percent of all R&D in the United States. The National Science Foundation estimates total U.S. R&D spending in 2002 at \$291 billion.¹⁸ Of that amount, R&D performed by private industry is estimated at \$213 billion. Detailed 2002 R&D totals by industry have not yet been published, but R&D performed by manufacturing industries is estimated at \$127 billion, or 67 percent of the total private R&D, and about 45 percent of all R&D performed in the United States.¹⁹ In 2000, manufacturing industries financed (as well as performed) about 55 percent of all private R&D. The remainder of the funding came primarily from the federal government; however, the federal government's financing of R&D performed by industry has been virtually unchanged in recent years.

Manufacturing R&D is conducted in a wide array of industries and businesses of all sizes. The heaviest R&D expenditures take place in computers and electronics, transportation equipment, and chemicals (primarily pharmaceuticals). Those three sectors together accounted for 75 percent of all manufacturing R&D in 2000. The remaining 25 percent is distributed among virtually every other manufacturing sector, with machinery and medical equipment being the next largest investors.²⁰

R&D is also spread across firms of different sizes. Large firms dominate R&D, but firms with fewer than 500 employees conducted about 18 percent of total industrial R&D in 2000. Within manufacturing, firms with fewer than 15 employees conducted about 2 percent of industrial manufacturing R&D. A recent Small Business Administration (SBA) study found that small business, whose share of manufacturing

¹⁷ Bureau of Economic Analysis, U.S. Department of Commerce, *Investment in Private Equipment and Software by Industry*.

¹⁸ "Slowing R&D Growth Expected in 2002," National Science Foundation *InfoBrief* (NSF 03-307), December 2002.

¹⁹ Estimates of manufacturing sector R&D are based on detailed 2000 distributions applied to 2002 industry totals.

²⁰ Preliminary tables for industrial R&D, National Science Foundation, December 2002.

output has been growing, has produced more than its share of technically important patents.²¹

The process through which R&D promotes economic prosperity is multi-faceted and complex. The first avenue is through direct benefits to firms from their R&D investments. Those direct benefits, or the potential benefits a rival might gain from R&D, are the primary driver of firm-financed R&D. The second is through "spillovers" whereby R&D performed by one firm benefits other firms without direct compensation for the innovation. The third is the feedback from R&D and its spillovers to improve manufacturing products, processes and distribution networks. The fourth is through the widely discussed multiplier — the effect of one industry's investment on others and the U.S. economy as a whole.

R&D spillovers are an important factor in this process. Spillovers come about when parties derive benefits from the R&D without having to fully compensate the company conducting the research. Spillovers are often characterized in one of three ways, but these pathways often interact and increase their combined effect.²² One way is through "market spillovers," in which the marketing of a new product creates benefits to market participants other than the innovating firm. Often this is through a new technology that is embodied in products newly developed or improved by R&D. However, because producers fail to capture all of the improvements in the prices they charge for those new goods, cost-free benefits accrue to competitors and customers, or are handed back to suppliers.²³ A second kind is termed a "knowledge spillover." This is the transmission of knowledge from an R&D activity that can be used by other economic agents in a virtually cost-free manner. A third kind is a "network spillover." It occurs when R&D benefits are enhanced in value by the development of a related set of technologies. Thus, extra benefits may accrue to an innovation if related technological

²¹ "Small Serial Innovators: The Small Firm Contribution To Technical Change," CHI Research, Inc. Produced under contract to the Office of Advocacy, 2003.

²² "The Importance of 'Spillovers' in the Policy Mission of the Advanced Technology Program," by Adam B. Jaffe, *Journal of Technology Transfer*, Vol. 23 (2), pp. 11–19.

²³ The potential for market spillovers of R&D has been quantified in a forthcoming NIST paper, "Inter-Industry Diffusion of Technology That Results From ATP Projects" (GCR # 03-848).

innovations also take place. For example, the existence of a modem allows greater benefits to be derived from computers, and the more people one can communicate with in that network the greater those benefits.

It is widely recognized that spillover effects are magnified — through sales transactions and knowledge transfers — the more interdependent the parties are and the closer their geographic proximity. A recent paper by Michael Orlando discusses the importance of proximity, both technological and geographical, to the spillover process. According to Orlando, his results are "consistent with intuition and existing empirical evidence which suggests that both geographic and technological distance attenuate knowledge spillovers." He finds that spillovers within a manufacturer's own very narrow sector tend to be much less sensitive to distance than are those from outside that narrow sector, however, a combination of geographic and technological nearness seems to be advantageous. Nevertheless, the impact from spillovers originating outside the manufacturers' narrow sector tends to decrease rapidly with distance.²⁴ Therefore, firms are more likely to benefit from spillovers when R&D takes place geographically near to them than they are if it occurs on the other side of the world, especially with regard to the benefits from more generalized R&D.

National Institute of Standards and Technology economist Gregory Tassej puts the importance of domestic R&D into a broader perspective:

Changes in competitive dynamics are altering the reward/risk ratio for R&D investments within and between technology life cycles. As life cycles compress, R&D at the company level no longer can exist in isolation of a supporting network. Corporations increasingly require access to R&D conducted by other firms in their supply chains and to the broader technology infrastructure provided by a national innovation system. If domestic R&D resources are not available, U.S. companies do not hesitate to form research partnerships with foreign companies, outsource R&D overseas, or directly invest in foreign research facilities. These research relationships often lead to follow-on foreign manufacturing relationships. Thus, the maintenance of an effective domestic R&D network is essential for attracting domestic and foreign R&D funds and

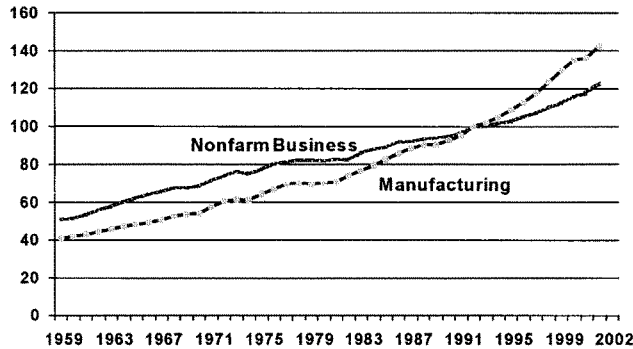
²⁴ "On the Importance of Geographic and Technological Proximity for R&D Spillovers: An Empirical Investigation," by Michael J. Orlando, Federal Reserve Bank of Kansas City, July 2000.

subsequent manufacturing, which increases domestic value added and hence economic growth.²⁵

C. Manufacturing is the Major Driver of Productivity Growth

Manufacturing has long led U.S. industries in productivity growth. Gains in productivity raise a country's standard of living. In the past fifteen years — which include both years of economic expansion and recession — output per hour in the U.S. private non-farm economy rose at an average annual rate of 1.9 percent. That

Chart 3: Labor Productivity in U.S. Nonfarm Business and Manufacturing
(1992=100)



Source: Bureau of Labor Statistics

productivity performance was substantially a result of gains in manufacturing labor productivity, which rose 3.1 percent per year.²⁶

In the same timeframe, total nonfarm multi-factor productivity — the productivity of labor and capital combined — advanced 0.9 percent annually. The manufacturing

²⁵ "R&D and Long-Term Competitiveness: Manufacturing's Central Role in a Knowledge-Based Economy," by Gregory Tassej, National Institute of Standards and Technology, February 2002, p. 9.

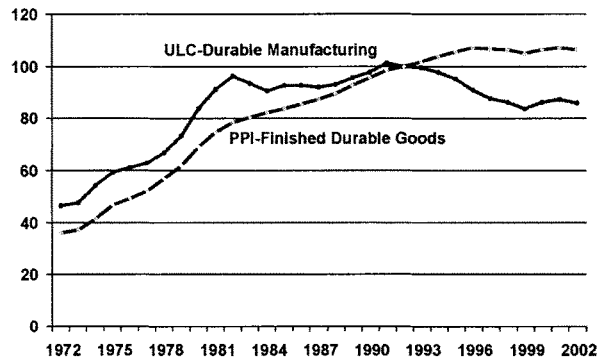
²⁶ Bureau of Labor Statistics, U.S. Department of Labor, Productivity and Costs.

sector had an increase of 1.6 percent per year. Durable manufacturing turned in an exceptionally strong multi-factor productivity increase of more than 2 percent per year, reflecting the technological breakthroughs in the manufacture of high-technology electronic goods.

As can be seen in Chart 3, there was a substantial acceleration in labor productivity beginning in the mid-1990s, and multi-factor productivity followed a similar pattern of gains. That acceleration encouraged many analysts, led by the federal Reserve Board, to conclude a new productivity breakthrough had occurred.

The main benefit to manufacturing from this acceleration in productivity was manufacturers' increased ability to compete, as labor costs per unit of output declined. As can be seen in Chart 4, unit labor costs in durable manufacturing have declined in all

**Chart 4: Unit Labor Costs in Durable Manufacturing
PPI for Finished Durable Goods**
(1992=100)



Source: Bureau of Labor Statistics

but two years since 1991, the end of the last recession, and have shown an average annual decline of 1.5 percent. This has been a major factor in flat and declining prices for manufactured durable goods during this time period. After remaining relatively flat

between 1991 and 1997, unit labor costs in the non-durable industries have shown modest increases during the past five years but have still performed better than the private nonfarm business sector as a whole.

These developments helped enable manufacturing wages to rise in line with other wages, 3.3 percent per year, while the price of the goods manufacturers sold increased only about 1 percent per year since 1990. Thus productivity has allowed manufacturing to price competitively in an increasingly global economy.

D. Manufacturing Provides Valuable Jobs

Manufacturing provides well-paying jobs with benefits to its workers. In 2001, salaries and benefits averaged about \$54,000 in the manufacturing sector compared to an average of \$45,600 for the private sector overall.²⁷ If one compares workers with the same characteristics, workers in durable manufacturing earned 12 percent more than workers with comparable characteristics in the private sector overall; workers in non-durable manufacturing earned 5 percent more.²⁸

Manufacturing offers job opportunities to workers across the educational spectrum — employing more than its relative share of the workforce with no more than a high school diploma, but also employing a large number of college-trained employees. In 2000, manufacturing had on its payrolls 16 percent of the workforce without a college degree, the second largest employer of that group in the country.²⁹ However, manufacturing also employed 12 percent of the workforce who had at least an associate's college degree, the second largest employer among the major industries of that group, as well.³⁰

²⁷ Average compensation per full-time-equivalent employee. Bureau of Economic Analysis, U.S. Department of Commerce.

²⁸ Based on an analysis of data in the 2000 *Current Population Survey* by JPC.

²⁹ Retail trade is the largest employer of workers without college degrees. BLS reports that in December 2002 wage levels in manufacturing were \$17.33 per hour compared to \$9.57 per hour in retail trade.

³⁰ The largest employer of people with less than a college degree is the retail services industry and the largest employer of people with at least an associate's degree is the educational services sector. *Current Population Survey 2000*.

Two factors make the manufacturing sector attractive to workers with all levels of education. One is the pay and benefits, and the other the educational and training opportunities provided by employers. The latest Labor Department surveys on employer training were conducted during the early and mid-1990s. Those surveys indicated over half of manufacturing employees needed training to qualify for their jobs. About 13 percent of the workers received formal job training, 30 percent received informal job training, and 26 percent trained in a school environment.³¹ About 38 percent of manufacturing workers also took skill-improvement training, the majority receiving their training through either formal or informal on-the-job training. Manufacturing and infrastructure industries were leaders in the percentage of training time, about 40 percent of formal training time, that was devoted to production, communications and quality training.³² The focus on production skills in formal training and on-the-job training creates a national pool of skilled craftsmen essential to an industrial economy. However it is accomplished, training provides an important investment in human capital needed for future growth and productivity improvements.

One result of these benefits is that manufacturing sector employees stay with the same firm longer than employees in any other private-sector industry (except mining). This stability is an advantage for the long-run embedded knowledge in the sector's workforce. In 2002, the typical manufacturing employee had 5.5 years of tenure (measured as the median number of years in the job), in contrast to 3.3 years for all employees working in private industry. This was the highest tenure for any major private industry sector of the economy.³³

³¹ *How Workers Get Their Training: A 1991 Update*, Bureau of Labor Statistics, U.S. Department of Labor, August 1992. Some workers received more than one type of training.

³² "1995 Survey of Employer Provided Training," Bureau of Labor Statistics, U.S. Department of Labor, Table 5.

³³ The average tenure in manufacturing was 8.7 years in 2000 vs. 6.3 years for all private industry workers. *Current Population Survey 2000*.

E. Consumers Benefit From Increased Variety and Quality of Goods

Consumers have benefited greatly from the large selection and quality of manufactured goods available. Consumers also have benefited from competitive pricing, the result of innovations and productivity improvements that manufacturers have effected. The clearest example of this is the contrast between goods inflation and services inflation. From the mid-1980s to the mid-1990s, the gap between core (excluding food and energy) Consumer Price Index services and goods prices averaged about 2 percentage points. Prices of core services increased about 4 percent per year while core goods prices increased about 2 percent per year. That differential has widened over the past five years to more than 3 percentage points. While core service prices have decelerated to the 3 percent range, core goods prices have been virtually flat. That widening corresponds with the acceleration in productivity that was seen in Chart 3 and is driven by the sizable productivity gains in manufacturing and by significant competition in the goods markets. Had that gap not widened but remained the same, consumers would have faced a choice of spending more or purchasing fewer goods, and would have likely done some of both.

Consumers have also benefited from increased manufacturing quality. This spurs new consumer purchases of such goods as cars, refrigerators and electronic equipment even when they already own older models. A 1995 Bureau of Labor Statistics (BLS) study indicates that the quality of goods consumers bought that year accounted for 1.7 percentage points of a total increase of 3.9 percent in the retail prices of those goods and services.³⁴ If that result is typical, it confirms that quality rather than quantity is the driving force in the growth of U.S. consumer (and probably producer) purchases. For example, it is estimated that the value of the quality improvements in automobiles increased at an annual rate of 2.2% between 1967 and 1998 based on the quality adjustments that the BLS made to its price index for automobiles during that time period. That implies today's auto is more than twice the car it was in 1967.

³⁴ "Addressing the Quality Change Issue in the Consumer Price Index," Moulton and Moses, *Brookings Papers on Economic Activity* 1997:1.

One example of quality improvements in manufactured goods is the reduction in the frequency of repair and a reduction in the cost of operation. For example, expenditures on automobile maintenance and repairs per household fell in constant dollar terms from \$740 in 1985 to \$674 in 1998, a decline of about 0.7 percent per year. However, at that same time the average annual mileage driven per household increased significantly. Consequently, real maintenance costs per mile driven were reduced even more, declining by about 2.5 percent per year. Another example is the reduced operating costs of home appliances. Quality improvements in refrigerators, for example, reduced the annual expenditures needed to operate them by more than 50 percent in real terms between 1981 and 1997.³⁵

U.S. consumers have a dizzying array of products from which to choose. Indeed, the average supermarket now carries 49,225 different items – most of which are manufactures rather than agricultural – compared to 14,145 in 1980.³⁶ In 2000, more than 9,000 new processed food and beverage items were introduced into supermarkets.³⁷ This variety of choice is a benefit that cannot be measured in monetary terms; it provides significant advantages and increased levels of satisfaction to the American consumer.

F. Manufacturing Benefits the States

The presence of a manufacturing base contributes to state economic growth through the mechanisms already described for the national economy: linkages to other parts of the economy, well-paying jobs and the benefits associated with investment and R&D spending. Table 1 shows manufacturing employment and manufacturing employment share for each state in early 2003. Manufacturing industries are ubiquitous in the United States; only eight states and the District of Columbia had 5 percent or less of their employment in manufacturing in 2003. Only Indiana had more than 20 percent

³⁵ See Chapter 4 of "Producing Prosperity-Manufacturing Technology's Unmeasured Role in Economic Expansion," by Joel Popkin and Company for The Association for Manufacturing Technology, September 2000.

³⁶ Number of Stock Keeping Units (SKUs) in a typical supermarket, Food Marketing Institute.

³⁷ "New Products and Services," Food Marketing Institute.

of its employment in manufacturing industries. However, 20 states had manufacturing employment shares that ranged between 12–20 percent of their employment base and those states were broadly distributed geographically. Sixteen states had more than 20 percent of their gross state product accounted for by manufacturing during the 1990s. Of those, all but three experienced growth rates in per capita gross product that were above the average for the United States.³⁸

U.S.	14,762	11.4%	Oregon	191	12.3%
California	1,590	11.0%	Mississippi	182	16.2%
Texas	925	9.8%	Kansas	178	13.4%
Ohio	883	16.1%	Arizona	176	7.7%
Illinois	740	12.8%	Colorado	157	7.3%
Michigan	735	16.8%	Louisiana	157	8.3%
Pennsylvania	732	13.1%	Maryland	154	6.3%
New York	621	7.5%	Oklahoma	146	9.9%
North Carolina	616	16.1%	Utah	110	10.4%
Indiana	581	20.4%	Nebraska	104	11.6%
Wisconsin	515	18.8%	New Hampshire	81	13.3%
Georgia	454	11.6%	West Virginia	66	9.1%
Tennessee	416	15.6%	Maine	64	10.9%
Florida	395	5.4%	Idaho	61	10.9%
New Jersey	359	9.1%	Rhode Island	61	12.8%
Minnesota	347	13.4%	Nevada	42	4.0%
Massachusetts	336	10.6%	Vermont	38	12.7%
Missouri	312	11.9%	South Dakota	38	10.1%
Virginia	312	9.0%	New Mexico	37	4.8%
Alabama	299	15.9%	Delaware	34	8.3%
South Carolina	280	15.7%	North Dakota	23	7.1%
Kentucky	272	15.4%	Montana	19	4.8%
Washington	268	10.2%	Hawaii	15	2.6%
Iowa	222	15.6%	Alaska	12	4.1%
Arkansas	210	18.3%	Wyoming	9	3.7%
Connecticut	206	12.6%	District of Columbia	3	0.4%

Source: *Current Employment Statistics*, Bureau of Labor Statistics, U.S. Department of Labor
 Note: The sum of the state numbers is somewhat lower than the total manufacturing employment reported for the United States as a whole in March 2003. This is primarily due to the state numbers being tabulated using an NAICS industrial classification rather than the SIC classification used for the national totals. Under NAICS, the publishing industries are tabulated as a part of the information sector, whereas for the national employment totals publishing is tabulated as part of the manufacturing sector.

³⁸ Bureau of Economic Analysis, Gross State Product.

The states with the most manufacturing employees are California, Texas, Ohio, Illinois, Michigan and Pennsylvania. High levels of manufacturing employment are also linked to significant ties to export industries. In five of these states, about 20–30 percent of manufacturing employment is tied to the export of manufactured goods and almost 10 percent of total employment is linked to such exports in four of the states.³⁹

Manufacturing companies perform the bulk of industry R&D; therefore, it is not surprising that the list of the top 10 states for manufacturing employment also contains seven of the top 10 states performing industry R&D. California, Michigan, New Jersey and Illinois top that list. Three of those states are among the top five states based on the number of manufacturing employees.⁴⁰ Eight of the top 10 states for industry R&D expenditures are also among the 10 states with the largest percentage of jobs tied to the export of manufactured goods.

When manufacturing plants are concentrated geographically they are more likely to benefit from R&D spillovers and other externalities. Silicon Valley in California and the high-tech corridor in New England are often cited as places where R&D spillovers are particularly strong. However, benefits can also be generated through other avenues. One example is the Midwestern nexus where manufacturing employment accounts for about 20 percent of private-sector employment. A recent study of the auto industry indicates that "two-thirds of independent supplier plants, 84% of assembler-owned supplier plants, and 58% of assembly plants are clustered within a day's drive of the motor city" and "essentially all of Canada's auto industry is located within 400 miles of Detroit."⁴¹ Such regional agglomeration does not happen by chance. This close proximity of manufacturing plants facilitates the use of more efficient manufacturing processes, such as just-in-time inventory management, and the proximity provides advantages in U.S.-Canadian trade.

³⁹ "U.S. Jobs From Exports: 1997 Benchmark Study of Employment Generated by Exports of Manufactured Goods," U.S. Department of Commerce, International Trade Association, 2001. Illinois and Pennsylvania had 7 and 6 percent of their total employment tied to manufactured exports and Pennsylvania had 17% of its manufacturing employment tied to exports.

⁴⁰ "Top R&D-Performing States Display Diverse R&D Patterns in 2000," National Science Foundation (NSF 03-303), November 2002.

⁴¹ "Midwest Infrastructure," *Chicago Fed Letter*, July 2002, p 4.

Manufacturing has been an important contributor toward tax receipts at all levels of government. During the past 10 years, manufacturing corporations have paid 30–34 percent of all corporate tax payments for state and local taxes, social security and payroll taxes, excise taxes, import and tariff duties, environmental taxes and license taxes.⁴² The benefits of manufacturing are recognized by state governments, many of which have developed plans for attracting new manufacturing investments to their states.

⁴² Bureau of Economic Analysis, U.S. Department of Commerce, NIPA data.

III. U.S. Manufacturing's Critical Challenges

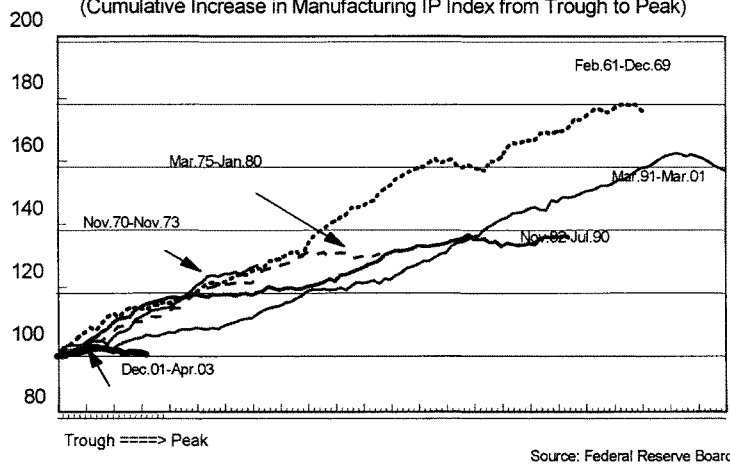
Section II presented the numerous benefits bestowed on the U.S. economy from a strong and growing manufacturing sector. Can those benefits be expected to continue? There is, indeed, cause for grave concern about the future of the inter-linked manufacturing process that has generated such a large share of American prosperity. While no one can determine what the ideal critical mass is to produce the most important benefits from the manufacturing sector, the process by which those benefits are produced clearly requires one. Today there are worrisome signs that mass is endangered. The manufacturing sector has shown few signs of recovery from the 2001 recession and is not exhibiting the same pattern of increased activity that has been observed following prior recessions. In addition, the United States is losing its place as exporter to the world.

A. Manufacturing, the Recession, and the Anemic Recovery

U.S. manufacturing is losing ground. The recession that officially began in 2001 began impacting the manufacturing sector in late 2000. Compared to other business cycles, manufacturing production is far behind its usual pattern of growth for the early part of an expansion. The ramifications from job losses, lost profits and slowing investment are cause for concern in regard to the immediate prospects for the economy's recovery from this recession. If these trends are not reversed they will adversely affect the future economic growth of the United States.

Manufacturing has always played a pivotal role in business cycle developments. As a supplier of goods to other sectors, manufacturing sees new orders fall by more than the decline in the trade sector's sales because new orders are also reduced to allow trade inventory adjustments to take place. This adjustment process continues as finished goods producers pass along order reductions and their inventory realignments to their suppliers. That is the main reason for the large amplitude of the traditional manufacturing cycle.

Chart 5: Manufacturing Industrial Production Growth during Recent Expansions
(Cumulative Increase in Manufacturing IP Index from Trough to Peak)



The opposite pattern happens during a recovery. Thus, manufacturing tends to lead the way in an economic expansion and provides important momentum to other sectors. But so far in this recovery, that has not happened. Chart 5 compares manufacturing output of this expansion to those of the previous five expansions, as measured by industrial production. The chart shows the growth in output from trough to peak of the respective economic expansions.⁴³ In the expansions during the 1960s, 1970s and 1980s, manufacturing output rose about 23 percent during the first 17 months of recovery. The recovery from the 1990–91 recession took twice as long to reach that point — over 30 months. That was one reason the early portion of that expansion is often referred to as the "jobless recovery." The recovery in manufacturing output this expansion is lagging behind even the poor start of the 1991 recovery.

⁴³ Peak and trough months are determined by the National Bureau of Economic Research's Business Cycle Dating Committee. That committee has determined that the peak of the last expansion, and thus the start of the most current recession, was in March 2001. It has not yet determined the date for the trough of the recession. For this analysis, December 2001 has been chosen as the most likely date for the trough month.

Manufacturing output is up less than 1.0 percent over the past 17 months compared with about 7 percent the previous recovery.

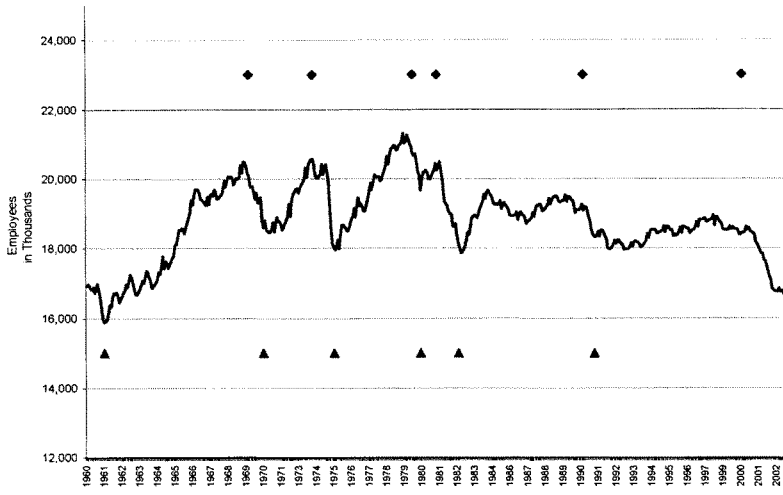
The faster manufacturing grows, the faster the U.S. economy and U.S. standard of living grow. But manufacturing growth slowed systematically in the two decades following the 1960s, when it increased at an annual rate of 4.8 percent. Industrial production increased at an annual rate of 3.0 percent in the 1970s, and only 2.5 percent in the 1980s. In the 1990s the growth trend accelerated almost back to the 1960's rate as new technologies prompted faster growth. However, recent weakness in the manufacturing sector leaves the prospects for the 2000s very unclear.

B. Manufacturing Has Lost a Large Number of Jobs

Manufacturing jobs are always lost during recessions. However, during past recoveries the number of jobs has generally grown. Chart 6 shows total manufacturing jobs along with the peaks and troughs of the business cycle. The peak periods are marked by diamonds at the top of the chart, and the trough months are marked by triangles at the bottom of the chart. Since the late 1970s, each peak has been a bit lower than the previous peaks' high point and during the recovery following the 1990–91 recession, manufacturing job growth showed only modest gains. In contrast to the usual pattern, manufacturing has lost jobs at a significantly faster pace during the last two years. As of early 2003, the number of manufacturing jobs is about equal to the number of jobs at the trough of the 1961 recession. This may be a signal that manufacturing will no longer generate the employment, and its related benefits, the economy has always relied on. In April 2003 manufacturers employed about 16.3 million workers, two-thirds of whom were production workers.⁴⁴ Between 1990 and 2000, the year prior to the most recent recession, employment in manufacturing fell by about half a million jobs, declining from 19.1 million to 18.5 million. Since 2000, in stark contrast, manufacturing has lost 2 million jobs, four times the loss in the preceding decade.

⁴⁴ *Current Employment Statistics Survey*, U.S. Department of Labor.

Chart 6: Manufacturing Employment, January 1960 to April 2003



Source: Bureau of Labor Standards (CES)

The last time manufacturing experienced 2 million job losses was in the early 1980s when manufacturing jobs declined from 21 million to 18.4 million before recovering slightly toward the end of that decade. During the 1990 recession and its immediate aftermath, manufacturing jobs declined by about 1 million before recovering to 18.8 million in 1998. While there may be some recovery from these low employment levels, it is not apparent in the current employment numbers. Furthermore, since the pattern from the most recent recovery shows lower peak employment levels than the previous one, many of these jobs may be lost forever.

Manufacturing employment has been impacted more than the jobs in the rest of the economy. For the United States as a whole, manufacturing employment as a share of total employment has fallen from 13.2 percent in 2000 to 11.4 percent in early 2003. This decline has been widespread geographically. Every state has seen a decline in

manufacturing's share of total employment. While in 2000 six states had manufacturing shares that exceeded 19 percent of their employment base, by March 2003 only one state had a manufacturing share that high.

One aspect of this rapid decline in manufacturing employment is the focus by manufacturers on core businesses. Business units outside those core areas of competence are spun off or closed, some become separate domestic firms (not all of them in the manufacturing sector) and others move to foreign locations, or the work is outsourced to a foreign firm. This "hollowing out" of industry can have significant impacts beyond the job losses. The movement overseas of manufacturers affects the entire industrial network. As manufacturers relocate overseas, suppliers all the way up the supply chain must make plans to relocate as well.

Plant closures accounted for 50–60 percent of the job displacements in manufacturing for workers with three or more years of tenure during the period from January 1993 through December 2001.⁴⁵ That compared with 45–50 percent for the non-manufacturing sectors of the economy. On average each year from 1993 through 1998, 177,000 manufacturing workers with three years or more of tenure lost their jobs due to plant closures. From January 1999 through December 2001 that rate increased to 230,000 workers per year.⁴⁶ The rate of reemployment for long-tenured employees (three years or more at their jobs) in manufacturing is also relatively low. Less than half of those workers return to manufacturing jobs; the rate of re-employment in non-durable manufacturing is even lower: only about a quarter of those losing jobs in non-durable manufacturing re-employed in non-durable manufacturing.⁴⁷ Long-tenured, full-time manufacturing employees who do find new full-time jobs, in any industry, tend to take a

⁴⁵ The reason for plant closures cannot be identified in these surveys. Consequently, all of these job displacements cannot be positively linked to outsourcing overseas. However, many of the industries with increasing import penetration shares are also industries in which a large percentage of the job losses are due to plant closures.

⁴⁶ *Displaced Workers Survey*, Bureau of Labor Statistics, U.S. Department of Labor.

⁴⁷ These rates cover workers who lost their jobs due to plant closures, lost shifts or slack work. Consequently, the rates of re-employment among workers whose jobs were lost due to plant closures is undoubtedly somewhat lower than these.

pay cut. In 1998, that loss of pay averaged about 10 percent, over twice as large as the average for re-employed workers overall.

C. Implications for Productivity of a Jobless Recovery

As chronicled in Section II, manufacturing productivity has been remarkable.⁴⁸ Relatively strong productivity growth has been maintained during the recession. However, that has been due to job cutbacks in manufacturing and other industries. That is not the most beneficial way for an economy to generate productivity growth. Robert J. Samuelson, in a 2003 op-ed piece, stated:

Over the long run, better productivity signifies higher living standards through new products, technologies and management methods. But at any one time, productivity depends on prevailing economic conditions – which may not be favorable. The present productivity surge reflects bad news more than good: layoffs, bankruptcies and cutbacks. The ruthless elimination of the least efficient plants and companies may improve productivity. But it doesn't necessarily signal a robust recovery.⁴⁹

Samuelson's analysis suggests that the most recent gains in productivity may be masking long-term damage to the process through which economic gains are made. Once the manufacturing "heart" shrinks to the point that it can no longer support the complex inter-linked process of innovation and investment, the method by which productivity gains are translated into long-term gains in prosperity is lost. Unfortunately, there is no clear diagnostic test whereby that loss of critical mass can be clearly identified – only a myriad of symptoms that a potential danger point has been reached.

⁴⁸ "Based on historical experience, it seems improbable that all of the large rise in multifactor productivity could be attributed to cyclical or transitory factors. Conversely, it seems very unlikely that all of the increase in the growth of productivity could be attributed to structural influences. The truth, presumably, lies between these two extremes, but where has yet to be determined. At minimum, however, it seems reasonable to conclude that the step-up in the pace of structural productivity growth that occurred in the latter part of the 1990s has not, as yet, faltered. Indeed, high growth of productivity over the past year merely extends recent experience. Over the past seven years, output per hour has been growing at an annual rate of more than 2-1/2 percent, on average, compared with a rate of roughly 1-1/2 percent during the preceding two decades. Although we cannot know with certainty until the books are closed, the growth of productivity since 1995 appears to be among the largest in decades." Alan Greenspan in a speech at the American Enterprise Institute, October 23, 2002.

⁴⁹ "Economic Darwinism", Robert J. Samuelson, *The Washington Post*, March 19, 2003.

D. U.S. Manufacturing Losing Ground in Global Trade

The United States continues to be the largest supplier of manufactured exports to the world; however, there are troubling developments in the merchandise trade sector that U.S. leadership in export trade has been strongly challenged.

Despite the growth in goods exports, the merchandise trade deficit has been negative since 1976. Goods exports as a share of U.S. GDP peaked at about 8 percent in late 1997 but has retreated to about 6 percent since then. This reflects declining goods exports in 1998 (due to the Asian currency crisis), some recovery in growth in the 1999–2000 period, and then a sharp decline in goods exports in 2001 and 2002. This last decline partially reflects the impact of the recession on our trading partners and of 9/11; but that is not the only cause. While the decline in U.S. exports in 2001 corresponded to a decline in total world trade, the same cannot be said for 2002. World merchandise trade increased 4 percent last year, while U.S. merchandise exports continued to decline.⁵⁰ Consequently, after two decades of relative stability, the U.S. share of world manufactured exports declined from 13.5 percent of the world total in 2001 to about 11 percent in 2002. That reflects a worsening of the U.S. position vis-à-vis other nations producing manufactured exports. This weakening of the U.S. goods exports corresponds to a worsening of the trade deficit relative to GDP.⁵¹

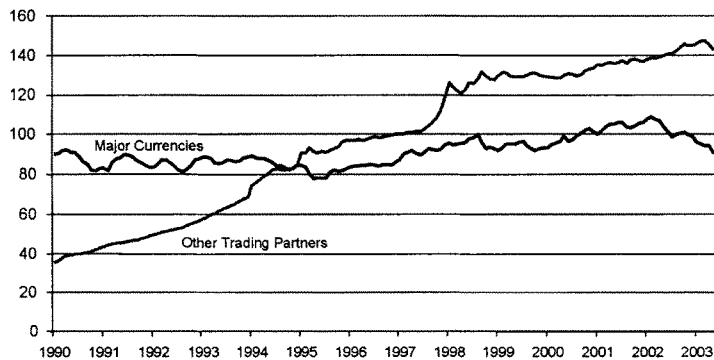
The strong U.S. dollar overseas is blamed for handicapping export growth and encouraging the growth of imports. The recent weakening of the dollar in many countries – it has fallen 8 percent from its peak in February 2002 – should be considered helpful to U.S. goods manufacturers. A rise in their exports should follow. But the balance of trade impact of the dollar's recent decline will probably not be as large as some have anticipated.

⁵⁰ "Trade Recovered in 2002, But Uncertainty Continues," WTO, April 2003.

⁵¹ The large current account trade deficit in the United States is sustainable only as long as foreign investors are willing to continue to buy assets in the United States in the form of stocks and bonds. The United States's strong economic base and stable political situation have been the basis for attracting that investment in the past. However, there are never any guarantees that foreign investors will continue to accumulate dollar holdings in their foreign exchange reserves at the same rate they have in the past.

That is because the decline is being driven by the 17 percent depreciation of the dollar against “major” currencies of the world — those that are traded on exchanges outside of their own countries. But those countries only account for 56 percent of U.S. trade. The other 44 percent reflects trade with countries, such as China, whose currencies are not defined as major currencies. If one looks at exchange rates applicable to the other 44 percent of U.S. trade, as shown in Chart 7, it is clear that the dollar has been increasing in value against them: 2 percent in the past year.⁵² Imports from those countries account for 46.5 percent of U.S. imports, but only 40.7 percent of U.S. exports. The differential for China is even larger. China bought 3 percent of U.S. exports in 2002, but was the source of 11 percent of U.S. imports; therefore, trade with China accounted for 21.9 percent of the 2002 U.S. merchandise trade deficit.⁵³ In the absence of the Chinese government’s intervention in the value of its currency against the dollar — some analysts estimate it is valued 40 percent higher than its market value

Chart 7: Federal Reserve’s Nominal Dollar Indexes



⁵² Many of the currencies in this index are pegged to the dollar and the exchange rate for those currencies show little month-to-month variation. The other currencies in the index tend to devalue against the dollar.

⁵³ In general, China’s exports and imports boomed in 2002, each growing in excess of 20 percent overall. WTO figures show China was virtually tied with France for the spot of fourth-largest exporter of merchandise in the world in 2002.

– U.S. exports to China would presumably be higher and imports from China lower.

Service exports have grown significantly in recent years, but were still less than half the size of goods exports in 2002. Consequently, the United States cannot depend solely on trade in services to offset the serious decline in goods exports. In addition, U.S. providers of business services are facing increasingly strong competition as foreign producers of services begin to staff U.S. call centers and provide programming services to U.S. companies. These jobs represent U.S. service imports and offset U.S. service exports. Consequently, the solution to the trade deficit is unlikely to be found solely with service sector exports.

U.S. imports of merchandise account for one-fifth of world trade.⁵⁴ Imports have been a positive force in the United States because the influx of inexpensive goods has helped keep prices down and encourage consumer spending. But when trade becomes too one-sided, it can slow economic growth. As a recent *Business Week* article states, "Real GDP... is a tally of domestic output, so when a bigger chunk of spending is satisfied by foreign suppliers, it's a drag on economic growth, especially in the manufacturing sector."⁵⁵ Consequently, it is important for the United States to maintain its ability to produce new and better goods and services for export.

Part of the growth in the merchandise trade deficit can be attributed to the growing purchases by U.S. "Original Equipment Manufacturers" (OEMs) of foreign-produced parts and components for their products. A measure of this hollowing out of the supply chain can be found in the statistics on "related party trade" – that is, imports to the United States from U.S.-owned foreign factories or from foreign companies to their U.S. affiliates. In 2001, the Department of Commerce estimated that \$526 billion, or 47 percent of all U.S. merchandise imports, fell under this category of trade.⁵⁶ The links between manufacturers and other sectors of the economy lead to broader impacts on the economy than just the loss of each manufacturing plant. It also reduces the

⁵⁴ "World Trade Developments in 2001 and Prospects for 2002," WTO, October 2002.

⁵⁵ "U.S.: Imports Get a Bigger Piece of the American Pie," James Cooper and Kathleen Madigan, *Business Week*, February 3, 2003.

⁵⁶ "U.S. Goods Trade: Imports and Exports by Related Parties, 2001," U.S. Department of Commerce, May 2002.

need for the support services and infrastructure improvements that would be necessary to support those manufacturing activities if they were performed in the United States.

In considering the competitiveness of U.S. manufactured goods in world markets, the costs of maintaining one of the most environmentally sound processes in the world must be noted. U.S. manufacturers' clean production processes and safer products are designed for domestic and world consumption, which means they often compete with products produced under less environmentally sound processes. This dual production is not costless to the manufacturing sector. In 1999, the direct cost to the manufacturing sector for new pollution abatement equipment was \$4.4 billion, 76 percent of all such expenditures by U.S. industries. In addition, manufacturers spent \$10.2 billion in operating costs for ongoing abatement activities, 86 percent of the total amount spent by all industries.⁵⁷ Together those costs equaled almost 6 percent of the before-tax net income of manufacturing companies in 1999. Beyond these direct costs for pollution abatement equipment, its operation and maintenance, there are other costs associated with meeting all federal environmental regulations. Estimates of those costs vary but a recent study done for the SBA estimates that the total cost paid by U.S. manufacturers to comply with those regulations is almost \$70 billion annually.⁵⁸

The role of the United States in world trade is enhanced by the ability to innovate. One of the more important U.S. service exports takes the form of payments for using a U.S. patent or other form of intellectual property; those payments currently make up about 13 percent of service exports. Almost 75 percent of the payments for intellectual property are between affiliated companies; U.S. firms; and companies they own or controls overseas. While this share has declined slightly since the mid-1980s it is one indication of the internationalization of U.S. manufacturing know-how. The allocation of patents in the United States provides further information on the processes of innovation in the goods-producing industries. Foreign-origin patents represented about 45 percent of all patents granted in the United States in the mid-1990s, the vast majority of which

⁵⁷ "Pollution Abatement Costs and Expenditures: 1999," Census Bureau, November 2002, Table 1.

⁵⁸ "The Impact of Regulatory Costs on Small Firms," W. Mark Crain and Thomas Hopkins, Small Business Administration, 2001.

are owned by foreign corporations.⁵⁹ While U.S. inventors are still awarded a growing share of all U.S. patents, it is noteworthy that, based on the number of patents awarded, only three American corporations were in the top 10 companies ranked by numbers of new patents in 1999. The remaining corporations were Japanese- or Korean-owned. Compare this to the number of patents awarded during the entire 1977–1996 time period, when over half of that top 10 list of patenting corporations were U.S. companies.

