SHARPENING OUR EDGE—STAYING COMPETITIVE IN THE 21ST CENTURY MARKETPLACE

HEARING

BEFORE THE

COMMITTEE ON GOVERNMENT REFORM

HOUSE OF REPRESENTATIVES

ONE HUNDRED NINTH CONGRESS

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SHARPENING OUR EDGE—STAYING COMPETITIVE IN THE 21ST CENTURY MARKETPLACE

THURSDAY, FEBRUARY 9, 2006

HOUSE OF REPRESENTATIVES,
COMMITTEE ON GOVERNMENT REFORM,
Washington, DC.

The committee met, pursuant to notice, at 9:09 a.m., in room 2154, Rayburn House Office Building, Hon. Tom Davis (chairman of the committee) presiding.

Present: Representatives Tom Davis, Ros-Lehtinen, Mica, Gutknecht, Miller, Turner, Issa, McHenry, Foxx, Cummings, Van Hollen, Ruppersberger, and Norton.

Staff present: David Marin, staff director; Ellen Brown, legislative director and senior policy counsel; John Hunter and Jim Moore, counsels; Rob White, press secretary; Drew Crockett, deputy director of communications; Brien Beattie, professional staff member; Teresa Austin, chief clerk; Sarah D'Orsie, deputy clerk; Leneal Scott and J.R. Deng, computer systems managers; Krista Boyd, minority counsel; Adam Bordes, minority professional staff member; Earley Green, minority chief clerk; and Jean Gosa, minority assistant clerk.

Ms. ROS-LEHTINEN [presiding]. The committee will come to order. We thank the Secretary of Commerce Carlos Gutierrez for appearing before us this morning. Congressman Davis is on his way. I apologize for my casual attire, but we have a retreat in Maryland. The buses leave in just a few moments.

Some of the Members are going to stay around, Mr. Secretary, to hear your testimony as well as to hear from our private panel as well. And they will be going to meet us in a little bit.

But I wanted to open up the meeting and give Members an opportunity to make opening statements, and I would just like to say what a delight it is for me to be with you, Mr. Secretary, because certainly our economy is in great shape, and I think that has a lot to do with the steady hand with which you have dealt with your department to stimulate the economy, to diversify our workforce and to make sure that we can do all we can to have all of the economies of the world be free. And I notice that you refer to that freedom quotient in your testimony from the Heritage Foundation, and I thank you for that.

You have a compelling personal story that in my congressional district is well known, and I think it speaks to the many opportunities that are available here in the United States of America for any immigrant, for any refugee who wants to come here, study, work hard, play by the rules and become an America success story. And

that, Mr. Secretary, you truly are. You're a role model for all of us, and we take great pride in my congressional district especially to see you sitting here being the Secretary of Commerce. It's always a pleasure.

With that, I'd like to turn to Congressman John Mica, my Florida colleague, for opening statements, for the beginning of them.

Mr. MICA. Thank you, Madam Chairwoman, and good morning. I am pleased to have Secretary Gutierrez with us this morning and two other distinguished panels. I too will be joining my colleagues on the majority side of the aisle as we convene to plan our agenda for the balance of the year, and actually one of the most important questions that we could consider is staying competitive in the 21st century marketplace and sharpening our edge, which is the title of this morning's hearing.

I think it's particularly important, I have been on Government Reform with Ileana Ros-Lehtinen I think for 14 years. I don't know that we've really spent much time focusing on this. We did look at a trade and business commerce reorganization back in the 90's. But I think this is extremely important.

I commend the President on looking at how we focus on a workforce for the future, and I think some of the elements that have been proposed as far as increasing our capability with science, math, education and job training are absolutely essential elements and will strongly support the administration's proposal.

I think that—actually, I read all of the testimony last night, and it was very enlightening. You have a great array of expert witnesses who actually deal in business and commerce and some of the cutting edge of where the opportunities are for the future. And they have also identified tax policy, health care and a number of other challenges that we face in the global marketplace to keep up with some very good expertise witnesses.

What I wanted to do is just take a few minutes though and talk about one thing that isn't here. It's one of my favorite subjects. As we all know, we have a $700 billion trade deficit. We are projecting this year about a $400 billion budget deficit. I am more concerned about the trade deficit than I am the budget deficit. We'll work our way through that. In the Reagan era, when we dealt with the challenge of international communism, we had to spend money to protect and defend and also keep us secure. We are doing the same thing now in the war on terrorism. But a $700 billion trade deficit should really be of concern, and some of the proposals the President put forth are longer term.

Now, one of the things I think we need to do and I want to focus just a second, I think we have the Secretary—I thought we had somebody, too, from the Department of State was on this before, but they—I don't see them now but we'll get a copy of this because they both play an important role in international trade as far as the government is concerned. How do we increase trade and deal with this deficit? It's pretty simple. You deal with trade assistance, trade promotion, trade finance and trade negotiation on the international scene.