Recent empirical research has found a link between U.S. wages and its share of patents. Among the findings of that paper is "a rise in the share of the United States in world innovation or in U.S. patents is associated with an increase in U.S. wages, while, an increase in foreign shares is usually associated with a decrease [in U.S. wages]."⁶⁰

E. U.S. Manufacturing Investment in Capital and R&D at Risk

The ability of the United States to continue to innovate and produce product and process improvements is also showing signs of deterioration. Manufacturing's share of capital investment has begun to slip. In 1999 its share of equipment and software purchases fell below 20 percent for the first time, and averaged only 17 percent during the 1999–2001 period.

Manufacturers accounted for 62 percent of private R&D in 2000 — \$124 billion — and manufacturers financed 90 percent of that total themselves.⁶¹ However, the \$11 billion increase in R&D spending between 2000 and 2002 represents only half the recent pace of R&D spending. In real terms, spending on R&D by all of private industry barely changed in 2002. And the National Science Foundation reports that manufacturing R&D input has barely grown for the past decade, only 5.6 percent (0.5 percent per year) in the 1989–1999 period.⁶² So while at 62 percent the manufacturing share of industry R&D is still high, that is much weaker than past performance.

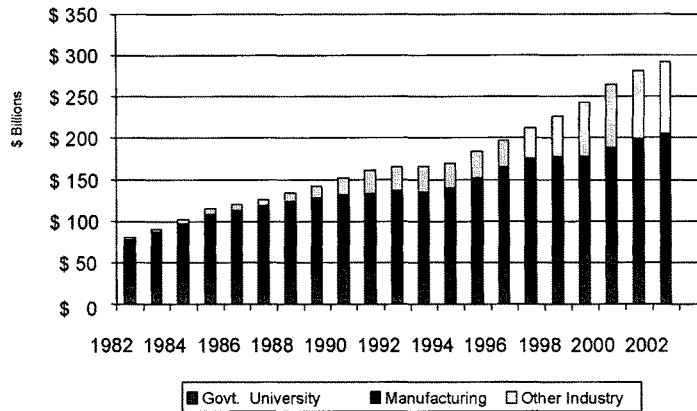
⁵⁹ *Science & Engineering Indicators 2002*, National Science Foundation, pp. 6-21.

⁶⁰ "Technology, Trade, and Wages," NBER Working Paper 5940, by James D. Adams, 1997, p. 28.

⁶¹ The remaining funds come from federal government sources. "U.S. Industrial R&D expenditures and R&D-to-Sales Ratio Reach Historical Highs in 2000," National Science Foundation *InfoBrief* (NSF03-306), December 2002.

⁶² The price index NSF uses is probably closer to an input price index (wages and salaries, equipment, supplies, etc.) than a proxy for an output price index.

Chart 8: R&D Expenditures by Performing Sector



Source: National Science Foundation

Manufacturing's share was 80 percent just 10 years ago and 95 percent 20 years ago. At first glance, one could conclude this is a result of the rapid growth of the services sector, and as Chart 8 shows there is an increase in non-manufacturing R&D.⁶³ However, the slowdown in the real growth of total R&D and the slowdown in goods-related R&D will impact the beneficial effects of the externalities that accompany new innovations in manufacturing.

There are also indications that the R&D expenditures of the United States as a share of the total R&D conducted by industrialized countries have begun to shrink. In 1984, the United States accounted for about 48 percent of total OECD R&D expenditures (in real terms) but by 1998 that share had fallen to less than 44 percent. And while the United States still spends more, by far, on R&D than any other OECD nation, it ranks only fifth in the world when ranked on R&D expenditures as a percent of GDP.⁶⁴

⁶³ Detailed tables on nonmanufacturing R&D indicate a large proportion of the expenditures take place in the network industries, trade and information services.

⁶⁴ *Science and Engineering Indicators — 2002*, National Science Foundation, Chapter 4.

In his book *The Free-Market Innovation Machine*, William Baumol discusses the importance of the competitive market mechanism in encouraging firms to devote a steady stream of expenditures to R&D. This, in and of itself, promotes growth in GDP. “[A] steady flow of innovation does not mean that GDP remains constant. Rather, a level flow of innovation can result in steady growth of the economy's output.”⁶⁵ That comes from three main processes: 1) the cumulative character of many innovations — called innovation breeding where one new idea suggests another new idea; 2) the public-good property of innovation — often thought of as a spillover effect; and 3) the accelerator feature of innovation — innovation growth plus the productivity impacts from that innovation. Assuming Baumol's model is correct, the current decline in R&D expenditures bodes ill for the continued growth of the U.S. economy.

If the U.S. manufacturing base shrinks too much, it promotes a shift in R&D and investment to other global centers where the critical mass necessary to conduct it exists and is growing. If this happens, a decline in the U.S. long-term economic growth rate is all but assured.

The ability to fund new R&D spending comes largely from the profits that a company can plow back into its business. Thus, the available cash flow of manufacturing firms is closely linked to their ability to perform R&D work as well as make capital investments. One measure of the cash flow available for such investments is the depreciation charges of a company, plus the profits it retains rather than distributes as dividends to its shareholders.⁶⁶ In the late 1980s manufacturing accounted for almost 40 percent of all corporate cash flow in the U.S. economy. Between 1999 and 2001 alone, this measure of manufacturing corporate cash flow fell by almost 20 percent, to 25 percent of total corporate cash flow in the United States. This puts severe limitations on companies' abilities to make the necessary investments

⁶⁵ Baumol, p. 51.

⁶⁶ In the early 1990s, manufacturing was paying out almost 30 percent of all corporate dividend payments to shareholders in addition to retaining enough earnings to fund its investment programs. Manufacturing's share of dividend payments declined to about 20 percent of the total corporate dividend payments in 2001. Bureau of Economic Analysis, U.S. Department of Commerce.

to spur future innovations and growth. Cash flow varies with the business cycle; the recession is one of the reasons for the recent slowdown in R&D.

While cyclical variations in cash flow and R&D are damaging to the creation of a constant stream of innovations, two other factors, longer term in nature, also temper private R&D spending. The first factor is the inability of producers to recover the fruits of all of their spending through the prices they charge for their innovations.⁶⁷ It is widely agreed that firms doing R&D do not capture all or even most of their investment through the price mechanism. The existence of these essentially "free" spillovers means the social return from R&D exceeds the private return. That can lead to a reluctance by firms to undertake some higher-risk projects. Another example of social returns being greater than private returns is related to the scope of the benefits from R&D. A single firm is unlikely to focus on the full scope of the possible uses of innovations resulting from its R&D. This may be increasingly true as firms focus on producing results from their R&D that will primarily benefit their relatively narrow core businesses.

In recognition of these instances where social returns to R&D are higher than the private returns, the federal government has put tax credits in place for research activities as part of the general business tax credit. In 1999, manufacturing received 74 percent of the benefit of the research activity tax credit and reduced its federal tax liability by \$3.9 billion. However, that was only about 4 percent of its total federal income tax liability and about 3 percent of the total amount the manufacturing sector spent on R&D.

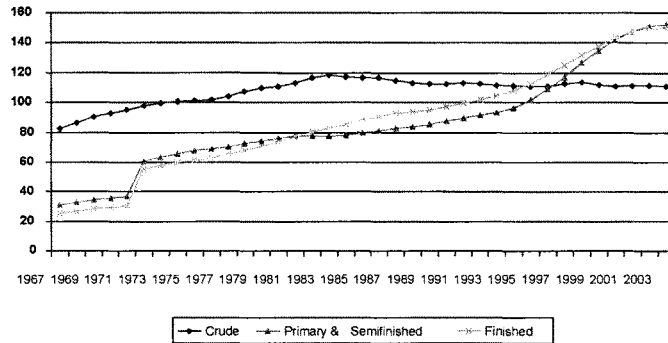
F. Manufacturing Capacity is Not Growing and Its Usage Has Dropped

Investment in new capacity is the hallmark of a growing industry that is optimistic about the future. Overall, U.S. manufacturing capacity has grown fairly steadily since the early 1980s (see Chart 9). But that masks the onset in 1980 of a decline in the United States's capacity to process crude materials for subsequent transformations by

⁶⁷ "The Search for R&D Spillovers," Zvi Griliches, NBER Working Paper no. 3768, July 1991.

the rest of the manufacturing sector.⁶⁸ The mining industry is a case in point: domestic exploration and productive capacity have declined significantly over the past two decades. The number of U.S. metal and non-metal mines has declined by 61 percent since 1980.⁶⁹ As a result, the United States has become more dependent on foreign nations to supply these raw materials: the reliance of the United States on mineral imports has risen nearly sevenfold in terms of value. The United States now imports over 50 percent of 37 mineral commodities, all of which are important for manufacturing and strategic military uses.⁷⁰ This increases the vulnerability of U.S. manufacturers to supply disruptions and the possibility of sudden and sharp price increases. Some of the decline reflects dwindling U.S. petroleum and mineral resources. But the decline also reflects the fact that policies have discouraged the development of resources in the United States. As a result, mineral and crude processing capacity is being located closer to the growing customer base in other countries, particularly those in eastern Asia.

Chart 9: Manufacturing Capacity by Stage of Process



Source: Federal Reserve Board

⁶⁸ See "Bottleneck Inflation and Growth," Joel Popkin, *The Rising Tide*, edited by Jerry Jasinowski and John Wiley & Sons, 1998.

⁶⁹ 2001 U.S. Mine Safety and Health Administration, "Injury Experience in Coal, Metal, Stone, Sand, Gravel, and Non-Metal Mining," Table 2, p. 16.

⁷⁰ U.S. Geological Survey, "Mineral Commodities Summaries 2003," p. 5.

The smaller the U.S. demand for locally produced finished goods, the less likely new capacity will locate here. Notwithstanding the leveling-off of crude material capacity growth, U.S. manufacturing capacity growth has been sustained by the growth of plants producing intermediate and finished goods. However, since 2000 finished and semi-finished goods capacity has not grown.⁷¹ Furthermore, the utilization of the capacity available in the United States is quite low, especially toward the end of the manufacturing chain. In April 2003 the capacity utilization rate for primary and semi-finished goods production was at 76.5 percent, slightly below its low point during the 1990–91 recession. However, capacity utilization for finished goods is only 70 percent, a full 7 percentage points below its lowest point during the 1990–91 recession.

Restructuring of industries and a loss of market share in some industries is a part of the dynamic economic process. But a loss of manufacturing capacity across the board is a signal of a potentially more serious problem that has implications for long-term economic prosperity.

G. Manufacturing Faces a Skills Shortage

The manufacturing sector has been a leader in teaching and improving the skills of its workforce, much of it through on-the-job-training. While companies across all industries are concerned about a lack of basic educational skills in their workforce, manufacturing faces the additional concern of a potential shortage of workers with the specific manufacturing skills needed to produce their products. The improvements of the skills and knowledge of the workforce is as important to achieving future gains in productivity as is the production of new and better capital equipment. Both are vital to the long-term growth process.

Dr. Beth Buehlmann of the Center for Workforce Preparation addressed the general skills shortage facing employers in recent testimony before Congress:

⁷¹ Capacity by stage of process, Federal Reserve Board.

In January 2002, data from a survey of over 1500 employers, confirmed similar results — 73 percent experienced very or somewhat severe conditions when trying to hire qualified workers, and 70 percent said that the workers had poor, wrong or no skills to meet business needs. The third CWP survey, conducted this January of 3700 employers from 80 communities across 34 states, found that just over 50 percent said it was 'very hard or hard' to find workers with the skills that they need. One out of eight employers said that applicants needed assistance with training of basic skills — reading, writing, math and communications. What these results indicate is that even in a slow economy employers are having difficulty finding skilled workers.⁷²

In 2001, the National Association of Manufacturers (NAM) conducted a study of workforce issues in the manufacturing sector. The survey found that more than 80 percent of manufacturers reported a "moderate to serious" shortage of qualified job applicants — even as manufacturers were reducing workforces. The study notes that "what manufacturing is facing is not a lack of employees, but a shortfall of highly qualified employees with specific educational backgrounds and skill."⁷³ This problem is felt especially among small firms where, at times, it has impacted a company's ability to accept work.

The flip side of this challenge is the growing scarcity of entry-level openings in manufacturing. While the average age of workers in manufacturing is only slightly higher than it is for the nonfarm economy as a whole — 41 years compared to 38 years — the distribution of workers is noticeably different. In 2000, 19 percent of workers in manufacturing industries were below the age of 30, whereas for the economy as a whole, 28 percent of workers were younger than 30.⁷⁴ This reflects the lack of job growth in the manufacturing sector in recent years but also presages a potential skill shortage for the future. When the older manufacturing workers retire there may not be anyone to replace them since there has not been a steady stream of younger workers encouraged to enter the pipeline and gain the important job-specific skills.

⁷² Testimony before the Subcommittee on 21st Century Competitiveness, Committee on Education and the Workforce, U.S. House of Representatives, March 4, 2003.

⁷³ "The Skills Gap 2001: Manufacturers Confront Persistent Skills Shortages in an Uncertain Economy," National Association of Manufacturers, 2001, p. 3.

⁷⁴ Calculations from the 2000 *Current Population Survey*.

In a May 2003 *Industry Week* article discussing the future shortage of skilled workers, futurist Roger Herman stated, "The manufacturing jobs that are going to be available are going to be more sophisticated than 'traditional' manufacturing sector jobs." United Technologies has embarked on a major training program for its front-line supervisors because, as its chief learning officer states, "[A] lot of what we are doing is more sophisticated than basic metal-bending. It is costly to lose people, and it is very costly to under-utilize them.... But given that we expect to have less people going forward than we have today, we do spend a lot of time on the issues of quality of what happens on the factory floor and productivity," a comment that underscores the difficulties of companies that are balancing job reductions with their skill needs of the future.⁷⁵

⁷⁵ "The Next Crisis: Too Few Workers," John S. McClenahan, *Industry Week*, May 1, 2003.

IV. CONCLUSION

This analysis has shown the benefits that the manufacturing sector provides the whole U.S. economy — from businesses and households to federal and state governments. It has also described the manufacturing-centered innovation process — often just below the statistical radar screen — that is the source of these benefits.

The analysis has also identified troublesome signs that the process through which manufacturing has generated those benefits may be deteriorating. Some of those signs are:

- the manufacturing recovery during the current economic expansion is unusually anemic compared to past expansions;
- there has been an exceptionally rapid decline in manufacturing jobs and with their loss, the potential loss of the skills, education and training of the workforce that promotes productivity growth;
- there are signs that the manufacturing sector may be unable to maintain the pace of its R&D spending, adjusted for inflation;
- current increases in productivity may reflect only downsizing and hide a fundamental slowdown in its trend rate of growth;
- the United States is losing ground in world merchandise trade, particularly vis-à-vis countries whose currency and other policies discourage imports; and
- parts of the U.S. manufacturing sector, such as those that produce raw and primary products, are no longer building new facilities here.

These are signs that dramatic change is underway. The question is whether the change is cyclical or will it become the long-term trend. A change in trend will be, like most structural change, difficult to detect. In fact, it may only be possible to identify the change after it has happened. At that point it could be governed by forces that could be difficult to reverse.

The success of the U.S. manufacturing sector requires a certain mass to be sustainable. This mass must be large enough to encourage investment in R&D

domestically, conducted by our scientists, and to encourage U.S. business to invest in capital goods and human capital here in the United States. Once that mass has diminished below its critical value, the process by which prosperity has been generated may never be recovered. If that is permitted to occur, the growth rate of the U.S. economy may drop to half its historical average.

*This white paper is the
second in a series of
publications for
the NAM Campaign
for Growth and
Manufacturing Renewal.*

**Council of Manufacturing
Associations**

NAM National Association
of Manufacturers

Joel Popkin and Company
Economic Consultants

July 22, 2003

The Honorable Charles Grassley
Chairman
Committee on Finance
U.S. Senate
Washington, DC 20510

Dear Senator Grassley:

Please let this letter serve as a response to your letter of July 10th. Following are my answers to the questions posed by Senator Hatch with reference to my testimony before your committee on July 8th.

Q. Given that the U.S. must repeal FSC/ETI export tax incentive, doesn't it make sense to you as economist that we should replace it with tax provisions designed to increase productivity and capital formation?

I am not an expert on the FSC/ETI tax incentive although I have a general understanding of how it works. While I do believe it makes sense to promote capital formation and productivity growth, the benefits of those policies will clearly be more generalized than were the benefits of the FSC/ETI tax. While the tax can not be replicated, at the very least it would be helpful to the companies that are losing this tax benefit if there is some time period over which that tax could be phased out.

Q. How important a role do you think the tax code's research and experimentation credit plays in spurring corporate R&D? Also, how significant are the tax incentives of other nations in luring R&D away from the U.S.?

I do think the research and experimentation credit does help spur corporate R&D although it is a relatively minor pay back on those investments. The argument for R&D tax credits is that spillovers from R&D benefit the economy as a whole while, by definition, the value of those spillovers can not be captured by the firm that is conducting the R&D. Since the benefit to society is larger than it is to the firm specifically, it is generally considered to be good public policy to provide some government incentives to R&D investments. This may especially be true in cases where tight profit margins are putting firms in a position of having to choose their projects very carefully and possibly narrow the focus more than they would otherwise. The other issue that arises is direct financing of R&D by the government. Especially during difficult economic times, I think it is useful for the government to finance R&D directly, especially in the areas of general research. However, I think that issue is beyond the focus of your committee. I have not made a comparative study of the tax policies of other countries with regard to R&D investments. Consequently, I am not qualified to answer your question on that subject. However, I think China's method of trying to attract R&D facilities as a condition of entry into its market might be a more worrisome trend. Tax policies are more easily countered by changes to U.S. tax policies than is this particular tactic.

Q. In your view, what are the tax policies this Committee should pursue to help ensure continuing productivity growth?

Unfortunately the answer to the final question is a difficult one. The reasons for spurts in productivity growth are often not well understood, consequently it is not always easy to determine what policies would best promote them. However, tax policies that encourage capital investment, especially capital deepening, should help improve productivity. Raising the limits on expensing equipment and shortening depreciation lives are both useful methods of providing incentives for those investments. Since much of the productivity growth in manufacturing (especially in multifactor productivity) came from rapid improvements in R&D intensive high tech equipment, promoting R&D also should benefit the growth of productivity. However, it is also important to remember that it is not just improvements in the equipment that promotes productivity growth. It is also important to make improvements in human capital (the education and training of the people who use that equipment). Consequently, tax incentives that promote more training of employees by firms might also be considered as well as the parts of the individual tax code that help increase the level of higher education in general. This may also be of use in transitioning people who are forced out of dying industries into new industries by providing incentives to acquire the skills that are useful in other sectors of the economy.

Sincerely,

Kathryn Kobe
Chief Economist
Joel Popkin and Company

TESTIMONY OF THEA M. LEE
CHIEF INTERNATIONAL ECONOMIST
AMERICAN FEDERATION OF LABOR AND
CONGRESS OF INDUSTRIAL ORGANIZATIONS
BEFORE THE SENATE FINANCE COMMITTEE

"An Examination of U.S. Tax Policy and Its Effect on the Domestic
and International Competitiveness of U.S.- Based Operations"

July 8, 2003

Mr. Chairman, Senator Baucus, members of the Committee, I thank you for the opportunity to testify today on behalf of the 13 million working men and women of the AFL-CIO and the unions of the Industrial Union Council on the issue of U.S. tax policy and the state of American manufacturing.

We believe this hearing is timely for several reasons. First, with 56,000 more manufacturing jobs lost last month—the 35th straight month of industrial job loss—it is clear the crisis in this sector is deep, prolonged, and requires immediate attention. Second, the Senate will have an opportunity through its debate on a replacement for the Foreign Sales Corporation/Extra-Territorial Income Exclusion tax (FSC/ETI) to boost manufacturing in the United States, while also bringing our tax code into compliance with WTO rulings.

My testimony will focus on four key points: the dimensions of the crisis in manufacturing; the arguments in favor of a manufacturing tax benefit to replace the FSC/ETI; a critique of an alternative plan put forward by some in the Congress to replace the FSC/ETI with primarily offshore tax breaks; and the need to address the manufacturing crisis in a comprehensive way, including through health care reform and reform of our flawed trade policies.

THE CRISIS IN MANUFACTURING

According to last Thursday's unemployment figures, 56,000 manufacturing workers lost their jobs in June alone. For 35 straight months, manufacturing has lost jobs, the longest such stretch since the Great Depression. Since July of 2000, the United States has lost 2.6 million manufacturing jobs, nearly 13 percent of the total manufacturing workforce. Manufacturing job loss accounts for a staggering 90 percent-plus of total U.S. job loss since March 2001. As the chart I have included with my testimony shows, nearly every state in the nation has suffered heavy manufacturing job loss.

Unless these trends are reversed, America's working families – and the nation's economy – will continue to suffer serious and long-term damage. Manufacturing historically has been a major generator of good, high-skilled, well-paid jobs, with strong

linkages to jobs in non-manufacturing sectors, and it remains a mainstay of local and state economies throughout the nation. Because productivity growth (and therefore the potential for non-inflationary wage gains) has traditionally been greater in manufacturing than in services, the decline of manufacturing affects not only workers in manufacturing, but also contributes to the stagnation in all workers' wages. Moreover, the massive scale of manufacturing plant closings and job layoffs is contributing directly to the serious fiscal crises afflicting virtually every state in the nation.

The forthcoming debate on the FSC/ETI repeal gives Congress a crucial opportunity to help U.S.-based manufacturing by reorienting tax policy to help—rather than harm—the sector.

MANUFACTURING TAX BENEFIT

Replacing the FSC/ETI with incentives to create and support U.S.-based manufacturing jobs is vital for the health of the industry and our entire economy. We believe that H.R. 1769, the Crane-Rangel-Manzullo-Levin bill, will help boost U.S.-based manufacturing, which is why the AFL-CIO strongly supports it. We look forward to working with a broad bipartisan coalition in Congress to build support for the bill.

H.R. 1769 would provide a tax benefit for production of goods in the United States, adjusted for the percentage of a company's worldwide production that takes place domestically. For instance, a company that makes all of its goods in the U.S. would be eligible for the entire benefit, while a company making half of its goods in the U.S. would receive half the benefit. In this way, the legislation would create an effective tax incentive to keep production in the United States. The legislation would also phase out FSC/ETI benefits over five years, allowing time for workers and companies who were FSC/ETI beneficiaries to adjust to a new system.

OFFSHORE TAX BREAKS

Rep. Bill Thomas (R-Calif.), chairman of the House Ways and Means Committee, last year put forward a proposal to repeal the FSC/ETI and replace it with a collection of corporate tax cuts, most of which would mainly benefit companies with overseas production facilities. We urge the Senate to reject this approach.

Multinational corporations could accumulate untaxed profits overseas more easily because "base company" rules would be repealed. These rules now subject companies' profits to taxes in one or more countries. Multinational corporations would also get tax breaks by using rules that allow profits made in countries like Germany and France to be converted into tax deductions by paying "expenses" to wholly or partly owned companies in tax havens like the Cayman Islands.

This proposal, quite simply, would ship more manufacturing jobs abroad. According to news accounts last year, "Even some supporters of the [Thomas] bill said the ability of companies to avoid taxes on profits from factories abroad so long as they

were not returned to the United States encouraged American companies to invest, and create jobs, overseas.”¹

It is bad enough that bureaucrats at the World Trade Organization (WTO) are requiring changes in our tax system, but it is even worse that some in Congress would respond to this challenge by making domestic manufacturing *less* competitive. The Thomas approach, though it has not yet been formally reintroduced this year, appears to define “enhancing American competitiveness” as boosting the profitability of multinational corporations to produce anywhere they choose, so long as they keep an American mailbox. We strongly encourage the Senate to reject it.

Our existing tax system—through foreign profit tax deferral, the foreign tax credit, and other provisions—already places American-based manufacturers at a terrible disadvantage compared to multinational firms that generate most production offshore. Those tax policies also urgently need to be fixed.

THE BROADER AGENDA

The manufacturing tax benefit, taken alone, will have only a small effect on enhancing the competitiveness of U.S. manufacturing. It will improve our tax policy, but the AFL-CIO believes Congress should make other significant policy changes.

America’s manufacturing workers are the most productive in the world. But they operate under enormous competitive disadvantages resulting from several factors in addition to tax policy, such as unfair trade agreements, an overvalued dollar and foreign currency manipulation, inadequate investment incentives, health care costs not borne by overseas producers, and foreign government subsidies. Unless these problems are addressed soon, American manufacturing capacity and jobs may end up permanently lagging. And our economic strength may be permanently weakened: U.S. productivity and wage gains have been largely driven by the performance of our manufacturing sector.

We urge the Congress to start with passing a manufacturing tax benefit, but to make that only the first step of a more comprehensive effort. Thank you.

¹ David Cay Johnston, “Bill Closing Bermuda Loophole Also Includes Tax Breaks,” *New York Times*, July 17, 2002.

Questions for Thea M. Lee

From Senator Orrin G. Hatch

Ms. Lee, would you agree with Professor Hall that equipment expensing would help the average American worker's wages in the long run?

A: We have not done any detailed analysis of this point, but I believe that the likely impact of equipment expensing on workers' wages would be quite small. Therefore, we would prefer more direct approaches to helping workers and boosting wages.

Professor Hall, Ms. Lee, and Ms. Kobe, I would like to ask all of you economists this next question. Given that the U.S. must repeal its FSC/ETI export tax incentive, and that we cannot replicate the benefits of that incentive, doesn't it make sense to you as economists that we should replace it with tax provisions designed to increase productivity and capital formation?

A: It certainly makes sense to replace the FSC/ETI with tax provisions that will directly help U.S.-based manufacturers and support American jobs. H.R. 1769 is clearly the best option of those that have been proposed so far in this regard. As the FSC/ETI was targeted to help U.S. exporters compete successfully in overseas markets, any replacement should also ensure that U.S.-based producers are not disadvantaged by U.S. tax provisions.

Statement of Mark Russell
Vice President of Taxes
Electrolux North America
Before the U.S. Committee on Finance
An Examination of U.S. Tax Policy and Its Effect on the Domestic and International
Competitiveness of U.S.-Based Operations
July 8, 2003

Mr. Chairman and Members of the Committee, thank you for the opportunity to voice the views of the Electrolux Group on U.S. tax policy and its impact on domestic and international competitiveness. I am Mark Russell, Vice President for Taxes for Electrolux North America.

Overview of Electrolux

Electrolux is the world's largest producer of appliances and equipment for indoor and outdoor use. Electrolux is incorporated in Sweden, where the company was founded and continues to maintain its headquarters, as well as several thousand employees. In the United States, Electrolux is often identified with vacuum cleaners. Our product line goes well beyond vacuum cleaners. Electrolux is known for its innovative products and strong brands. Electrolux is our biggest and most important brand, but the Electrolux Group includes many other famous brands for indoor and outdoor appliances for both consumers and professional users. These brands include Eureka, Frigidaire, Tappan, Kelvinator, Poulan, Husqvarna, Weed Eater, McCulloch, Partner and Dimas.

Electrolux had annual sales in 2002 of approximately \$14 billion while sales in the United States were in excess of \$5.5 billion in 2002. Twelve percent of products manufactured in the U.S. by Electrolux are exported. Worldwide, the group has manufacturing operations at 111 locations in 26 countries. The four largest manufacturing operations are located in the United States and account for 23% of the total value of Electrolux's production. Forty percent of the company's operations are in North America, where it employs 20,000 workers in dozens of states.

The larger operations in the United States are in Greenville, Michigan; Webster City, Iowa; Nashville, Arkansas; Springfield, Tennessee; Orangeburg, South Carolina; and St. Cloud, Minnesota. In the past five years, Electrolux has invested in excess of \$700 million in plant and equipment in the U.S. In Webster City and Jefferson, Iowa we have three plants with more than 2,100 employees that make clothes washers and dryers and built in vacuum systems. In Arkansas, we manufacture chain saws, grass trimmers and blowers and employ over 2,200. In Springfield, Tennessee, we assemble household ranges and ovens with 2000 employees. The group purchases raw materials such as steel and plastics and other finished components from domestic suppliers in the amount of 1.5 billion to 1.75 billion dollars per year.

The company's worldwide effective tax rate for 2002, 2001 and 2000 was 32.6, 28.3 and 32.5 percent, respectively (30.9, 32 and 32.4 percent excluding one-time items). The Group Treasury organization of Electrolux has the global responsibility for financing and liquidity, and for the management of financial exposures. Group Treasury has four regional centers: Sweden,

Singapore, Brazil and the U.S. The regional centers are responsible for local cash management, financing, and support to the subsidiaries. Electrolux has a high level of liquidity due to recent divestitures. Net liquidity is defined as liquid funds less short-term borrowing. For 2002, liquid funds were 11.8 percent of net sales due to divestments.

Worldwide net borrowings were lower for 2002, mainly because of cash flow generation, as well as higher net proceeds from divested and acquired operations. Electrolux had a net debt-equity ratio of 0.05 for 2002, 0.37 for 2001, and 0.63 for 2000.

International Competitiveness

A country's tax system has a major impact on its international competitive position. Current U.S. tax law promotes various policy objectives such as incentives for expanding export sales and increasing research and development expenditures. The current tax code also has various disincentives, a major one being the limitation on interest deductibility (earnings stripping). In addition, the United States taxes corporations on their worldwide income and has higher corporate tax rates than many European Union countries. This worldwide tax system impacts companies like Electrolux and is a factor in decisions to invest in the United States. As the Senate Finance Committee reviews the rule governing U.S. taxation, it should keep in mind two criteria. First, any changes to the U.S. laws governing international tax should not impede the creation of U. S. jobs and the investment of debt and equity capital into the United States by foreign companies which have a capital structure which has evolved for legitimate purposes and is consistent with the internationally recognized arm's length standard. Second, legislation should not target or discriminate against companies which were founded abroad and have deep historical ties to their country of incorporation, and continue to conduct significant business in their home country, particularly when such country has a fully developed tax system with effective tax rates comparable to the U.S.

Extraterritorial Income Regime

We recognize the repeal of the extraterritorial income regime is the likely response to the World Trade Organization (WTO) decision that extraterritorial income regime (ETI) is prohibited export incentive. Legislation which repeals the ETI should be designed to help sectors of the U.S. economy that currently benefit from the ETI and this should include foreign owned companies which manufacture products in the United States. The ETI regime has been a factor in our decision to maintain and expand our production in the United States. Other countries offer subsidies and incentives to entice companies to locate operations there or have lower tax rates. For example, Mexico and Canada have recently reduced their marginal tax rates to 32 percent and 33.4 percent (combined federal and provincial), respectively compared to marginal rates of 39 percent in the U.S. Without some alternative to the ETI regime, it will be difficult for a foreign owned company to justify further expansion in the United States. Several of our competitors have transferred manufacturing operations to Mexico, Canada, and other countries because of perceived cost advantages. The lower corporate rate in Mexico and Canada are a major factor in the decision. Lower tax rates will increase profit margins which will result in our competitors having a competitive advantage over us. Generally, price is a key factor for consumers when determining which brand appliance to purchase. And net after tax profitability

is, of course, a very important factor in the markets for debt and equity capital, where we must also be competitive.

Electrolux has a history with the United States and wants to maintain and strengthen its operations in the U.S. and at the same time remain competitive in the global marketplace. Representatives Crane (R-IL) and Rangel (D-NY) have introduced H.R. 1769, the "Job Protection Act of 2003," which would repeal the current law ETI benefit for transactions after the date of enactment. Senator Hollings (D-SC) has introduced companion legislation (S. 970). This legislation recognizes the need to assist those companies that currently benefit from the ETI by providing transition relief until 2008. In addition, H.R. 1769 would provide a permanent new deduction which reduces the effective corporate tax rate for U.S. manufacturers. This new deduction would be based on U.S. production activities and the product does not need to be exported to be eligible for the deduction. Companies such as Electrolux would receive a sliding-scale effective rate reduction based on the value of their U.S. production of eligible products compared to the value of their worldwide production.

The Jobs Protection Act of 2003 recognizes the fact that if production is to be maintained in the United States, ETI transition relief is needed and companies manufacturing products in the United States which benefited from the ETI regime should receive some type of tax relief that is compatible with the rules of the WTO. As the Senate Finance Committee continues its deliberations on the repeal of the ETI regime, it should not rule out transition relief and corporate rate deduction for those companies making products in the United States.

Policy Considerations Relating to Earnings Stripping Proposals

Electrolux believes that, beyond the context of inversions, the policy considerations relating to earnings stripping are not clear. In particular, Electrolux believes that reforms to section 163(j) should target abusive transactions, and not penalize legitimate business transactions.

Present law provides rules to limit the ability of U.S. corporations to reduce the tax on their U.S. source income through earnings stripping transactions. Code section 163(j) specifically addresses earnings stripping involving interest payments, by limiting the deductibility of interest paid to certain related parties if the payor's debt-equity ratio exceeds 1.5 to 1 and the payor's net interest expense exceeds 50 percent of its adjusted taxable income, that is, taxable income computed without regard to deductions for net interest expense, net operating losses, and depreciation, amortization, and depletion. Disallowed interest amounts can be carried forward indefinitely, and any excess of the 50 percent limit can be carried forward three years.

Electrolux would not be affected by the earnings stripping proposal in the "Reversing the Expatriation of Profits Offshore Act" as passed by the this Committee as stand alone legislation in the 107th Congress and as passed by this Committee and the Senate as a provision in the S. 1149, the "Energy Tax Incentives Act of 2003" and S. 1054, the "Jobs and Growth Reconciliation Tax Act of 2003" because it has not entered into any transactions which can be defined as an inversion transaction. Electrolux commends the Committee for addressing earnings stripping in a narrow context. More specifically, the Senate has addressed earnings

stripping in a manner which impacts only those companies that have done transactions which are solely tax driven. Under this legislation, current law earnings stripping rules would be modified only for those companies which averted U.S. taxes by reincorporating in a tax haven. However, both the Treasury earnings stripping proposal and H.R. 5095, as it was introduced in the 107th Congress, raise serious policy concerns. Both of these proposals unfairly target for adverse federal tax treatment foreign-owned enterprises that engage in legitimate arm's length transactions of the sort that U.S. owned businesses commonly undertake both in the U.S. and abroad. In so doing, both proposals would serve to penalize those very companies that are importing jobs into the United States that could otherwise be located elsewhere.

H.R. 5095. H.R. 5095 would change section 163(j) in several ways.

1. The debt-equity threshold test in current law would be eliminated.
2. Interest paid to certain related parties would not be deductible if the payor's net interest expense exceeds 35 percent of its adjusted taxable income, rather than the 50 percent threshold under current law.
3. Carryovers of interest disallowed would be limited to five years.
4. The carryover of excess limitations would be eliminated.
5. A new interest disallowance rule would be added to section 163(j), which would disallow related-party interest deductions to the extent that the U.S. subsidiaries of a foreign parent are more highly leveraged than the overall worldwide corporate group. Interest amounts disallowed under this new rule would not be eligible for carryover, nor would any excess limitation. The modified present-law disallowance rule and the new disallowance rule would be coordinated by providing that the rule yielding the greater amount of interest disallowed would determine the overall disallowance.

Administration Budget Proposal. The Administration's budget for fiscal year 2004 proposes to make the following changes to section 163(j):

1. Repeal the current law 1.5 to 1 debt to equity safe harbor and replace it with a safe harbor that would be determined based on a series of debt-to-asset ratios identified for certain asset classes.
2. Impose a worldwide limitation that would deny a deduction for disqualified interest paid by U.S. members of a corporate group that are more highly leveraged than the overall group. The amount of interest that would be disallowed under the worldwide test would be limited by the safe harbor based on asset classes. A carry forward of interest amounts that exceed the worldwide limitation would not be permitted.
3. Reduce the threshold for the limitation based on adjusted taxable income from 50 percent to 35 percent of the adjusted taxable income.

4. Limit the indefinite carryforward for disallowed interest under the adjusted taxable income limitation of current law to five years.
5. Eliminate the 3-year carryforward of excess limitation.

Electrolux believes both of these proposals raise numerous policy issues which should be considered before any action is taken on legislation to modify Code section 163(j) in a manner which goes beyond those changes that have previously been approved by the Senate and that target clearly abusive transactions.

- Both proposals are discriminatory, violate the arm's length standard, and would be in direct conflict with U.S. treaty obligations. U.S. subsidiaries of foreign parent companies should be taxed under the same rules as are U.S. companies that are owned by U.S. parents, and interest paid to treaty country affiliates should be deductible on the same terms as interest that is paid to U.S. affiliates, which, of course, is subject to the arm's length standard. If enacted as proposed in the 107th Congress, section 201 of H.R. 5095 would clearly violate the anti-discrimination article of the U.S.-Sweden Income Tax Treaty, as well as the similar anti-discrimination article of the U.S. Model Income Tax Convention and many other bilateral tax treaties to which the U.S. is a party. This is because section 201 would impose restrictions on the deductibility of interest payments that go beyond the arm's length standard applicable to interest paid to U.S. affiliates.
- Because it is very common for U.S. multi-national corporations to capitalize their foreign subsidiaries in significant part with debt, as well as equity, these proposals create a substantial risk of retaliation by our treaty partners. Subject to satisfying the arm's length standard, interest payments on such debt are typically deductible for purposes of the host country's corporate income tax. These proposals create a substantial risk that our major treaty partners will respond to this U.S. discrimination by similarly restricting the ability of the foreign subsidiaries of U.S. multi-national corporations to deduct interest payments on their intercorporate debt. The result would be a general and highly undesirable increase in the tax burden of such foreign subsidiaries of U.S. corporations and, overall, an added tax burden imposed on multi-national businesses and thus on international trade.
- The proposed changes to section 163(j) are arbitrary. The purpose of the current law safe harbor is designed to limit interest deductibility to U.S. subsidiaries that are thinly capitalized. Repeal of the debt-equity safe harbor would result in the disallowance of interest payments by corporations that are not thinly capitalized.
- The one-size-fits-all approach of the worldwide test does not take into account that some businesses by nature involve more debt than others, and this includes businesses that are cyclical in nature. It also disregards the long-recognized U.S. and international tax principle that a corporation is entitled to be treated for tax purposes as a separate taxable entity from any of its related corporations as long as it satisfies the arm's length standard in its business dealings with those corporations. The arm's length standard is inconsistent

with any requirement, such as the worldwide test would impose, that each related corporation must be capitalized according to the same debt-equity ratio.

- Current law carryforwards were designed to prevent a permanent loss of deductions if interest expense appeared high due to year-to-year fluctuations in profits. This reflects the reality that cash flow arising over a period of years can be used to service debt in any particular year. Focusing on a single year's debt provides an unrepresentative view of the company's capital structure and is not a good measure of the company's long-term ability to service debt. Carryforwards are consistent with the broader tax policy of addressing consequences of annual accounting periods.
- Clearly, there are business cycles in most industries and adjusted taxable income does not increase each year in a straight-line consistent manner.
- Focus on a single year's debt provides an unrealistic view that is inconsistent with an arm's length view of a company's ability to service debt.
- Under U.S. and international tax principles, guaranteed debt does not necessarily indicate that the borrower is thinly capitalized. With respect to domestic corporations, U.S. law has long recognized that guaranteed debt is often used merely as a means of reducing both the documentation and the borrowing costs that would result from unguaranteed debt. The Treasury proposal and H.R. 5095 unfairly penalize U.S. subsidiaries of foreign parents for engaging in this reasonable and common business practice. Particularly when such guaranteed borrowing otherwise satisfies the arm's length standard, the proposals would further discriminate against foreign multi-national corporations in violation of U.S. treaty obligations.

In addition, with specific reference to the Treasury's proposal for a safe harbor determined by a series of debt-to-asset ratios identified for particular asset classes, Electrolux has the following concerns:

- It is inappropriate to apply such a safe harbor principally to cross-border debtor-creditor relationships between related parties. As is reflected in section 385(b)(3) of the Code and numerous judicial decisions, the ratio of corporate debt to equity plays a substantial role in determining the deductibility of interest payments by U.S. corporations to related persons, whether the payment is a cross-border transaction or is a purely domestic transaction. In that light, prescribing a maximum debt-equity ratio that is applicable principally to cross-border related-party interest payments and not to otherwise similar domestic related-party interest payments, as would be the case with respect to Treasury's proposed amendment to section 163(j), is unwarranted and, as previously noted, would violate the nondiscrimination clauses of many of the tax treaties to which the U.S. is a party. For that reason, if Congress were to conclude that such a safe harbor is necessary, either to give effect to the arm's length standard or for other reasons, the safe harbor should be applied even-handedly to all corporate payments of interest to related persons without regard to whether the payments occur in a cross-border context. Such a safe harbor could be applied in a uniform and nondiscriminatory manner in any one of three

ways. First, section 163(j) could be amended so that it applies to all corporations, including both domestic and foreign multinational groups. Second, section 385 could be amended to require such a safe harbor in measuring the adequacy of the debt-equity ratios of all U.S. corporations for purposes of determining the deductibility of interest paid to any related persons. Third, the Treasury could exercise its current authority under section 385 to prescribe regulations that require such a safe harbor in determining the deductibility of interest paid to any related persons by all U.S. corporations.

- Tax basis should not be the standard for determining allowed indebtedness. Stock acquisitions, taxable or tax-free, are frequently accomplished without a step up in the basis of the assets. The same is true for tax-free asset acquisitions, as occur for example by certain statutory mergers. However, fair market value generally is greater than asset basis and that excess should be allowed in calculation of the permitted debt. In reality, financial institutions base financing decisions on fair market value and not tax basis. If the tax law is going to focus only on asset basis, there is no reason to limit such a rule to cross-border affiliates. Rather, such a rule should be applied across the board, including debt-equity determinations in the case of payments to domestic affiliates.
- Another serious flaw is the transitory nature of the asset class percentages. Treasury has not indicated the origin of its study that produced these percentages. Are these percentages based upon objective economic reality and, therefore, likely to remain in place or are they based on short-term fiscal objectives and thus may well change at some future date? As an example of this concern, note that the present 50% adjusted taxable income limitation in section 163(j) is proposed to be reduced to 35%; yet the Treasury has not produced any data to support the need for such a change other than for the limited purpose of dealing with inversions.