Unfortunately, I still maintain—and some have heard this song and dance before—that the way the United States conducts international trade, business and commerce is somewhat dysfunctional.

I have a chart that's up there, and you can see it. It hasn't changed much. We have put a little bit of lipstick on the pig, but it is still a rather dysfunctional array of activities where negotiation is out here; finance out here. Commerce has something; State has something, and a host of other agencies that we see. We try to coordinate it, but we don't always get the best results.

One of the additional problems that we have in addition to having a dysfunctional trade organization is that our competition, China, the European Union, have actually come together, are more organized for trade, for trade finance. You can't tell where business, government, finance and trade negotiation begins and ends. And that is the competition that we face, and we don't have a structure to deal with that in the 21st century.

I want to talk a little bit about trade assistance and promotion and one of the challenges we face right now. I have another chart. If you look at really what we spend on trade assistance—international trade administration accounts for 4 percent of the Department of Commerce budget. If we look at the 40,000 people we have in the Department of Commerce, you might say that 1,200 directly deal with business and trade. So the Department of Commerce is somewhat a misnomer. It's sort of a weather department, and also NOAA, Bureau of Census, take up 65 percent of the resources, very little with trade.

What is even worse is that the amount of money that we are spending, the net amount of money—if you could put chart 4 up—because of some of the things Congress has done—you can't see that very well—but trade administration started out in 2005 with $403 million, went down to $398 in 2006. This wouldn't be bad enough, that we're reducing the amount of resources dedicated to promoting trade, business assistance and the activities to sell overseas, but we also have a capital cost sharing requirement, and that means that they are being charged against their budget for security and improvements that are usually wherever this foreign commercial service operation is located overseas. So actually you have a net reduction in the amount of money that's spent. And, actually, I have heard of offices, potential offices being closed.

So these are on the front line of doing business overseas, and we're decreasing our resources, not the Secretary's fault. It's the Congress' fault, OMB and others who deal with these issues.

I wanted to also say that, in addition to a net reduction in our resources to assisting business, most of this is not directed to the Ford's or to the—well, God knows, Ford has its problem and the large U.S. corporations, because most of them can deal overseas, but to medium and small business, which have the most difficulty in competing overseas, then the structure that we have as far as foreign commercial service operations—I have a chart, foreign commercial service operations by region. And we have a total of 79 foreign commercial service operations. And in some countries, we have them where we probably don't need them. We have about 80-some countries where we have no foreign commercial service operation.

Now that wouldn't be bad enough if those who have the responsibility—we don't have a foreign commercial service operation; we have the responsibility given to the Department of State. The Department of State has—I queried the Department of State, and I

think we have 290 foreign commercial service officers under the Secretary located overseas.

The bulk of the positions overseas that deal with the economic assistance and promoting U.S. business and aid to business overseas, we have 497 officers who are economic officers under the Department of State.

If this doesn't have you confused, I'll totally confuse you in a minute. We have a total of 1,319 economic officers, foreign service officers. That's within the Department of State. So they're not located overseas, so most of those are probably in Washington or wherever. So 497.

Then we asked, what do they do? And this is the response and the way they said it: The difference is accounted for by the fact that many economic officers are entry level officers who in their first one or two tours in the foreign service fill rotational or counselor positions. So that's what we're sending in the areas where we have no foreign commercial service officers, sort of our rookies to assist business.

So the structure is dysfunctional, the resources are being cut back, and then we send rookies in to do the job. When you want to promote business, assist business, you have to have people who know what they're doing, and we send in sometimes the least capable.

We do have the same problem in Congress. Nobody is responsible specifically for putting together a comprehensive trade and business package. We have the same jurisdictional problems Department of Commerce has with dealing with State and the myriad other agencies we saw.

Just, in conclusion, for example, in the Baltic areas, Lithuania, Estonia, Latvia, I think we have one foreign commercial service officer for three of the biggest emerging markets, and we're about to lose that person.

Some years ago, through some political wheeling and dealing, I got a foreign commercial service officer assigned to the Slovak Republic. When we did that—you can see the figure when he first came in was $225,000; this is with one position—up to a quarter of a billion dollars of U.S. business. In addition to what you see here and not accounting for are about six Boeing aircraft worth more than $1 billion. That's in a short period with one person.

So in most countries, again, we have no foreign commercial service officer or rookies. In the emerging markets, we have very limited resources. And to do business—put back up the embassy. Having been in international trade for 7 years in the private sector—where is the picture of one of the embassies?

I defy you to try to conduct business as an American businessman or someone overseas—this is one of our embassies—and penetrate from that gate to get into the foreign service commercial offices. Most of the assistance is located within the embassy. This isn't the Citadel that most of them are, but it was difficult as me as a former chief of staff in the U.S. Senate with sort of credentials to even penetrate into this and talk to anybody, again, with my standing.

So this is the system that we have in place now for assisting U.S. trade and business. Mostly the small guys. On top of that, we have

a system of penalizing them. We charge them a fee. Most countries do not charge a fee. Some underwrite their international trade and business efforts, not to mention research and development and all the other things that are done.

So not many people are familiar with this structure. I raise this as something continually that we need to pay attention to. I thank you for allowing me the time, Mr. Chairman. We filled a little with your coming in.

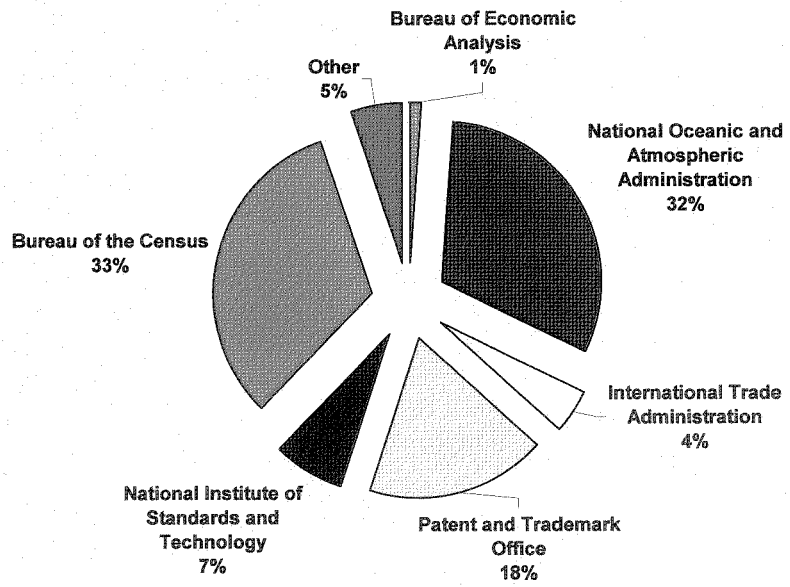
What we're talking about here today is very important. I support the initiatives proposed. I think we need to even look beyond that. Thank you.

[The information referred to follows:]

Trade Promotion Coordinating Committee (TPCC): Agencies of the U.S. Government involved in Trade Policy Formulation, Promotion or Finance
USTR
Treasury
DOD
DOE
USDA
DPA
DOT
CEA
DOL
OMB
NSC/NEC
A/S for Int'l Affairs
Directorate of Defense Trade Controls
A/S for Policy and International Affairs
Export Credit Guarantee Programs
Foreign Service
State
Ex-Im Bank
OPIC
TPCC
SBA
DOC (ITA)
TDA
USAID
Foreign Agricultural Service
Office of Aviation and International Affairs
Global Trade and Technology Network
Bureau of Int'l Labor Affairs
Trade Promotion & Finance Agencies
Foreign Service Agencies (Excluding Commerce)
Functional/Sector Specific Agencies
Policy/Oversight Agencies
Adapted and Updated by the Congressional Research Service, April 2004

Department of Commerce Employment Figures

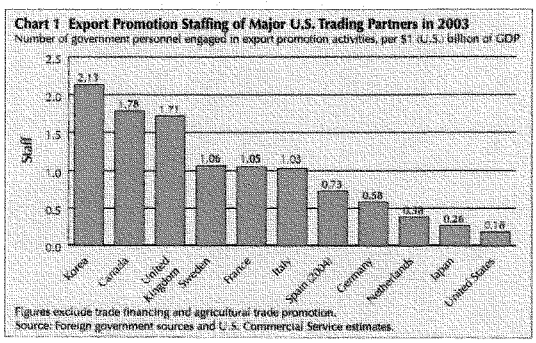
as of September 2005

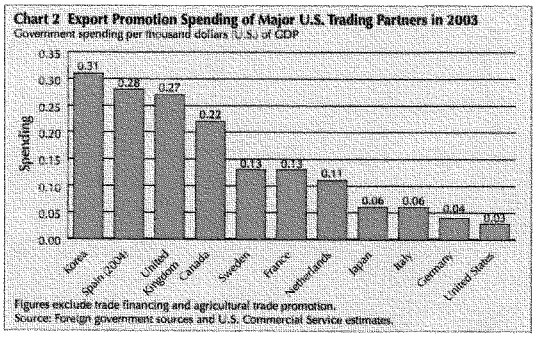


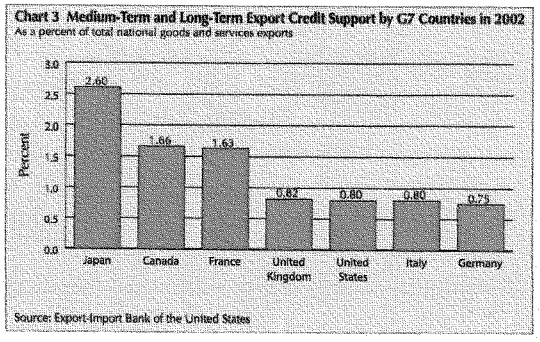
The Department of Commerce is a misnomer.