Other Issues to Consider

As the Committee works to address repeal of the ETI regime and international tax reform, it should consider other incentives to encourage investment in the United States and also remove the various disincentives. Electrolux commends the Senate Finance Committee for including a provision in S. 1149, the "Energy Tax Incentives Act of 2003" which would provide a tax credit for the manufacture of energy-efficient appliances, including energy-efficient clothes washers and refrigerators. This credit serves two purposes. First, this credit encourages investment in designing and manufacturing appliances which would save energy. Second, the credit encourages companies like Electrolux to continue manufacturing products in the United States. Basically, this credit will encourage inbound investment.

Other disincentives impacting inbound investment include withholding taxes. Although the U.S. has taken a positive step to eliminate withholding taxes in the U.S./U.K. treaty, a broader approach would be preferred. The removal of withholding on dividends would remove an additional barrier to investment.

Conclusion

As Congress continues its consideration of a legislative response to the WTO's ruling of the ETI regime as a prohibited export subsidy, Congress should consider the role foreign owned companies with substantial U. S. operations play in the U.S. economy. Companies like Electrolux are an integral part of the U.S. economy. U.S. tax laws should not impede a foreign owned company from producing products in the U.S., exporting these products, and thus keeping the jobs of the workers who produce those products in the U.S.

Electrolux appreciates this opportunity to present our views. We are willing to assist the Committee in any manner as it continues its deliberations on international tax issues.



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July 11, 2003

Senator Orrin G. Hatch submitted the following question.

Mr. Russell, Mr. Spitzer, I'd like to ask the two of you about this so-called earnings stripping. If Congress were to pass either the Administration's proposal or the proposal in H.R. 5095 how would that impact your companies' future investment plans in this country?

Response from Electrolux and Mark Russell

The answer to your question is that it would reduce future investment plans. Both proposals, the Administration's and H.R. 5095, would be a tax increase that would reduce cash flow in the U.S. because interest would not be deductible.

Management and or the Board of Directors must approve all capital investments. Investment requests are required to generate a cash flow return from the investment that is greater than a predetermined hurdle rate. This hurdle rate varies by country and takes into account several factors including the mix of debt and equity. To the extent that the debt percentage is decreased due to the interest on the debt no longer being deductible, the hurdle rate would increase in the U.S. because the group's cost of equity is much higher than its cost of debt.

The reduced cash flow and higher hurdle rate would make it difficult for the group to justify making investments in the U.S. In conclusion, passage of H.R. 5095 or the administration's proposal would make the U.S. less competitive in attracting foreign capital as compared to other countries.

Mark Russell

**Written Testimony of
Alexander Spitzer
Senior Vice President - Taxes, Nestlé USA
Before the
Committee on Finance
United States Senate
July 8, 2003**

Good morning. My name is Alexander Spitzer. Mr. Chairman, I am grateful for this opportunity to share with the Committee my personal views on international tax policy as it relates to U.S. operations of multinational firms and, in particular, any impediments in the tax code that may serve as a barrier to attracting international investment into the U.S. manufacturing base.

I am Senior Vice President - Taxes for Nestlé USA and have held the top tax job in the company for the last 18 years. Also, from 1996-2002, I served as President of the Organization for International Investment (OFII).

As you may know, OFII is the leading business association in Washington representing the interests of U.S. subsidiaries of multinational firms – companies such as Shell, Rolls-Royce, Sony and Philips Electronics. OFII supports the notion that U.S. economic policy should provide non-discriminatory treatment for U.S. subsidiaries of foreign firms. The most recent example of exactly the type of policy we support

occurred just a few weeks ago in this very room when you and some of your colleagues made a special effort to ensure that U.S. shareholders owning stock in foreign-based firms, such as Nestlé, would pay tax on dividends from those companies at the **same** tax rate as dividends from a domestic company. As an employee-shareholder in Nestlé, I want to thank you for your efforts to ensure that we were not punitively treated under the bill.

As the top tax executive for a major U.S. subsidiary of a Swiss-based multinational and as long-time President of the inbound investment community's leading association, I believe that I have a unique perspective to offer the Committee today. Thank you for inviting me.

Nestlé in the United States

Nestlé, a Swiss public company, is the world's largest food company and is 140 years old. For more than 100 years (well before the U.S. enacted the current federal income tax), Nestlé has been investing in American factories, jobs and businesses and manufactures in the U.S. a large range of products including Baby Ruth, Butterfinger, Nestlé Crunch, PowerBar, Poland Spring Water, Hot Pockets, Taster's Choice coffee, Coffee-mate, Libby's Juicy Juice, Häagen-Dazs Ice Cream, Friskies pet food and many more. We have a total of 43,000 employees at 73 manufacturing facilities, 6 distribution centers and numerous sales offices around the country in 33 states, supporting a \$2.5 billion annual payroll. Nestlé's U.S. manufactured product sales for 2002 approximated \$18.0 billion, including \$600 million in exports. This March, *Fortune*

magazine named Nestlé USA “America’s Most Admired Food Company” for the sixth consecutive year. Whether it is the 1,600 employees in Springville, Utah making Stouffer’s Lean Cuisine or the 1,000 across Iowa making Carnation Instant Breakfast or Purina Dog Chow, Nestlé makes a significant contribution to the U.S. economy.

U.S. Subsidiaries Provide Key Contributions to the U.S. Economy

Nestlé is not alone in making important contributions, as U.S. government data on all U.S. subsidiaries clearly demonstrate.

Providing jobs: In 2000, 6.4 million American workers were employed by U.S. subsidiaries of foreign firms, accounting for 13.8 percent of all U.S. manufacturing jobs and 5.6 percent of the overall private industry workforce. Over the last five years, U.S. subsidiaries’ employment has increased by more than 30 percent. These jobs are distributed across a range of industries, with 43 percent of the jobs in manufacturing.

Paying high wages: U.S. subsidiaries of foreign companies support an annual payroll of \$330 billion. In 2000, compensation per employee was 15.4 percent, or \$6,830 higher at U.S. subsidiaries than at all private-sector businesses in the U.S. In part, higher wages reflect the high productivity of U.S. subsidiaries.

Contributing to U.S. export growth: In 2000, U.S. subsidiaries exported a record \$165.3 billion of merchandise. Their merchandise exports accounted for 21 percent of

all goods exported by the U.S. that year. And, except for 1987, they have accounted for more than 20 percent of the U.S. total for every year since 1980.

Investing in plant and equipment: U.S. subsidiaries have established deep roots in this country and continue to make very substantial investments that will make them even more productive. They invested \$148.8 billion in new plant and equipment in 2000, twice the amount of just five years ago.

Contributing to U.S. R&D activity: In 2000, U.S. subsidiaries invested \$30.2 billion in R&D activities in the United States, performed by U.S. doctors, scientists and engineers. Their share of all privately-funded U.S. industrial R&D has risen by \$12.7 billion from five years ago.

Tax Payments of U.S. Subsidiaries

Consistent with their significant economic activity in the United States, U.S. subsidiaries are also significant taxpayers in the United States. Appended to my statement is a statistical review that goes into some detail regarding different facets of U.S. subsidiaries' robust and material contribution to the U.S. tax base. The appendix is drawn from a recent White Paper produced by OFII and it relies on the most recent IRS data. The highlights of the data are:

- U.S. subsidiaries' tax payments have grown from \$6 billion in 1991 to \$28 billion in 2000, accounting for 14% of all corporate tax payments.

- The effective U.S. corporate tax rate (measured as a percentage of assets) of U.S. subsidiaries is comparable to that of all U.S. corporations.
- U.S. subsidiaries' long-term debt has declined as a share of assets and is similar to that of all U.S. corporations.

The statistics above and in the appendix demonstrate that U.S. subsidiaries are paying tax at the same levels as all other corporate taxpayers.

Some allege that foreign firms have a tax advantage in the U.S. tax code and that this "advantage" has led to a disproportionate number of U.S. companies being acquired by foreign firms. In my professional experience, the assertion of a tax advantage is false and M&A data regarding U.S. acquired companies prove that foreign firms are not dominating U.S. mergers and acquisitions.

- Between 1998-2001, U.S.-based companies' acquisition of U.S.-based companies totaled \$4.2 trillion, compared with \$993.1 billion in foreign acquisitions of U.S.-based firms, or about 24 percent.¹
- Of the top ten U.S. M&A deals announced in 2002, only two involved foreign-based firms purchasing U.S. based companies.²

¹ *Mergers & Acquisitions, The Dealmaker's Journal*, various issues.

² *The Daily Deal*, January 23, 2003

It is also worth noting that foreign direct investment is a two-way street. As of 2002, the value of foreign direct investment in the U.S. was \$1.3 trillion and the value of U.S. direct investment abroad was \$1.5 trillion.³

Competitiveness of U.S. Operations of Multinational Companies

In today's global economy, successful businesses are in a constant search for growth – often tapping into markets other than their own. To do this, competitive international firms must understand the unique needs in all of their markets, constantly innovate, operate at maximum efficiency to keep prices competitive, and create value for shareholders.

Investment in the United States by foreign-based firms directly benefits the U.S. economy by supporting high-wage jobs, increasing U.S. productivity through the transfer of firm-specific technology and know-how and expanding the domestic capital stock. The benefits of inward investment to host countries have been confirmed repeatedly in the academic literature. A recent survey of this literature by Prof. Robert Lipsey concludes:⁴

“Within host countries, it has been abundantly shown that foreign-owned firms pay higher wages than domestically-owned firms. . . . Productivity comparisons between foreign-owned and domestically-owned firms or establishments almost always find that the foreign-owned firms have higher productivity levels. . . . If regions or countries encouraging inward investment are interested in encouraging high-wage plants, foreign investors seem to meet that desire.”

³ Preliminary 2002 data, Balance of Payment and Direct Investment Position data, U.S. Department of Commerce.

⁴ Robert E. Lipsey, “Home and Host Country Effects of FDI,” 2003 (in press).

In the past, competitiveness has been defined in stark, “us vs. them” terms. I would urge you to reject this easy formulation. In today’s global markets, we cannot put national flags on firms. This is dramatically illustrated in a recent study by James Glassman of the American Enterprise Institute that finds Americans, on average, own over 20 percent of the shares of the 100 largest (measured by U.S. sales) foreign-owned publicly-traded companies in the United States.⁵ Policy makers should examine the economic benefits that flow from each kind of international business profile without regard to where a business happens to have its legal place of incorporation. The point is that the competitiveness of the U.S. tax *SYSTEM* as it affects all U.S.-based business activity, *not* the competitiveness of a particular form of business organization, should be the goal. In this way we will maximize the economic well-being of Americans.

Substantive Tax Issues Affecting Inbound Investment

My comments in this area will focus on examples of tax policies uniquely impacting U.S. subsidiaries – some policies are constructive and others have the potential to be harmful. Certain aspects of U.S. tax law, such as the advance pricing agreement program and U.S. bilateral tax treaties, are moving in the right direction. Other aspects of U.S. tax law, such as the so-called “earnings stripping” rules (Section 163(j)), are not.

The Advance Pricing Agreement Program

The United States has led the way in allowing taxpayers to negotiate “advance pricing agreements” (APAs) with the IRS and, in certain cases, other countries, to resolve transfer pricing disputes without costly and uncertain litigation. The APA program is utilized significantly by both U.S.- and foreign-based multinationals. In 2002, 49 of the 85 APAs executed involved U.S. subsidiaries of foreign parent companies, based on the latest IRS announcement and APA report dated March 31, 2003. The APA process should be encouraged as a preferred alternative dispute resolution program, and be given the highest priority at the IRS with respect to resolving disputes and providing certainty in this area.

Double Taxation Treaties

U.S. bilateral tax treaties are important for several reasons. Such agreements serve to avoid international double taxation and prevent tax avoidance and evasion. Such agreements also serve to remove barriers to trade and investment between two countries as a result of overlapping tax jurisdictions. These agreements promote cross-border mutual investment by foreign-based companies operating in the United States and by U.S.-based companies operating abroad, creating greater economic activity.

The United States has an extensive tax treaty network program with countries throughout the world. The efforts of the Treasury Department and the Senate in updating and expanding this tax treaty network – most recently with new tax treaties

⁵ James K. Glassman, “America’s Reciprocal Stock Portfolio: How U.S. Investors Invest in ‘Foreign’ Companies that Invest in the United States,” *American Enterprise Institute*, (July 2001).

and protocols with Australia, Mexico, and the United Kingdom – should be applauded. In addition, the Treasury Department's efforts to update many existing treaties should be fully supported, including those with some of our major European and Asian trading partners.

Section 163 (j) -- Earnings Stripping

The United States currently has rules that limit the ability of U.S. subsidiaries to deduct interest paid to foreign related parties (for the purposes of these rules, certain unrelated third party debt is considered related party debt when guaranteed by a foreign affiliate company). These rules are generally referred to as the earnings stripping rules. In response to the debate on corporate inversion transactions, several proposals were put forward by the Administration and Members in the House to significantly further restrict **all** U.S. subsidiaries' ability to deduct interest paid to foreign related parties – not just inverted companies. Any legislation to further restrict the deductibility of interest expense should be limited to identified abusive practices, consistent with the understanding of the intent of this Committee and the Senate to limit any further changes to the earnings stripping rules with respect to only certain inverted companies.

The clear evidence based on recent IRS data on U.S. corporations is that there are no identifiable problems with the earnings stripping rules that justify drastic changes to these rules across the board. The data shows that U.S. subsidiaries of foreign-based companies essentially are indistinguishable from other U.S. companies as measured by the amount of U.S. taxes paid and long-term debt as a percentage of assets.

Certain proposed changes to the earnings stripping rules, beyond inverted structures, would have grave consequences. These changes could result in a reduction in new domestic investment by foreign-based companies, at a time when the U.S. economy needs such investment and related jobs the most. These changes would have other serious side effects, including significant tax treaty conflicts and inappropriate double taxation that is inconsistent with U.S. tax policy. The proposed changes could also lead to potential retaliation abroad with similar draconian regimes that would adversely impact U.S.-based companies operating abroad.

The IRS's Administration of the Tax Law Must be Nondiscriminatory

The IRS must have the resources and directives to be more international in its focus and to enforce the arm's length standard in an unbiased fashion, whether the investment is inbound or outbound. There need to be verifiable procedures in place to assure the fair and nondiscriminatory enforcement of the arm's length standard already in place for both inbound and outbound companies. In my experience, IRS field agents sometimes take unreasonable – and wildly different positions – based on whether a taxpayer is an inbound or outbound investor. While some of this IRS zeal is understandable as a negotiating position, sometimes it goes beyond that and becomes two different standards – one for inbound transactions and one for outbound transactions.

Conclusion

This hearing is not the first to explore the link between tax policy and positive economic activity. However, it is unique in its focus on "U.S. tax policy and the competitiveness of U.S. -based operations." The emphasis on U.S.-based operations is one that I particularly support because policymakers must answer a very simple question: "How does tax policy benefit the United States?" Does it create, support or eliminate jobs? Competitiveness MUST relate to "U.S. operations" because, if properly considered, it relates to the competitiveness of our system, our workers and our nation.

I hope that Members of the Committee will reject the simplistic "us vs. them" concept of competitiveness. As I have outlined above, U.S. subsidiaries support millions of American jobs and therefore are appropriately part of today's discussion of "the competitiveness of U.S. operations." As you move forward in considering reforms to the tax system, I urge you to do so in a non-discriminatory way that maximizes job-creating investment in the United States. Thank you for thoughtfully framing this discussion. I am happy to answer any questions.

APPENDIX

STATISTICAL INFORMATION ON U.S. SUBSIDIARIES

This appendix provides recent statistical information and analysis on U.S. subsidiary tax payments and indebtedness. It is largely drawn from an April 7, 2003 white paper prepared by the Organization for International Investment, "Budget Proposal on Related Party Interest Expense."

I. Overview

Recent IRS statistical data show that U.S. subsidiaries tax payments, effective tax rates, and levels of long-term indebtedness are very similar to those of other U.S.-based companies. The IRS tabulates information from income tax returns filed by U.S. corporations for U.S. subsidiaries of foreign-based companies ("U.S. subsidiaries") as well as all U.S. corporations. By comparing tax return information of U.S. subsidiaries and all U.S. corporations, it can be determined whether U.S. subsidiaries pay less tax, are more highly leveraged, borrow more heavily from shareholders, or pay higher interest rates than all U.S. corporations. For this purpose, we analyzed tax return data for 1991 through 2000, the most recent year for which data are available from the IRS.⁶

II. Recent IRS Data (1991-2000)

The most recent publicly available IRS data on U.S. subsidiaries and all U.S. corporations show⁷:

- U.S. subsidiary tax payments have grown from \$6 billion in 1991 to \$28 billion in 2000, accounting for 14% of all corporate tax payments.
- The effective U.S. corporate tax rate (measured as a percent of assets) of U.S. subsidiaries is comparable to that of all U.S. corporations.

⁶ IRS tabulations of corporate income tax returns for any calendar year include fiscal year returns that have at least six months of overlap with the calendar year. For example, IRS data for 2000 includes returns with fiscal years ending after June 30, 2000, and before July 1, 2001.

⁷ Data discussed in this section are from U.S. corporate income tax returns filed with the IRS that are collected and reported by the SOI Division. Comparisons are made using the most recent data available. The most recent aggregate data are for tax year 2000, and the most recent data showing industry detail are for 1999. These figures compare U.S. subsidiaries of foreign parents having 50 percent or more foreign ownership with data for all taxable U.S. corporations. Taxable U.S. corporation data are from all corporate tax returns filed with IRS, less those of S-corporations, which operate in pass-through form.

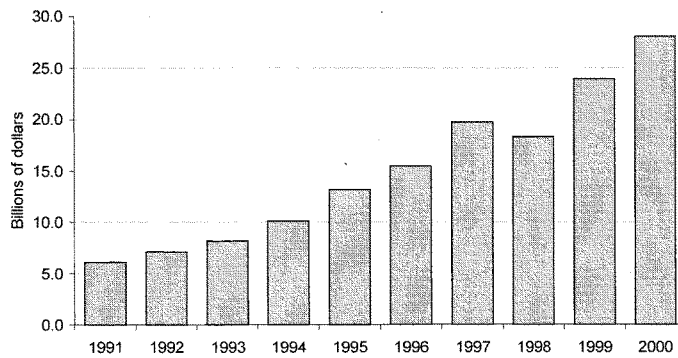
- U.S. subsidiaries' long-term debt has declined as a share of assets and is similar to that of all U.S. corporations.
- U.S. subsidiaries' loans from shareholders are a small and stable fraction of company financing.
- Over 75 percent of interest paid by U.S. subsidiaries to related parties is received by residents of OECD countries.

These findings are discussed below.

U.S. subsidiary tax payments have grown from \$6 billion in 1991 to \$28 billion in 2000

U.S. subsidiary tax payments have increased rapidly over the past decade, from \$6 billion in 1991 to \$28 billion in 2000 (see Figure 1). Taxes paid by U.S. subsidiaries accounted for 14 percent of all corporate income taxes in 2000, up from six percent in 1991.

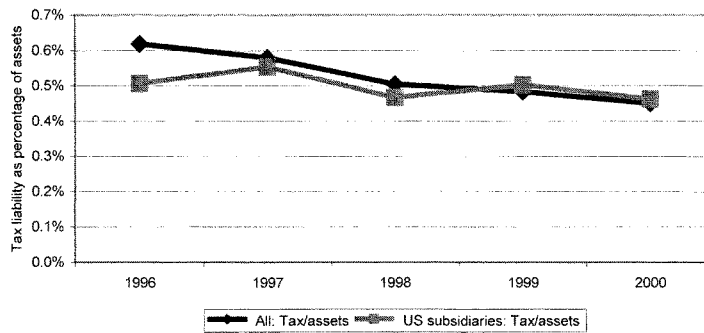
FIGURE 1: US SUBSIDIARY FEDERAL TAXES, 1991-2000



Effective tax rates of U.S. subsidiaries and all U.S. corporations are comparable

A key indicator of the extent to which earnings stripping may be a significant problem is whether U.S. subsidiary taxes are significantly lower than those of comparable U.S. companies. IRS data (see Figure 2) show that the effective tax rate of U.S. subsidiaries (measured as a percent of assets) is comparable to that of all U.S. corporations.⁸

FIGURE 2: COMPARISON OF EFFECTIVE TAX RATES
ON TOTAL ASSETS, 1996-2000



⁸ S Corporations are excluded from these data; however, it is not possible to exclude mutual funds (RICs) and Real Estate Investment Trusts (REITs).

U.S. subsidiary long-term debt has declined as a share of assets and is similar to that of all taxable corporations

Over the most recent five years, the long-term debt of U.S. subsidiaries generally has declined as a percent of total assets, from 16.2 to 14.7 percent (see Figure 3). These same U.S. subsidiary data may be compared with the long-term debt of all taxable U.S. corporations. While U.S. subsidiary debt is a somewhat higher share of assets, recent trends indicate that this gap has narrowed significantly, from three percentage points to one percentage point (see Figure 4).

FIGURE 3: US SUBSIDIARIES LONG-TERM DEBT AS A PERCENTAGE OF TOTAL ASSETS, 1996-2000

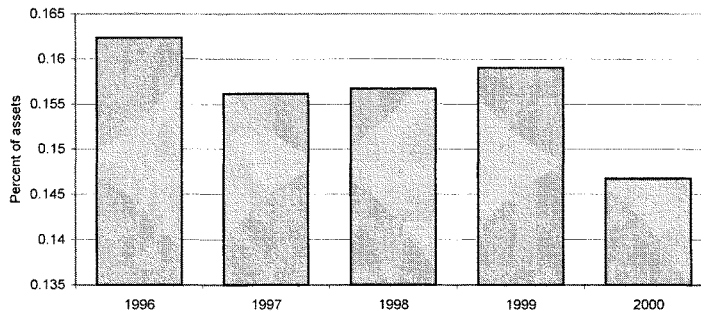
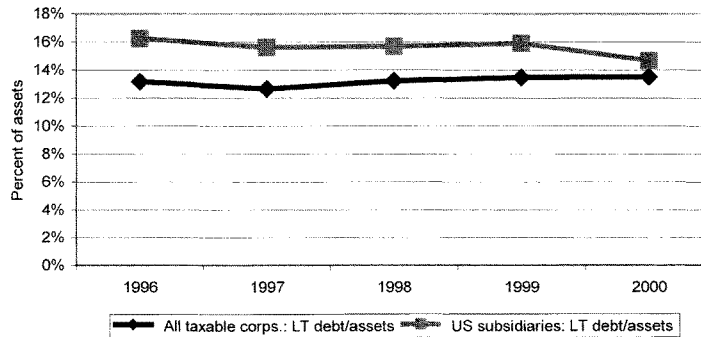
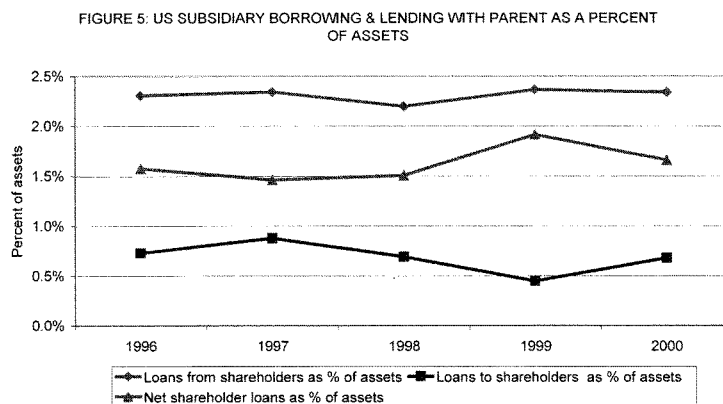


FIGURE 4: LONG-TERM DEBT AS A PERCENTAGE OF ASSETS



U.S. subsidiaries' loans from shareholders are a small and stable fraction of company financing

U.S. subsidiaries' loans from shareholders were only 2.3 percent of assets in 2000 (see Figure 5). U.S. subsidiaries also lend money to shareholders and these loans equal 0.5 percent of total assets. On net, loans from shareholders are a very small share of total assets, just 1.7 percent.⁹ Over the past five years, these relationships have been stable and do not indicate any significant increase in net shareholder borrowings.



Three-quarters of U.S. subsidiary related party interest paid to OECD residents

Over 75 percent of related party interest was paid to recipients taxable in OECD countries. In addition to the United Kingdom, the top 10 recipient countries of related party interest were: the

⁹ Amounts reported on the Form 1120 corporate tax return do not capture all related party debt and miss some loans with affiliates that are not direct shareholders. Data on loans between affiliates are captured on Form 5472, but this information is not reported with the same timeliness, frequency, and completeness as most corporate tax return data. The most recent data are from 1998 and show net related party debt of 5.1 percent of assets. This figure, however, is based on the 610 largest returns, which account for about 1 percent of all U.S. subsidiary returns with about three-quarters of U.S. subsidiary assets. These data can be further separated into broad industry categories. For example, Form 5472 data show that 76 affiliates in the finance, insurance, and real estate sector account for 38 percent of reported assets, and 25 percent of the borrowing from, and 47 percent of lending to affiliates. This sector has gross borrowing from affiliates equal to 4.6 percent of assets. The remaining 534 affiliates have net related party borrowing equal to 7.0 percent of assets and gross borrowing of 8.6 percent. Overall, net related party borrowing was a smaller share of assets than in 1996 – the data previously published by IRS.

Netherlands, France, Canada, Switzerland, Japan, Germany, South Korea, Sweden, and Belgium. As a general matter, these countries have comprehensive income tax systems that include foreign source interest income.¹⁰ Surprisingly, U.S. withholding tax applies to non-portfolio interest paid to residents of four of these countries (Belgium, Canada, Japan, and Korea).

D. Conclusions

Recent IRS data on U.S. subsidiaries' tax payments, effective tax rates, debt levels, interest income and expense, and loans to and from shareholders show they are very similar to those of all U.S. taxable corporations.

¹⁰ While a few of these countries have (or had) preferential finance company regimes, OECD countries must remove such regimes pursuant to the recommendations on harmful tax practices adopted by the Committee on Fiscal Affairs. EU member countries also are subject to the restrictions on preferential tax regimes imposed by the European Code of Conduct.

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ALEXANDER SPITZER
SENIOR VICE PRESIDENT - TAXES
NESTLÉ HOLDINGS, INC.

July 22, 2003

Mr. Brad Cannon
Committee on Finance
219 Dirksen Senate Office Building
Washington, DC 20510

RE: July 8, 2003 – A. Spitzer Testimony – Senate Committee on Finance

Dear Mr. Cannon:

In response to the questions from Senator Hatch forwarded to me by Chairman Grassley on July 10, 2003, please find attached my responses. Please thank the Chairman again for the opportunity to testify.

With best regards,

Alexander Spitzer

AS:sp
03as36
Attachment

FOLLOW-UP QUESTIONS**Senate Finance Committee Hearing
"An Examination of U.S. Tax Policy and Its Effect on the Domestic and
International Competitiveness of U.S.- Based Operations"****Question #1**

If Congress were to pass either the Administration's proposal or the proposal included in H.R. 5095, how would that impact your company's future investment plans in this country?

Answer #1

Provisions included in H.R. 5095, "The American Competitiveness Act," and those contained in the Administration's Fiscal Year 2004 budget, would substantially increase the cost of doing business in the United States for Nestlé relative to U.S.-based businesses. This would chill Nestlé's continued investment, as well as other foreign investment, in this country – potentially causing a negative impact on employment and payroll.

Section 201 of H.R. 5095 and the Administration's budget proposal would amount to a significant tax increase for U.S. subsidiaries of foreign companies. These tax changes would exacerbate an already arbitrary and discriminatory law (IRC Sec. 163 (j)). Section 201 would further tighten these rules and unreasonably disallow deductions for legitimate arm's length interest payments by U.S. subsidiaries of foreign-based companies. As such, U.S. subsidiaries would be treated differently from – and less advantageously than – their U.S.-based counterparts. Section 201 would deter expansion of existing operations and future new investment in the United States – consequences that will be felt in nearly every state and industry across the country.

As noted in my testimony, Nestlé in the United States only borrows to invest in U.S. plants and businesses (e.g., our Springville, Utah Stouffer Lean Cuisine Plant with 1600 employees and a \$50 million annual payroll). Our jurisdictional borrowings follow the assets for which they were incurred. This is a matter of company policy to avoid foreign exchange risk and political instability (not relevant to the U.S.) as well as common sense. For example, for a U.S.-headquartered company, it would seem inappropriate to borrow in the United States (and obtain a U.S. tax deduction from interest expense) for the purpose of building a plant in Japan. Debt should follow income producing assets.

For Nestlé USA, we often borrow on an arm's length basis directly from our parent corporation or from third parties with a parent company guarantee. Nestlé USA is perfectly qualified to borrow without a guarantee from third parties, however, borrowing with a parent guarantee allows Nestlé to borrow on better terms and rates. If §163(j) is modified in a manner that would further limit Nestlé's interest deductions with regard to its legitimate debt, this would cause Nestlé to borrow from third parties without a

guarantee at a substantial cost, including a higher rate of interest - ultimately limiting Nestlé's ability to continue to invest in the United States and ironically, causing our tax payment to go **down** (as a result of higher deductible interest).

The major changes as proposed in Section 201 of H.R. 5095 and the Administration's budget proposal have never been justified by any data showing a broad, significant problem that needs to be addressed as a policy matter. A review of the latest IRS statistics show that U.S. subsidiaries' loans from parent and affiliate companies represent only seven percent of their total liabilities. Since "earnings stripping" can only happen in the context of a related party loan, the scope of debt that could be of even theoretical concern is small. In fact, the most recent data show that U.S. subsidiaries' total interest deductions (\$128.9 billion) were less than their total taxable interest receipts (\$129.0 billion).

I would like to include, for the record, a "White Paper on Related Party Interest Expense" prepared by the Organization for International Investment (OFII) that contains detailed information and analysis on this topic, in particular, the Administration's budget proposal on earnings stripping. You can find this document at http://www.ofii.org/OFII_White_Paper.pdf.

As I mention in my written testimony, Section 201 of H.R. 5095 and the proposal in the Administration's budget were initiated in response to the debate on corporate inversion transactions. However, as I explain above, these proposals would significantly further restrict **all** U.S. subsidiaries' ability to deduct interest paid to foreign related parties – not just inverted companies. Any legislation to further restrict the deductibility of interest expense should be limited to identified abusive practices, consistent with the understanding of the intent of this Committee and the Senate to limit any further changes to the earnings stripping rules to only certain inverted companies.

Question #2

Can you tell us a little more about how the IRS's Advance Pricing Agreement program makes your company's life easier? You also mentioned there are other impediments in the tax system that discriminates against U.S. subsidiaries of foreign-based companies. Can you elaborate on these?

Answer #2

Advance Pricing Agreement Program

The Advance Pricing Agreement ("APA") Program provides an alternative dispute resolution for transfer pricing issues. Transfer pricing controversies, by their nature, are very factually intensive and quite expensive to try before a court. The APA Program allows the taxpayer and the IRS to avoid the high costs of litigation, provides certainty to the parties for multiple year periods and allows the IRS and the taxpayer to achieve greater currency on audits.

Nestlé and the IRS negotiated an APA which allowed the parties to avoid the high costs of litigation, provided certainty and allowed the parties to avoid audit delays. The APA process resolved an issue that had previously been litigated by the parties three times with great expense in terms of attorney fees, expert witnesses and management downtime. Nestlé was pleased to have been afforded the opportunity to resolve this dispute in the lower cost, highly efficient APA Program.

In addition to the APA program, timely and low cost resolution of issues can be accomplished through a **mandatory** arbitration process between governments (most likely our treaty partners). This would provide timely resolution of issues as well as avoid potential double taxation and high costs to all parties. The current competent authority program does not go far enough, as the governments are not compelled to ultimately resolve issues leaving taxpayers with the potential for double taxation. A mandatory arbitration process would properly remove the taxpayer as a stakeholder in issues that are really between governments.

These types of issue resolution processes, which provide timeliness, certainty and low costs, generate a very favorable investment climate.

Impediments in the Tax System that Discriminate Against U.S. Subsidiaries

Overall, the U.S. Tax Code treats U.S. subsidiaries of foreign companies in the same manner as all other U.S. corporations. I discuss some of the exceptions in my written testimony. While not a problem in the Code, IRS field agents sometimes take unreasonable – and wildly different – positions on certain issues based on whether a taxpayer is an inbound or outbound investor (i.e., enforcement of the arm's length standard). I believe it is imperative that laws and regulations are enforced in an unbiased fashion. Verifiable procedures need to be in place to assure treatment is fair and nondiscriminatory.

The one area in the Code that is clearly discriminatory is the so-called "Earnings Stripping" rules embodied in Section 163(j). The discriminatory nature of these rules would be made significantly worse by the legislative proposals contained in H.R. 5095 and the Administration's budget proposal, as discussed above.

IRC Section 163(j) limits deductions for "disqualified interest" paid by companies – typically U.S. subsidiaries of foreign parent corporations – that have (a) debt-to-equity ratios exceeding 1.5 to 1, and (b) net interest expense exceeding 50% of adjusted taxable income ("ATI"). Section 163(j) covers two types of disqualified interest:

Related Party Debt: Current law covers interest paid to a related party, to the extent no U.S. income or withholding tax is paid by the recipient ("related party interest"). Related party interest is typically outbound interest paid to a related lender in a tax treaty country, if the treaty reduces the U.S. withholding tax (otherwise 30%) to a lower rate (typically 10% or less). Related party interest

paid to non-treaty tax havens is generally not subject to disallowance, because the full 30% U.S. withholding tax is imposed.

Unrelated Party Debt: The restrictions in current law cover interest paid to an unrelated party, if the debt is guaranteed by a foreign related party. That means if a U.S. subsidiary were to borrow money from a U.S. bank and used a parent company guarantee to lower the interest rate, current law would treat this debt as if it were a loan directly from the parent company. Ironically, without the guarantee, the interest rate would be higher; the U.S. subsidiary would be able to deduct the higher interest, ultimately lowering its taxable income.

Borrowing from related parties is a legitimate part of the normal course of business. Section 163(j) increases the costs of financing for U.S. subsidiaries compared to all other U.S. corporations. Since U.S. subsidiaries often incur such debt to expand a facility, create a new operation or make a strategic investment in the United States, such rules work to discourage this activity.

COMMUNICATIONS



July 13, 2003

The Honorable Charles E. Grassley
Chairman
United States Senate Finance Committee

Dear Senator Grassley,

We are concerned that the Senate Finance Committee is considering recommending that section 911 of the U.S. Tax Law be eliminated.

Elimination of the foreign earned income exclusion will make U.S. companies less competitive internationally, and reduce the number of U.S. citizens working abroad, thus, putting pressure on the U.S. job market, as well as losing effective "ambassadors" for U.S. products, practices, mores and culture.

Most U.S. companies who station American employees abroad do so under a "tax protection" or "tax equalization" scheme which basically assures that the employee pays the equivalent in taxes as if he/she were living in the U.S. The idea is that the employee neither benefits nor loses, from a tax perspective, from being posted overseas. Taxable incomes are usually inflated by school fees, excess housing allowances, home leave costs, emergency leave costs, etc., and the earned income exclusion helps to offset the effect of an inflated taxable income.

In summary, it is important to understand that the foreign earned income exclusion is not a windfall to Americans working abroad. It helps to even out the tax disparity between Americans working abroad and other nationals working abroad.... most of whom are not taxed on foreign earned income. If the exclusion is eliminated, U.S. companies will have no other choice than to replace more American citizens with other nationalities. They need every edge to remain competitive in an increasingly competitive global economy.

Respectfully,

Dan McCarthy
Executive Vice President, The American Chamber of Commerce in Egypt
Chairman & Managing Director, General Motors Egypt

CC: Senate Finance Committee Members
Attachment: List of AmCham Member U.S. companies



July 8, 2003

Senator Charles E. Grassley
Chairman
Senate Finance Committee
Washington D.C.

RE: American Chamber of Commerce in Japan (ACCJ) views concerning an unscheduled hearing on the effects of U.S. tax policy on U.S. international competitiveness.

Dear Senator Grassley:

We understand that the Senate Finance Committee may hold a hearing on whether to repeal Internal Revenue Code Section 911 that allows U.S. citizens living and working abroad to exclude up to \$80,000 in foreign earnings from gross income. As we have previously written to you, I will lead a small delegation to Washington next week and would be pleased to discuss this and other subjects with you in person, or to testify if the hearing is held during our visit July 15-17.

The American Chamber of Commerce in Japan, representing over 3,200 members and 634 American companies trading with and investing in the second largest economy in the world, strongly recommends against this proposal repealing Section 911. We realize that the intention in eliminating Section 911 would be to raise revenues to offset tax cuts elsewhere. We believe, however, that for the following reasons it would fall short of achieving its stated objectives, and would instead have a serious negative impact on U.S. competitiveness and influence.

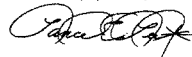
- It would further damage the cost competitiveness of American products. No other major country taxes the foreign earned income of its citizens working abroad. Since few people would accept foreign assignments at lower income, especially in a country like Japan that has a much higher cost of living than the United States, the cost to U.S. firms of hiring U.S. citizens for overseas jobs would rise. Moreover, Americans working abroad would pay much higher taxes than U.S. workers with the same base pay. This higher tax burden upon overseas Americans would not pass a "fair and reasonable" test.
- U.S. firms unwilling or unable to bear the additional cost would hire local or third-country nationals. While the skills of these individuals

may equal those of their American counterparts, over the long run it will seriously erode the ability of the United States to develop and retain American managers with the skills to operate in increasingly globalized markets.

- It is well established that exports increase as investment expands, and it is also true that U.S. citizens expatriate Americans play a vital role in generating these U.S. exports, thereby creating U.S.-based jobs and additional tax revenues.
- Many smaller businesses will be forced to exit the international market entirely, thereby further eroding our presence and influence. This would undo the efforts by the federal and state governments to increase small business participation in international trade and investment.
- Many overseas taxpayers do not receive tax and other benefits enjoyed by U.S. residents such as Social Security or Medicare, or have access to tax-deferred or tax-exempt retirement plans. Even those who do, find their housing allowances, travel expenses, and subsidies provided for their children's educational fees subject to FICA withholding—on top of U.S. and foreign taxes. No amount of foreign tax credit will 'off-set' this inequity.
- Many American educators could no longer afford to remain overseas. As one English teacher wrote to us: "Most Japanese prefer to study with an American teacher because they see American English as being best suited to the global economy. Moreover, on a daily basis, I see myself as an ambassador for American values. Were the foreign source income exclusion to be eliminated, I would be forced to seriously consider returning to the United States, since it would no longer be worth my time and effort to 'carry the flag' for America and her interests overseas." America needs more, not fewer, ambassadors of good will.
- Finally, we seriously question whether the projected revenue enhancements projected by the provision's proponents have taken into account the inevitable reduction in the number of Americans working overseas.

In short, Section 911 is in the best interests of the United States and should be retained.

Sincerely yours,



Lance E. Lee, President
American Chamber of Commerce in Japan



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July 8, 2003

**The Honorable Charles Grassley
Chairman, Committee on Finance
United States Senate
219 Dirksen Senate Office Building
Washington, DC 20510-6200
USA**

Dear Senator Grassley:

On behalf of the membership of the American Chamber of Commerce, which includes U.S. companies and U.S. citizens working in Kazakhstan and throughout Central Asia, we wish to request that you support the foreign earned income exclusion (IRC section 911) and oppose any attempts to weaken or eliminate that exclusion as part of any future legislation. As you are aware, IRC Section 911 provides a foreign earned income exclusion of up to \$80,000 in foreign earnings from gross income annually to U.S. citizens working overseas, which allows them to compete effectively against comparably qualified non-U.S. citizens. While much of the exclusion is often used up by compensation that is not really income to the employee, Section 911 does help significantly to increase both jobs for Americans abroad and business for the companies employing them.

The United States is one of very few countries levying income taxes based on nationality, not residency, which subjects U.S. citizens working abroad to double taxation. At a time when U.S. companies are increasing amounts of business in the global economy, U.S. Government tax policies are making it very difficult for Americans to work overseas. Americans abroad must pay U.S. income tax on income, benefits, allowances, and overseas adjustments. By comparison, no other major industrial country in the world taxes its citizens working overseas on their foreign earned income.

This puts U.S. companies and American employees working overseas at a significant competitive disadvantage because U.S. employers must pay American workers abroad more than they would pay other nationals. Many employers cannot take on this additional burden – even if the American has better professional qualifications.

Compounding the situation, the overseas employer must also compensate for the American's income tax on many non-salary, quality-of-life items that are taxed as income including the reimbursement for cost of children's schooling, living allowances, home leave, emergency travel, and other necessary and often expensive aspects of living overseas. Thus, in many parts of the world, employers find it significantly less expensive to hire foreign nationals instead of U.S. citizens.

By their very presence overseas, U.S. citizens help to promote America's national interests. Americans who have lived and worked abroad or whose companies rely on overseas markets are well aware of the important link between U.S. exports and Americans overseas. U.S. citizens abroad are prone to *buy* American, *sell* American, *specify* American, *hire* American, and *create opportunities* for other Americans overseas.

As our Chamber members can certainly attest, expatriate Americans play a vital role in generating U.S. exports, thereby creating U.S.-based jobs and additional tax revenues. For these reasons, maintaining section 911 is very much in the U.S. national interest.

Thank you for your time and consideration.

Sincerely,

Martin Quirke
President



Written Statement for the Record
from the American Chamber of Commerce in Sweden
Box 160510
103 21 Stockholm
Sweden

For the hearing on
An Examination of U.S. Tax Policy and its Effect on Domestic and International Competitiveness of
U.S.-Based Operations

Before the
Senate Committee on Finance
on
July 8, 2003

Via: Editorial@finance-rep.senate.gov

July 18, 2003

The Honorable Charles E. Grassley
Chairman, Senate Finance Committee
135 Hart Senate Building
Washington, D.C. 20510-501

Dear Senator Grassley:

On behalf of the Board of Directors and the more than 235 members of the American Chamber of Commerce in Sweden, I write to express our appreciation of your ongoing efforts to examine the effects of U.S. tax policy on U.S. domestic and international competitiveness. We understand that your July 8 hearing on this subject focused on U.S.-based operations, while today's second hearing will focus on U.S. operations located outside the United States. As you continue consideration of this subject, and possibly move toward action on related legislation, we ask that you avoid measures that would raise taxes on U.S. businesses and American workers abroad.

Specifically, we write to express our opposition to proposals to scale back or repeal Internal Revenue Code Section 911. Section 911 allows U.S. citizens living and working abroad to exclude up to \$80,000 in foreign earnings from gross income.

At a time when global markets are increasing in importance to U.S. companies, U.S. Government tax policies impose unique burdens on Americans working overseas. Unlike their counterparts from other industrialized nations, Americans abroad must pay U.S. income tax on income, benefits, allowances,

and overseas adjustments. This puts U.S. companies and American employees working overseas at a significant competitive disadvantage because U.S. employers must pay American workers abroad more than they would pay other nationals. Many employers cannot take on this additional burden – even if the American has better professional qualifications.

To make matters worse, the overseas employer must also compensate for the American's income tax on many *non-salary*, quality-of-life items that are taxed as income: reimbursement for the cost of children's schooling, cost of living allowances, home leave, emergency travel, and other necessary and often expensive aspects of living overseas. Thus, in many parts of the world, employers find it significantly cheaper to hire foreign nationals instead of U.S. citizens.

By their very presence overseas, U.S. citizens help to promote America's national interests. Americans who have lived and worked abroad or whose companies rely on overseas markets are well aware of the important link between U.S. exports and Americans overseas. U.S. citizens abroad are prone to *buy* American, *sell* American, *specify* American, *hire* American, and *create opportunities* for other Americans overseas. Expatriate Americans play a vital role in generating U.S. exports, thereby creating U.S.-based jobs and additional tax revenues. For these reasons, section 911 is very much in the U.S. national interest.

The United States is Sweden's largest export market. The number of American companies in Sweden has almost tripled in the last decade and there are over 1000 American companies established in Sweden today. U.S. companies are Sweden's largest foreign employer with about 109,000 people today.

The confidence between Swedish and American business communities is also seen in the large investments made in recent years. Swedish/American mergers and acquisitions also show the mutual benefit, interest and belief in the business climate in both countries.

Scaling back or repeal of Section 911 clearly is contrary to the growth-oriented objectives of the recently enacted Jobs and Growth Tax Relief Reconciliation Act of 2003 (signed into law on May 28, 2003). When Congress last addressed Section 911 six years ago, it increased the exclusion amount to \$80,000, thereby recognizing the significance of the provision, in advancing the global competitive position of U.S. companies and in retaining jobs for qualified U.S. workers in important international posts. These goals are more important now than ever. For these reasons, we respectfully request that you oppose efforts to scale back or repeal Section 911.

Sincerely,

Marianne Raidna
Managing Director
American Chamber of Commerce
in Sweden

STATEMENT OF THE
BIG-TICKET LEASING COALITION
TO
THE SENATE FINANCE COMMITTEE
FOR THE RECORD OF ITS JULY 8, 2003 HEARING
ON
**U.S. TAX POLICY AND ITS EFFECT ON THE DOMESTIC AND
INTERNATIONAL COMPETITIVENESS OF U.S.-BASED
OPERATIONS**

I. INTRODUCTION

The Big-Ticket Leasing Coalition, a group of U.S. businesses operating in the global leasing marketplace, appreciates the opportunity to present this written statement to the Senate Finance Committee in conjunction with its July 8, 2003 hearing on U.S. tax policy and its effect on the domestic and international competitiveness of U.S.-based operations.

In this statement, the Big-Ticket Leasing Coalition highlights an issue of great importance to the U.S. leasing industry that arises in connection with proposed legislation to establish U.S. compliance with the World Trade Organization's ruling in the extraterritorial income ("ETI") case, a major focus of the July 8 Finance Committee hearing. Specifically, the Coalition wishes to highlight the need to include transition relief for leasing transactions entered into in reliance on ETI benefits and the predecessor foreign sales corporation ("FSC") rules. Failure to provide such relief would be wholly inequitable and economically devastating to the affected participants in U.S. leasing industry.

II. THE U.S. LEASING INDUSTRY

The leasing industry is important to the American economy. U.S. manufacturers use leasing as a means to provide financing for exports of their goods, and many have leasing subsidiaries that arrange for such financing. Many U.S. financial companies also arrange for lease financing as one of their core financial intermediation services. In addition,

many U.S. companies act as equity investors in lease transactions. Ultimately, the activities of these companies support U.S. jobs and investment.

To put the size of the leasing industry into perspective, it has been estimated that approximately 30 percent of all equipment investment is financed through leasing rather than outright acquisition. Approximately 80 percent of U.S. companies lease some or all of their equipment. The leasing industry is expected to finance this year more than \$200 billion of equipment purchases.

Leasing, through promotion of exports of U.S. equipment, helps U.S. companies compete in the global economy. Many lease transactions undertaken by U.S. lessors are cross-border leases of U.S.-manufactured equipment to foreign users. These include leases of aircraft, rolling stock, computers, mining and oil drilling equipment, turbines and generators, and many other types of equipment. Many of these cross-border leases have been structured and priced in reliance on FSC and ETI benefits.

III. NEED FOR FSC-ETI LEASE TRANSITION RELIEF

Transition rules are a matter of fundamental tax fairness and sound tax policy. When Congress in the past has enacted legislation terminating tax benefits, it has applied pre-existing changes prospectively, grandfathering past transactions undertaken in reliance on such benefits. Congress has recognized that taxpayers have a right to rely on the tax laws in effect at the time transactions are entered into, and that taxpayers would not make long-term investments encouraged by Congressionally enacted tax incentives (e.g., low-income housing credits) if they had reason to fear that Congress someday might retroactively erase the relevant tax benefits.

FSC and ETI leases are precisely the type of long-term investments that require transition relief. FSC and ETI lease contracts often run for more than 20 years and are priced taking into account the FSC and ETI benefits, a portion of which are transferred, in the form of reduced rents, to the lessee. These contracts are binding – taxpayers cannot simply reverse the transactions, exit them, or increase rental charges to compensate for the loss of anticipated tax benefits.

In recognition of these characteristics, Congress provided transition relief for FSC leases in the “FSC Repeal and Extraterritorial Income Exclusion Act of 2000,” signed into law on November 15, 2000. Specifically, the 2000 Act provided that the FSC repeal provisions would not apply to lease and other transactions involving a FSC entered into before 2002. Thus, income from rental payments received in 2002 and beyond pursuant to a FSC lease entered into prior to 2002 continue to qualify for FSC benefits.

In developing transition rules, Congress also appropriately recognized the need to respect future transactions entered into by a FSC pursuant to binding contracts then in place. Specifically, the 2000 Act provided that the FSC rules would continue to apply to transactions in the ordinary course of business after 2001 if such transactions were undertaken pursuant to a binding contract in effect on September 30, 2000, and all times

thereafter. The Act specifically noted that binding contracts included enforceable lease purchase options, renewal options, and replacement options. Thus, for example, income received by a FSC lessor on the sale of the residual interest in the leased property in 2008 would qualify for FSC benefits so long as the sale occurred pursuant to a purchase option in effect as of September 30, 2000. And of course, property covered by the FSC transition rules also would have been eligible for ETI benefits upon a subsequent re-leasing or sale of the residual interest.

Failure to provide similar grandfather relief in connection with ETI repeal would have a perversely harsh impact on U.S. lessors. Like FSC leases, ETI leases typically are structured such that tax benefits are realized immediately by the foreign lessee (e.g., foreign-owned airlines) in the form of lower rents, while the U.S. lessor (e.g., a U.S. bank) realizes its share of tax benefits only in the final years of the contract (including from re-lease or sale of the leased equipment originally eligible for FSC or ETI benefits). Absent grandfather relief, many U.S. lessors with existing long-term ETI leases would end up never realizing the first dollar of tax benefit around which these transactions were priced. On the other hand, their lessees, companies often located in the same countries that instigated the EU challenge to the FSC and ETI regimes, would continue to receive (through fixed lease rents) the full assumed tax benefit.

Some might assert that U.S. lessors never should have entered into ETI leases given the potential for European Union challenge to the ETI regime. However, it was quite reasonable for taxpayers entering into ETI leases to expect that Congress, if it were ultimately forced to reconsider the availability of ETI benefits, would take the same approach as in the 2000 legislation, where grandfather relief was provided. It also should be noted that Congress drafted the ETI provisions with the full expectation that taxpayers would enter into leasing contracts in reliance on these transactions. The 2000 Act included detailed rules outlining how the ETI provisions would apply to leasing arrangements. It would have been unimaginable to taxpayers that Congress might later penalize transactions it sought to encourage in the 2000 legislation.

If full grandfather relief is not provided, the financial impact would be devastating for U.S. lessors with long-term FSC and ETI contracts. Not only would they suffer substantial tax increases in the coming years, they would face an immediate hit to financial earnings to reflect the total future loss of the FSC and ETI benefits.

IV. RECOMMENDATIONS

As Congress considers legislation repealing the ETI regime, it must provide full and fair grandfather relief. As an initial matter, ETI repeal legislation should not disturb the FSC transition rules that were provided by Congress in the 2000 Act. In addition, Congress should provide full transition relief for leased property currently entitled to FSC or ETI benefits. In order for lessors to realize the expected benefits of the FSC and ETI regimes, the transitional grandfathering rules must cover all of the lessor's taxable income generated by the leased asset. This includes, in addition to the initial lease to the lessee, rents from renewals, replacement leases or other follow-on leases and proceeds from any

disposition, including (but not limited to) an early termination of a lease or sale to the lessee or unrelated third party.

The Big-Ticket Leasing Coalition also would take this opportunity to urge the Finance Committee not to adopt – in connection with ETI legislation or elsewhere – other tax-law changes that would impair the competitiveness of the U.S. leasing industry. Specifically, the Coalition is concerned that proposals to “clarify” the “economic substance” doctrine would penalize legitimate business transactions undertaken in the ordinary course of business. In addition, the Coalition urges the Finance Committee to reject a “service contract” depreciation proposal – approved by the Senate as part of floor consideration of economic growth legislation (H.R. 2) and dropped in conference – that would have drastically increased the costs of providing lease financing for the nation’s municipal transit systems, water treatment facilities, and other public services.

FOR MORE INFORMATION:

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**Statement of James H. Zrust,
Vice President of Tax
The Boeing Company
Submitted to the Committee on Finance
United States Senate
Hearing on
An Examination of U.S. Tax Policy and Its Effect on the Domestic and
International Competitiveness of U.S. Companies
July 8, 2003**

On behalf of the more than 160,000 employees of The Boeing Company as well as the nearly 26,000 suppliers and companies we do business with in all 50 states, I want to reiterate our views presented at your earlier hearing on the potential impact on U.S. aerospace workers and suppliers if the Extraterritorial Income Exclusion Act of 2000 ("ETI") is repealed without a suitable replacement. We applaud your tireless efforts to address, on behalf of U.S. exporters, the World Trade Organization's decision on ETI.

This Committee has long worked to ensure that our tax system does not unfairly penalize U.S. businesses, especially vis-à-vis foreign competitors. Consistent with that position, we do not believe that an appropriate response to the WTO's decision would be to simply repeal ETI. The effect of such an act would be a tax increase on American exporters. More importantly for Boeing, this could result in the potential loss or relocation of 9,600 high-paying, high tech jobs. For our suppliers, this could mean the loss of 23,000 jobs.

Last year Senator Hatch raised the issue of which states would be hardest hit by a blanket ETI repeal. From a Boeing perspective, the hardest hit states would be Washington and Kansas, followed by Texas, Oklahoma and Oregon. When you factor in the impact on

our supplier base, we would anticipate additional impact to be felt primarily in the states of Texas, California, Connecticut, Ohio, Arizona and North Carolina.

Repealing ETI without a suitable replacement would have an adverse impact on the international competitiveness on *all* domestic exporters, threatening thousands of American jobs. A recent Price Waterhouse Coopers study has tied 3.5 million jobs directly and indirectly to ETI.

A repeal of ETI without a suitable replacement would be especially devastating to the U.S. aerospace industry, an industry that employs nearly 800,000 highly skilled workers. It would likely cause companies to lose substantial portions of their export business activities and result in the elimination or transfer of these U.S.-based jobs overseas. Today ETI helps level the playing field for U.S. companies competing against foreign firms, which are often heavily subsidized by their governments and enjoy tax rebates on their exports.

Boeing supports the Job Protection Act (H.R. 1769) as a suitable replacement to ETI. This legislation was recently introduced in the House by Congressmen Crane, Rangel and Manzullo and has already garnered more than 100 cosponsors. It is a proposal that will help maintain the global competitiveness of U.S. manufacturers and bring the U.S. into compliance with World Trade Organization (WTO) rulings. The bill would repeal ETI and replace it with a corporate rate reduction for U.S. manufacturers through a permanent new deduction. The deduction would apply to *all* manufacturers, not just those that export their goods, thus it is consistent with our trade agreements. Companies that

produce 100 percent of eligible goods domestically would receive an effective 3-½ point rate reduction on their net income of U.S. production activities. Companies that produce less than 100 percent domestically would receive a rate reduction based on their amount of US production over goods produced worldwide. The legislation is roughly revenue neutral, costing the government \$126 million over 10 years.

In crafting your bill, it is critical for the committee to provide domestic tax relief for manufacturers along the lines of the Job Protection Act. Transition is very important especially for companies that have relied on this tax policy for more than thirty years when making their investment decisions. Companies that have chosen to stay in the United States and produce jobs here at home should not be penalized when ETI is repealed to permit us to meet our WTO obligations.

Members of this committee are acutely aware of the current declined state of the aviation industry, due in part to the events of September 11, 2001. For Boeing, some seventy percent of all our commercial aircraft are exported to foreign airlines. We rely heavily on a "rules-based" trading system in order to ensure that an effective global trading system is maintained and economies around the world continue to grow. The maintenance of an effective rules-based trading system is one reason why Boeing takes very seriously the need for the U.S. government to ultimately comply with the WTO's decision. The question now before this committee is *how* to shape compliance without severely impacting domestic manufacturers.

Boeing, our suppliers and our workers who assemble the aircraft take great pride in the fact that we are a "pure exporter." Rather than establish foreign subsidiaries to produce and distribute our aircraft for us, we have relied on ETI and its predecessors in making investment decisions. Those decisions have allowed us to strengthen our production capabilities and employment in the U.S. since Boeing was founded more than eighty-five years ago. Our approach has maximized the creation of high technology and higher-paying jobs *within* the United States. We are convinced that this approach is responsible for strengthening the industrial base of our country. We should hardly be punished for taking this approach.

Boeing has employees working in 46 states -- in Mesa, Bangor, Tulsa, Oak Ridge, Ft. Campbell, Minot, Salt Lake City and Philadelphia and at the Stennis and Kennedy Space Centers, Glasgow Test Facility and Malmstrom Air Force Base to name a few of our locations. Not only is Boeing the largest employer in the states of Washington and Kansas, but we are also the largest *manufacturing* employer in California and Missouri.

For decades, Boeing has made substantial investments in the training and educating of people, the development of technology, and creation of highly advanced manufacturing facilities. Using a conservative multiplier effect of 2.4, the work of Boeing today generates nearly one-half million jobs in this country, many of which are with small and medium size businesses. Our supply chain stretches throughout all 50 states of the union. For example, in the south, in states like Florida, Mississippi, Kentucky, West Virginia, Tennessee and Louisiana, almost 2,000 businesses provide goods and services to Boeing

for more than \$700 million annually. In the northeast, in just Pennsylvania, Maine and Massachusetts, our business generates more than \$800 million for more than 1,700 companies each year. In the Midwest, we have our World Headquarters and employees and suppliers spanning Illinois, Iowa, Indiana, Ohio, Michigan and Wisconsin, bringing almost five billion dollars to suppliers alone to those state economies. And in the west, in states like New Mexico, North Dakota, South Dakota, Montana, Oregon, Utah and Wyoming, Boeing works with nearly 800 companies that provide goods and services totaling \$945 million. In Arizona alone, we annually have spent more than \$1 billion with our suppliers. In short, the Boeing Team has been and, hopefully, will continue to be an important engine of economic growth and technology in the United States.

However, any repeal of the ETI Act—without a suitable replacement for the aerospace industry and other manufacturers who are not interested in exporting jobs abroad—will be particularly detrimental to the U.S. competitiveness. The loss of a tax provision that allows U.S. exporters to compete fairly with European exporters may well translate into a reduction in R&D investments, higher capital costs, and lost market share over time.

And, the effect of that will be a reduction in our workforce and supplier base. I submit to you that this is a scenario that Boeing, our suppliers, nor the American people wants to see unfold.

Mr. Chairman, we look forward to continuing our work with you and your committee to resolve these very difficult issues facing U.S. based companies who choose to retain jobs at home in the United States. We hope you will also continue to press this

Administration to execute the trade negotiating objective wisely included in the Trade Promotion Authority Act to address the inequity in the current WTO rules regarding direct and indirect tax systems.

July 21, 2003

Charles E. Grassley
Chairman
Senate Finance Committee
US Senate, Room SD-219

Dear Senator Grassley:

CORD (Christian Outreach Relief and Development) is an international PVO (private voluntary organization) which works in Vietnam to benefit impoverished highlands minority peoples.

As a US citizen, I am writing to you to ask for your support for retention of Section 911-- the exclusion from earned income affecting U.S. citizens and residents living abroad.

It is my view that the proposed change to Section 911 would be damaging to our charitable mission and that of hundreds of other U.S. based PVOs that deliver humanitarian, economic, and civil society relief and assistance in developing countries worldwide. Further, I believe that the change to Section 911 would be counterproductive when considered in light of current U.S. foreign policy objectives, some of which US PVOs are involved in helping to achieve. There are multiple reasons for this view.

First, the exclusion has long served as an incentive for U.S. citizens to join my type of organization and to be willing to serve in demanding overseas posts. Their motivations for doing so are no less laudable than those of men and women in the uniformed armed services and the exclusion has been one way of compensating them for what, in many cases, constitutes hardship duty. In fact, as current law is written, few overseas staff of PVOs face any taxation because their compensation levels are modest in comparison to positions in other sectors.

Second, it can easily be concluded that a likely necessary response on the part of many employers to such a change would have been to "gross-up" the salary for such affected positions in order to recruit, retain, and relocate qualified staff. That might not seem to be a compelling argument except for the fact that many organizations similar to mine (though not mine) are predominately funded by USAID and other U.S. Government agencies. Accordingly, increases in compensation to our staff members and the taxation thereof would have necessarily resulted in increased financial claims against grants, cooperative agreements and contracts awarded by those agencies. That would partially offset the revenue gains obtained from introducing taxation on the previously excluded income. Since many private commercial firms are engaged in contractual work for the United States government, it could be anticipated that they, too, would respond in this fashion.

Finally, I submit that the effect of the proposed change would do little to advance responsible tax policy and desired economic stimulus resulting in job creation. In reality, the additional costs of sending staff overseas would most likely mean that my organization would be able to fund fewer jobs, thereby lessening the current number of individuals hired by my agency. It is clear from data compiled by the Joint Committee on Taxation that it would simply cause burden shifting with little net economic gain.

Sincerely,

Steve Copple, Director
CORD Vietnam

(US address: 11514 E. 35th St. S., Independence, MO 64052)

Statement of Richard B. Malia
Division Vice President, Tax and International Control
Corning Incorporated
One Riverfront Plaza
Corning, NY 14831

Submitted to the United States Senate Committee on Finance for its
Hearing On Examination of U.S. Tax Policy and Its Effect on the Domestic
and International Competitiveness of U.S.- Owned Foreign Operations

July 15, 2003

Chairman Grassley, Ranking Member Baucus, and members of the Finance
Committee, thank you for the opportunity to submit this written statement
concerning the repeal and replacement of the Extraterritorial Income provision
("ETI").

Corning Incorporated is a 152-year-old U.S. multinational manufacturer of
high quality glass and related products, headquartered in Corning, New York.
Our company has a proud history of innovation, including creation of the
glass envelope for Thomas Edison's light bulb, development of the
manufacturing process for television tubes, invention of low-loss optical fiber,
and invention of catalytic converter substrates. Today, Corning makes a large
array of high tech products, including telecommunications equipment,
emission control devices, liquid crystal display technologies, semiconductor
materials, and laboratory devices for scientific research. Even as we have
become a multinational concern over the past few decades, we have been
proud to remain an American-based company with manufacturing facilities in
twelve states.

It is in this context that we offer the following comments on ETI repeal and
replacement. First, we urge the Committee to adopt legislation providing for
the longest possible transition period. A five-year transition, as has been
suggested by a number of legislators, is not an unreasonable length of time
and in fact should be the minimum duration Congress should consider. Why?
Because beginning with the creation of the Domestic International Sales
Corporation provision ("DISC") in 1971, American manufacturers accepted

the federal government's offer to create and maintain manufacturing facilities in the United States, investing untold billions of dollars in the process. To now repeal this offer on an immediate basis would unfairly penalize such companies for their good faith investment.

We believe this position is particularly justified in view of the so-called "1981 Understanding," in which the United States agreed not to challenge the territorial tax system commonly used by European nations, and in exchange – or so it was understood by U.S. officials and tax executives – the Europeans agreed not to challenge the U.S. export tax benefit. The United States went so far as to repeal the DISC in 1984 and replace it with the Foreign Sales Corporation provision ("FSC") in an effort to more closely emulate the effects of the territorial system common in European countries. And for 13 years, the FSC regime went unchallenged by the Europeans, providing U.S. companies an expectation of certainty concerning FSC compliance with international trade law. Unfortunately, in 1997 the EU decided to disregard its part of the 1981 Understanding, as well as its 13-year stamp of approval for FSC, by challenging FSC, and subsequently ETI, as illegal trade subsidies.

Significantly, the EU's action occurred even as the United States has continued for over two decades to stand by its part of the 1981 Understanding.

While this has been an honorable position for our nation to maintain, it is now incumbent upon the United States to ensure basic fairness for American multinationals operating in the global marketplace. Therefore, before ETI is repealed, the United States should address once again the basic issue of fairness for U.S. companies facing competitors operating under a territorial system. The disparate treatment of direct and indirect taxes, for example, must be evaluated and resolved in a manner that is equitable for American companies.

Finally, because of the importance of manufacturing to the U.S. economy, as ETI is phased-out it should be replaced with a non-export-based manufacturing tax incentive. According to a recent study by the National Association of Manufacturers, manufacturing growth spawns more additional economic activity and jobs than any other economic sector, with every \$1 of final demand for manufactured goods generating an additional \$0.67 in other manufactured products and \$0.76 in products and services from

nonmanufacturing sectors. Moreover, manufacturers are responsible for almost two-thirds of all private-sector research and development, totaling \$127 billion in 2002. Therefore, a non-export-based manufacturing incentive would have a very positive effect on the U.S. economy by creating and maintaining manufacturing jobs in this country and stimulating “ripple effects” for related equipment makers and service providers.

Thank you for holding this important hearing and your careful examination of the complex issues involved. We appreciate the opportunity to provide you with our thoughts and look forward to working with the Committee to resolve the matter in a fashion that ensures basic fairness for American companies.

Equipment Leasing Association
4301 N. Fairfax Drive, Suite 550
Arlington, VA 22203

July 22, 2003

**STATEMENT OF THE EQUIPMENT LEASING
ASSOCIATION**

TO

**THE COMMITTEE ON FINANCE
U.S. SENATE**

**FOR THE RECORD OF ITS JULY 8, 2003 HEARING ON THE
EXAMINATION OF U.S. TAX POLICY AND ITS EFFECT ON THE
DOMESTIC AND INTERNATIONAL COMPETITIVENESS OF U.S.-
BASED OPERATIONS**

INTRODUCTION

The Equipment Leasing Association (ELA) is submitting this statement for the record to express our concerns regarding legislative proposals being considered by Congress with regard to U.S. tax policy and its effect on the domestic and international competitiveness of U.S.-based operations. Our primary concern is Congress' response to the WTO's ruling in January 2002 on the "FSC Repeal and Extraterritorial Income Exclusion Act of 2000." More specifically, in response to the WTO's ruling, Congress is considering repealing the export tax incentive known as the ETI regime, without transition relief for multi-year leasing contracts that utilized ETI or the FSC incentives which preceded ETI. ELA believes that this would be the wrong course of action for Congress to take and would be contrary to U.S. tax policy. Further, in order to enhance the global competitiveness of U.S. leasing companies, ELA urges Congress to repeal the "Pickle" asset depreciation Rule.

ELA has over 800 member companies throughout the United States who provide lease financing for all types of businesses in all types of markets. Large ticket leasing includes the financing of transportation equipment such as aircraft, rail cars and vessels as well as facilities such as power plants and paper mills. Middle market lessors finance high-tech equipment such as MRI (magnetic resonance imaging) and CT (computed tomography) systems. Lessors in the small ticket arena provide financing for equipment essential to virtually all businesses such as phone systems, pagers, copiers, scanners, and fax machines. Approximately 80% of all businesses in the U.S. lease some or all of their equipment and it is anticipated that the industry will provide financing in excess of \$200 billion this year alone for the acquisition of equipment.

WHAT IS A FSC/ETI LEASE?

Since the late 1980's, U.S. financial institutions have entered into multi-year leases of U.S.-manufactured export property, including aircraft, rolling stock and other equipment in reliance on specific tax incentives provided for in the FSC/ETI provisions. The economics and terms and conditions of these lease transactions reflected the FSC/ETI tax benefits Congress enacted specifically to induce investors to enter into such transactions. Whether structured using the FSC regime or the ETI regime, these leases afforded the (usually) foreign lessee with rentals which factored in FSC/ETI tax benefits. Examples include long-term leases of U.S. manufactured aircraft to foreign airlines and, for use on international routes, major U.S. airlines, and leases of locomotives manufactured in the United States to Canadian railroads.

In a FSC/ETI lease much of the economic value of the FSC/ETI benefits is passed on to the lessee in the form of lower, fixed rents throughout the term of the lease. When lessors calculated the pricing of FSC/ETI leases, they did so relying on statutes which provided for the partial exclusion from income future rents and sales proceeds so long as certain rules were met. Leases are executory contracts that continue for a period of years and under the FSC/ETI provisions, U.S. lessors do not realize the majority of their FSC/ETI tax benefits until late in the lease term – where taxable income is greatest – with the largest potential benefit being realized upon a qualifying disposition of the asset at the end of the term. Consequently, repeal of FSC/ETI will result in a loss of expected tax benefit where a cash benefit has already been passed through to the foreign lessee. This result will also trigger a loss for financial reporting purposes, as GAAP rules require lessors to record much of the income early in the lease term, in anticipation of earning an overall return on the transaction. Accounting income recorded to-date attributable to the FSC/ETI benefit would have to be reversed if there was a “total repeal” (without transitional relief), with the U.S. lessor earning a below-market return and taking a significant loss for financial reporting purposes. The foreign lessee would retain the financial benefit since it is not responsible under the lease agreement for a change in U.S. tax law.

The U.S. leasing industry understands Congress' desire to comply with the WTO ruling. However, we believe that that it would be inequitable to U.S. taxpayers, and contrary to U.S tax policy to affect such a repeal without providing adequate grandfathering for existing long term lease transactions.

WHY ARE FSC/ETI LEASING TRANSITIONAL RULES IMPORTANT?

- Failure to preserve transition rules for FSC/ETI leases of U.S. export property would have a material adverse economic impact on the U.S. companies that engaged in FSC/ETI leases. In setting the economics of rents and other payments to be made by the lessees of the property, FCS lessors assumed for both tax and accounting purposes that U.S. tax benefits under the FSC and, after September 30, 2000, ETI regimes would be available for the duration of their leases and related transactions.

- The FSC/ETI regimes were intended to enable and have enabled U.S. lessors to offer terms and economics competitive with foreign-based lessors. However, the economic risk of a change in U.S. tax law is typically borne by the U.S. lessor, not the lessee. As a result, FSC/ETI leases do not have “opt-out” clauses or permit any changes to the leasing terms if FSC/ETI laws are repealed. Thus, U.S. lessors are the only ones that would suffer the adverse economic consequences while lessees would continue to realize the economic benefits of the original FSC and ETI tax advantages for the entire term of the multi-year lease.
- As in all other long-term leases, the FSC/ETI lessor determines the overall return on its investment by calculating the total after-tax cash flows generated by the lease. In accordance with GAAP rules (FAS 13), this total after-tax income is allocated for accounting purposes in proportion to the lessor’s outstanding investment over time at a constant rate of return. Therefore, for financial accounting purposes, income from the lease is at its greatest in the early years, when the FSC/ETI lessor’s outstanding investment is the largest.
- As a result, while FSC/ETI lessors are still waiting to realize the majority of their FSC/ETI tax benefits, GAAP accounting has required much of the income associated with these benefits to be recorded in the early years of the leases. Thus, total repeal without transitional rules for existing transactions would require a reversal of that portion of income recorded to-date attributable to the future FSC/ETI tax benefits. That is, income would have to be restated and reduced to reflect the lost FSC/ETI benefits and FSC/ETI lessors would report a significant loss for financial accounting purposes.
- As the FSC/ETI tax incentives were reflected in the original pricing of the lease at closing, the continuation of FSC/ETI benefits will not provide U.S. lessors with any ongoing or future competitive advantage as the lessor will only realize current market rents and sale proceeds at the end of the initial lease in order to ultimately realize its originally anticipated market return. Therefore, the WTO should not be concerned about the grandfathering of existing leases.
- Sales and re-leases of assets subject to FSC/ETI leases could not be contractually committed to at the commencement of the lease. Consequently, a transitional rule using traditional “binding contract” language would not cover sales and re-leases of assets subject to a valid FSC/ETI lease that could have been entitled to FSC/ETI benefits had the regime remained in effect. Accordingly, sales and re-leases of assets subject to a valid FSC/ETI lease should be grandfathered to the same extent the benefit would have been available if the regime had not been repealed.
- Congress has historically provided adequate grandfathering for multi-year contracts entered into on reliance on specific statutory provisions. Congressional action which grandfathered multi-year FSC leasing contracts as part of the ETI legislation enacted in 2000 provided lessors with further comfort that this long-standing practice would continue.

- Repeal of the FSC transition rules for financing transactions that were booked years ago and are scheduled to continue for years to come, and failure to grandfather ETI leasing transactions, would be inequitable and contrary to U.S. tax policy.

In order for FSC lessors to realize the expected benefits of the FSC and ETI regimes, the transitional rules must cover all of the FSC lessors' taxable income generated by the leased asset that could have qualified under FSC/ETI. This includes, or may include, in addition to the initial lease to the lessee, rents from renewals, replacement leases or other follow-on leases and proceeds from any disposition, including (but not limited to) an early termination of a lease or sale to the lessee or unrelated third party, and a clarification of the application of the FSC/ETI transition rules in foreclosure scenarios. The grandfathering language currently allows for a FSC lessor to benefit from an income exclusion of 15% to 30% of sales proceeds from any binding agreement in effect as of September 30, 2000. If a lender forecloses on an asset subject to a FSC lease, the lessor is subject to tax on the excess of the loan balance over the tax basis of the asset. While the income that results from foreclosure should be treated as the result of a binding agreement in place prior to September 30, 2000, clarification would be helpful.

Consistent with the historical practice of Congress, taxpayers should be able to proceed on the assumption that transactions entered into in reliance on specific statutory benefits like FSC or ETI will be provided transitional protection if those statutory benefits are later withdrawn. It is a matter of fundamental fairness and sound tax policy that investments made in reliance on statutory investment incentives should be protected against future legislative changes. A failure to provide adequate transitional protection could undermine the willingness of investors to price future tax incentives into their investment decisions, rendering such benefits less effective in inducing future investment.

The following hypothetical examples are indicative of the impact on book earnings of repeal on FSC and ETI transactions:

Impact of Non-Grandfathering Congressionally Mandated FSC/ETI Tax Benefits on Long-Live Equipment Leasing Transactions

- Indicative Examples
- Amounts per \$1 million of original equipment costs
- Equipment – Boeing-Manufactured Aircraft

Transaction Type	In-Service	Lease Expiration	Book Earnings With Grandfathering		Book Earnings Without Grandfathering		Without Grandfathering	
			Through 2002	Post-2002	Through 2002	Post-2002	Immediate Book Loss	Reduction in Future Earnings
Ownership FSC	1991	2016	142,365	47,652	73,565	10,226	68,800	37,426
Ownership FSC	2000	2023	26,433	166,658	6,225	22,917	20,208	143,742
Commission FSC	1997	2017	36,980	58,573	30,480	40,593	6,500	17,980
ETI	2001	2025	24,952	298,561	13,114	146,684	11,838	151,877

**RECONCILIATION OF COST RECOVERY FOR FOREIGN LEASED PROPERTY
(THE "PICKLE" (ASSET DEPRECIATION) RULE)**

Despite the growing focus on increasing the global competitiveness of U.S. business, the U.S. Internal Revenue Code (the Code) continues to place U.S. lessors at a competitive disadvantage through the "Pickle" lease rules (named after its Congressional sponsor). Adopted in 1984, Pickle requires that depreciation available to a U.S. taxpayer leasing property to a foreign person (not subject to U.S. federal income tax) be limited to the straight-line method over the longer of the property's class life or 125 percent of the lease term. The Pickle Rule was primarily intended by Congress to prevent "investment tax incentives", i.e. depreciation under the ACRS System and the investment tax credit (ITC) from benefiting domestic tax-exempt entities, but was also extended to foreign persons not subject to U.S. federal income tax. At the time of enactment of the Pickle rules, accelerated depreciation was generally available for property used primarily outside the United States.

Generally applicable changes to the depreciation rules enacted as part of the Tax Reform Act of 1986 restricted depreciation on foreign use of property to the straight-line method over an asset's class life. Thus, after 1986, property used predominately outside the United States by a U.S. taxpayer, whether directly or in the leasing business and without regard to the Pickle limitations, was not entitled to accelerated depreciation. Consequently, the changes in generally applicable depreciation rules enacted in 1986 rendered the Pickle rule unnecessary in order to achieve the 1984 policy objective of not passing accelerated depreciation through to foreign persons not subject to U.S. income tax. Nevertheless, the Pickle rule was not amended in 1986 or subsequently. The result of this failure is to discriminate against U.S. lessors leasing property outside the United States to foreign persons compared to other U.S. taxpayers using similar property outside the United States. For example, a U.S. manufacturer using manufacturing equipment outside the United States is entitled to straight-line depreciation over the equipment's class life, even though the benefit of that depreciation is reflected in the price of the goods sold to non-U.S. taxpayers. By contrast, a U.S. lessor of the exact same piece of equipment, if leased to a non-U.S. taxpayer, would be limited to depreciation over the longer of the equipment's class life or 125 percent of the lease term. The result of this discriminatory tax treatment has been to limit the ability of U.S. providers of asset-based capital to expand their businesses into the global marketplace.

The Pickle rule discriminates against U.S. lessors of property used outside the United States and leased to non-U.S. taxpayers as compared to all other property owned by U.S. taxpayers and used outside the United States. This rule has placed U.S. lessors at a competitive disadvantage worldwide. The tax policy rationale for this discriminatory treatment disappeared in 1986 when all foreign use property was required to be depreciated on a straight-line basis over its class life eliminating the pass through of accelerated depreciation. The FSC/ETI regimes which allowed U.S. lessors to remain competitive in world markets, at least as to U.S. manufactured property, will now be repealed leaving U.S. lessors at an even greater competitive disadvantage.

The leasing industry has a significant impact on the U.S. role in the global economy. Many U.S. manufacturers use leasing as a means to finance exports of their goods, and many have leasing subsidiaries that arrange for such financing. Many U.S. financial companies also arrange lease financing as one of their core services. The activities of these companies support U.S. jobs and investment.

In order to reduce disincentives to the export activities of the U.S. leasing companies and to help offset the negative impact on U.S. exports of the successful EU challenges to the FSC and ETI provisions of the Code, ELA urges Congress to repeal the Pickle rule. (We note that legislation to repeal the Pickle rule has previously been introduced in the House by Ways and Means Committee members, Jim McCreery (R-LA) and Bob Matsui (D-CA) [H.R. 1493 and H.R. 1492] in the last Congress.)

**Statement for submission to the Senate Finance Committee Hearings:
"An Examination of U.S. Tax Policy and its Effect on International Competitiveness"
July 8, 2003 (U.S.-Owned Foreign Operations) & July 15, 2003 (U.S.-Based Operations)**

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15 July 2003

To: Sen. Charles Grassley, Chairman, Senate Finance Committee
cc: Senate Finance Committee Members

Re: IRC Sec. 911: Don't Kill American Jobs and Job Opportunities Overseas

Dear Mr. Chairman:

In connection with tax initiatives otherwise intended to stimulate the economy and create jobs, it has been proposed within the Senate Finance Committee to increase the current tax burden on Americans living and working overseas by reducing or eliminating the foreign earned income exclusion (Internal Revenue Code Sec. 911).

My comments on that proposal are based on my experience as an American who has worked overseas for more than 15 years, first as the head of a foreign office for an American law firm and then as General Counsel to a foreign company based in Dubai, where I currently employ both a second American lawyer and an American secretary. I also served for six years as Vice President-Legal and a member of the board of directors of the American Business Council of Dubai, and for three years as the chairman of its U.S. Public Affairs Committee. Apart from professional and business activities, I have been for a number of years the chairman of the Dubai Natural History Group.

* * * * *
The reduction or elimination of the foreign earned income exclusion would be extremely short-sighted. It would achieve exactly the opposite of the intended economic goal – it would destroy, not create, American jobs and associated tax revenue. We "learned" this once before, in 1978, which led to the current Sec. 911. It would also be unfair and damaging to many working individuals in the short run and to America's political, economic and cultural interests in the long run.

The key factor in the equation, often not appreciated within the United States, is that the U.S. is virtually the only country, developed or undeveloped, that taxes its citizens on income earned from employment outside the country. Thus individual Americans must compete in the international job market against foreign candidates who do not have domestic tax obligations. It is this disparity that Sec. 911 was intended to address. The competitive disadvantage is particularly important in relatively low tax jurisdictions outside Western Europe – precisely where the world economy is growing fastest and where the opportunities for American skills are greatest.

It helps that Americans are smart, energetic and have a "can do" spirit and "Yankee ingenuity." But cost counts, too, in the international marketplace. Reduction or repeal of the foreign earned income exclusion would have the direct and immediate effect of making American workers substantially less competitive in the international job market. This would be true at all employment levels, although the effect would be greatest for, e.g., teachers, nurses, technicians and other non-executive employees.

It is no coincidence, for example, that already a disproportionate number of teaching positions at the several English-language universities in Dubai are filled by Canadians, who are routinely said to have the "look and feel" of Americans, without the cost. Canadians, unlike Americans, are not taxed on income from employment overseas. Increasingly, too, we are seeing similar positions go to Australians and New Zealanders, who likewise pay no domestic tax on foreign wages.

Many Americans currently gainfully employed overseas would be forced to return home all but immediately if Sec. 911 is reduced or repealed. Others would return over the medium term, and it would not be other Americans who are hired to replace them. The net result would be increased U.S. unemployment and a smaller total job pool for Americans.

What's more, it is not just American jobs that are at stake, but also the opportunity to expand America's role and influence in the world in the best sense, and in the best way possible – by example. The alternative is to withdraw Americans from the international marketplace and to rely on American movies, American tourists and American soldiers to disseminate America's image and values.

If anything, the United States should consider following the practice of the majority of the world by eliminating taxation of income earned from overseas employment. This would expand American job opportunities and promote increased American influence worldwide. It would also be an effective alternative to certain American trade policies that have been criticized under WTO standards.

Sincerely,

/s/

Gary R. Feulner

cc: American Business Council of Dubai and the Northern Emirates
American Business Council of the Gulf Countries

**Statement for submission to the Senate Finance Committee Hearings:
"An Examination of U.S. Tax Policy and its Effect on International Competitiveness"
July 8, 2003 (U.S.-Owned Foreign Operations) & July 15, 2003 (U.S.-Based Operations)**

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16 July 2003

To: Sen. Charles Grassley, Chairman, Senate Finance Committee
cc: Senate Finance Committee Members

Re: A Critique of the Senate Finance Committee Tax Staff Memorandum on Sec. 911

Dear Mr. Chairman:

The text of a memorandum addressed to you by the Finance Committee Tax Staff, dated May 12, 2003 and titled "Repealing Sec. 911", has reached me by virtue of my membership in the American Business Council of Dubai. It has also been indicated that amendment or repeal of Internal Revenue Code Sec. 911 may be proposed in connection with the current Committee hearings. I have commented generally (by submission dated July 15, 2003) on the undesirability of such a proposal.