Of the 40,093 employees at Commerce, only 12,000 jobs focus on business and international trade.

Government Spending and Staffing of Major Exporting Countries*







* The U.S. figures in Charts 1 and 2 are based on trade promotion activities of the Commerce Department, International Trade Administration. Federal trade promotion funding (as defined in Chart 2) has averaged approximately $300 million in the current four-year period (FY 2001–2004), up from an average of approximately $260 million in the preceding four-year period (FY 1997–2000).

The Presidential Budget Proposal for Fiscal Year 2007

Department of Commerce

(In millions of dollars)

	2005 Actual	Estimate	
		2006	2007
International Trade Administration	**403**	**398**	**409**
Capital Security Cost-Sharing - Program Obligations	**3.095**	**10.57**	**20.687**
	399.095	**387.43**	**388.313**

Foreign Commercial Service Offices
By Region

Africa/Near East/South Asia

1. Algeria
2. Cote d'Ivoire
3. Egypt
4. Ghana
5. India
6. Israel
7. Jordan
8. Kenya
9. Kuwait
10. Lebanon
11. Morocco
12. Nigeria
13. Pakistan
14. Saudi Arabia
15. Senegal
16. South Africa
17. UAE

East Asia/Pacific

18. Australia
19. China
20. Indonesia
21. Japan
22. Korea
23. Malaysia
24. New Zealand
25. Philippines
26. Singapore
27. Taiwan
28. Thailand
29. Vietnam

Europe

30. Austria
31. Belgium
32. Bulgaria
33. Croatia
34. Czech Republic
35. Denmark
36. Finland
37. France
38. Germany
39. Greece
40. Hungary
41. Ireland
42. UK (Ireland, N.)
43. Italy
44. Latvia
45. Netherlands
46. Norway
47. Poland
48. Portugal
49. Romania
50. Russia
51. Slovak Republic
52. Spain
53. Sweden
54. Switzerland
55. Turkey
56. Ukraine
57. United Kingdom
58. Yugoslavia

Western Hemisphere

59. Argentina
60. Barbados
61. Brazil
62. Canada
63. Chile
64. Colombia
65. Costa Rica
66. Dominican Rep
67. Ecuador
68. Guatemala
69. Honduras
70. Jamaica
71. Mexico
72. Panama
73. Peru
74. Trinidad/Tobago
75. Uruguay
76. Venezuela

209

Foreign

EMBASSIES AT WHICH STATE DEPARTMENT PERFORMS COMMERCIAL FUNCTION

AFRICA

1 Abidjan
2 Addis Ababa
3 Antananarivo
4 Asmara
5 Bamako
6 Bangui
7 Banjul
8 Bissau
9 Brazzaville
10 Bujumbura
11 Conakry
12 Cotonou
13 Dar Es Salaam
14 Djibouti
15 Freetown
16 Gaborone
17 Harare
18 Kampala
19 Khartoum
20 Kigali
21 Kinshasa
22 Libreville
23 Lilongwe
24 Lome
25 Luanda
26 Lusaka
27 Maputo
28 Maseru
29 Mbabane
30 N'djamena
31 Niamey
32 Monrovia
33 Nouakchott
34 Ouagadougou
35 Port Louis
36 Praia
37 Windhoek
38 Yaounde

EAST ASIA & PACIFIC

39 Apia
40 Bandar Seri Begawan
41 Dili
42 Kolonia
43 Koror
44 Majuro
45 Phnom Penh
46 Port Moresby
47 Rangoon
48 Suva
49 Ulaambaatar
50 Vientianne

EUROPE

51 Ashgabat
52 Baku
53 Bishkek
54 Chisinau
55 Dushanbe
56 Ljubljana
57 Luxembourg
58 Minsk
59 Nicosia
60 Reykjavik
61 Riga
62 Sarajevo
63 Skopje
64 Tallinn
65 Tashkent
66 Tbilisi
67 Tirana
68 Valletta
69 Vilnius
70 Yerevan