It seems especially important, however, to respond directly to the above-referenced Tax Staff memorandum, which implicitly advocates repeal. Unfortunately the memorandum relies for many of its principal conclusions on factual errors about the operation of Sec. 911 that may not be evident to uncritical readers, and that disqualify it as a basis for responsible decision-making. Perhaps those errors have already been recognized and corrected in the record, but in case not, the following comments will be worthwhile.

1. The introductory paragraphs of the memorandum accurately describe the operation of the foreign tax credit.

2. The next section of the memorandum is provocatively captioned: "Section 911: A Savings for the Highly Paid." However, that characterization depends entirely on fundamental errors about how the foreign earned income exclusion, housing exclusion and housing deductions operate. These can be readily identified by reference to IRS Form 2555. In fact, the characterization is wrong and insupportable.

(a) The memorandum ignores the fact that the housing exclusion requires that all claimants must pay tax on employer-provided housing expenses up to approximately \$10,000 (the figure for 2002 is \$10,842).

(b) The memorandum implicitly treats a housing allowance as an additional cash benefit, without recognizing that the housing exclusion only applies to qualified housing expenses, i.e., amounts actually and reasonably paid by the taxpayer (or the employer) for housing. Any portion of a housing allowance that exceeds actual housing expenses would constitute cash compensation subject only to the basic \$80,000 earned income exclusion.

(c) The memorandum errs crucially (and inexplicably) in asserting that a taxpayer earning a salary less than the \$80,000 maximum earned income exclusion cannot claim the housing exclusion. In fact, the foreign earned income exclusion and the housing exclusion and deduction are essentially additive, by (evident) design. Even the memorandum's hypothetical taxpayer, earning a heavily (and unlikely) housing-skewed compensation of \$60,000 cash and \$40,000 in housing expenses, would be able to include the first \$20,000 of employer-paid housing expenses within the \$80,000 earned income exclusion and would then be able to claim a further housing exclusion and deduction of c.\$8,337, after paying tax on housing benefits of \$10,842 (like all other taxpayers claiming the housing exclusion). These calculations can be done by reference to IRS Form 2555.

(d) The memorandum reasons from its erroneous premise (the unavailability of the housing exclusion to lower paid workers) that Sec. 911 represents "a savings for the highly paid." This inflammatory conclusion would be indefensible even if the premise was correct, in view of the fact that the principal provision of Sec. 911 – the foreign earned income exclusion – is undeniably a 'progressive' measure: it protects a much higher proportion of the earnings of lower paid taxpayers. However, as explained above, the key premise is itself false. The Senate Finance Committee deserves better.

(e) The Tax Staff is on thin ice in any case in relying on the "savings for the highly paid" argument, even if it were true (which it is not). This is because, by all accounts, Sec. 911 is now under scrutiny primarily in order to salvage a tax initiative that is far more of a "savings for the highly paid" – a reduction in the tax on dividends, the benefits of which will unquestionably accrue disproportionately to the most wealthy taxpayers.

(f) The memorandum calculates, almost correctly, that a senior expatriate employee earning a \$150,000 salary and receiving \$40,000 in paid housing expenses would have a taxable income of \$70,000. Actually, his (or her) taxable income would be more nearly \$81,000 (see point 2(a) above). This is characterized as "a generous benefit." But it is important to ask: From what vantage point is that judgment made? A national of any other country occupying the same senior position overseas would not even be taxed on the first \$80,000 in his (or her) home country. So what appears to the Tax Staff as a "generous benefit" is in fact a significant competitive handicap, even for higher paid American employees (salaries at the upper middle management or senior professional level). The fact is that Sec. 911 was not conceived and should not be viewed through the prism of domestic tax "fairness." It is designed to achieve international tax competitiveness.

(g) The memorandum remarks that "the Sec. 911 exclusion is not available to government or military personnel stationed overseas." This is true, and in fact this observation follows logically from the basic rationale for the exclusion, which is to facilitate the private employment of Americans in the international marketplace by putting them on a competitive footing with nationals of other countries. No such competitive factors operate in the realm of government employment or military service. To state this observation as an 'argument' only underscores the memorandum's failure to take account of the fundamental reasons for the exclusion.

3. The last section of the memorandum, titled "Sec. 911 Subsidizes a Company's Cost of Sending Employees Overseas," is not as empirically ill-founded as the preceding one, but it continues the pattern of making assumptions and treating them as facts.

(a) There is ample room to quarrel with the memorandum's assertion that "most employers offer their overseas employees 'tax equalization' packages" but in any case this formulation ignores the growing numbers of Americans who work overseas for foreign companies or on their own, as entrepreneurs or consultants.

(b) The memorandum implicitly treats being "sent" overseas to work as if it were a penalty, like exile, and asks whether this should be subsidized by the tax code. This perspective would be amusing if it were not tragic. The point is, there are jobs out there, in the international arena, for companies large and small, American and non-American, and they add to the sum total of jobs available to Americans who want to make a living. But to be able to get those jobs, Americans have to be competitive. U.S. salary levels are already relatively high in worldwide terms. The addition of domestic tax obligations is in many cases enough to price Americans out of the market. If Sec. 911 is in any way a "subsidy" for American business, word has yet to reach the WTO – Sec. 911 does not go nearly as far as the prevailing individual income tax policies of virtually every other nation.

(c) The memorandum asserts that "whether [a] U.S. company uses U.S. products in its foreign operations . . . is a management decision wholly within the control of the U.S. employer. It is not determined by the nationality of its foreign managers; it is a business decision subject to the control of the U.S. parent." Perhaps this is true in theory, but in practice very few companies are run with such a degree of centralization. Local executives at all levels hire staff, buy cars, buy office supplies, contract for materials and services, etc., based on price, quality, service and a host of intangibles.

(d) The memorandum laments the loss of high tech jobs to India, and implicitly criticizes the export of know-how, as if America's advantage lies in keeping technology a secret. This is a red herring in a discussion of Sec. 911. By most knowledgeable accounts, one of America's principal advantages is that it is positioned to maintain itself at the forefront of technology, so that it will always have (high value) technology to export. Thus the way forward is not to build a wall around the U.S., but to promote education, R&D and entrepreneurship. Blame might better be assigned to factors such as America's failure to cultivate a culture that fills our science graduate schools with American students. Recent figures show that at many U.S. schools, more than half of all graduate students in physical sciences are foreigners. Such problems go far beyond overseas tax policy.

(e) In addition to overlooking the economic importance of the international job market in expanding job opportunities for Americans, the memorandum fails to acknowledge or consider the long-term economic, political, cultural benefits of facilitating the employment of more Americans in the international marketplace. Do we leave the global arena, and the wealth of commercial experience it brings, to others? And do we leave it to tourists, to movies and television, or to the U.S. military, to show the face of America to the world?

(f) In the memorandum, the 290,000 taxpayers who are said to claim the Sec. 911 exemption are made to sound rather like freeloaders. It is therefore salutary to remark that these are not people on welfare – they are, by definition, people

who are gainfully employed. Most of them have families and most of them will have undertaken various significant obligations in connection with overseas employment – dealing with houses, cars, schooling, insurance, etc., not to mention maintaining ties with families, friends, schools and other institutions in the U.S. Being a long way from "home" also brings added burdens and expenses in dealing with routine medical, economic, property and administrative affairs. One must question the basic fairness of legislation that would attempt to balance the budget on the backs of this relatively small group of people by the imposition of a sudden and gratuitous change of the applicable tax regime. One must also question the wisdom of a long range revenue forecast that assumes that these individuals will wish (or be able) to continue their erstwhile foreign employment in the face of an even more disadvantageous tax regime.

To summarize, the U.S. government is poorly served by the Tax Staff memorandum, which is inaccurate as to the facts and superficially reasoned, and should not be relied on a basis for public policy decision-making. The U.S. tax code is complicated, but the obligation to "get it right" is especially high if polemical conclusions are to be drawn and promoted. That standard of responsibility has not been met.

More generally, the foreign earned income exclusion should be judged by the goals which it was intended to achieve. Discussion of the foreign earned income exclusion needs to cast aside erroneous, pejorative and hypocritical arguments about tax fairness and recognize that what is at issue is the competitiveness of individual Americans – not sending American jobs overseas, but keeping the international marketplace open to American individuals by allowing them to compete there on the same terms as nationals of other countries – in short, the proverbial level playing field.

Sincerely,

/s/

Gary R. Feulner

cc: American Business Council of Dubai and the Northern Emirates
American Business Council of the Gulf Countries

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NATIONAL ASSOCIATION OF
 REAL ESTATE INVESTMENT TRUSTS®

Statement of the
 National Association of Real Estate Investment Trusts
 to the
 United States Senate Committee on Finance
 Regarding
 An Examination of U.S. Tax Policy and Its Effect on the Domestic and
 International Competitiveness of U.S.-Based Operations
 Hearing Held on July 8, 2003
 Submitted by Steven A. Wechsler
 NAREIT President and Chief Executive Officer
 1875 Eye Street, N.W., Suite 600
 Washington, D.C. 20006

◆◆◆
 NATIONAL ASSOCIATION OF REAL ESTATE INVESTMENT TRUSTS®

On behalf of the National Association of Real Estate Investment Trusts ("NAREIT"), I am submitting a statement as part of the Senate Finance Committee's hearing regarding U.S. tax policy and its effect on the domestic and international competitiveness of U.S.-based operations. The proposal NAREIT requests the Committee to consider deals with the application of the Foreign Investment in Real Property Tax Act ("FIRPTA") to the distribution by real estate investment trusts ("REITs") of capital gains dividends to foreign investors. This request is being made to remove an impediment to the investment of foreign capital in U.S. REITs.

In essence, foreign entities receiving REIT capital gains distributions are considered to have "effectively connected income" in the United States that subjects them to the requirement that they file U.S. tax returns and be subject to the branch profits tax. The result is that many foreign investors avoid REIT investments, placing the REIT industry at a competitive disadvantage in attracting foreign investment relative to other U.S. industries and to competing equity investments in companies organized outside of the United States. Correcting this situation would simplify the tax treatment of REIT dividend distributions to foreign investors and permit capital to flow to its most productive use, unimpeded by the tax laws. Addressing this competitive imbalance is especially appropriate for U.S. REITs, which are required to be U.S. corporations. See Rev. Rul. 89-130, 1989-2 C.B. 117.

NAREIT is the national trade association for REITs and publicly traded real estate companies. Members are REITs and other public businesses that own, operate and finance income-producing real estate, as well as those firms and individuals who advise, study and service these businesses.

Background. FIRPTA, found in section 897¹ requires foreign persons to pay tax on the gain from any dispositions of U.S. real property interests. The interests on which disposition recognition occurs include real estate and shares in certain corporations, as well as distributions from REITs that are capital gains distributions. The purpose of the law was to treat foreign investors the same as U.S. persons out of a concern that foreign investors had an advantage in acquiring U.S. real property interests. Under section 1445, a withholding tax is imposed when a U.S. real property interest is acquired from a foreign person.

Section 897(c)(3) recognizes the inappropriateness of erecting a barrier to non-U.S. portfolio investments, and therefore exempts from FIRPTA the sale of stock of a publicly traded corporation so long as the selling shareholder owns 5% or less of that corporation's stock. Thus, any non-U.S. shareholder of a publicly traded REIT does not have "effectively connected income" when he or she sells shares of a publicly traded REIT. That means the seller is not required to file a U.S. tax return because of such sale, just as he or she does not have to do so upon the sale of stock of any non-real estate corporation.

However, under section 897(h), any REIT distribution to a nonresident alien individual or a foreign corporation that is attributable to the sale of a U.S. real property interest is treated as a gain recognized by such non-U.S. investor from the sale of U.S. real property interests. Under section 1445(e)(1), a REIT making such capital gains distributions to a non-U.S. investor is required to deduct and withhold a tax equal to 35%.

¹ "Section" refers to the Internal Revenue Code of 1986, as amended (the "Code.")



The problem is that FIRPTA, in section 897(a)(1), treats the non-U.S. investor receiving the proceeds of a U.S. real property interest as if the taxpayer were engaged in a trade or business within the United States during the taxable year and as if such gain or loss were *effectively connected* with such trade or business. Since they are treated as engaging in a trade or business in the United States, nonresident alien individuals and foreign corporations receiving capital gains distributions from REITs are required under the regulations to file a U.S. tax return.

Although the regulations require non-U.S. investors receiving a capital gain distribution from a REIT to file a return, the withheld tax more than satisfies the foreign shareholder's U.S. tax liability so there is no revenue generating aspect to the filing. These non-U.S. investors, unlike other foreign persons subject to tax under FIRPTA, will have satisfied their U.S. income tax liability through the withholding tax. There is no additional information disclosed in the return that is of value to the Service and the filing of these returns is superfluous.

NAREIT raises this as an issue because we understand foreign investors with significant amounts of investment capital avoid REIT investments due to the nuisance of having to file U.S. tax returns on their REIT capital gains distributions. In today's global financial markets, a significant amount of capital invested in the United States is raised from foreign institutional investors, many of whom invest in this country to help meet asset diversification objectives. The funds placed in this country are in turn invested in a broad portfolio of diversified assets, a portion of which would normally include REIT investments. However, because of the requirement that non-U.S. investors receiving capital gains distributions from REITs file a U.S. tax return, we are told that money managers are typically instructed to avoid placing investments in REITs. (While REITs are required to distribute at least 90% of their net income, the portion of that distribution that is considered a capital gains distribution — which triggers the return filing requirement — is typically 5% to 10% of the total amount distributed.)

It is important to note that it is not an appropriate withholding tax that principally discourages such investment, but rather the requirement to file a U.S. return on a very minor portion of the foreign institutional investor's United States portfolio. While the penalty for failure to file a tax return under section 6651 is relatively minor from a monetary perspective, trustees of foreign funds exercising their fiduciary responsibilities do not regard non-compliance with the law, no matter how insignificant, as an acceptable option. Instead of going through the nuisance of filing a return or ignoring the return filing requirement, these foreign investors avoid REIT investments.

Compounding this filing requirement is a technical issue involving the "branch profits" tax in section 884. The branch profits tax is intended to impose tax on a non-U.S. corporation's operation of a U.S. business through a branch as if the corporation were operating through a corporate subsidiary. An exception to the branch profits tax applies to the sale of the stock of a U.S. real property interest such as REIT stock. One would expect that if the branch profits tax does not cover a sale of REIT stock, then certainly the receipt of a REIT capital gains distribution would not be covered either. Nevertheless, the Code could be read as applying the branch profits tax to REIT capital gain distributions made to non-U.S. corporations, even though such distributions are already taxed once under FIRPTA. If so, this would further discourage



foreign investment in REITs. This application would serve no policy purpose, and it clearly violates the intent of Congress to impose a single layer of tax on REIT shareholders.

Conclusion. Non-U.S. portfolio investors in publicly traded REITs should not be treated as if they are operating a U.S. business merely because they receive a REIT capital gains distribution. Section 897(h)(1), which treats REIT capital gain distributions as effectively connected to a U.S. business, should be amended to no longer apply to distributions received by foreign shareholders owning 5% or less of a publicly traded REIT, listed on a U.S. stock exchange.

No longer treating such REIT capital gains distributions as effectively connected income would have two effects. First, foreign investors owning 5% or less of a publicly traded REIT would not have to file U.S. tax returns merely because they receive REIT capital gains distributions. Second, it would clarify that the branch profits tax does not apply merely because non-U.S. portfolio investors receive capital gains distributions from publicly traded REITs. Because this change would apply only to shareholders owning no more than 5% of the stock of publicly traded REIT, it would parallel the current FIRPTA exemption rule of section 897(c)(3).

This proposed change would simplify the tax treatment of capital invested by foreign interests in REITs and thereby remove a significant barrier to such foreign investment. On behalf of the nation's REITs, and the millions of small investors they represent, thank you for your consideration of this proposal.



**FSC-BENEFITED EXPORTS AND JOBS IN 1999:
Estimates for Every Congressional District**

Prepared for

National Foreign Trade Council

July 2, 2002

National Economic Consulting **NEC**

FSC-BENEFITED EXPORTS AND JOBS IN 1999

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I. EXECUTIVE SUMMARY

Since 1971, the United States has provided tax incentives to encourage U.S. exports—first through Domestic International Sales Corporations (DISCs), then Foreign Sales Corporations (FSCs), and currently through the Extraterritorial Income (ETI) regime.

These export incentives are intended to promote high-quality job opportunities in the United States. U.S. workers at plants that export have historically earned substantially more than other domestic workers. Over the 1976-1987 period, export workers' **wages and benefits were 14.5 percent and 32.7 percent higher**, respectively, than for other domestic workers.¹

The U.S. export incentives are also intended to offset the reliance by all major U.S. trading partners on value-added taxes to finance national government expenditures. Unlike the corporate income tax, which is imposed on exports but not imports, World Trade Organization (WTO) rules allow value-added taxes to be adjusted at the border such that exports are exempt and imports are taxable.

This report finds that over **\$310 billion** of the nation's \$990 billion of exports of goods and services benefited from the FSC tax incentive in 1999 (see Table 1). These FSC-benefited exports accounted for **3.4 percent** of the nation's Gross Domestic Product (GDP) in 1999. Over one million U.S. jobs were *directly* attributable to FSC-benefited exports and another 2.5 million jobs were *indirectly* attributable to these exports as a result of intermediate goods and services used in the production and distribution processes. In all, **3.5 million U.S. jobs** were attributable to exports that benefited from FSC tax incentives in 1999, and average of 8,000 jobs per Congressional District (see Table 1).

Table 1.—FSC Benefited Exports and Jobs in the United States, 1999

FSC Exports (\$ millions)	Jobs Supported by FSC-Benefited Exports			Per Congressional District*	
	Direct	Indirect	Total	FSC exports (\$ million)	FSC-related jobs
\$314,208	1,022,000	2,458,000	3,480,000	\$721	8,000

*Includes 435 Congressional Districts and the District of Columbia.

Source: PricewaterhouseCoopers LLP estimates.

The five states with the largest dollar value of FSC-benefited exports in 1999 are, in order: California, Texas, Michigan, New York, and Washington (see Table 2). These top five states account for 44 percent of all FSC-benefited exports and 39 percent of all FSC-related jobs in 1999.

¹ A. Bernard and J. B. Jensen, *Brookings Papers on Economic Activity*, 1995, pp. 67-1112.

Table 2.—FSC-Benefited Exports Ranked by State, 1999

State	FSC-Benefited Exports		FSC-Related Jobs, Total	
	(\$ millions)	Percent of U.S.	Amount	Percent of U.S.
California	\$50,174	16%	150,000	15%
Texas	\$28,866	9%	87,000	8%
Michigan	\$22,965	7%	62,000	6%
New York	\$19,443	6%	56,000	5%
Washington	\$18,806	6%	54,000	5%
U.S., Total	\$314,208	100%	1,022,000	100%

Source: PricewaterhouseCoopers LLP estimates.

The top ten Congressional Districts for FSC-benefited exports in 1999 are listed in Table 3, below. The 1st District of Washington, which includes portions of Bellevue, Redmond and Seattle, among others, was the largest source of FSC-benefited exports, and is estimated to have had 21,000 jobs supported by FSC in 1999. The 7th District of Washington, located in King county (including North Seattle and Kirkland), was the second largest source of FSC-benefited exports in 1999. California has four Congressional Districts among the top ten ranked by FSC-benefited exports: the 13th, 14th, 15th, and 16th, which include Fremont, Hayward, Palo Alto, Sunnyvale, San Jose, Santa Clara, Los Gatos, and Santa Cruz. Washington's 9th, Michigan's 11th, Colorado's 2nd and Texas' 23rd District are also in the top ten Congressional Districts ranked by FSC-benefited exports in 1999.

Table 3.—Top 10 Congressional Districts for Total FSC-Benefited Exports, 1999

Rank	Congressional District	FSC Exports (\$ millions)	FSC-Related Jobs		
			Direct	Indirect	Total
1	Washington 1	\$5,405	14,900	6,200	21,100
2	Washington 7	\$5,317	14,600	6,300	20,900
3	California 14	\$5,194	13,500	6,100	19,600
4	Washington 9	\$5,100	14,300	5,800	20,100
5	California 13	\$4,025	10,400	6,200	16,500
6	California 15	\$3,475	9,100	6,100	15,300
7	Michigan 11	\$3,455	7,900	6,200	14,100
8	Colorado 2	\$3,319	12,200	7,300	19,400
9	Texas 23	\$3,033	11,600	5,500	17,100
10	California 16	\$2,983	7,600	6,100	13,700

Source: PricewaterhouseCoopers LLP estimates.

II. DATA AND METHODOLOGY

A. Merchandise Exports

The source of data on merchandise exports is the 1999 Exporter Location (“EL”) from the U.S. Bureau of the Census, as published by the International Trade Administration (“ITA”) of the U.S. Department of Commerce. The EL series assigns values of merchandise exports to local geographical areas based on the physical location of exporters, as determined by ZIP codes reported on U.S. export declarations.

The export data reported by the Census Bureau are limited to those merchandise goods that are directly exported by the exporter of record, as defined on shippers’ export declarations (“SED”). In some cases, locations from which firms export their products may not coincide with the locations where export goods are produced. Also, this method of identifying the location of exports does not represent the locations of firms that supply parts that go into export production.

For example, suppose Company M manufactures a computer in Texas valued at \$1,000 and ships the computer for export through a port in Louisiana. In manufacturing the computer, suppose Company M buys a hard drive for \$200 from Company X in Massachusetts. The Bureau of the Census would attribute a \$1,000 export from Texas and no export from Massachusetts or Louisiana, because the Bureau typically would not know about the existence or extent of the contribution from Company X in Massachusetts. Taking a slight variation of the example, if Company M had sold the computer to Company Q—a Louisiana wholesaler who exports the computer for \$1,100—the Bureau would count a \$1,100 export from Louisiana and no export from Texas or Massachusetts.

The export data from the Bureau of the Census modestly understate the level of exports for many states, because about 7 percent of the value of exports cannot be assigned to a location. The Massachusetts Institute of Social Economic Research (“MISER”), at the University of Massachusetts at Amherst, addresses this problem by reassigning the “unallocated” data back to the states. Using 1999 MISER data, PwC recalibrated the 1999 EL data for this study.

B. Jobs Directly Attributable to Exports

The Census Bureau does not measure export-related jobs directly. The 1997 Census of Manufactures and Census of Wholesale Trade report detailed data on shipments and jobs for each county. With the aid of commercial and propriety software, we mapped these data from counties into 3-digit ZIP code areas and calculated the job-to-shipment ratio within each 3-digit ZIP code. We estimated export-related jobs by 3-digit ZIP code from the job-to-shipment ratio and the export location data (both at a 3-digit ZIP code level).

C. Identification by Congressional District

With the aid of commercial and proprietary software, PwC mapped 3-digit ZIP code areas into the 435 Congressional Districts plus the District of Columbia. Because 3-digit ZIP codes often

lie in more than one Congressional District, we developed a set of algorithms to apportion 3-digit ZIP codes among Congressional Districts based on 1999 employment data for both 3-digit Zip code areas and Congressional Districts (from the Census Bureau).

D. FSC-Benefited Exports and FSC-Related Direct Jobs

The FSC share of total merchandise exports was calculated by state based on 1996 IRS tabulations of FSC returns (the most recent information currently available) by major product and MISER data on exports by state and industry.² The FSC share of 1999 merchandise exports and export-related jobs at the Congressional District level was determined from the statewide estimates.

FSC-benefited service exports from 1996 IRS data were allocated across the states according to each state's share of total service value-added in 1996. Using the 1996 ratio of FSC-benefited service to merchandise exports at the State level and 1999 FSC-benefited merchandise exports by Congressional District, we estimated FSC-benefited service exports at the Congressional District level. Using the state level sales-to-jobs ratio for services from the 1997 Economic Census, we calculated the number of direct jobs supported by FSC service exports for each Congressional District.

E. Indirect Jobs Attributable to FSC-Benefited Exports

Jobs directly attributable to FSC-benefited exports exclude both *upstream* jobs associated with energy, materials, and inputs required to manufacture exports and *downstream* jobs required to distribute exports. Total jobs associated with FSC-benefited exports include both direct and indirect jobs. The ratio of total jobs to direct jobs is referred to as the export job "multiplier."

A recent study by the International Trade Administration (ITA) of the U.S. Department of Commerce estimated the export job multiplier in 1997.³ The ITA study focused on the exports of manufactured goods. An earlier study by the U.S. Department of Commerce Economics and Statistics Administration (ESA) estimated the export job multiplier for both goods and services

² The major product and service categories broken out by IRS loosely mirror the 3 digit SIC codes for industry groups. In any given major group, if there is an omission of a particular industry group, this could mean that there were no returns for that industry group or there were so few that these were combined into a "miscellaneous" category under the major group (for disclosure purposes).

³ U.S. Dept of Commerce, International Trade Administration, "U.S. Jobs from Exports, A 1997 Benchmark Study of Employment Generated by Exports of Manufactured Goods", February 2001.

for 1994.⁴ In this study, indirect jobs are estimated using a weighted average of the export job multiplier for manufacturing from the ITA study and the export job multipliers for non-manufacturing sectors from the ESA study.

Indirect jobs are apportioned to Congressional Districts based on their share of total employment using Census Bureau information on employment by Congressional District from the 2000 census.

⁴ U.S. Dept of Commerce, Economics and Statistics Administration, "U.S. Jobs Supported by Goods and Services Exports, 1983-94," Research Series OMA-1-96, November 1996.

III. NATIONAL RESULTS

FSC-BENEFITED EXPORTS AND EMPLOYMENT BY STATE, 1999
SORTED ALPHABETICALLY

State	Exports (\$ mill)	Export Employment (000s)		
		Direct	Indirect	Total
1 AK	429.1	1.4	5.3	6.7
2 AL	2,413.5	11.9	36.4	48.3
3 AR	1,196.0	4.9	22.2	27.1
4 AZ	4,881.1	16.7	42.3	59.0
5 CA	50,173.6	149.7	278.9	428.6
6 CO	5,555.3	19.7	41.8	61.5
7 CT	5,444.3	15.5	31.5	47.1
8 DC	2,542.6	5.4	5.0	10.3
9 DE	2,442.8	6.5	7.1	13.7
10 FL	11,647.4	52.0	132.6	184.5
11 GA	5,402.9	16.5	72.8	89.2
12 HI	171.0	1.0	10.2	11.2
13 IA	1,612.1	6.6	28.2	34.8
14 ID	1,126.3	3.8	11.4	15.2
15 IL	15,733.4	45.3	110.5	155.9
16 IN	7,475.8	30.6	56.2	86.8
17 KS	2,650.6	9.3	24.9	34.2
18 KY	3,998.6	14.7	34.1	48.8
19 LA	2,189.6	5.9	35.1	41.0
20 MA	8,130.4	27.6	59.9	87.5
21 MD	2,211.9	9.1	49.4	58.6
22 ME	1,076.4	5.3	11.8	17.1
23 MI	22,964.8	62.3	87.9	150.1
24 MN	7,653.9	24.6	48.9	73.5
25 MO	4,020.1	12.2	50.4	62.6
26 MS	760.0	4.5	22.2	26.7
27 MT	230.5	1.2	8.1	9.2
28 NC	5,977.1	22.7	72.5	95.1
29 ND	382.9	1.5	6.0	7.5
30 NE	1,240.1	4.2	16.6	20.8
31 NH	1,119.9	4.9	12.3	17.2
32 NJ	10,472.9	27.0	74.9	101.8
33 NM	1,587.1	6.7	14.5	21.1
34 NV	775.1	4.4	17.7	22.1
35 NY	19,443.1	56.3	158.9	215.2
36 OH	13,002.5	44.9	102.4	147.2
37 OK	1,175.5	4.8	29.3	34.1
38 OR	5,645.6	16.4	30.8	47.3
39 PA	9,195.5	34.8	107.1	141.9
40 RI	478.3	2.8	9.5	12.3
41 SC	3,055.6	12.6	34.6	47.1
42 SD	608.7	3.0	7.1	10.1
43 TN	4,878.6	18.7	50.3	69.0
44 TX	28,865.6	86.9	175.0	261.9
45 UT	1,359.4	5.6	19.8	25.4
46 VA	5,332.1	17.9	64.7	82.6
47 VT	1,370.3	5.8	6.0	11.8
48 WA	18,805.7	53.9	52.9	106.8
49 WI	4,822.5	20.5	51.8	72.3
50 WV	380.6	1.8	13.9	15.7
51 WY	99.1	0.5	4.6	5.1
Totals	314,208.0	1,022.3	2,458.4	3,480.7

FSC-BENEFITED EXPORTS AND EMPLOYMENT BY STATE, 1999
SORTED BY EXPORTS

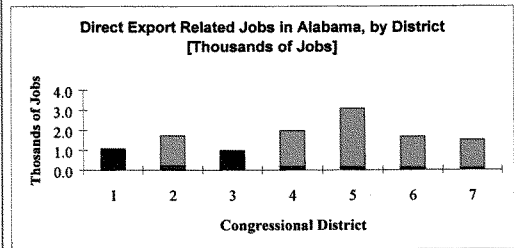
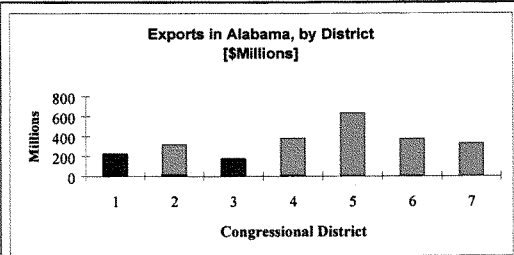
State	Exports (\$ mill)	Export Employment (000s)		
		Direct	Indirect	Total
1 CA	50,173.6	149.7	278.9	428.6
2 TX	28,865.6	86.9	175.0	261.9
3 MI	22,964.8	62.3	87.9	150.1
4 NY	19,443.1	56.3	158.9	215.2
5 WA	18,805.7	53.9	52.9	106.8
6 IL	15,733.4	45.3	110.5	155.9
7 OH	13,002.5	44.9	102.4	147.2
8 FL	11,647.4	52.0	132.6	184.5
9 NJ	10,472.9	27.0	74.9	101.8
10 PA	9,195.5	34.8	107.1	141.9
11 MA	8,130.4	27.6	59.9	87.5
12 MN	7,653.9	24.6	48.9	73.5
13 IN	7,475.8	30.6	56.2	86.8
14 NC	5,977.1	22.7	72.5	95.1
15 OR	5,645.6	16.4	30.8	47.3
16 CO	5,555.3	19.7	41.8	61.5
17 CT	5,444.3	15.5	31.5	47.1
18 GA	5,402.9	16.5	72.8	89.2
19 VA	5,332.1	17.9	64.7	82.6
20 AZ	4,881.1	16.7	42.3	59.0
21 TN	4,878.6	18.7	50.3	69.0
22 WI	4,822.5	20.5	51.8	72.3
23 MO	4,020.1	12.2	50.4	62.6
24 KY	3,998.6	14.7	34.1	48.8
25 SC	3,055.6	12.6	34.6	47.1
26 KS	2,650.6	9.3	24.9	34.2
27 DC	2,542.6	5.4	5.0	10.3
28 DE	2,442.8	6.5	7.1	13.7
29 AL	2,413.5	11.9	36.4	48.3
30 MD	2,211.9	9.1	49.4	58.6
31 LA	2,189.6	5.9	35.1	41.0
32 IA	1,612.1	6.6	28.2	34.8
33 NM	1,587.1	6.7	14.5	21.1
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36 NE	1,240.1	4.2	16.6	20.8
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42 NV	775.1	4.4	17.7	22.1
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45 RI	478.3	2.8	9.5	12.3
46 AK	429.1	1.4	5.3	6.7
47 ND	382.9	1.5	6.0	7.5
48 WV	380.6	1.8	13.9	15.7
49 MT	230.5	1.2	8.1	9.2
50 HI	171.0	1.0	10.2	11.2
51 WY	99.1	0.5	4.6	5.1
Totals	314,208.0	1,022.3	2,458.4	3,480.7

IV. STATE PROFILES

FSC-Benefited Exports and Related Jobs in Alabama, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	223	1.0	5.1
2	315	1.7	5.3
3	174	1.0	5.1
4	378	2.0	5.2
5	629	3.1	5.8
6	371	1.7	6.3
7	324	1.5	3.7
Total	2,413	11.9	36.4

Exports in \$Millions
Jobs in Thousands



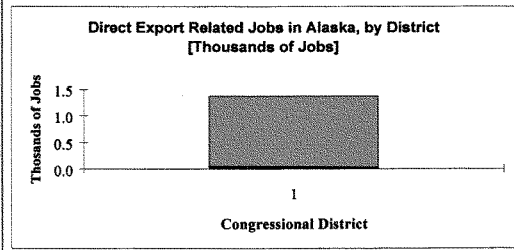
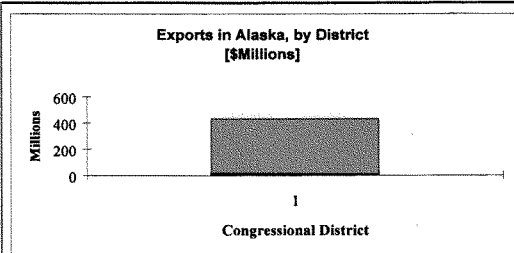
Alabama

	Exports (\$Millions)	Direct Jobs (Thousands)
Alabama Total	2,413	11.9
Cong. District, Alabama Average	345	1.7
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Alaska, 1999


District	Exports	Direct Jobs	Indirect Jobs
1	429	1.4	5.3
Total	429	1.4	5.3

Exports in \$Millions
Jobs in Thousands



Alaska

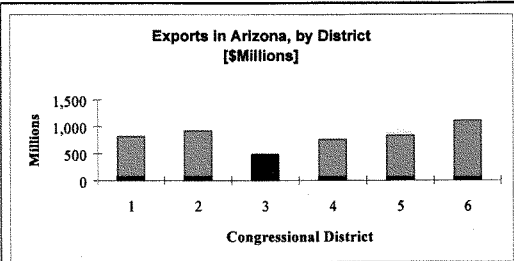
	Exports (\$Millions)	Direct Jobs (Thousands)
Alaska Total	429	1.4
Cong. District, Alaska Average	429	1.4
Cong. District, National Average	771	2.3



FSC-Benefited Exports and Related Jobs in Arizona, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	811	2.6	8.2
2	915	3.3	5.0
3	476	1.6	7.8
4	752	2.4	7.1
5	827	3.2	6.6
6	1,099	3.5	7.7
Total	4,881	16.7	42.3

Exports in \$Millions
Jobs in Thousands



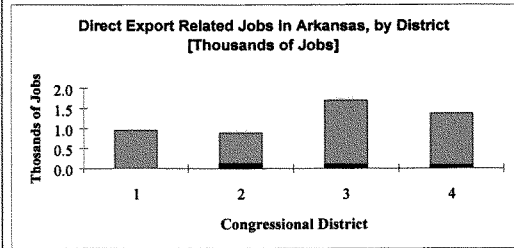
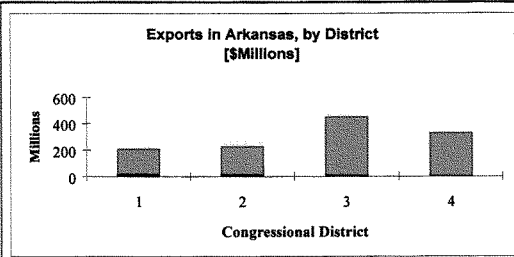
Arizona

	Exports (\$Millions)	Direct Jobs (Thousands)
Arizona Total	4,881	16.7
Cong. District, Arizona Average	814	2.8
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Arkansas, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	204	0.9	5.0
2	223	0.9	5.9
3	445	1.7	6.6
4	324	1.4	4.8
Total	1,196	4.9	22.2

Exports in \$Millions
Jobs in Thousands

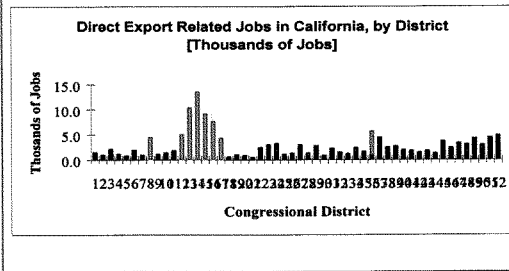
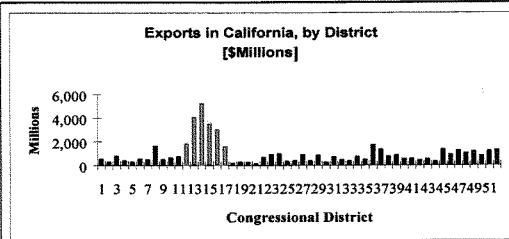


Arkansas

	Exports (\$Millions)	Direct Jobs (Thousands)
Arkansas Total	1,196	4.9
Cong. District, Arkansas Average	299	1.2
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in California, 1999
 [Exports in \$Millions, Thousands of Jobs]

District	Exports	Direct Jobs	Indirect Jobs
1	531	1.4	5.3
2	264	0.9	4.8
3	760	2.1	5.6
4	361	1.1	6.4
5	276	0.8	5.5
6	525	1.9	6.2
7	456	1.0	5.6
8	1,603	4.4	6.5
9	479	1.1	5.3
10	618	1.4	6.7
11	715	1.8	5.2
12	1,788	5.0	6.1
13	4,025	10.4	6.2
14	5,194	13.6	6.1
15	3,475	9.1	6.1
16	2,983	7.6	6.1
17	1,559	4.3	5.4
18	161	0.5	4.9
19	269	1.0	5.4
20	228	0.8	4.0
21	131	0.4	4.8
22	651	2.4	5.4
23	888	2.9	5.5
24	945	3.1	5.9
25	306	1.0	5.8
26	376	1.3	4.8
27	864	2.9	5.3
28	368	1.3	5.2
29	828	2.8	6.0
30	236	0.8	4.2
31	683	2.3	4.3
32	433	1.4	4.6
33	352	1.2	3.6
34	702	2.3	4.5
35	477	1.6	3.9
36	1,699	5.7	5.8
37	1,318	4.4	3.7
38	736	2.4	5.1
39	830	2.6	5.4
40	512	1.9	4.8
41	543	1.7	5.4
42	387	1.4	5.0
43	510	1.7	5.8
44	307	1.3	5.1
45	1,321	3.7	5.8
46	883	2.4	4.9
47	1,234	3.3	6.8
48	1,007	3.0	6.5
49	1,130	4.2	5.5
50	783	2.9	4.5
51	1,191	4.5	6.4
52	1,268	4.8	5.2
Total	50,174	149.7	278.9



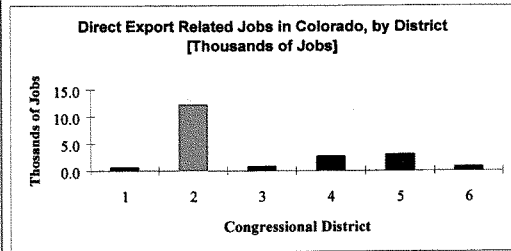
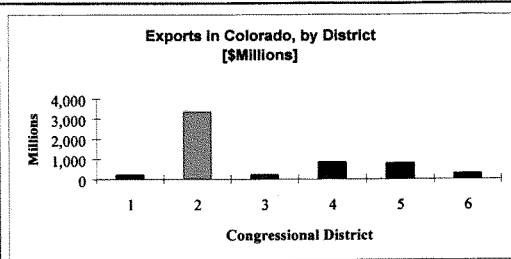
California

	Exports (\$Millions)	Direct Jobs (Thousands)
California Total	50,174	149.7
Cong. District, California Average	965	2.9
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Colorado, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	205	0.5	6.3
2	3,319	12.2	7.3
3	200	0.7	6.7
4	811	2.6	7.1
5	765	2.9	7.6
6	255	0.7	6.9
Total	5,555	19.7	41.8

Exports in \$Millions
Jobs in Thousands



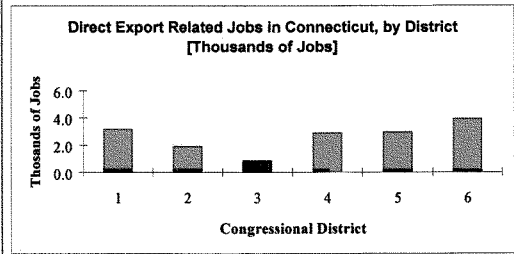
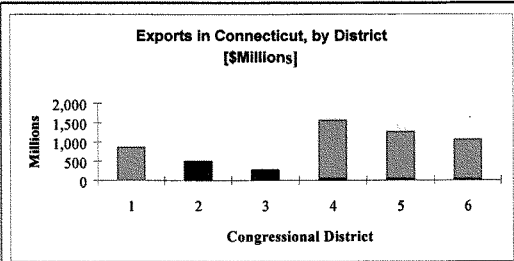
Colorado

	Exports (\$Millions)	Direct Jobs (Thousands)
Colorado Total	5,555	19.7
Cong. District, Colorado Average	926	3.3
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Connecticut, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	854	3.1	4.9
2	493	1.9	5.4
3	260	0.8	5.2
4	1,544	2.9	5.1
5	1,246	2.9	5.4
6	1,047	3.9	5.4
Total	5,444	15.5	31.5

Exports in \$Millions
Jobs in Thousands



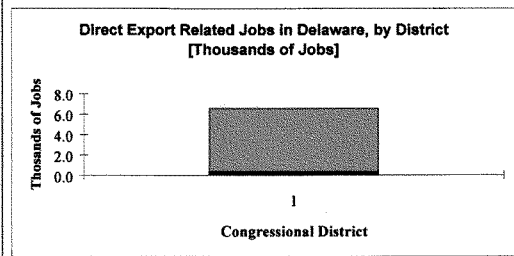
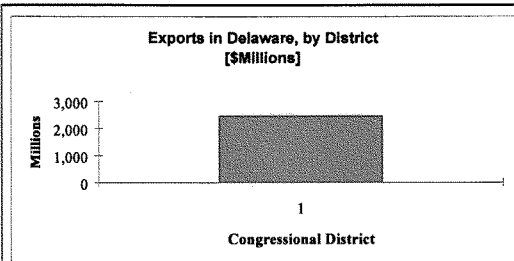
Connecticut

	Exports (\$Millions)	Direct Jobs (Thousands)
Connecticut Total	5,444	15.5
Cong. District, Connecticut Average	907	2.6
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Delaware, 1999


District	Exports	Direct Jobs	Indirect Jobs
1	2,443	6.5	7.1
Total	2,443	6.5	7.1

Exports in \$Millions
Jobs in Thousands



Delaware

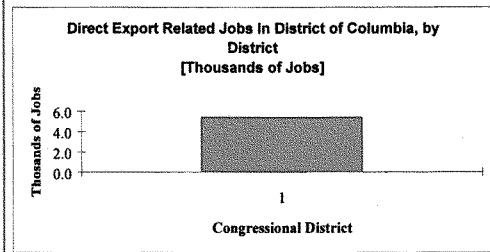
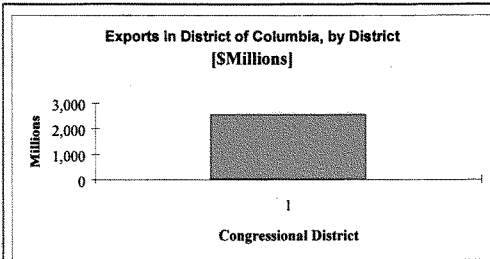
	Exports (\$Millions)	Direct Jobs (Thousands)
Delaware Total	2,443	6.5
Cong. District, Delaware Average	2,443	6.5
Cong. District, National Average	721	2.3



FSC-Benefited Exports and Related Jobs in District of Columbia, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	2,543	5.4	5.0
Total	2,543	5.4	5.0

Exports in \$Millions
Jobs in Thousands

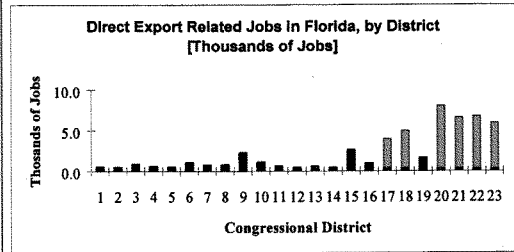
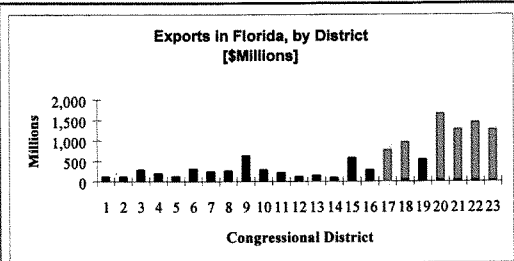


District of Columbia		
	Exports (\$Millions)	Direct Jobs (Thousands)
District of Columbia Total	2,543	5.4
Cong. District, D.C. Average	2,543	5.4
Cong. District, National Average	771	2.3

FSC-Benefited Exports and Related Jobs in Florida, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	107	0.5	5.4
2	99	0.5	5.6
3	274	0.8	4.5
4	185	0.6	6.8
5	116	0.5	5.2
6	300	1.1	5.7
7	230	0.7	6.7
8	252	0.7	7.6
9	621	2.2	6.4
10	275	1.1	5.1
11	204	0.6	5.7
12	106	0.4	5.4
13	140	0.6	5.3
14	83	0.4	6.2
15	567	2.6	5.9
16	266	0.9	6.1
17	756	3.9	3.8
18	948	4.9	4.8
19	522	1.6	6.6
20	1,647	8.0	7.2
21	1,263	6.5	6.4
22	1,434	6.7	5.6
23	1,255	5.9	4.8
Total	11,647	52.0	132.6

Exports in \$Millions
Jobs in Thousands



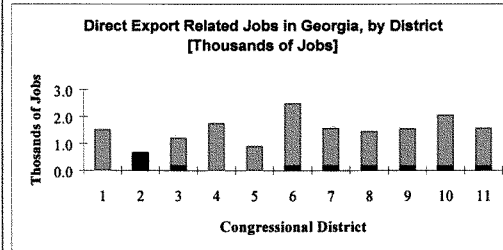
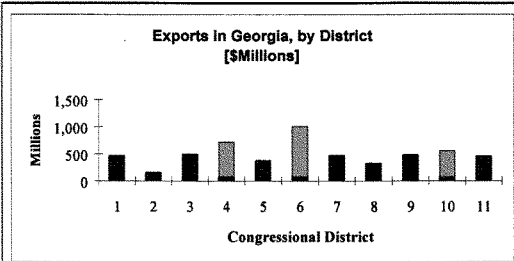
Florida

	Exports (\$Millions)	Direct Jobs (Thousands)
Florida Total	11,647	52.0
Cong. District, Florida Average	500	2.3
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Georgia, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	460	1.5	5.5
2	146	0.6	5.0
3	484	1.2	6.9
4	712	1.7	7.4
5	368	0.9	5.6
6	995	2.5	9.8
7	463	1.5	6.8
8	316	1.4	5.2
9	468	1.5	7.5
10	545	2.0	5.2
11	446	1.5	7.9
Total	5,403	16.5	72.8

Exports in \$Millions
Jobs in Thousands



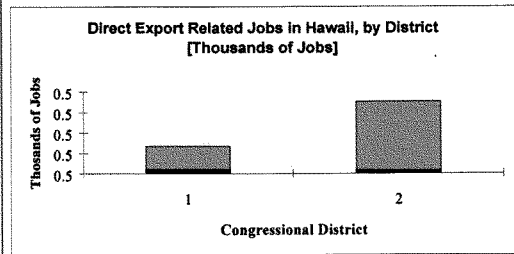
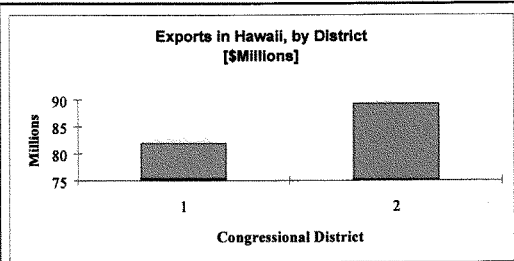
Georgia

	Exports (\$Millions)	Direct Jobs (Thousands)
Georgia Total	5,403	16.5
Cong. District, Georgia Average	491	1.5
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Hawaii, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	82	0.5	4.9
2	89	0.5	5.3
Total	171	1.0	10.2

Exports in \$Millions
Jobs in Thousands



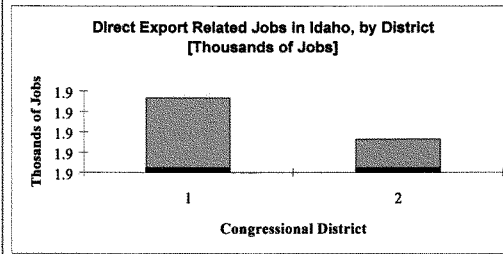
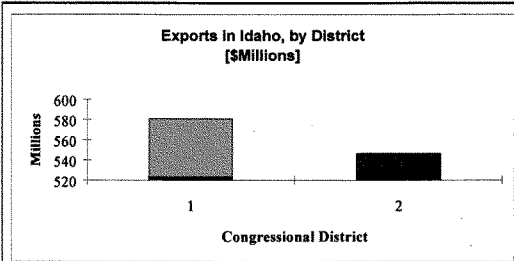
Hawaii

	Exports (\$Millions)	Direct Jobs (Thousands)
Hawaii Total	171	1.0
Cong. District, Hawaii Average	85	0.5
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Idaho, 1999


District	Exports	Direct Jobs	Indirect Jobs
1	580	1.9	6.2
2	546	1.9	5.2
Total	1,126	3.8	11.4

Exports in \$Millions
Jobs in Thousands



Idaho

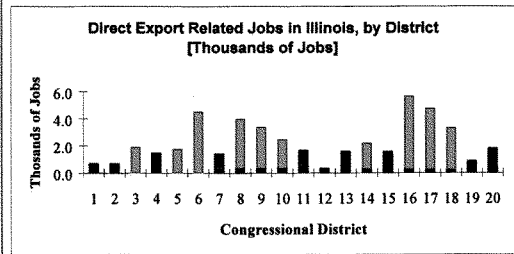
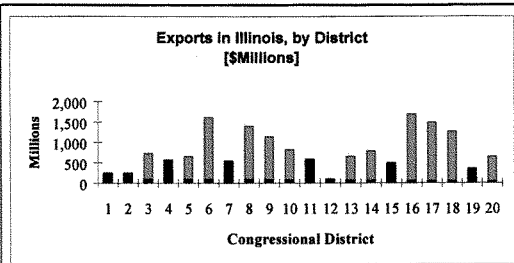
	Exports (\$Millions)	Direct Jobs (Thousands)
Idaho Total	1,126	3.8
Cong. District, Idaho Average	563	1.9
Cong. District, National Average	721	2.3



FSC-Benefited Exports and Related Jobs in Illinois, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	232	0.7	4.0
2	230	0.7	4.0
3	717	1.9	5.4
4	557	1.4	4.5
5	641	1.7	6.4
6	1,597	4.5	6.0
7	534	1.4	4.4
8	1,383	3.9	7.0
9	1,126	3.3	5.7
10	810	2.4	5.6
11	569	1.6	5.6
12	88	0.3	4.7
13	636	1.6	7.4
14	769	2.1	6.8
15	479	1.5	5.6
16	1,672	5.6	6.5
17	1,470	4.7	5.1
18	1,255	3.3	5.5
19	337	0.8	4.9
20	631	1.8	5.4
Total	15,733	45.3	110.5

Exports in \$Millions
Jobs in Thousands



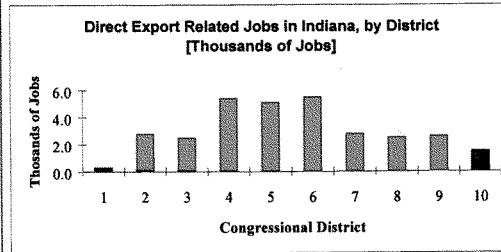
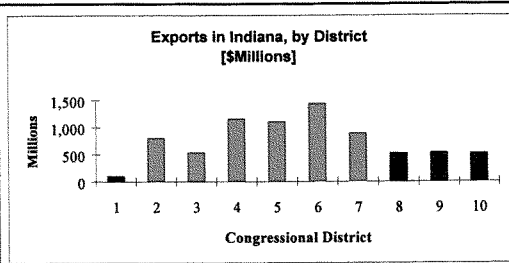
Illinois

	Exports (\$Millions)	Direct Jobs (Thousands)
Illinois Total	15,733	45.3
Cong. District, Illinois Average	787	2.3
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Indiana, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	87	0.3	4.9
2	790	2.7	5.1
3	522	2.5	5.6
4	1,143	5.4	5.9
5	1,092	5.1	5.3
6	1,425	5.5	7.3
7	876	2.8	5.9
8	511	2.5	5.4
9	519	2.6	5.7
10	511	1.5	5.1
Total	7,476	30.6	56.2

Exports in \$Millions
Jobs in Thousands



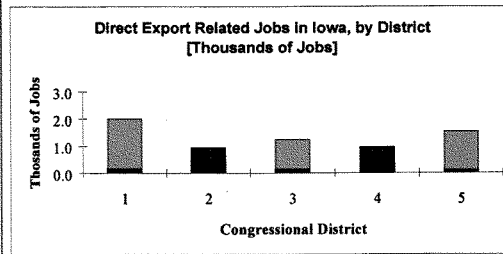
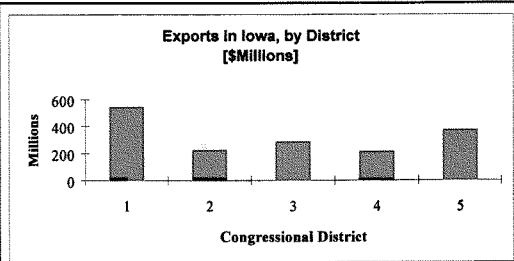
Indiana

	Exports (\$Millions)	Direct Jobs (Thousands)
Indiana Total	7,476	30.6
Cong. District, Indiana Average	748	3.1
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Iowa, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	538	2.0	6.0
2	218	0.9	5.4
3	282	1.2	5.4
4	207	0.9	6.2
5	367	1.5	5.2
Total	1,612	6.6	28.2

Exports in \$Millions
Jobs in Thousands



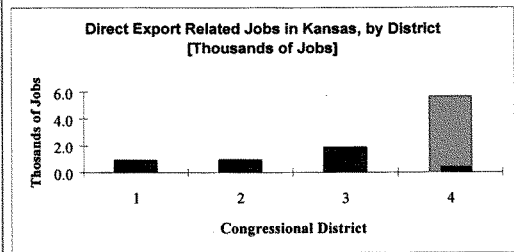
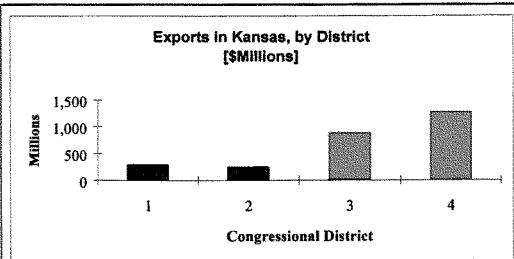
Iowa

	Exports (\$Millions)	Direct Jobs (Thousands)
Iowa Total	1,612	6.6
Cong. District, Iowa Average	322	1.3
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Kansas, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	276	0.9	5.8
2	241	0.9	5.8
3	872	1.8	7.3
4	1,262	5.6	6.1
Total	2,651	9.3	24.9

Exports in \$Millions
Jobs in Thousands



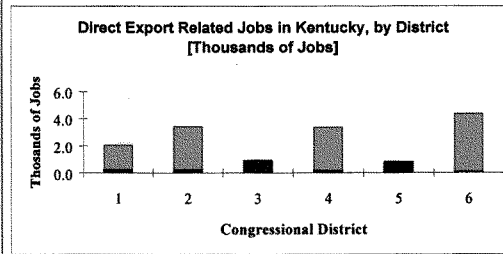
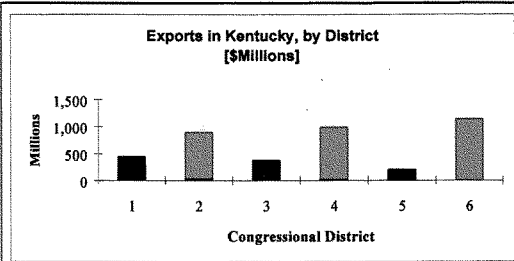
Kansas

	Exports (\$Millions)	Direct Jobs (Thousands)
Kansas Total	2,651	9.3
Cong. District, Kansas Average	663	2.3
Cong. District, National Average	771	2.3

FSC-Benefited Exports and Related Jobs in Kentucky, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	436	2.0	5.2
2	888	3.4	6.2
3	368	0.9	5.7
4	976	3.3	6.2
5	195	0.8	4.1
6	1,135	4.3	6.7
Total	3,999	14.7	34.1

Exports in \$Millions
Jobs in Thousands



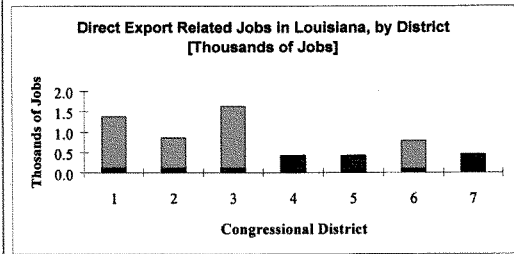
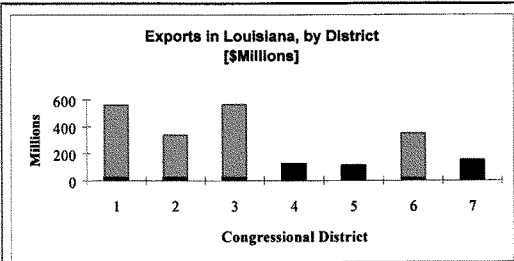
Kentucky

	Exports (\$Millions)	Direct Jobs (Thousands)
Kentucky Total	3,999	14.7
Cong. District, Kentucky Average	666	2.5
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Louisiana, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	559	1.4	5.9
2	336	0.9	4.4
3	561	1.6	4.9
4	124	0.4	4.6
5	111	0.4	4.5
6	348	0.8	5.8
7	150	0.4	5.1
Total	2,190	5.9	35.1

Exports in \$Millions
Jobs in Thousands



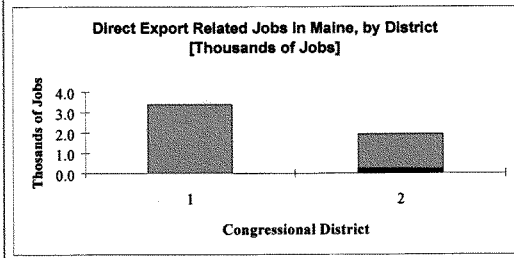
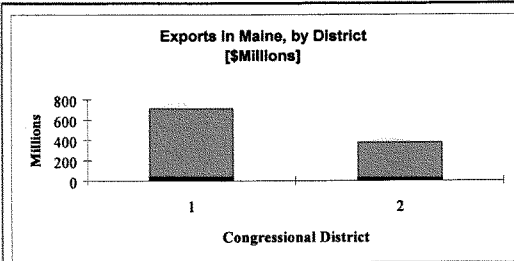
Louisiana

	Exports (\$Millions)	Direct Jobs (Thousands)
Louisiana Total	2,190	5.9
Cong. District, Louisiana Average	318	0.8
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Maine, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	705	3.4	6.4
2	371	1.9	5.4
Total	1,076	5.3	11.8

Exports in \$Millions
Jobs in Thousands



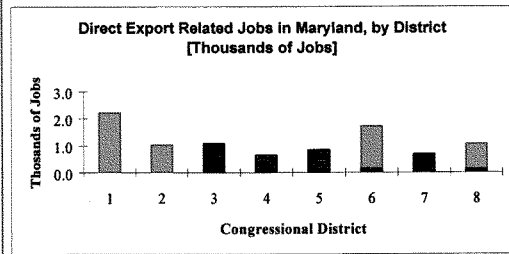
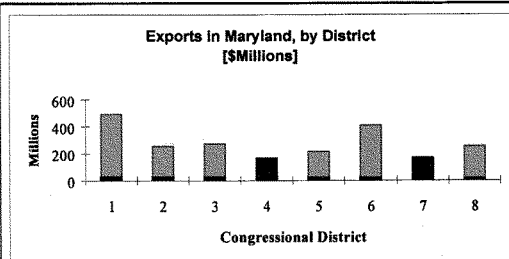
Maine

	Exports (\$Millions)	Direct Jobs (Thousands)
Maine Total	1,076	5.3
Cong. District, Maine Average	538	2.6
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Maryland, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	490	2.2	6.4
2	253	1.0	6.2
3	270	1.1	6.0
4	165	0.6	6.1
5	212	0.8	7.0
6	406	1.7	6.8
7	166	0.7	4.1
8	249	1.0	6.8
Total	2,212	9.1	49.4

Exports in \$Millions
Jobs in Thousands



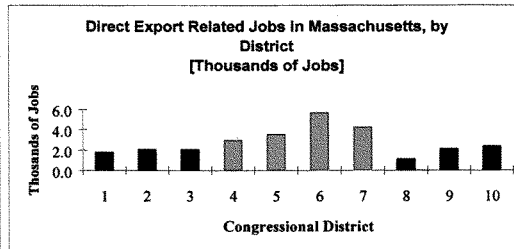
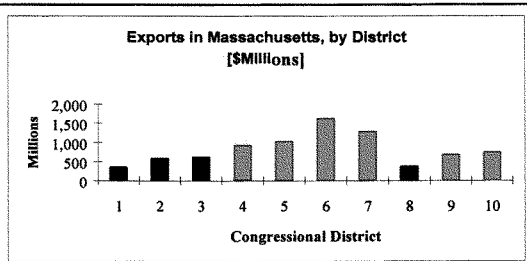
Maryland

	Exports (\$Millions)	Direct Jobs (Thousands)
Maryland Total	2,212	9.1
Cong. District, Maryland Average	276	1.1
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Massachusetts, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	350	1.7	5.7
2	580	2.0	5.6
3	611	2.0	6.1
4	916	2.9	6.1
5	1,018	3.5	6.0
6	1,612	5.6	6.2
7	1,273	4.2	6.1
8	363	1.1	6.0
9	677	2.1	5.9
10	732	2.3	6.2
Total	8,130	27.6	59.9

Exports in \$Millions
Jobs in Thousands



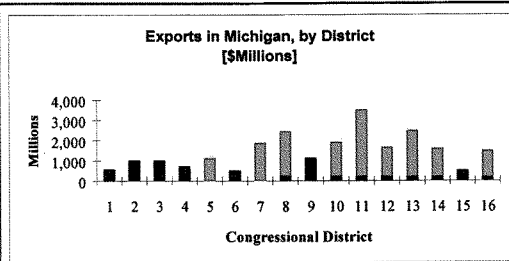
Massachusetts

	Exports (\$Millions)	Direct Jobs (Thousands)
Massachusetts Total	8,130	27.6
Average	813	2.8
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Michigan, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	536	2.3	5.4
2	986	4.2	6.2
3	981	4.1	6.2
4	697	2.9	5.5
5	1,091	3.4	4.8
6	492	2.3	5.6
7	1,839	5.1	5.5
8	2,404	6.2	6.3
9	1,099	2.8	5.7
10	1,865	4.1	6.3
11	3,455	7.9	6.2
12	1,613	3.5	5.5
13	2,438	5.5	6.1
14	1,556	3.5	3.9
15	469	1.0	3.4
16	1,445	3.6	5.2
Total	22,965	62.3	87.9

Exports in \$Millions
Jobs in Thousands



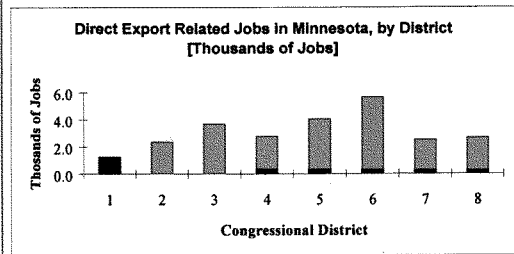
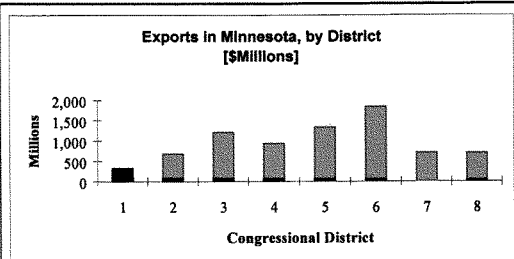
Michigan

	Exports (\$Millions)	Direct Jobs (Thousands)
Michigan Total	22,965	62.3
Cong. District, Michigan Average	1,435	3.9
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Minnesota, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	318	1.2	5.9
2	671	2.3	6.0
3	1,198	3.7	6.8
4	927	2.7	5.7
5	1,323	4.0	5.8
6	1,828	5.6	7.6
7	697	2.5	5.5
8	692	2.6	5.6
Total	7,654	24.6	48.9

Exports in \$Millions
Jobs in Thousands



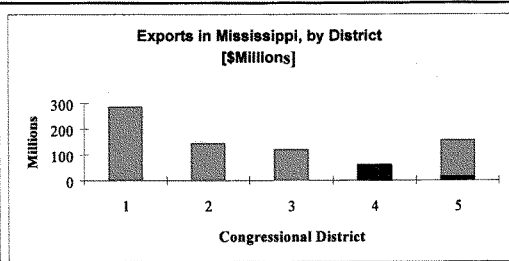
Minnesota

	Exports (\$Millions)	Direct Jobs (Thousands)
Minnesota Total	7,654	24.6
Cong. District, Minnesota Average	957	3.1
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Mississippi, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	284	1.8	5.1
2	143	0.8	3.5
3	119	0.7	4.8
4	59	0.3	4.0
5	155	0.8	4.8
Total	760	4.5	22.2

Exports in \$Millions
Jobs in Thousands



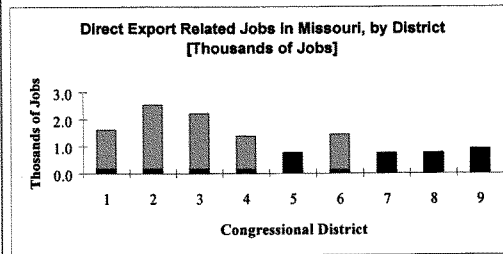
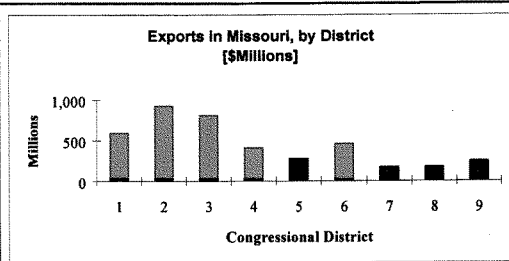
Mississippi

	Exports (\$Millions)	Direct Jobs (Thousands)
Mississippi Total	760	4.5
Cong. District, Mississippi Average	152	0.9
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Missouri, 1999


District	Exports	Direct Jobs	Indirect Jobs
1	590	1.6	4.1
2	919	2.5	6.1
3	802	2.2	5.6
4	406	1.4	5.7
5	274	0.7	5.2
6	453	1.4	6.0
7	165	0.7	6.3
8	170	0.7	4.9
9	242	0.9	6.5
Total	4,020	12.2	50.4

Exports in \$Millions
Jobs in Thousands



Missouri

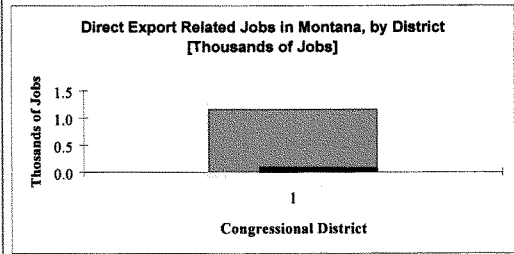
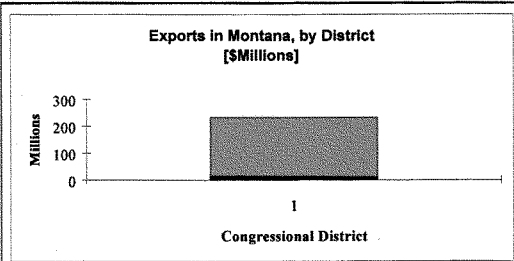
	Exports (\$Millions)	Direct Jobs (Thousands)
Missouri Total	4,020	12.2
Cong. District, Missouri Average	447	1.4
Cong. District, National Average	721	2.3



FSC-Benefited Exports and Related Jobs in Montana, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	231	1.2	8.1
Total	231	1.2	8.1

Exports in \$Millions
Jobs in Thousands



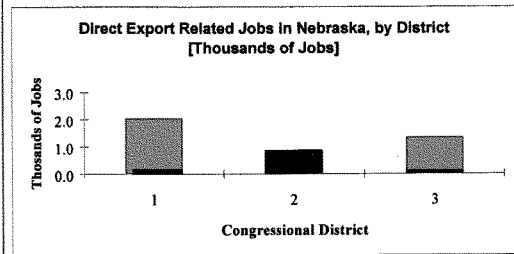
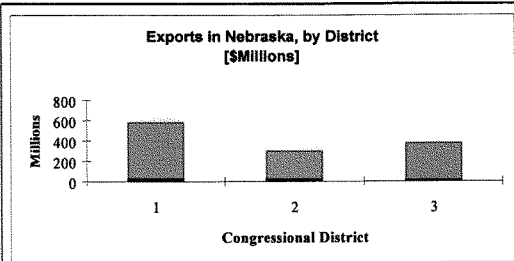
Montana

	Exports (\$Millions)	Direct Jobs (Thousands)
Montana Total	231	1.2
Cong. District, Montana Average	231	1.2
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Nebraska, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	575	2.0	5.8
2	294	0.8	5.8
3	371	1.3	5.0
Total	1,240	4.2	16.6

Exports in \$Millions
Jobs in Thousands



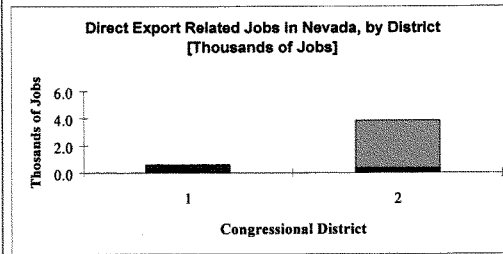
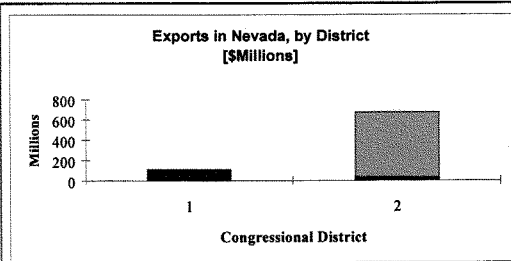
Nebraska

	Exports (\$Millions)	Direct Jobs (Thousands)
Nebraska Total	1,240	4.2
Cong. District, Nebraska Average	413	1.4
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Nevada, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	108	0.6	8.1
2	668	3.8	9.6
Total	775	4.4	17.7

Exports in \$Millions
Jobs in Thousands



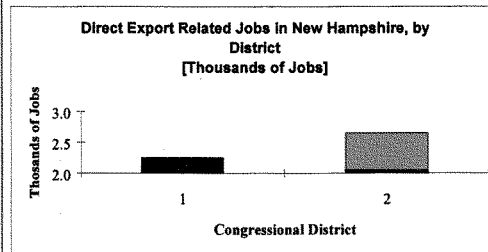
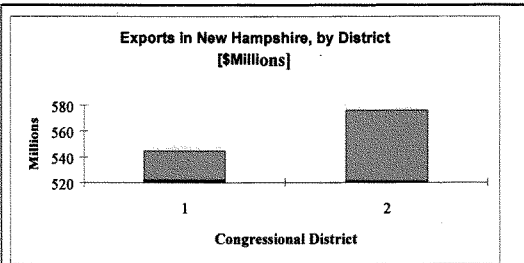
Nevada

	Exports (\$Millions)	Direct Jobs (Thousands)
Nevada Total	775	4.4
Cong. District, Nevada Average	388	2.2
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in New Hampshire, 1999


District	Exports	Direct Jobs	Indirect Jobs
1	544	2.2	6.3
2	576	2.6	6.0
Total	1,120	4.9	12.3

Exports in \$Millions
Jobs in Thousands



New Hampshire

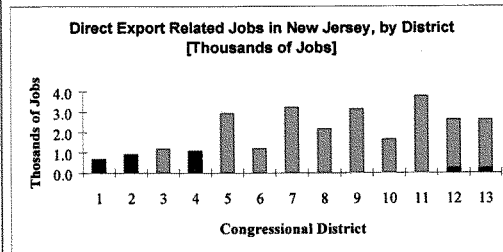
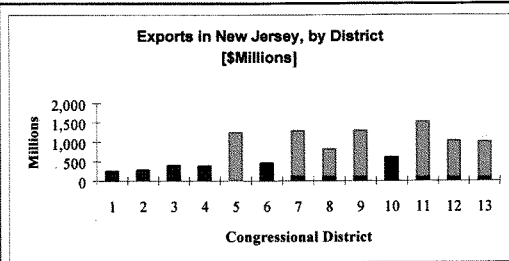
	Exports (\$Millions)	Direct Jobs (Thousands)
New Hampshire Total	1,120	4.9
Average	560	2.4
Cong. District, National Average	721	2.3



FSC-Benefited Exports and Related Jobs in New Jersey, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	238	0.7	5.4
2	269	0.9	5.5
3	390	1.2	5.7
4	378	1.1	5.7
5	1,233	2.9	6.0
6	450	1.2	6.0
7	1,277	3.2	6.1
8	805	2.1	5.5
9	1,288	3.1	6.0
10	606	1.6	4.5
11	1,517	3.8	6.5
12	1,026	2.6	6.6
13	995	2.6	5.3
Total	10,473	27.0	74.9

Exports in \$Millions
Jobs in Thousands



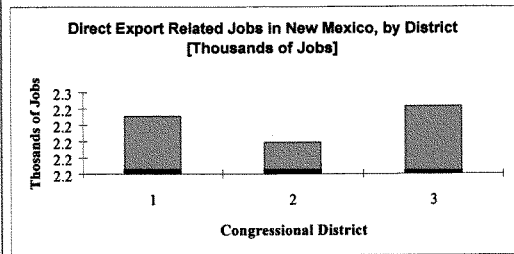
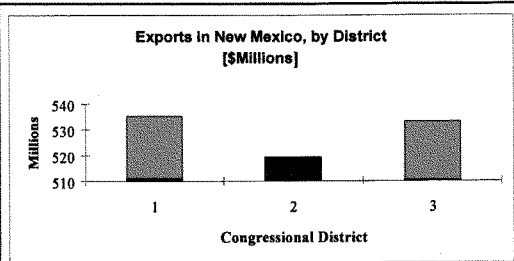
New Jersey

	Exports (\$Millions)	Direct Jobs (Thousands)
New Jersey Total	10,473	27.0
Cong. District, New Jersey Average	800	2.1
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in New Mexico, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	535	2.2	5.2
2	519	2.2	4.3
3	533	2.2	5.0
Total	1,587	6.7	14.5

Exports in \$Millions
Jobs in Thousands



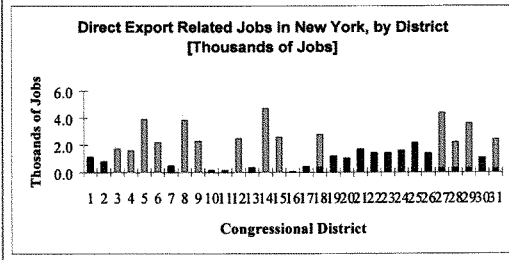
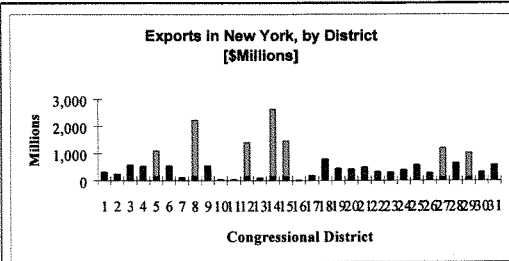
New Mexico

	Exports (\$Millions)	Direct Jobs (Thousands)
New Mexico Total	1,587	6.7
Cong. District, New Mexico Average	529	2.2
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in New York, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	297	1.1	5.9
2	226	0.8	5.6
3	559	1.7	5.4
4	513	1.6	5.4
5	1,087	3.9	5.5
6	536	2.2	5.2
7	110	0.5	5.5
8	2,214	3.8	5.9
9	542	2.3	5.2
10	27	0.1	4.2
11	29	0.1	4.4
12	1,387	2.4	4.4
13	77	0.3	5.5
14	2,623	4.7	6.7
15	1,445	2.6	3.9
16	9	0.0	3.3
17	176	0.4	4.4
18	779	2.8	5.4
19	437	1.2	5.7
20	408	1.0	5.6
21	474	1.7	5.2
22	307	1.4	5.6
23	290	1.4	4.8
24	373	1.6	4.6
25	560	2.1	5.1
26	267	1.4	5.1
27	1,196	4.3	5.6
28	627	2.2	5.3
29	1,003	3.6	5.0
30	298	1.0	4.7
31	563	2.4	4.9
Total	19,443	56.3	158.9

Exports in \$Millions
Jobs in Thousands



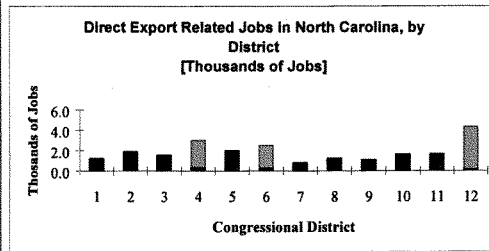
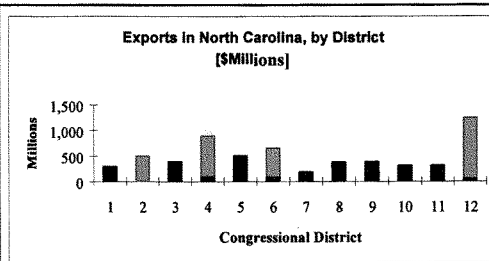
New York

	Exports (\$Millions)	Direct Jobs (Thousands)
New York Total	19,443	56.3
Cong. District, New York Average	627	1.8
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in North Carolina, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	295	1.2	4.5
2	494	1.9	6.7
3	387	1.5	4.8
4	883	3.0	7.8
5	500	2.0	5.9
6	648	2.5	6.7
7	179	0.8	5.8
8	371	1.2	5.4
9	376	1.1	6.8
10	303	1.6	6.3
11	305	1.6	5.7
12	1,235	4.3	6.0
Total	5,977	22.7	72.5

Exports in \$Millions
Jobs in Thousands



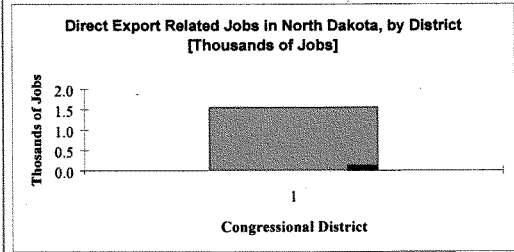
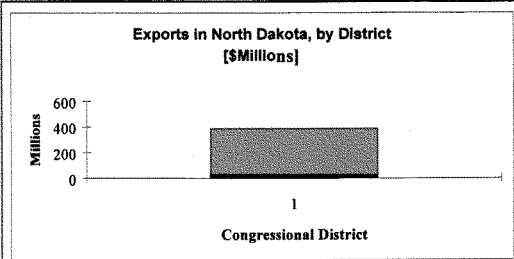
North Carolina

	Exports (\$Millions)	Direct Jobs (Thousands)
North Carolina Total	5,977	22.7
Average	498	1.9
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in North Dakota, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	383	1.5	6.0
Total	383	1.5	6.0

Exports in \$Millions
Jobs in Thousands



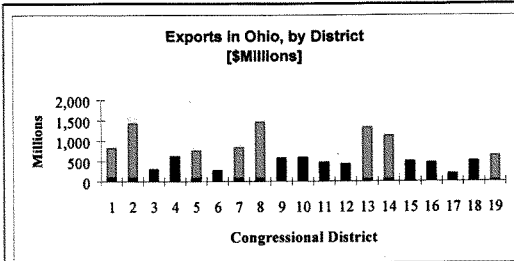
North Dakota

	Exports (\$Millions)	Direct Jobs (Thousands)
North Dakota Total	383	1.5
Average	383	1.5
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Ohio, 1999


District	Exports	Direct Jobs	Indirect Jobs
1	808	2.1	4.8
2	1,413	4.1	6.0
3	283	0.9	4.9
4	611	2.4	5.2
5	736	3.0	5.5
6	262	1.1	5.0
7	820	2.8	5.6
8	1,441	4.1	5.9
9	560	1.9	5.1
10	574	2.1	5.2
11	453	1.6	4.1
12	419	1.2	6.3
13	1,305	5.0	6.1
14	1,110	4.3	5.4
15	484	1.5	6.6
16	441	1.8	5.5
17	175	0.7	4.7
18	489	1.9	4.9
19	619	2.3	5.6
Total	13,003	44.9	102.4

Exports in \$Millions
Jobs in Thousands



Ohio

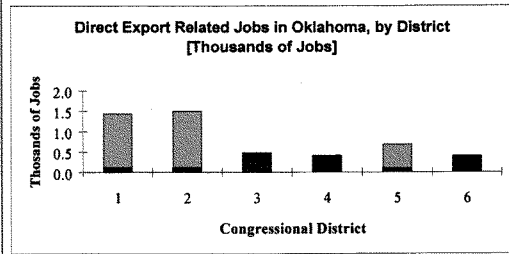
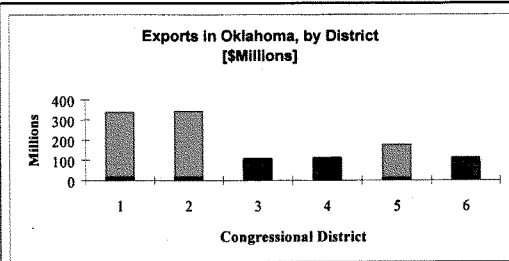
	Exports (\$Millions)	Direct Jobs (Thousands)
Ohio Total	13,003	44.9
Cong. District, Ohio Average	684	2.4
Cong. District, National Average	721	2.3