NEAR EAST

71 Algiers
72 Beirut
73 Damascus
74 Doha
75 Manama
76 Muscat
77 Sanaa
78 Tripoli
79 Tunis

SOUTH ASIA

80 Colombo
81 Dhaka
82 Islamabad
83 Kabul
84 Kathmandu

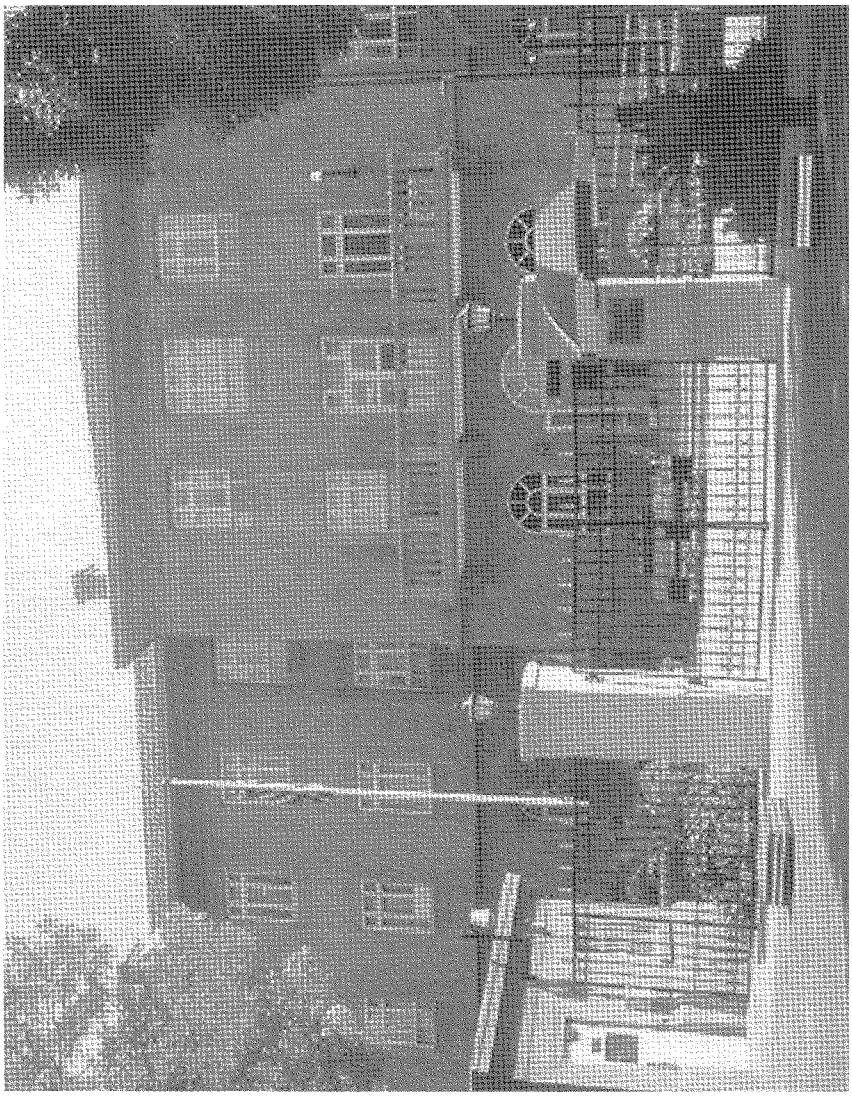
WESTERN HEMISPHERE

85 Asuncion
86 Belize
87 Bridgetown
88 Georgetown
89 Kingston
90 La Paz
91 Managua
92 Montevideo
93 Nassau
94 Paramaribo
95 Port au Prince
96 Port of Spain
97 St. Georges
98 Tegucigalpa

497 - Overseas (1319) - Total -

"As you can see, the number of economic positions overseas (497) is considerably less than the number of Foreign Service officers with an economic specialty (1319). The difference is accounted for by the fact that ***many economic officers are entry level officers, who in their first one or two tours in the Foreign Service fill rotational or consular positions;*** other economics officers are stationed in Washington, others are participating in long-term training or performing non-economic jobs overseas, including senior positions as Chiefs of Mission and Deputy Chiefs of Mission."

-Matthew A. Reynolds
Acting Assistant Secretary
Legislative Affairs



Foreign Commercial Service Impact
On Exports to the Republic of Slovakia

	Counted Successes	Export Value per Year
FY2002	4	$225,000
FY2003	21	$23,400,000
FY2004	30 +	$55,000,000
FY2005	30 +	$209,000,000

Chairman TOM DAVIS [presiding]. Mr. Secretary, you have limited time here; is that correct? You have a limited period of time.

Secretary GUTIERREZ. Yes.

Chairman TOM DAVIS. Let me ask Members if we can hear from the Secretary and do questions, and then I'll put my statement in the record.