FSC-Benefited Exports and Related Jobs in Oklahoma, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	336	1.4	5.5
2	340	1.5	4.8
3	106	0.5	4.5
4	110	0.4	4.8
5	173	0.7	5.5
6	110	0.4	4.3
Total	1,176	4.8	29.3

Exports in \$Millions
Jobs in Thousands



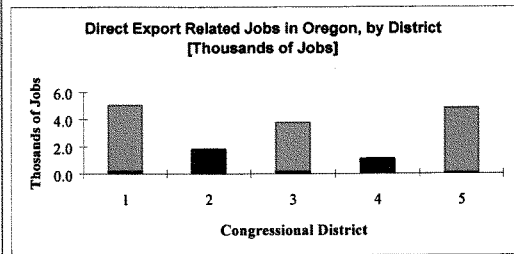
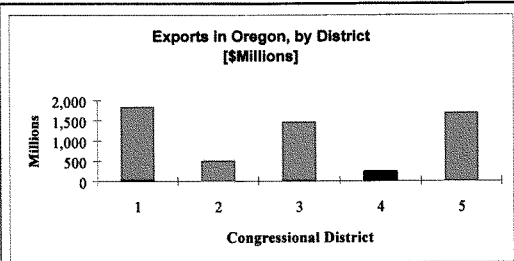
Oklahoma

	Exports (\$Millions)	Direct Jobs (Thousands)
Oklahoma Total	1,176	4.8
Cong. District, Oklahoma Average	198	0.8
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Oregon, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	1,815	5.0	7.3
2	486	1.8	5.8
3	1,445	3.7	6.2
4	234	1.1	5.4
5	1,665	4.8	6.1
Total	5,646	16.4	30.8

Exports in \$Millions
Jobs in Thousands



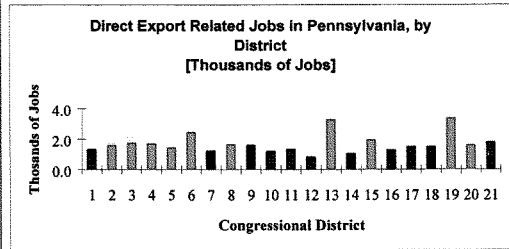
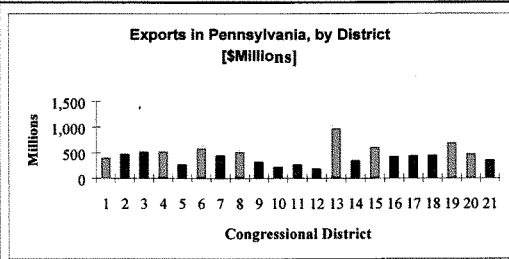
Oregon

	Exports (\$Millions)	Direct Jobs (Thousands)
Oregon Total	5,646	16.4
Cong. District, Oregon Average	1,129	3.3
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Pennsylvania, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	386	1.3	3.4
2	461	1.6	4.1
3	502	1.7	4.4
4	503	1.7	5.1
5	259	1.4	4.9
6	566	2.4	5.3
7	432	1.2	5.5
8	497	1.6	6.1
9	310	1.6	5.1
10	214	1.2	5.2
11	258	1.3	4.9
12	174	0.8	4.4
13	954	3.3	6.1
14	334	1.0	4.6
15	591	1.9	5.6
16	413	1.2	6.1
17	426	1.5	5.8
18	438	1.5	4.7
19	674	3.3	6.1
20	463	1.6	4.8
21	341	1.8	5.0
Total	9,196	34.8	107.1

Exports in \$Millions
Jobs in Thousands



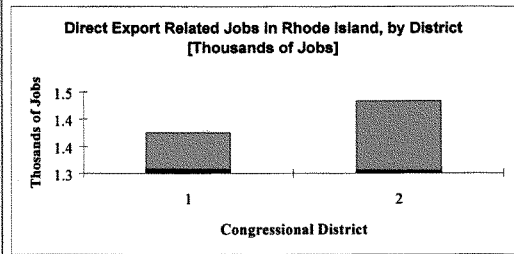
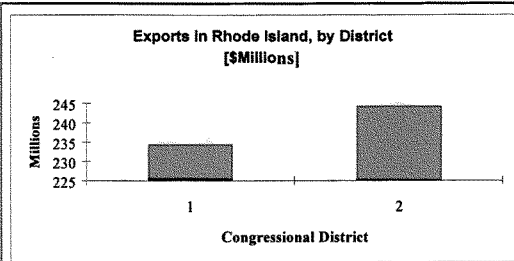
Pennsylvania

	Exports (\$Millions)	Direct Jobs (Thousands)
Pennsylvania Total	9,196	34.8
Cong. District, Pennsylvania Average	438	1.7
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Rhode Island, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	234	1.4	4.6
2	244	1.4	4.8
Total	478	2.8	9.5

Exports in \$Millions
Jobs in Thousands



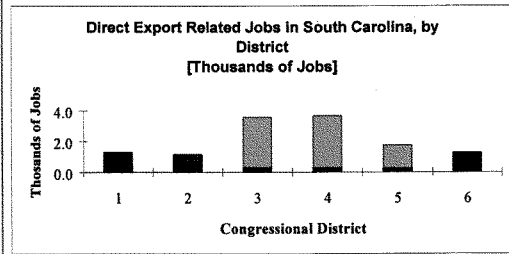
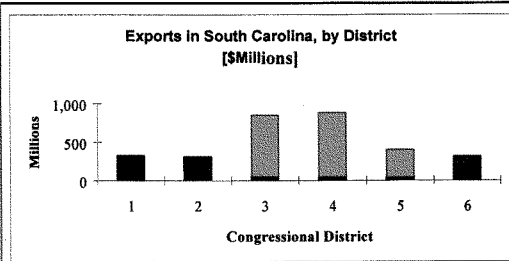
Rhode Island

	Exports (\$Millions)	Direct Jobs (Thousands)
Rhode Island Total	478	2.8
Cong. District, Rhode Island Average	239	1.4
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in South Carolina, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	324	1.3	6.2
2	308	1.1	6.4
3	845	3.5	5.8
4	875	3.6	6.2
5	396	1.7	5.6
6	307	1.2	4.5
Total	3,056	12.6	34.6

Exports in \$Millions
Jobs in Thousands



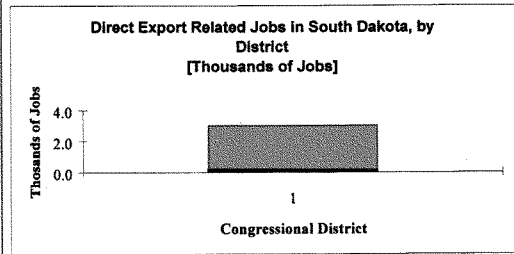
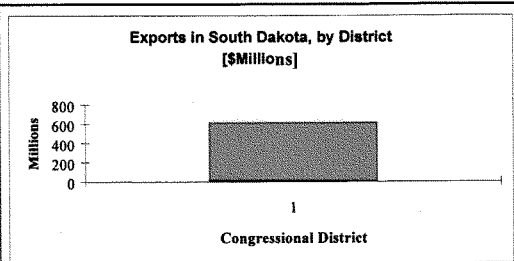
South Carolina

	Exports (\$Millions)	Direct Jobs (Thousands)
South Carolina Total	3,056	12.6
Average	509	2.1
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in South Dakota, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	609	3.0	7.1
Total	609	3.0	7.1

Exports in \$Millions
Jobs in Thousands



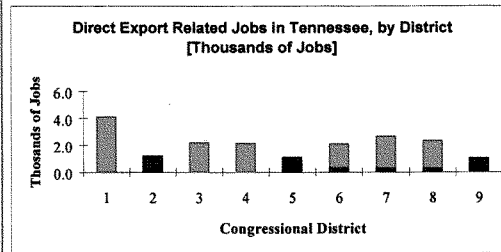
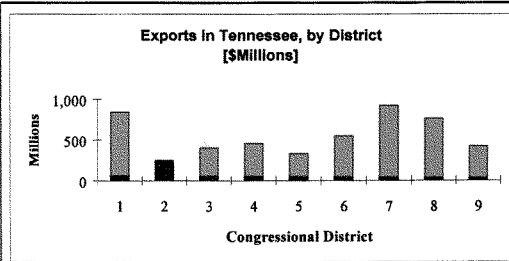
South Dakota

	Exports (\$Millions)	Direct Jobs (Thousands)
South Dakota Total	609	3.0
Cong. District, South Dakota Average	609	3.0
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Tennessee, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	836	4.1	5.4
2	243	1.2	5.8
3	399	2.2	5.2
4	451	2.1	5.3
5	327	1.1	5.9
6	542	2.1	7.1
7	913	2.6	6.6
8	754	2.3	5.1
9	415	1.0	4.0
Total	4,879	18.7	50.3

Exports in \$Millions
Jobs in Thousands



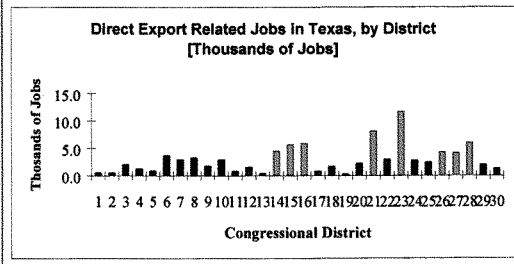
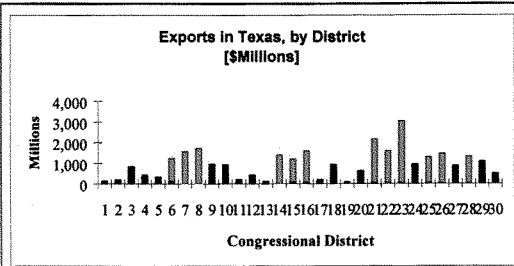
Tennessee

	Exports (\$Millions)	Direct Jobs (Thousands)
Tennessee Total	4,879	18.7
Cong. District, Tennessee Average	542	2.1
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Texas, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	116	0.5	4.9
2	178	0.4	4.9
3	821	2.0	8.4
4	409	1.2	6.2
5	309	0.8	5.5
6	1,218	3.6	7.8
7	1,551	2.9	7.5
8	1,697	3.2	7.2
9	944	1.7	5.3
10	905	2.8	8.2
11	190	0.7	4.9
12	407	1.4	5.7
13	104	0.4	4.7
14	1,377	4.4	5.8
15	1,186	5.6	4.8
16	1,582	5.8	4.2
17	190	0.7	4.9
18	911	1.6	4.7
19	72	0.2	5.4
20	605	2.2	4.8
21	2,142	8.0	7.4
22	1,571	2.9	7.1
23	3,033	11.6	5.5
24	938	2.7	5.6
25	1,267	2.3	5.7
26	1,446	4.2	8.7
27	858	4.1	4.7
28	1,294	5.9	4.6
29	1,056	1.9	4.8
30	489	1.2	5.0
Total	28,866	86.9	175.0

Exports in \$Millions
Jobs in Thousands



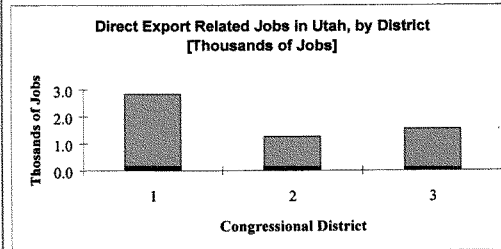
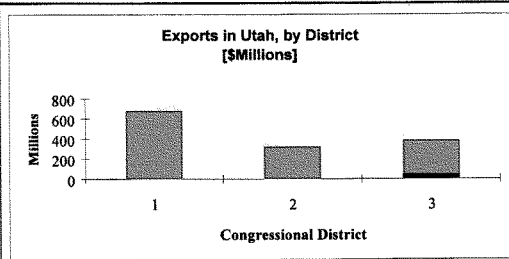
Texas

	Exports (\$Millions)	Direct Jobs (Thousands)
Texas Total	28,866	86.9
Cong. District, Texas Average	962	2.9
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Utah, 1999

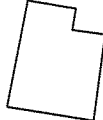
District	Exports	Direct Jobs	Indirect Jobs
1	672	2.8	6.6
2	313	1.2	6.7
3	374	1.5	6.5
Total	1,359	5.6	19.8

Exports in \$Millions
Jobs in Thousands



Utah

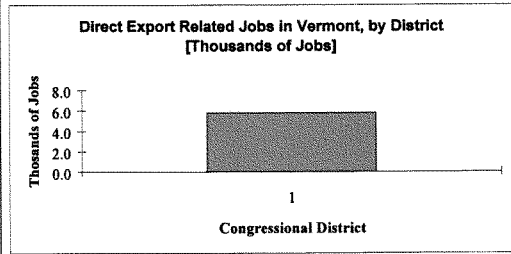
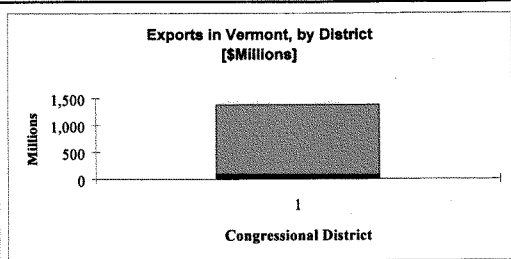
	Exports (\$Millions)	Direct Jobs (Thousands)
Utah Total	1,359	5.6
Cong. District, Utah Average	453	1.9
Cong. District, National Average	771	2.3



FSC-Benefited Exports and Related Jobs in Vermont, 1999


District	Exports	Direct Jobs	Indirect Jobs
1	1,370	5.8	6.0
Total	1,370	5.8	6.0

Exports in \$Millions
Jobs in Thousands



Vermont

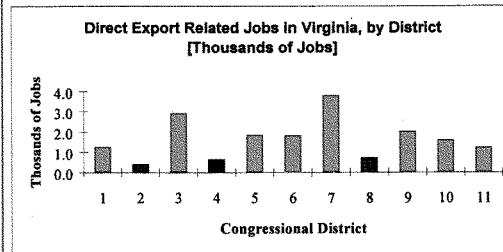
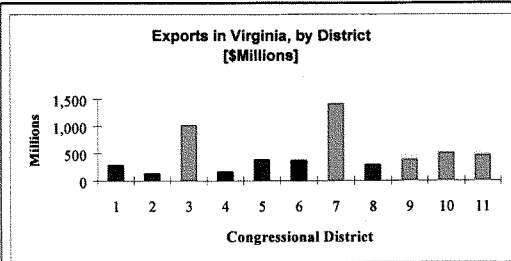
	Exports (\$Millions)	Direct Jobs (Thousands)
Vermont Total	1,370	5.8
Cong. District, Vermont Average	1,370	5.8
Cong. District, National Average	721	2.3



FSC-Benefited Exports and Related Jobs in Virginia, 1999


District	Exports	Direct Jobs	Indirect Jobs
1	274	1.2	6.2
2	125	0.4	4.7
3	1,009	2.9	4.7
4	161	0.6	5.3
5	375	1.8	5.4
6	366	1.8	5.5
7	1,407	3.8	6.9
8	280	0.7	6.7
9	376	2.0	4.7
10	500	1.6	8.1
11	460	1.2	6.6
Total	5,332	17.9	64.7

Exports in \$Millions
Jobs in Thousands



Virginia

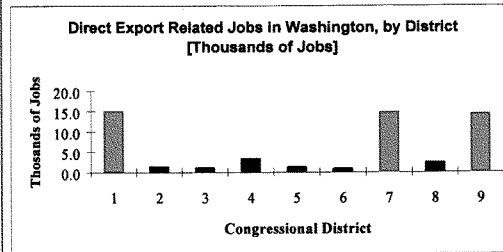
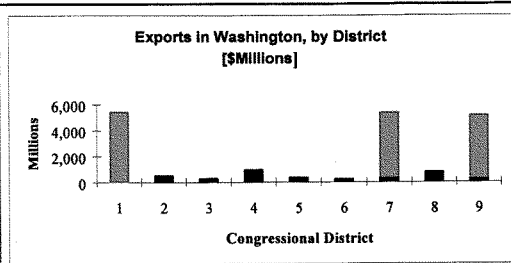
	Exports (\$Millions)	Direct Jobs (Thousands)
Virginia Total	5,332	17.9
Cong. District, Virginia Average	485	1.6
Cong. District, National Average	721	2.3



FSC-Benefited Exports and Related Jobs in Washington, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	5,405	14.9	6.2
2	483	1.3	6.4
3	264	1.0	6.1
4	938	3.3	5.3
5	339	1.2	5.3
6	206	0.8	4.9
7	5,317	14.6	6.3
8	755	2.3	6.7
9	5,100	14.3	5.8
Total	18,806	53.9	52.9

Exports in \$Millions
Jobs in Thousands



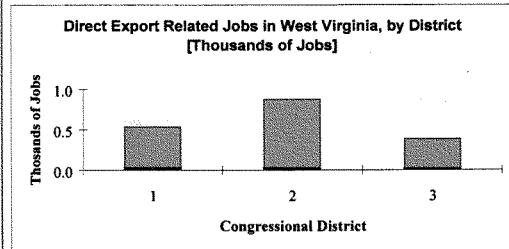
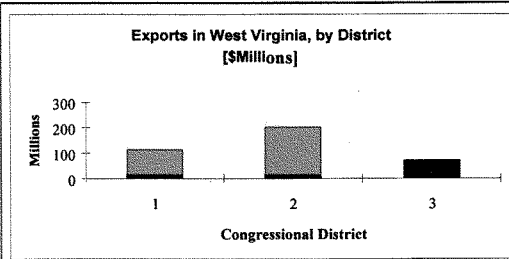
Washington

	Exports (\$Millions)	Direct Jobs (Thousands)
Washington Total	18,806	53.9
Cong. District, Washington Average	2,089	6.0
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in West Virginia, 1999


District	Exports	Direct Jobs	Indirect Jobs
1	111	0.5	4.8
2	200	0.9	5.2
3	69	0.4	3.9
Total	381	1.8	13.9

Exports in \$Millions
Jobs in Thousands



West Virginia

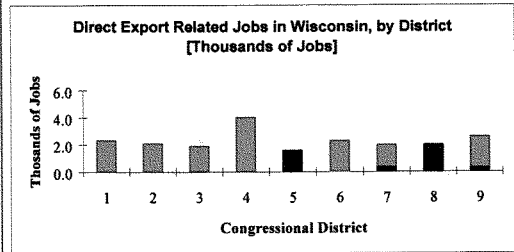
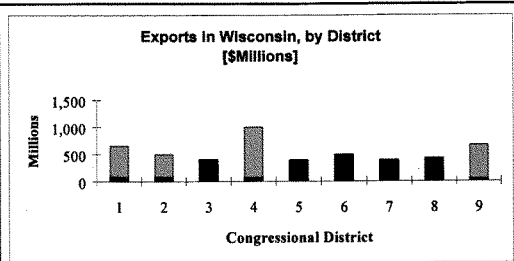
	Exports (\$Millions)	Direct Jobs (Thousands)
West Virginia Total	381	1.8
Average	127	0.6
Cong. District, National Average	771	2.3



FSC-Benefited Exports and Related Jobs in Wisconsin, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	644	2.3	5.8
2	488	2.0	6.6
3	392	1.9	5.9
4	989	4.0	5.6
5	379	1.6	4.2
6	481	2.3	5.9
7	381	1.9	5.5
8	412	2.0	6.0
9	657	2.6	6.4
Total	4,822	20.5	51.8

Exports in \$Millions
Jobs in Thousands



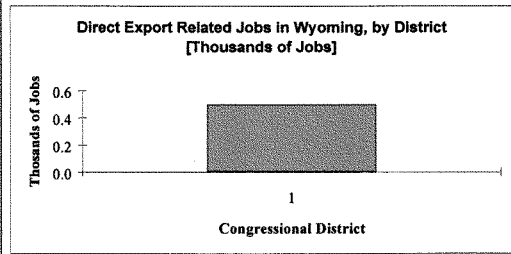
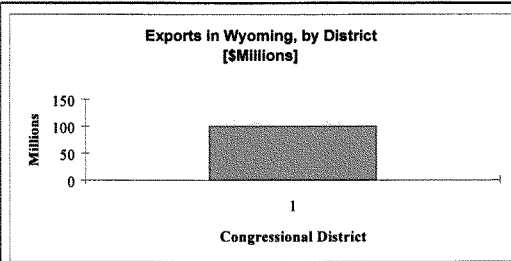
Wisconsin

	Exports (\$Millions)	Direct Jobs (Thousands)
Wisconsin Total	4,822	20.5
Cong. District, Wisconsin Average	530	2.3
Cong. District, National Average	721	2.3

FSC-Benefited Exports and Related Jobs in Wyoming, 1999

District	Exports	Direct Jobs	Indirect Jobs
1	99	0.5	4.6
Total	99	0.5	4.6

Exports in \$Millions
Jobs in Thousands



Wyoming

	Exports (\$Millions)	Direct Jobs (Thousands)
Wyoming Total	99	0.5
Cong. District, Wyoming Average	99	0.5
Cong. District, National Average	721	2.3

APPENDICES

A. RESULTS SORTED BY STATE AND BY CONGRESSIONAL DISTRICT

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
SORTED ALPHABETICALLY**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
1	Alabama	1	223.0	1.0	5.1	6.1
2	Alabama	2	315.1	1.7	5.3	7.0
3	Alabama	3	173.8	1.0	5.1	6.1
4	Alabama	4	378.0	2.0	5.2	7.2
5	Alabama	5	628.9	3.1	5.8	8.8
6	Alabama	6	371.0	1.7	6.3	7.9
7	Alabama	7	323.7	1.5	3.7	5.1
8	Alaska	1	429.1	1.4	5.3	6.7
9	Arizona	1	811.1	2.6	8.2	10.8
10	Arizona	2	915.2	3.3	5.0	8.4
11	Arizona	3	476.2	1.6	7.8	9.4
12	Arizona	4	752.0	2.4	7.1	9.5
13	Arizona	5	827.2	3.2	6.6	9.8
14	Arizona	6	1,099.4	3.5	7.7	11.2
15	Arkansas	1	203.8	0.9	5.0	5.9
16	Arkansas	2	222.5	0.9	5.9	6.8
17	Arkansas	3	445.4	1.7	6.6	8.3
18	Arkansas	4	324.2	1.4	4.8	6.1
19	California	1	530.5	1.4	5.3	6.7
20	California	2	264.2	0.9	4.8	5.7
21	California	3	759.9	2.1	5.6	7.6
22	California	4	361.4	1.1	6.4	7.4
23	California	5	275.9	0.8	5.5	6.3
24	California	6	525.5	1.9	6.2	8.2
25	California	7	455.6	1.0	5.6	6.5
26	California	8	1,602.9	4.4	6.5	10.9
27	California	9	479.2	1.1	5.3	6.4
28	California	10	618.2	1.4	6.7	8.1
29	California	11	714.6	1.8	5.2	7.0
30	California	12	1,788.3	5.0	6.1	11.0
31	California	13	4,025.3	10.4	6.2	16.5
32	California	14	5,194.2	13.6	6.1	19.6
33	California	15	3,474.6	9.1	6.1	15.3
34	California	16	2,983.4	7.6	6.1	13.7
35	California	17	1,558.8	4.3	5.4	9.7
36	California	18	160.7	0.5	4.9	5.4
37	California	19	269.0	1.0	5.4	6.4
38	California	20	228.4	0.8	4.0	4.8
39	California	21	131.4	0.4	4.8	5.3
40	California	22	651.1	2.4	5.4	7.8
41	California	23	888.2	2.9	5.5	8.4
42	California	24	945.1	3.1	5.9	9.0
43	California	25	306.4	1.0	5.8	6.8
44	California	26	376.4	1.3	4.8	6.1

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
SORTED ALPHABETICALLY**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
45	California	27	864.3	2.9	5.3	8.2
46	California	28	367.8	1.3	5.2	6.5
47	California	29	828.5	2.8	6.0	8.8
48	California	30	236.4	0.8	4.2	5.0
49	California	31	683.4	2.3	4.3	6.6
50	California	32	433.2	1.4	4.6	6.1
51	California	33	352.0	1.2	3.6	4.8
52	California	34	702.2	2.3	4.5	6.8
53	California	35	477.3	1.6	3.9	5.5
54	California	36	1,699.3	5.7	5.8	11.4
55	California	37	1,318.0	4.4	3.7	8.1
56	California	38	736.0	2.4	5.1	7.6
57	California	39	829.8	2.6	5.4	8.1
58	California	40	511.7	1.9	4.8	6.7
59	California	41	543.3	1.7	5.4	7.1
60	California	42	387.2	1.4	5.0	6.4
61	California	43	510.0	1.7	5.8	7.5
62	California	44	306.9	1.3	5.1	6.3
63	California	45	1,321.2	3.7	5.8	9.5
64	California	46	882.8	2.4	4.9	7.3
65	California	47	1,233.9	3.3	6.8	10.1
66	California	48	1,007.3	3.0	6.5	9.6
67	California	49	1,130.4	4.2	5.5	9.7
68	California	50	782.8	2.9	4.5	7.4
69	California	51	1,191.3	4.5	6.4	10.9
70	California	52	1,267.8	4.8	5.2	10.0
71	Colorado	1	205.3	0.5	6.3	6.8
72	Colorado	2	3,319.0	12.2	7.3	19.4
73	Colorado	3	199.6	0.7	6.7	7.5
74	Colorado	4	811.3	2.6	7.1	9.7
75	Colorado	5	764.9	2.9	7.6	10.5
76	Colorado	6	255.2	0.7	6.9	7.6
77	Connecticut	1	853.9	3.1	4.9	8.1
78	Connecticut	2	492.9	1.9	5.4	7.3
79	Connecticut	3	260.0	0.8	5.2	6.0
80	Connecticut	4	1,544.5	2.9	5.1	8.0
81	Connecticut	5	1,246.4	2.9	5.4	8.3
82	Connecticut	6	1,046.7	3.9	5.4	9.3
83	Delaware	1	2,442.8	6.5	7.1	13.7
84	District of Columbia	1	2,542.6	5.4	5.0	10.3
85	Florida	1	107.1	0.5	5.4	5.9
86	Florida	2	98.6	0.5	5.6	6.1
87	Florida	3	274.0	0.8	4.5	5.4
88	Florida	4	185.1	0.6	6.8	7.4

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
Sorted Alphabetically**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
89	Florida	5	115.6	0.5	5.2	5.7
90	Florida	6	299.5	1.1	5.7	6.8
91	Florida	7	229.6	0.7	6.7	7.4
92	Florida	8	251.6	0.7	7.6	8.3
93	Florida	9	620.7	2.2	6.4	8.6
94	Florida	10	275.2	1.1	5.1	6.2
95	Florida	11	204.2	0.6	5.7	6.3
96	Florida	12	105.6	0.4	5.4	5.8
97	Florida	13	139.9	0.6	5.3	5.8
98	Florida	14	82.7	0.4	6.2	6.6
99	Florida	15	566.6	2.6	5.9	8.5
100	Florida	16	265.6	0.9	6.1	7.0
101	Florida	17	755.9	3.9	3.8	7.7
102	Florida	18	948.4	4.9	4.8	9.7
103	Florida	19	522.4	1.6	6.6	8.2
104	Florida	20	1,646.7	8.0	7.2	15.2
105	Florida	21	1,263.0	6.5	6.4	12.9
106	Florida	22	1,434.3	6.7	5.6	12.3
107	Florida	23	1,255.1	5.9	4.8	10.7
108	Georgia	1	459.9	1.5	5.5	7.0
109	Georgia	2	145.5	0.6	5.0	5.6
110	Georgia	3	483.9	1.2	6.9	8.1
111	Georgia	4	711.5	1.7	7.4	9.1
112	Georgia	5	367.9	0.9	5.6	6.5
113	Georgia	6	995.3	2.5	9.8	12.3
114	Georgia	7	463.3	1.5	6.8	8.3
115	Georgia	8	315.6	1.4	5.2	6.7
116	Georgia	9	468.4	1.5	7.5	9.0
117	Georgia	10	545.5	2.0	5.2	7.2
118	Georgia	11	446.0	1.5	7.9	9.5
119	Hawaii	1	81.8	0.5	4.9	5.4
120	Hawaii	2	89.2	0.5	5.3	5.8
121	Idaho	1	580.4	1.9	6.2	8.1
122	Idaho	2	545.9	1.9	5.2	7.1
123	Illinois	1	231.7	0.7	4.0	4.7
124	Illinois	2	229.8	0.7	4.0	4.6
125	Illinois	3	716.9	1.9	5.4	7.3
126	Illinois	4	557.3	1.4	4.5	6.0
127	Illinois	5	640.8	1.7	6.4	8.1
128	Illinois	6	1,597.3	4.5	6.0	10.5
129	Illinois	7	533.8	1.4	4.4	5.7
130	Illinois	8	1,383.0	3.9	7.0	11.0
131	Illinois	9	1,126.4	3.3	5.7	9.1
132	Illinois	10	809.5	2.4	5.6	8.0

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
Sorted Alphabetically**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
133	Illinois	11	568.5	1.6	5.6	7.2
134	Illinois	12	87.8	0.3	4.7	5.0
135	Illinois	13	636.5	1.6	7.4	9.0
136	Illinois	14	768.9	2.1	6.8	8.9
137	Illinois	15	479.0	1.5	5.6	7.1
138	Illinois	16	1,672.1	5.6	6.5	12.1
139	Illinois	17	1,470.3	4.7	5.1	9.8
140	Illinois	18	1,255.3	3.3	5.5	8.8
141	Illinois	19	337.4	0.8	4.9	5.7
142	Illinois	20	631.2	1.8	5.4	7.2
143	Indiana	1	86.8	0.3	4.9	5.1
144	Indiana	2	790.0	2.7	5.1	7.8
145	Indiana	3	522.4	2.5	5.6	8.1
146	Indiana	4	1,142.8	5.4	5.9	11.3
147	Indiana	5	1,091.7	5.1	5.3	10.4
148	Indiana	6	1,425.2	5.5	7.3	12.7
149	Indiana	7	875.8	2.8	5.9	8.6
150	Indiana	8	511.3	2.5	5.4	7.9
151	Indiana	9	518.8	2.6	5.7	8.3
152	Indiana	10	511.0	1.5	5.1	6.6
153	Iowa	1	538.3	2.0	6.0	8.0
154	Iowa	2	218.0	0.9	5.4	6.3
155	Iowa	3	281.9	1.2	5.4	6.6
156	Iowa	4	207.2	0.9	6.2	7.1
157	Iowa	5	366.8	1.5	5.2	6.7
158	Kansas	1	276.3	0.9	5.8	6.7
159	Kansas	2	240.9	0.9	5.8	6.7
160	Kansas	3	871.7	1.8	7.3	9.1
161	Kansas	4	1,261.7	5.6	6.1	11.7
162	Kentucky	1	435.7	2.0	5.2	7.3
163	Kentucky	2	888.4	3.4	6.2	9.6
164	Kentucky	3	368.0	0.9	5.7	6.6
165	Kentucky	4	976.3	3.3	6.2	9.5
166	Kentucky	5	195.4	0.8	4.1	4.9
167	Kentucky	6	1,134.9	4.3	6.7	11.0
168	Louisiana	1	558.7	1.4	5.9	7.2
169	Louisiana	2	335.7	0.9	4.4	5.2
170	Louisiana	3	561.5	1.6	4.9	6.5
171	Louisiana	4	124.0	0.4	4.6	5.0
172	Louisiana	5	111.4	0.4	4.5	4.9
173	Louisiana	6	348.0	0.8	5.8	6.6
174	Louisiana	7	150.4	0.4	5.1	5.6
175	Maine	1	705.4	3.4	6.4	9.8
176	Maine	2	371.0	1.9	5.4	7.3

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
Sorted Alphabetically**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
177	Maryland	1	489.6	2.2	6.4	8.6
178	Maryland	2	253.2	1.0	6.2	7.2
179	Maryland	3	270.1	1.1	6.0	7.1
180	Maryland	4	165.2	0.6	6.1	6.7
181	Maryland	5	211.8	0.8	7.0	7.8
182	Maryland	6	406.3	1.7	6.8	8.5
183	Maryland	7	166.3	0.7	4.1	4.7
184	Maryland	8	249.3	1.0	6.8	7.9
185	Massachusetts	1	350.4	1.7	5.7	7.4
186	Massachusetts	2	579.7	2.0	5.6	7.7
187	Massachusetts	3	610.5	2.0	6.1	8.1
188	Massachusetts	4	915.8	2.9	6.1	9.0
189	Massachusetts	5	1,017.6	3.5	6.0	9.5
190	Massachusetts	6	1,611.8	5.6	6.2	11.9
191	Massachusetts	7	1,273.3	4.2	6.1	10.3
192	Massachusetts	8	363.0	1.1	6.0	7.1
193	Massachusetts	9	676.7	2.1	5.9	8.0
194	Massachusetts	10	731.7	2.3	6.2	8.5
195	Michigan	1	536.3	2.3	5.4	7.7
196	Michigan	2	985.9	4.2	6.2	10.4
197	Michigan	3	980.9	4.1	6.2	10.3
198	Michigan	4	696.7	2.9	5.5	8.4
199	Michigan	5	1,091.0	3.4	4.8	8.2
200	Michigan	6	492.3	2.3	5.6	7.9
201	Michigan	7	1,839.2	5.1	5.5	10.7
202	Michigan	8	2,403.8	6.2	6.3	12.5
203	Michigan	9	1,098.9	2.8	5.7	8.4
204	Michigan	10	1,864.5	4.1	6.3	10.4
205	Michigan	11	3,454.8	7.9	6.2	14.1
206	Michigan	12	1,612.7	3.5	5.5	9.0
207	Michigan	13	2,437.9	5.5	6.1	11.6
208	Michigan	14	1,555.5	3.5	3.9	7.4
209	Michigan	15	468.8	1.0	3.4	4.4
210	Michigan	16	1,445.4	3.6	5.2	8.8
211	Minnesota	1	318.2	1.2	5.9	7.1
212	Minnesota	2	670.8	2.3	6.0	8.3
213	Minnesota	3	1,197.9	3.7	6.8	10.5
214	Minnesota	4	927.0	2.7	5.7	8.4
215	Minnesota	5	1,322.6	4.0	5.8	9.8
216	Minnesota	6	1,828.1	5.6	7.6	13.2
217	Minnesota	7	697.3	2.5	5.5	8.0
218	Minnesota	8	692.0	2.6	5.6	8.2
219	Mississippi	1	284.1	1.8	5.1	6.9
220	Mississippi	2	142.9	0.8	3.5	4.3

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
Sorted Alphabetically**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
221	Mississippi	3	119.0	0.7	4.8	5.5
222	Mississippi	4	59.5	0.3	4.0	4.4
223	Mississippi	5	154.7	0.8	4.8	5.6
224	Missouri	1	589.8	1.6	4.1	5.7
225	Missouri	2	919.0	2.5	6.1	8.6
226	Missouri	3	802.3	2.2	5.6	7.8
227	Missouri	4	405.7	1.4	5.7	7.1
228	Missouri	5	273.7	0.7	5.2	5.9
229	Missouri	6	452.5	1.4	6.0	7.4
230	Missouri	7	165.2	0.7	6.3	7.0
231	Missouri	8	169.5	0.7	4.9	5.6
232	Missouri	9	242.2	0.9	6.5	7.4
233	Montana	1	230.5	1.2	8.1	9.2
234	Nebraska	1	574.8	2.0	5.8	7.8
235	Nebraska	2	294.5	0.8	5.8	6.6
236	Nebraska	3	370.8	1.3	5.0	6.4
237	Nevada	1	107.5	0.6	8.1	8.6
238	Nevada	2	667.6	3.8	9.6	13.4
239	New Hampshire	1	544.4	2.2	6.3	8.6
240	New Hampshire	2	575.6	2.6	6.0	8.7
241	New Jersey	1	238.2	0.7	5.4	6.1
242	New Jersey	2	269.0	0.9	5.5	6.4
243	New Jersey	3	390.4	1.2	5.7	6.9
244	New Jersey	4	378.0	1.1	5.7	6.8
245	New Jersey	5	1,233.2	2.9	6.0	8.9
246	New Jersey	6	449.7	1.2	6.0	7.2
247	New Jersey	7	1,277.0	3.2	6.1	9.3
248	New Jersey	8	804.9	2.1	5.5	7.6
249	New Jersey	9	1,288.2	3.1	6.0	9.1
250	New Jersey	10	606.1	1.6	4.5	6.2
251	New Jersey	11	1,516.6	3.8	6.5	10.3
252	New Jersey	12	1,026.1	2.6	6.6	9.2
253	New Jersey	13	995.4	2.6	5.3	7.9
254	New Mexico	1	535.1	2.2	5.2	7.5
255	New Mexico	2	519.1	2.2	4.3	6.5
256	New Mexico	3	533.0	2.2	5.0	7.2
257	New York	1	297.2	1.1	5.9	7.0
258	New York	2	226.4	0.8	5.6	6.3
259	New York	3	559.5	1.7	5.4	7.1
260	New York	4	513.2	1.6	5.4	7.0
261	New York	5	1,087.1	3.9	5.5	9.3
262	New York	6	535.8	2.2	5.2	7.3
263	New York	7	109.9	0.5	5.5	5.9
264	New York	8	2,214.2	3.8	5.9	9.7

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
Sorted Alphabetically**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
265	New York	9	542.2	2.3	5.2	7.5
266	New York	10	27.5	0.1	4.2	4.3
267	New York	11	28.8	0.1	4.4	4.5
268	New York	12	1,386.6	2.4	4.4	6.9
269	New York	13	77.4	0.3	5.5	5.8
270	New York	14	2,623.1	4.7	6.7	11.4
271	New York	15	1,444.6	2.6	3.9	6.4
272	New York	16	8.6	0.0	3.3	3.4
273	New York	17	176.3	0.4	4.4	4.8
274	New York	18	779.1	2.8	5.4	8.2
275	New York	19	436.6	1.2	5.7	6.8
276	New York	20	408.4	1.0	5.6	6.6
277	New York	21	474.4	1.7	5.2	6.9
278	New York	22	307.0	1.4	5.6	7.0
279	New York	23	290.0	1.4	4.8	6.1
280	New York	24	373.4	1.6	4.6	6.1
281	New York	25	559.8	2.1	5.1	7.2
282	New York	26	267.1	1.4	5.1	6.5
283	New York	27	1,196.4	4.3	5.6	9.9
284	New York	28	627.3	2.2	5.3	7.5
285	New York	29	1,003.5	3.6	5.0	8.6
286	New York	30	298.4	1.0	4.7	5.8
287	New York	31	563.3	2.4	4.9	7.3
288	North Carolina	1	295.4	1.2	4.5	5.7
289	North Carolina	2	494.3	1.9	6.7	8.6
290	North Carolina	3	386.8	1.5	4.8	6.4
291	North Carolina	4	883.0	3.0	7.8	10.8
292	North Carolina	5	499.8	2.0	5.9	7.9
293	North Carolina	6	648.5	2.5	6.7	9.2
294	North Carolina	7	179.5	0.8	5.8	6.5
295	North Carolina	8	370.8	1.2	5.4	6.6
296	North Carolina	9	376.4	1.1	6.8	7.9
297	North Carolina	10	302.8	1.6	6.3	7.9
298	North Carolina	11	305.0	1.6	5.7	7.3
299	North Carolina	12	1,234.9	4.3	6.0	10.3
300	North Dakota	1	382.9	1.5	6.0	7.5
301	Ohio	1	807.5	2.1	4.8	6.9
302	Ohio	2	1,413.0	4.1	6.0	10.1
303	Ohio	3	283.1	0.9	4.9	5.9
304	Ohio	4	611.1	2.4	5.2	7.7
305	Ohio	5	736.4	3.0	5.5	8.5
306	Ohio	6	262.1	1.1	5.0	6.0
307	Ohio	7	819.8	2.8	5.6	8.4
308	Ohio	8	1,441.2	4.1	5.9	10.0