[The prepared statement of Chairman Tom Davis follows:]

Opening Statement of Chairman Tom Davis
Government Reform Committee Hearing
"Sharpening Our Edge – Staying Competitive in the 21st Century Marketplace"
February 9, 2006

Good morning, today the Committee meets to study the challenges America faces in staying competitive in the 21st Century global economy.

Over the last few years, the rapid growth of emerging free market economies has led to a heated debate in the United States. Pundits, politicians and armchair economists have all warned about the impact of low-cost Chinese labor, Indian outsourcing and vast numbers of new Asian engineering graduates on the traditional economic leadership role of the United States.

It is true that the IT revolution and the continued push to lower global trade barriers has helped create what New York Times columnist Tom Friedman has referred to as a "flatter" world. It's a world in which many familiar have been reordered and in which American workers have to compete with their counterparts around the world more directly than ever before. However, as David Brooks, also of the New York Times, pointed out in a recent column, "Americans remain the hardest working people on the face of the earth and the most productive."

It is important to remember that the United States has been the prime mover in fostering the rise of the global economic order. If the globalizing world increasingly resembles America, it is because the rules and values on which that world operates are becoming increasingly American – competition, transparency and free markets – and because it is American companies that are often best-positioned to take advantage of new global opportunities.

However, many Americans, including some Members of Congress, have reacted to some of the tougher changes brought about by globalization by advocating U.S. withdrawal from the bold new world it is responsible for creating. After all, as Friedman noted, "It is easy to demonize free markets - and the freedom to outsource and offshore – because it is so much easier to see people being laid off than being hired." Yet the truth is that the U.S. unemployment rate this month hit a nearly a five-year low and the availability of low-cost consumer goods and services from China and India have allowed average Americans to stretch their hard-earned dollars further than ever before. Think DVD players. Think cell phones. Think leather jackets.

As Members of Congress, our reaction to the global economy should not be to fear or shun it. Rather, it should be to constantly look for ways to streamline U.S. policies in order to maximize our ability to blaze new paths and nurture innovation. In setting forth his American Competitiveness Initiative during the State of the Union address, the President offered some challenging proposals. Our purpose here today is to not only examine this Initiative but to help frame the debate over maximizing U.S. competitiveness. We'll hear from business leaders who have been successful in the global economy. We want them to tell us if the many competitiveness proposals will actually make a difference to decision makers in the business world.

Today we are honored to welcome the Secretary of Commerce, Carlos M. Gutierrez. We will also hear from Dr. Hector de J. Ruiz, President and CEO of Advanced Micro Devices; M. Brian O'Shaughnessy, President and CEO or Revere Copper Products; Mr. Richard S. Garnick, President, North American Services for Keane, Inc.; Ms. Deborah Wince Smith, President of the Council on Competitiveness; and former Congressman Dave McCurdy, President of the Electronic Industries Alliance. Thank you all very much for being here.

Chairman TOM DAVIS. So why don't you proceed at this point. It's our policy we swear you in before you testify, so raise your right hand.

[Witness sworn.]

Chairman TOM DAVIS. We very much appreciate you being here. This is an important hearing. This not only fits into what the President mentions in the State of the Union but something a lot of us have been talking about for a long time, a changing world economically and America's being ready to compete in that world. Go ahead. Thank you.

STATEMENT OF CARLOS M. GUTIERREZ, SECRETARY, U.S. DEPARTMENT OF COMMERCE

Secretary GUTIERREZ. Thank you, Mr. Chairman. I appreciate the opportunity to be here. Members of the committee, I am very pleased to have this opportunity to discuss American competitiveness, and with your permission, Mr. Chairman, I'd like to make a brief opening statement and submit my written testimony for the record.

Let me say at the outset that American companies and American workers are the most competitive and innovative in the world. And I would like to just repeat that because it's often good to remind ourselves again and again that we are the most competitive economy on the face of the Earth.

Our GDP per capita is among the highest in the world. Over the past 4 years, the United States has experienced faster growth in real GDP than any other major industrialized nation. Our 2005 GDP per capita is higher than that of Japan, the UK, Germany, France, Italy and Canada. So therefore we have the highest GDP per capita of any other G7 nation.

Just to give you an idea, the U.S. economy is growing well over twice as fast as the European Union, so the European Union being a very large economy in the worldwide context, our economy is growing twice as fast as that of the European Union.

Our unemployment rate is 4.7 percent. This is lower than the unemployment rate in Canada, in Italy, in Germany and in France, and in many of those countries the range there is anywhere from 6.5 all the way up to 9 percent.

The United States is the world's leading exporter of goods and services. U.S. productivity has had one of the fastest 5-year periods of growth in almost 40 years. We have created over 4.8 million jobs since April 2003. An estimated 72 percent of the world's total venture capital spending is invested in U.S. companies.

So America's willingness and ability to compete has made our Nation's the most powerful economy, and the great thing is that we have the numbers and we have the results and we have the facts to show it. The challenge of course is, how do we maintain our leadership role as the most competitive economy in the world? How do we keep it going? And how do we step it up even more in light of the fact that the world is getting more and more competitive?

In his State of the Union address, President Bush announced an ambitious American competitiveness initiative. The centerpiece is the President's commitment to doubling funding for Federal research and development in the physical sciences and engineering

over the next 10 years. To maintain our economic leadership, we need to generate new technologies. We need to continue to invent the future the way we have been doing so for decades and decades.

The American Competitiveness Initiative calls for a 24 percent increase in funding for our world class laboratories at the National Institute of Standards and Technology. This funding will allow scientists there who have won three Nobel Prizes to advance research in such promising fields as nanotechnology, hydrogen and quantum information. This could lead to new cancer therapies, fuel cells to power pollution-free cars and unbreakable codes to protect electronic financial transactions, among many other innovations. Research on nanotechnology data alone is crucial to the private sector success in a market that could reach $1 trillion over the next decade.

The second major component is investing in human capital. President Bush is proposing investing $380 million in fiscal 2007 to improve math and science skills in K through 12 schools. His plan also provides for job training, supporting universities that offer world class education and research opportunities, and attracting and retaining the best and brightest high skilled workers from around the world by supporting comprehensive immigration reform.

In addition to the American Competitiveness Initiative, the President is committed to fostering a business environment that encourages entrepreneurship and risk taking, and we know what it takes to have an environment that is innovation friendly.

We need to continue to keep taxes low, and we need to make the President's tax cuts and the Congress's tax cuts permanent, and we need to recognize that not making them permanent is the same as taking a tax increase, and the last thing our economy needs today is a tax increase.

We need a regulatory climate that is responsible and reasonable. We need to ensure that entrepreneurs who are creating a business and trying to create new products and creating jobs aren't sabotaged by frivolous lawsuits.

We need a health care system that is efficient, affordable and portable. We need to protect innovation through intellectual property rights, and we need an economy that is open to the global marketplace.

Compared to other countries, America has a powerful business environment, and that is why we are leading the world, and that is why there is no other industrialized Nation that comes close. But we are not complacent, and we know we still have work to do. When we open our markets to 3 billion new consumers, we also open up to 3 billion new competitors. To thrive in an open world, economies like ours compete on the basis of innovation, on the basis of talent and on the basis of the business environment that we create.

Mr. Chairman, the President, the Commerce Department, and this administration are committed to maintaining America's leadership and competitiveness in today's dynamic global economy. I want to thank you and the members of this committee for your support. I want to recognize your foresight, Mr. Chairman, in call-

ing these hearings, and I would welcome your comments and suggestions, and I'd be pleased to take your questions.

[The prepared statement of Secretary Gutierrez follows:]

Testimony of
Carlos M. Gutierrez
Secretary of Commerce
Before the
House Government Reform Committee
February 9, 2006

Chairman Davis, Ranking Member Waxman, and members of the Committee, thank you for the opportunity to appear before you today to discuss U.S. competitiveness, a vitally important topic for our workers, companies and the future of our economy. As President Bush said in his State of the Union address, the American economy is preeminent, but we cannot afford to be complacent. We have a choice in how to respond to the rise of new competitors like China and India. Some want to respond by retreating into isolationism. But I want to talk to you today about the path that the President is following – maintaining our leadership by competing with confidence.

The Competitiveness Imperative

The spread of economic freedom has brought many new participants into the global economy. According to the Heritage Foundation and Wall Street Journal Index of Economic Freedom, there are now 72 countries with economies that are considered free or mostly free, close to double the number of just 10 years ago. These nations are becoming increasingly interconnected as a result of advances in telecommunication networks, new trade agreements, integrated financial markets, and distributed supply chains.

The opportunities for U.S. firms and workers presented by the global economy are immense. Consider the fact that over 95 % of the world's population lives outside of

U.S. borders—all potential customers of U.S. firms. For example, as the President noted in his State of the Union address, one out of every five U.S. manufacturing jobs is related to global trade.

While this dynamic and interconnected world of our suppliers, customers, employers and competitors brings opportunity, it also requires that workers and firms be willing to change. Countries that resist change by erecting trade barriers, imposing burdensome regulations on product and labor markets or trying to pick and choose industry winners do so at their own risk. However, embracing change and focusing on competitiveness is the path to a higher standard of living in this new world. The United States is on this path and it has yielded results. In 2005, our per capita GDP of $42,000 is among the highest in the world and our January 2006 unemployment rate of 4.7% is among the lowest of all G7 countries.