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
Sorted Alphabetically**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
309	Ohio	9	560.2	1.9	5.1	7.0
310	Ohio	10	574.1	2.1	5.2	7.3
311	Ohio	11	452.5	1.6	4.1	5.8
312	Ohio	12	418.9	1.2	6.3	7.5
313	Ohio	13	1,304.7	5.0	6.1	11.1
314	Ohio	14	1,110.4	4.3	5.4	9.7
315	Ohio	15	484.0	1.5	6.6	8.1
316	Ohio	16	440.7	1.8	5.5	7.3
317	Ohio	17	175.4	0.7	4.7	5.4
318	Ohio	18	488.9	1.9	4.9	6.7
319	Ohio	19	618.6	2.3	5.6	7.9
320	Oklahoma	1	336.1	1.4	5.5	6.9
321	Oklahoma	2	339.9	1.5	4.8	6.3
322	Oklahoma	3	106.0	0.5	4.5	5.0
323	Oklahoma	4	110.3	0.4	4.8	5.2
324	Oklahoma	5	173.1	0.7	5.5	6.1
325	Oklahoma	6	110.2	0.4	4.3	4.7
326	Oregon	1	1,815.5	5.0	7.3	12.3
327	Oregon	2	485.8	1.8	5.8	7.6
328	Oregon	3	1,445.3	3.7	6.2	10.0
329	Oregon	4	233.7	1.1	5.4	6.5
330	Oregon	5	1,665.3	4.8	6.1	10.9
331	Pennsylvania	1	385.9	1.3	3.4	4.7
332	Pennsylvania	2	461.0	1.6	4.1	5.6
333	Pennsylvania	3	502.1	1.7	4.4	6.1
334	Pennsylvania	4	502.8	1.7	5.1	6.8
335	Pennsylvania	5	258.7	1.4	4.9	6.3
336	Pennsylvania	6	565.7	2.4	5.3	7.8
337	Pennsylvania	7	431.5	1.2	5.5	6.7
338	Pennsylvania	8	497.1	1.6	6.1	7.7
339	Pennsylvania	9	309.5	1.6	5.1	6.6
340	Pennsylvania	10	213.7	1.2	5.2	6.4
341	Pennsylvania	11	258.3	1.3	4.9	6.2
342	Pennsylvania	12	174.0	0.8	4.4	5.2
343	Pennsylvania	13	954.2	3.3	6.1	9.3
344	Pennsylvania	14	333.8	1.0	4.6	5.6
345	Pennsylvania	15	591.4	1.9	5.6	7.5
346	Pennsylvania	16	413.2	1.2	6.1	7.4
347	Pennsylvania	17	426.4	1.5	5.8	7.3
348	Pennsylvania	18	438.0	1.5	4.7	6.1
349	Pennsylvania	19	673.7	3.3	6.1	9.4
350	Pennsylvania	20	463.3	1.6	4.8	6.4
351	Pennsylvania	21	341.3	1.8	5.0	6.8
352	Rhode Island	1	234.2	1.4	4.6	6.0

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
Sorted Alphabetically**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
353	Rhode Island	2	244.1	1.4	4.8	6.3
354	South Carolina	1	324.3	1.3	6.2	7.5
355	South Carolina	2	307.8	1.1	6.4	7.6
356	South Carolina	3	845.4	3.5	5.8	9.3
357	South Carolina	4	875.0	3.6	6.2	9.8
358	South Carolina	5	396.5	1.7	5.6	7.3
359	South Carolina	6	306.6	1.2	4.5	5.7
360	South Dakota	1	608.7	3.0	7.1	10.1
361	Tennessee	1	835.9	4.1	5.4	9.5
362	Tennessee	2	242.8	1.2	5.8	7.0
363	Tennessee	3	398.6	2.2	5.2	7.4
364	Tennessee	4	451.0	2.1	5.3	7.4
365	Tennessee	5	327.2	1.1	5.9	6.9
366	Tennessee	6	541.6	2.1	7.1	9.2
367	Tennessee	7	913.1	2.6	6.6	9.2
368	Tennessee	8	753.6	2.3	5.1	7.4
369	Tennessee	9	414.7	1.0	4.0	5.0
370	Texas	1	116.4	0.5	4.9	5.3
371	Texas	2	177.9	0.4	4.9	5.3
372	Texas	3	820.6	2.0	8.4	10.4
373	Texas	4	409.2	1.2	6.2	7.4
374	Texas	5	308.6	0.8	5.5	6.3
375	Texas	6	1,217.6	3.6	7.8	11.4
376	Texas	7	1,551.1	2.9	7.5	10.4
377	Texas	8	1,696.9	3.2	7.2	10.4
378	Texas	9	944.0	1.7	5.3	7.0
379	Texas	10	905.2	2.8	8.2	11.0
380	Texas	11	190.3	0.7	4.9	5.7
381	Texas	12	407.3	1.4	5.7	7.2
382	Texas	13	104.2	0.4	4.7	5.1
383	Texas	14	1,376.6	4.4	5.8	10.2
384	Texas	15	1,185.8	5.6	4.8	10.4
385	Texas	16	1,582.5	5.8	4.2	10.0
386	Texas	17	190.4	0.7	4.9	5.6
387	Texas	18	910.8	1.6	4.7	6.3
388	Texas	19	71.5	0.2	5.4	5.6
389	Texas	20	605.5	2.2	4.8	7.0
390	Texas	21	2,142.0	8.0	7.4	15.4
391	Texas	22	1,570.6	2.9	7.1	9.9
392	Texas	23	3,033.0	11.6	5.5	17.1
393	Texas	24	937.5	2.7	5.6	8.3
394	Texas	25	1,267.0	2.3	5.7	8.0
395	Texas	26	1,446.5	4.2	8.7	12.9
396	Texas	27	857.6	4.1	4.7	8.7

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
Sorted Alphabetically**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
397	Texas	28	1,293.9	5.9	4.6	10.5
398	Texas	29	1,055.9	1.9	4.8	6.7
399	Texas	30	489.2	1.2	5.0	6.2
400	Utah	1	672.2	2.8	6.6	9.4
401	Utah	2	313.0	1.2	6.7	8.0
402	Utah	3	374.3	1.5	6.5	8.0
403	Vermont	1	1,370.3	5.8	6.0	11.8
404	Virginia	1	273.6	1.2	6.2	7.4
405	Virginia	2	124.8	0.4	4.7	5.1
406	Virginia	3	1,008.7	2.9	4.7	7.6
407	Virginia	4	161.2	0.6	5.3	5.9
408	Virginia	5	375.3	1.8	5.4	7.2
409	Virginia	6	365.9	1.8	5.5	7.3
410	Virginia	7	1,407.1	3.8	6.9	10.7
411	Virginia	8	279.9	0.7	6.7	7.3
412	Virginia	9	375.6	2.0	4.7	6.7
413	Virginia	10	500.2	1.6	8.1	9.6
414	Virginia	11	459.9	1.2	6.6	7.8
415	Washington	1	5,405.0	14.9	6.2	21.1
416	Washington	2	482.6	1.3	6.4	7.7
417	Washington	3	264.1	1.0	6.1	7.1
418	Washington	4	938.0	3.3	5.3	8.6
419	Washington	5	338.6	1.2	5.3	6.5
420	Washington	6	205.9	0.8	4.9	5.7
421	Washington	7	5,316.6	14.6	6.3	21.0
422	Washington	8	755.4	2.3	6.7	9.0
423	Washington	9	5,099.6	14.3	5.8	20.1
424	West Virginia	1	111.4	0.5	4.8	5.3
425	West Virginia	2	200.1	0.9	5.2	6.1
426	West Virginia	3	69.0	0.4	3.9	4.3
427	Wisconsin	1	644.2	2.3	5.8	8.1
428	Wisconsin	2	487.6	2.0	6.6	8.7
429	Wisconsin	3	392.4	1.9	5.9	7.8
430	Wisconsin	4	988.7	4.0	5.6	9.6
431	Wisconsin	5	378.8	1.6	4.2	5.8
432	Wisconsin	6	480.8	2.3	5.9	8.1
433	Wisconsin	7	380.7	1.9	5.5	7.4
434	Wisconsin	8	412.4	2.0	6.0	7.9
435	Wisconsin	9	657.0	2.6	6.4	8.9
436	Wyoming	1	99.1	0.5	4.6	5.1
Total U.S.			314,208.0	1,022.3	2,458.4	3,480.7

B. RESULTS SORTED BY EXPORT LEVEL

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
Sorted By Exports**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
1	Washington	1	5,405.0	14.9	6.2	21.1
2	Washington	7	5,316.6	14.6	6.3	21.0
3	California	14	5,194.2	13.6	6.1	19.6
4	Washington	9	5,099.6	14.3	5.8	20.1
5	California	13	4,025.3	10.4	6.2	16.5
6	California	15	3,474.6	9.1	6.1	15.3
7	Michigan	11	3,454.8	7.9	6.2	14.1
8	Colorado	2	3,319.0	12.2	7.3	19.4
9	Texas	23	3,033.0	11.6	5.5	17.1
10	California	16	2,983.4	7.6	6.1	13.7
11	New York	14	2,623.1	4.7	6.7	11.4
12	District of Columbia	1	2,542.6	5.4	5.0	10.3
13	Delaware	1	2,442.8	6.5	7.1	13.7
14	Michigan	13	2,437.9	5.5	6.1	11.6
15	Michigan	8	2,403.8	6.2	6.3	12.5
16	New York	8	2,214.2	3.8	5.9	9.7
17	Texas	21	2,142.0	8.0	7.4	15.4
18	Michigan	10	1,864.5	4.1	6.3	10.4
19	Michigan	7	1,839.2	5.1	5.5	10.7
20	Minnesota	6	1,828.1	5.6	7.6	13.2
21	Oregon	1	1,815.5	5.0	7.3	12.3
22	California	12	1,788.3	5.0	6.1	11.0
23	California	36	1,699.3	5.7	5.8	11.4
24	Texas	8	1,696.9	3.2	7.2	10.4
25	Illinois	16	1,672.1	5.6	6.5	12.1
26	Oregon	5	1,665.3	4.8	6.1	10.9
27	Florida	20	1,646.7	8.0	7.2	15.2
28	Michigan	12	1,612.7	3.5	5.5	9.0
29	Massachusetts	6	1,611.8	5.6	6.2	11.9
30	California	8	1,602.9	4.4	6.5	10.9
31	Illinois	6	1,597.3	4.5	6.0	10.5
32	Texas	16	1,582.5	5.8	4.2	10.0
33	Texas	22	1,570.6	2.9	7.1	9.9
34	California	17	1,558.8	4.3	5.4	9.7
35	Michigan	14	1,555.5	3.5	3.9	7.4
36	Texas	7	1,551.1	2.9	7.5	10.4
37	Connecticut	4	1,544.5	2.9	5.1	8.0
38	New Jersey	11	1,516.6	3.8	6.5	10.3
39	Illinois	17	1,470.3	4.7	5.1	9.8
40	Texas	26	1,446.5	4.2	8.7	12.9
41	Michigan	16	1,445.4	3.6	5.2	8.8
42	Oregon	3	1,445.3	3.7	6.2	10.0
43	New York	15	1,444.6	2.6	3.9	6.4
44	Ohio	8	1,441.2	4.1	5.9	10.0

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
Sorted By Exports**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
45	Florida	22	1,434.3	6.7	5.6	12.3
46	Indiana	6	1,425.2	5.5	7.3	12.7
47	Ohio	2	1,413.0	4.1	6.0	10.1
48	Virginia	7	1,407.1	3.8	6.9	10.7
49	New York	12	1,386.6	2.4	4.4	6.9
50	Illinois	8	1,383.0	3.9	7.0	11.0
51	Texas	14	1,376.6	4.4	5.8	10.2
52	Vermont	1	1,370.3	5.8	6.0	11.8
53	Minnesota	5	1,322.6	4.0	5.8	9.8
54	California	45	1,321.2	3.7	5.8	9.5
55	California	37	1,318.0	4.4	3.7	8.1
56	Ohio	13	1,304.7	5.0	6.1	11.1
57	Texas	28	1,293.9	5.9	4.6	10.5
58	New Jersey	9	1,288.2	3.1	6.0	9.1
59	New Jersey	7	1,277.0	3.2	6.1	9.3
60	Massachusetts	7	1,273.3	4.2	6.1	10.3
61	California	52	1,267.8	4.8	5.2	10.0
62	Texas	25	1,267.0	2.3	5.7	8.0
63	Florida	21	1,263.0	6.5	6.4	12.9
64	Kansas	4	1,261.7	5.6	6.1	11.7
65	Illinois	18	1,255.3	3.3	5.5	8.8
66	Florida	23	1,255.1	5.9	4.8	10.7
67	Connecticut	5	1,246.4	2.9	5.4	8.3
68	North Carolina	12	1,234.9	4.3	6.0	10.3
69	California	47	1,233.9	3.3	6.8	10.1
70	New Jersey	5	1,233.2	2.9	6.0	8.9
71	Texas	6	1,217.6	3.6	7.8	11.4
72	Minnesota	3	1,197.9	3.7	6.8	10.5
73	New York	27	1,196.4	4.3	5.6	9.9
74	California	51	1,191.3	4.5	6.4	10.9
75	Texas	15	1,185.8	5.6	4.8	10.4
76	Indiana	4	1,142.8	5.4	5.9	11.3
77	Kentucky	6	1,134.9	4.3	6.7	11.0
78	California	49	1,130.4	4.2	5.5	9.7
79	Illinois	9	1,126.4	3.3	5.7	9.1
80	Ohio	14	1,110.4	4.3	5.4	9.7
81	Arizona	6	1,099.4	3.5	7.7	11.2
82	Michigan	9	1,098.9	2.8	5.7	8.4
83	Indiana	5	1,091.7	5.1	5.3	10.4
84	Michigan	5	1,091.0	3.4	4.8	8.2
85	New York	5	1,087.1	3.9	5.5	9.3
86	Texas	29	1,055.9	1.9	4.8	6.7
87	Connecticut	6	1,046.7	3.9	5.4	9.3
88	New Jersey	12	1,026.1	2.6	6.6	9.2

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
Sorted By Exports**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
89	Massachusetts	5	1,017.6	3.5	6.0	9.5
90	Virginia	3	1,008.7	2.9	4.7	7.6
91	California	48	1,007.3	3.0	6.5	9.6
92	New York	29	1,003.5	3.6	5.0	8.6
93	New Jersey	13	995.4	2.6	5.3	7.9
94	Georgia	6	995.3	2.5	9.8	12.3
95	Wisconsin	4	988.7	4.0	5.6	9.6
96	Michigan	2	985.9	4.2	6.2	10.4
97	Michigan	3	980.9	4.1	6.2	10.3
98	Kentucky	4	976.3	3.3	6.2	9.5
99	Pennsylvania	13	954.2	3.3	6.1	9.3
100	Florida	18	948.4	4.9	4.8	9.7
101	California	24	945.1	3.1	5.9	9.0
102	Texas	9	944.0	1.7	5.3	7.0
103	Washington	4	938.0	3.3	5.3	8.6
104	Texas	24	937.5	2.7	5.6	8.3
105	Minnesota	4	927.0	2.7	5.7	8.4
106	Missouri	2	919.0	2.5	6.1	8.6
107	Massachusetts	4	915.8	2.9	6.1	9.0
108	Arizona	2	915.2	3.3	5.0	8.4
109	Tennessee	7	913.1	2.6	6.6	9.2
110	Texas	18	910.8	1.6	4.7	6.3
111	Texas	10	905.2	2.8	8.2	11.0
112	Kentucky	2	888.4	3.4	6.2	9.6
113	California	23	888.2	2.9	5.5	8.4
114	North Carolina	4	883.0	3.0	7.8	10.8
115	California	46	882.8	2.4	4.9	7.3
116	Indiana	7	875.8	2.8	5.9	8.6
117	South Carolina	4	875.0	3.6	6.2	9.8
118	Kansas	3	871.7	1.8	7.3	9.1
119	California	27	864.3	2.9	5.3	8.2
120	Texas	27	857.6	4.1	4.7	8.7
121	Connecticut	1	853.9	3.1	4.9	8.1
122	South Carolina	3	845.4	3.5	5.8	9.3
123	Tennessee	1	835.9	4.1	5.4	9.5
124	California	39	829.8	2.6	5.4	8.1
125	California	29	828.5	2.8	6.0	8.8
126	Arizona	5	827.2	3.2	6.6	9.8
127	Texas	3	820.6	2.0	8.4	10.4
128	Ohio	7	819.8	2.8	5.6	8.4
129	Colorado	4	811.3	2.6	7.1	9.7
130	Arizona	1	811.1	2.6	8.2	10.8
131	Illinois	10	809.5	2.4	5.6	8.0
132	Ohio	1	807.5	2.1	4.8	6.9

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
Sorted By Exports**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
133	New Jersey	8	804.9	2.1	5.5	7.6
134	Missouri	3	802.3	2.2	5.6	7.8
135	Indiana	2	790.0	2.7	5.1	7.8
136	California	50	782.8	2.9	4.5	7.4
137	New York	18	779.1	2.8	5.4	8.2
138	Illinois	14	768.9	2.1	6.8	8.9
139	Colorado	5	764.9	2.9	7.6	10.5
140	California	3	759.9	2.1	5.6	7.6
141	Florida	17	755.9	3.9	3.8	7.7
142	Washington	8	755.4	2.3	6.7	9.0
143	Tennessee	8	753.6	2.3	5.1	7.4
144	Arizona	4	752.0	2.4	7.1	9.5
145	Ohio	5	736.4	3.0	5.5	8.5
146	California	38	736.0	2.4	5.1	7.6
147	Massachusetts	10	731.7	2.3	6.2	8.5
148	Illinois	3	716.9	1.9	5.4	7.3
149	California	11	714.6	1.8	5.2	7.0
150	Georgia	4	711.5	1.7	7.4	9.1
151	Maine	1	705.4	3.4	6.4	9.8
152	California	34	702.2	2.3	4.5	6.8
153	Minnesota	7	697.3	2.5	5.5	8.0
154	Michigan	4	696.7	2.9	5.5	8.4
155	Minnesota	8	692.0	2.6	5.6	8.2
156	California	31	683.4	2.3	4.3	6.6
157	Massachusetts	9	676.7	2.1	5.9	8.0
158	Pennsylvania	19	673.7	3.3	6.1	9.4
159	Utah	1	672.2	2.8	6.6	9.4
160	Minnesota	2	670.8	2.3	6.0	8.3
161	Nevada	2	667.6	3.8	9.6	13.4
162	Wisconsin	9	657.0	2.6	6.4	8.9
163	California	22	651.1	2.4	5.4	7.8
164	North Carolina	6	648.5	2.5	6.7	9.2
165	Wisconsin	1	644.2	2.3	5.8	8.1
166	Illinois	5	640.8	1.7	6.4	8.1
167	Illinois	13	636.5	1.6	7.4	9.0
168	Illinois	20	631.2	1.8	5.4	7.2
169	Alabama	5	628.9	3.1	5.8	8.8
170	New York	28	627.3	2.2	5.3	7.5
171	Florida	9	620.7	2.2	6.4	8.6
172	Ohio	19	618.6	2.3	5.6	7.9
173	California	10	618.2	1.4	6.7	8.1
174	Ohio	4	611.1	2.4	5.2	7.7
175	Massachusetts	3	610.5	2.0	6.1	8.1
176	South Dakota	1	608.7	3.0	7.1	10.1

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
Sorted By Exports**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
177	New Jersey	10	606.1	1.6	4.5	6.2
178	Texas	20	605.5	2.2	4.8	7.0
179	Pennsylvania	15	591.4	1.9	5.6	7.5
180	Missouri	1	589.8	1.6	4.1	5.7
181	Idaho	1	580.4	1.9	6.2	8.1
182	Massachusetts	2	579.7	2.0	5.6	7.7
183	New Hampshire	2	575.6	2.6	6.0	8.7
184	Nebraska	1	574.8	2.0	5.8	7.8
185	Ohio	10	574.1	2.1	5.2	7.3
186	Illinois	11	568.5	1.6	5.6	7.2
187	Florida	15	566.6	2.6	5.9	8.5
188	Pennsylvania	6	565.7	2.4	5.3	7.8
189	New York	31	563.3	2.4	4.9	7.3
190	Louisiana	3	561.5	1.6	4.9	6.5
191	Ohio	9	560.2	1.9	5.1	7.0
192	New York	25	559.8	2.1	5.1	7.2
193	New York	3	559.5	1.7	5.4	7.1
194	Louisiana	1	558.7	1.4	5.9	7.2
195	Illinois	4	557.3	1.4	4.5	6.0
196	Idaho	2	545.9	1.9	5.2	7.1
197	Georgia	10	545.5	2.0	5.2	7.2
198	New Hampshire	1	544.4	2.2	6.3	8.6
199	California	41	543.3	1.7	5.4	7.1
200	New York	9	542.2	2.3	5.2	7.5
201	Tennessee	6	541.6	2.1	7.1	9.2
202	Iowa	1	538.3	2.0	6.0	8.0
203	Michigan	1	536.3	2.3	5.4	7.7
204	New York	6	535.8	2.2	5.2	7.3
205	New Mexico	1	535.1	2.2	5.2	7.5
206	Illinois	7	533.8	1.4	4.4	5.7
207	New Mexico	3	533.0	2.2	5.0	7.2
208	California	1	530.5	1.4	5.3	6.7
209	California	6	525.5	1.9	6.2	8.2
210	Florida	19	522.4	1.6	6.6	8.2
211	Indiana	3	522.4	2.5	5.6	8.1
212	New Mexico	2	519.1	2.2	4.3	6.5
213	Indiana	9	518.8	2.6	5.7	8.3
214	New York	4	513.2	1.6	5.4	7.0
215	California	40	511.7	1.9	4.8	6.7
216	Indiana	8	511.3	2.5	5.4	7.9
217	Indiana	10	511.0	1.5	5.1	6.6
218	California	43	510.0	1.7	5.8	7.5
219	Pennsylvania	4	502.8	1.7	5.1	6.8
220	Pennsylvania	3	502.1	1.7	4.4	6.1

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
Sorted By Exports**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
221	Virginia	10	500.2	1.6	8.1	9.6
222	North Carolina	5	499.8	2.0	5.9	7.9
223	Pennsylvania	8	497.1	1.6	6.1	7.7
224	North Carolina	2	494.3	1.9	6.7	8.6
225	Connecticut	2	492.9	1.9	5.4	7.3
226	Michigan	6	492.3	2.3	5.6	7.9
227	Maryland	1	489.6	2.2	6.4	8.6
228	Texas	30	489.2	1.2	5.0	6.2
229	Ohio	18	488.9	1.9	4.9	6.7
230	Wisconsin	2	487.6	2.0	6.6	8.7
231	Oregon	2	485.8	1.8	5.8	7.6
232	Ohio	15	484.0	1.5	6.6	8.1
233	Georgia	3	483.9	1.2	6.9	8.1
234	Washington	2	482.6	1.3	6.4	7.7
235	Wisconsin	6	480.8	2.3	5.9	8.1
236	California	9	479.2	1.1	5.3	6.4
237	Illinois	15	479.0	1.5	5.6	7.1
238	California	35	477.3	1.6	3.9	5.5
239	Arizona	3	476.2	1.6	7.8	9.4
240	New York	21	474.4	1.7	5.2	6.9
241	Michigan	15	468.8	1.0	3.4	4.4
242	Georgia	9	468.4	1.5	7.5	9.0
243	Georgia	7	463.3	1.5	6.8	8.3
244	Pennsylvania	20	463.3	1.6	4.8	6.4
245	Pennsylvania	2	461.0	1.6	4.1	5.6
246	Georgia	1	459.9	1.5	5.5	7.0
247	Virginia	11	459.9	1.2	6.6	7.8
248	California	7	455.6	1.0	5.6	6.5
249	Missouri	6	452.5	1.4	6.0	7.4
250	Ohio	11	452.5	1.6	4.1	5.8
251	Tennessee	4	451.0	2.1	5.3	7.4
252	New Jersey	6	449.7	1.2	6.0	7.2
253	Georgia	11	446.0	1.5	7.9	9.5
254	Arkansas	3	445.4	1.7	6.6	8.3
255	Ohio	16	440.7	1.8	5.5	7.3
256	Pennsylvania	18	438.0	1.5	4.7	6.1
257	New York	19	436.6	1.2	5.7	6.8
258	Kentucky	1	435.7	2.0	5.2	7.3
259	California	32	433.2	1.4	4.6	6.1
260	Pennsylvania	7	431.5	1.2	5.5	6.7
261	Alaska	1	429.1	1.4	5.3	6.7
262	Pennsylvania	17	426.4	1.5	5.8	7.3
263	Ohio	12	418.9	1.2	6.3	7.5
264	Tennessee	9	414.7	1.0	4.0	5.0

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
Sorted By Exports**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
265	Pennsylvania	16	413.2	1.2	6.1	7.4
266	Wisconsin	8	412.4	2.0	6.0	7.9
267	Texas	4	409.2	1.2	6.2	7.4
268	New York	20	408.4	1.0	5.6	6.6
269	Texas	12	407.3	1.4	5.7	7.2
270	Maryland	6	406.3	1.7	6.8	8.5
271	Missouri	4	405.7	1.4	5.7	7.1
272	Tennessee	3	398.6	2.2	5.2	7.4
273	South Carolina	5	396.5	1.7	5.6	7.3
274	Wisconsin	3	392.4	1.9	5.9	7.8
275	New Jersey	3	390.4	1.2	5.7	6.9
276	California	42	387.2	1.4	5.0	6.4
277	North Carolina	3	386.8	1.5	4.8	6.4
278	Pennsylvania	1	385.9	1.3	3.4	4.7
279	North Dakota	1	382.9	1.5	6.0	7.5
280	Wisconsin	7	380.7	1.9	5.5	7.4
281	Wisconsin	5	378.8	1.6	4.2	5.8
282	New Jersey	4	378.0	1.1	5.7	6.8
283	Alabama	4	378.0	2.0	5.2	7.2
284	California	26	376.4	1.3	4.8	6.1
285	North Carolina	9	376.4	1.1	6.8	7.9
286	Virginia	9	375.6	2.0	4.7	6.7
287	Virginia	5	375.3	1.8	5.4	7.2
288	Utah	3	374.3	1.5	6.5	8.0
289	New York	24	373.4	1.6	4.6	6.1
290	Maine	2	371.0	1.9	5.4	7.3
291	Alabama	6	371.0	1.7	6.3	7.9
292	Nebraska	3	370.8	1.3	5.0	6.4
293	North Carolina	8	370.8	1.2	5.4	6.6
294	Kentucky	3	368.0	0.9	5.7	6.6
295	Georgia	5	367.9	0.9	5.6	6.5
296	California	28	367.8	1.3	5.2	6.5
297	Iowa	5	366.8	1.5	5.2	6.7
298	Virginia	6	365.9	1.8	5.5	7.3
299	Massachusetts	8	363.0	1.1	6.0	7.1
300	California	4	361.4	1.1	6.4	7.4
301	California	33	352.0	1.2	3.6	4.8
302	Massachusetts	1	350.4	1.7	5.7	7.4
303	Louisiana	6	348.0	0.8	5.8	6.6
304	Pennsylvania	21	341.3	1.8	5.0	6.8
305	Oklahoma	2	339.9	1.5	4.8	6.3
306	Washington	5	338.6	1.2	5.3	6.5
307	Illinois	19	337.4	0.8	4.9	5.7
308	Oklahoma	1	336.1	1.4	5.5	6.9

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
Sorted By Exports**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
309	Louisiana	2	335.7	0.9	4.4	5.2
310	Pennsylvania	14	333.8	1.0	4.6	5.6
311	Tennessee	5	327.2	1.1	5.9	6.9
312	South Carolina	1	324.3	1.3	6.2	7.5
313	Arkansas	4	324.2	1.4	4.8	6.1
314	Alabama	7	323.7	1.5	3.7	5.1
315	Minnesota	1	318.2	1.2	5.9	7.1
316	Georgia	8	315.6	1.4	5.2	6.7
317	Alabama	2	315.1	1.7	5.3	7.0
318	Utah	2	313.0	1.2	6.7	8.0
319	Pennsylvania	9	309.5	1.6	5.1	6.6
320	Texas	5	308.6	0.8	5.5	6.3
321	South Carolina	2	307.8	1.1	6.4	7.6
322	New York	22	307.0	1.4	5.6	7.0
323	California	44	306.9	1.3	5.1	6.3
324	South Carolina	6	306.6	1.2	4.5	5.7
325	California	25	306.4	1.0	5.8	6.8
326	North Carolina	11	305.0	1.6	5.7	7.3
327	North Carolina	10	302.8	1.6	6.3	7.9
328	Florida	6	299.5	1.1	5.7	6.8
329	New York	30	298.4	1.0	4.7	5.8
330	New York	1	297.2	1.1	5.9	7.0
331	North Carolina	1	295.4	1.2	4.5	5.7
332	Nebraska	2	294.5	0.8	5.8	6.6
333	New York	23	290.0	1.4	4.8	6.1
334	Mississippi	1	284.1	1.8	5.1	6.9
335	Ohio	3	283.1	0.9	4.9	5.9
336	Iowa	3	281.9	1.2	5.4	6.6
337	Virginia	8	279.9	0.7	6.7	7.3
338	Kansas	1	276.3	0.9	5.8	6.7
339	California	5	275.9	0.8	5.5	6.3
340	Florida	10	275.2	1.1	5.1	6.2
341	Florida	3	274.0	0.8	4.5	5.4
342	Missouri	5	273.7	0.7	5.2	5.9
343	Virginia	1	273.6	1.2	6.2	7.4
344	Maryland	3	270.1	1.1	6.0	7.1
345	New Jersey	2	269.0	0.9	5.5	6.4
346	California	19	269.0	1.0	5.4	6.4
347	New York	26	267.1	1.4	5.1	6.5
348	Florida	16	265.6	0.9	6.1	7.0
349	California	2	264.2	0.9	4.8	5.7
350	Washington	3	264.1	1.0	6.1	7.1
351	Ohio	6	262.1	1.1	5.0	6.0
352	Connecticut	3	260.0	0.8	5.2	6.0

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
Sorted By Exports**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
353	Pennsylvania	5	258.7	1.4	4.9	6.3
354	Pennsylvania	11	258.3	1.3	4.9	6.2
355	Colorado	6	255.2	0.7	6.9	7.6
356	Maryland	2	253.2	1.0	6.2	7.2
357	Florida	8	251.6	0.7	7.6	8.3
358	Maryland	8	249.3	1.0	6.8	7.9
359	Rhode Island	2	244.1	1.4	4.8	6.3
360	Tennessee	2	242.8	1.2	5.8	7.0
361	Missouri	9	242.2	0.9	6.5	7.4
362	Kansas	2	240.9	0.9	5.8	6.7
363	New Jersey	1	238.2	0.7	5.4	6.1
364	California	30	236.4	0.8	4.2	5.0
365	Rhode Island	1	234.2	1.4	4.6	6.0
366	Oregon	4	233.7	1.1	5.4	6.5
367	Illinois	1	231.7	0.7	4.0	4.7
368	Montana	1	230.5	1.2	8.1	9.2
369	Illinois	2	229.8	0.7	4.0	4.6
370	Florida	7	229.6	0.7	6.7	7.4
371	California	20	228.4	0.8	4.0	4.8
372	New York	2	226.4	0.8	5.6	6.3
373	Alabama	1	223.0	1.0	5.1	6.1
374	Arkansas	2	222.5	0.9	5.9	6.8
375	Iowa	2	218.0	0.9	5.4	6.3
376	Pennsylvania	10	213.7	1.2	5.2	6.4
377	Maryland	5	211.8	0.8	7.0	7.8
378	Iowa	4	207.2	0.9	6.2	7.1
379	Washington	6	205.9	0.8	4.9	5.7
380	Colorado	1	205.3	0.5	6.3	6.8
381	Florida	11	204.2	0.6	5.7	6.3
382	Arkansas	1	203.8	0.9	5.0	5.9
383	West Virginia	2	200.1	0.9	5.2	6.1
384	Colorado	3	199.6	0.7	6.7	7.5
385	Kentucky	5	195.4	0.8	4.1	4.9
386	Texas	17	190.4	0.7	4.9	5.6
387	Texas	11	190.3	0.7	4.9	5.7
388	Florida	4	185.1	0.6	6.8	7.4
389	North Carolina	7	179.5	0.8	5.8	6.5
390	Texas	2	177.9	0.4	4.9	5.3
391	New York	17	176.3	0.4	4.4	4.8
392	Ohio	17	175.4	0.7	4.7	5.4
393	Pennsylvania	12	174.0	0.8	4.4	5.2
394	Alabama	3	173.8	1.0	5.1	6.1
395	Oklahoma	5	173.1	0.7	5.5	6.1
396	Missouri	8	169.5	0.7	4.9	5.6

**FSC-BENEFITED EXPORTS AND EMPLOYMENT BY
CONGRESSIONAL DISTRICT, 1999
Sorted By Exports**

#	State	CD	Exports (\$ mill)	Export Employment (000s)		
				Direct	Indirect	Total
397	Maryland	7	166.3	0.7	4.1	4.7
398	Missouri	7	165.2	0.7	6.3	7.0
399	Maryland	4	165.2	0.6	6.1	6.7
400	Virginia	4	161.2	0.6	5.3	5.9
401	California	18	160.7	0.5	4.9	5.4
402	Mississippi	5	154.7	0.8	4.8	5.6
403	Louisiana	7	150.4	0.4	5.1	5.6
404	Georgia	2	145.5	0.6	5.0	5.6
405	Mississippi	2	142.9	0.8	3.5	4.3
406	Florida	13	139.9	0.6	5.3	5.8
407	California	21	131.4	0.4	4.8	5.3
408	Virginia	2	124.8	0.4	4.7	5.1
409	Louisiana	4	124.0	0.4	4.6	5.0
410	Mississippi	3	119.0	0.7	4.8	5.5
411	Texas	1	116.4	0.5	4.9	5.3
412	Florida	5	115.6	0.5	5.2	5.7
413	West Virginia	1	111.4	0.5	4.8	5.3
414	Louisiana	5	111.4	0.4	4.5	4.9
415	Oklahoma	4	110.3	0.4	4.8	5.2
416	Oklahoma	6	110.2	0.4	4.3	4.7
417	New York	7	109.9	0.5	5.5	5.9
418	Nevada	1	107.5	0.6	8.1	8.6
419	Florida	1	107.1	0.5	5.4	5.9
420	Oklahoma	3	106.0	0.5	4.5	5.0
421	Florida	12	105.6	0.4	5.4	5.8
422	Texas	13	104.2	0.4	4.7	5.1
423	Wyoming	1	99.1	0.5	4.6	5.1
424	Florida	2	98.6	0.5	5.6	6.1
425	Hawaii	2	89.2	0.5	5.3	5.8
426	Illinois	12	87.8	0.3	4.7	5.0
427	Indiana	1	86.8	0.3	4.9	5.1
428	Florida	14	82.7	0.4	6.2	6.6
429	Hawaii	1	81.8	0.5	4.9	5.4
430	New York	13	77.4	0.3	5.5	5.8
431	Texas	19	71.5	0.2	5.4	5.6
432	West Virginia	3	69.0	0.4	3.9	4.3
433	Mississippi	4	59.5	0.3	4.0	4.4
434	New York	11	28.8	0.1	4.4	4.5
435	New York	10	27.5	0.1	4.2	4.3
436	New York	16	8.6	0.0	3.3	3.4
Total U.S.			314,208.0	1,022.3	2,458.4	3,480.7

Re: Section 911

We appreciate your ongoing efforts to examine the effects of U.S. tax policy on U.S. domestic and international competitiveness. We understand that your July 8 hearings on this subject will focus on U.S.-based operations, while the as-yet unscheduled second hearing will focus on U.S. operations located outside the United States. As you continue consideration of this subject, and possibly move toward action on related legislation, we ask that you avoid measures that would raise taxes on U.S. businesses and American workers abroad.

Specifically, we write to express our opposition to proposals to scale back or repeal Internal Revenue Code Section 911. Section 911 allows U.S. citizens living and working abroad to exclude up to \$80,000 in foreign earnings from gross income.

At a time when global markets are increasing in importance to U.S. companies, U.S. Government tax policies impose unique burdens on Americans working overseas. Unlike their counterparts from other industrialized nations, Americans abroad must pay U.S. income tax on income, benefits, allowances, and overseas adjustments. This puts U.S. companies and American employees working overseas at a significant competitive disadvantage because U.S. employers must pay American workers abroad more than they would pay other nationals. Many employers cannot take on this additional burden even if the American has better professional qualifications.

To make matters worse, the overseas employer must also compensate for the American's income tax on many *non-salary*, quality-of-life items that are taxed as income: reimbursement for the cost of children's schooling, cost of living allowances, home leave, emergency travel, and other necessary and often expensive aspects of living overseas. Thus, in many parts of the world, employers find it significantly cheaper to hire foreign nationals instead of U.S. citizens.

By their very presence overseas, U.S. citizens help to promote America's national interests. Americans who have lived and worked abroad or whose companies rely on overseas markets are well aware of the important link between U.S. exports and Americans overseas. U.S. citizens abroad are prone to *buy American*, *sell American*, *specify American*, *hire American*, and *create opportunities* for other Americans overseas. Expatriate Americans play a vital role in generating U.S. exports, thereby creating U.S.-based jobs and additional tax revenues. For these reasons, section 911 is very much in the U.S. national interest.

Scaling back or repeal of Section 911 clearly is contrary to the growth-oriented objectives of the recently enacted Jobs and Growth Tax Relief Reconciliation Act of 2003 (signed into law on May 28, 2003). When Congress last addressed Section 911 six years ago, it increased the exclusion amount to \$80,000, thereby recognizing the significance of the provision, in advancing the global competitive position of U.S. companies and in retaining jobs for qualified U.S. workers in important international

posts. These goals are more important now than ever. For these reasons, we respectfully request that you oppose efforts to scale back or repeal Section 911.

Sincerely,

James C. Spackman
William A. Meyer
Charles de Foucault
Jonathan Goodspeed
John P. Formichella, M.A., J.D.

Ralph J. Polese

Thomas S. Wright

Luanne Grant (Mrs)

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Mark A. McCune

Marsha Mayer Beaudoin

Sophia Makonnen

Jitendra R. Modi

Mark H. Khan

Mike Whitney
Robert Kofsky
Mr. Brendan Ryan

THE JOB PROTECTION ACT OF 2003 BENEFITS U.S. AGRICULTURE
STATEMENT OF SMITHFIELD FOODS INC.
JULY 8, 2003

Smithfield Foods, Inc. exports 270 thousand tons of food products annually, which impacts over 15,000 full time employees. While we raise 12 million of the hogs used to produce our pork products in the United States as a part of our vertical integration strategy, we also buy 9 million hogs from family farmers across the United States.

The Extraterritorial Income Exclusion (ETI), and its predecessors the Foreign Sales Corporation (FSC) and the Domestic International Sales Corporation (DISC), were enacted to help offset competitive disadvantages faced by U.S. exporters. At the time that DISC was enacted, Congress was concerned that companies were moving their operations overseas and wanted to encourage production of goods in the United States. The DISC, the FSC and the ETI all addressed this dual Congressional concern: maintaining the competitiveness of U.S. exporters and encouraging production of goods in the United States.

Smithfield's business model and the agribusiness industry fit the classic profile of the taxpayer that the DISC, FSC and ETI regimes were enacted to help. If the ETI is repealed without an adequate substitute, many U.S. based exporters will lose an important incentive to keep jobs, assets, and production in the United States and our farmers will lose a competitive advantage to producers in other countries.

Smithfield supports US efforts to honor our WTO obligations and come into compliance with the WTO decision on FSC and ETI by modifying our tax laws. However, we strongly disagree with the notion that the best way to accomplish this is by repealing ETI and using the money raised by repeal to pay for international tax reform that provides no benefit to U.S. exporters.

Smithfield has long felt that a GATT legal measure can be developed to replace the ETI that will not hurt the competitiveness of U.S. exporters. The Job Protection Act of 2003 – commonly referred to as the Crane-Rangel-Manzullo-Levin bill or H.R. 1769 – is such a measure. The legislation aims to replace the ETI which, like the FSC rules it replaced, applies not only to many industrial firms, but also to farmers and agri-businesses as well.

Like ETI and FSC before it, the Job Protection Act of 2003 applies broadly, providing tax benefits for all products “manufactured, produced, grown, or extracted” in the United States. Thus, the legislation's benefits would flow to an agri-business, ranch, farm, or other agricultural concern as well as to any manufacturing concern for income earned from production activities in the United States. Agricultural interests thus qualify for the same benefits with the same conditions under the Jobs Protection Act of 2003 legislation as do manufacturing companies.

In fact, a broader universe of U.S. agricultural concerns will benefit from the tax program created under the Jobs Protection Act of 2003 bill than under FSC and ETI. This is because H.R. 1769 eliminates the FSC/ETI requirement to export – the central WTO-inconsistency of those laws – and applies to income from domestic agricultural production, regardless of where that production is sold.

Opponents of the Job Protection Act argue that U.S. agricultural exports risk retaliation under this legislation. This is not the case. It is true that the European Union, which successfully challenged FSC/ETI in the WTO, has threatened to impose trade retaliation against the United States by January 2004 if the United States has not made sufficient progress by then in complying with the WTO's decision. It is also true that EU retaliation, if implemented, might impact agricultural exports. European trade officials, however, have indicated that such retaliation is not imminent or certain.

Far from risking retaliation, the Job Protection Act of 2003 is the *only* legislation yet introduced in the House of Representatives to date that promises to settle the long-standing FSC/ETI trade dispute with the Europeans and to remove the threat of a trade war. Currently, the bill has broad, bipartisan support from roughly 120 cosponsors. It also complies with WTO rules. The legislation provides a domestic production incentive that is not export contingent and is otherwise consistent with WTO rules. Indeed, Canada and other countries have used a similar tax regime for years and have never been challenged in the WTO. And finally, and most importantly, The Job Protection Act is good policy, replacing ETI and FSC with a program encouraging domestic production, not the shifting of production offshore. In short, the Job Protection Act legislation is by far the most viable vehicle for avoiding a trade war over the FSC/ETI dispute, protecting agriculture from retaliation and maintains US jobs and family farm income.

The Job Protection Act of 2003 merits strong support from the U.S. agricultural community as it provides a tax incentive for domestic agricultural production and removes the threat of a trade war that could harm American agriculture. These benefits explain why the National Farmer's Union, along with Smithfield Foods, has joined major American manufacturers and organized labor to press for passage of the Job Protection Act. Having evaluated H.R. 1769, they recognize the bill enables the United States to comply with its WTO obligations while not compromising the interests of U.S. farmers and producers and their workers.