An economy's productivity is the best measure for whether it is competitive and positioned to maintain a high standard of living. Productivity measures the efficiency with which goods and services are produced. And that, in turn, determines the real wages and standard of living of those workers. Over the past five years, productivity in the non-farm business sector has grown 3.3% annually – one of the fastest five year periods of growth in almost 40 years. So, on this score, the United States is well positioned to maintain its high standard of living.

But the rest of the world is not standing still and neither can we. In order to remain the most competitive economy in the world, we must focus on three areas of policy. First, we must have the capacity to continually innovate and stay ahead of the competition. Second, we must have a business environment in which entrepreneurs can

deliver new products and services. And, third, we must have an open and level global playing field on which our products and services can be sold. President Bush and the Department of Commerce are committed to addressing each of these areas.

Innovation Capacity

In his State of the Union Address, President Bush announced the American Competitiveness Initiative (ACI), which provides an agenda for maintaining our leadership in two areas that significantly contribute to a nation's innovation capacity: intellectual and human capital.

The centerpiece of the ACI is the President's strong commitment to double over 10 years investment in the key Federal agencies that support basic research programs in the physical sciences – the National Science Foundation, the Department of Energy's Office of Science, and the Department of Commerce's National Institute of Standards and Technology (NIST).

NIST has long been a center for high-impact basic research, as evidenced by the three Nobel Prizes its scientists have been awarded. NIST research has led to innovations that we use every day, from the high-density magnetic storage technology which makes devices such as computer hard drives and mp3 players so compact, to protective body armor and diagnostic screening for cancer patients. The ACI calls for $535 million for NIST labs and research construction accounts in 2007, a 24% increase over 2006 (after omitting earmarks). This will help fund the work of 3,900 scientists and engineers from government, industry and universities – an increase of 600 researchers over FY 2006. Their work in areas including nanotechnology, hydrogen fuel systems, and quantum

information will lead to the innovations of tomorrow, such as much more efficient batteries, and smaller computer chips to power our digital devices, as well as fuel cells to power pollution-free cars and unbreakable codes to protect electronic financial transactions and video transmissions.

It is also critical to focus on how these dollars are spent. The most successful research is based on careful planning and merit-based peer review rather than by funding a specific organization or project. So, to maximize the impact of ACI research, we encourage the Congress to resist earmarking scientific research funding.

We must also focus on the two-thirds of all research funding that is invested by the private sector in addition to the one-third of research funding that comes from the Federal Government. This is why it is critical that Congress makes the R&D tax credit permanent. Making the credit permanent, which is estimated to cost $86 billion over ten years, would enable companies to have certainty in their tax planning and be bold in their R&D investment strategy. As part of the ACI, the President is also committed to working with Congress to modernize the credit to make it even more effective and efficient at encouraging private sector innovation.

The second major component of the ACI is its call for investment in human capital. As the President noted in his State of the Union address, our greatest advantage has always been our educated, hardworking and ambitious people. Maintaining our leadership in human creativity and talent begins with encouraging children to take more rigorous math and science courses. The ACI proposes $380 million in new Federal support to improve the quality of math, science, and technological education in our K-12 schools and engage every child in rigorous courses that teach important analytical,

technical, and problem-solving skills. The ACI will expand access of low-income students to Advanced Placement/International Baccalaureate (AP/IB) coursework by training 70,000 additional teachers over five years to lead AP/IB math and science courses, and encourage up to 30,000 math and science professionals over eight years to become adjunct high school teachers. Building on the successes of the No Child Left Behind Act, the ACI will raise student achievement in math and science through testing and accountability.

As part of the ACI, the President's FY07 Budget introduces Career Advancement Accounts (CAA). CAAs will be self-managed accounts of up to $3,000 that workers and people looking for work can use to obtain education and training. The CAA initiative will offer training opportunities to about 800,000 workers annually, more than tripling the number trained under the current system, and give America's workers the resources they need to increase their skills and compete for the jobs of the 21st century economy.

Maintaining our leadership in human capital also requires that we continue to attract and retain the best and the brightest high-skilled workers from around the world by reforming America's immigration system, while protecting our borders. Much of America's innovation – and many of our jobs – come from companies started by Americans who immigrated to our country.

In the increasingly competitive international marketplace, it is vital that we continue to make America a hospitable place for entrepreneurs and encourage highly skilled specialists from around the world to build their businesses. Just as corporations compete to recruit the best possible workers, and universities compete to recruit the best possible students, our country will increasingly compete with other countries to recruit

and retain the best most highly skilled minds. This is a zero-sum game. People will start their innovative businesses in the United States; or in the countries we compete with. Recruiting the world's most talented people to the United States will increase our entrepreneurship, our international competitiveness and – according to every major study of this issue – will net many high-paying jobs for all Americans.

A Competitive Business Environment

A competitive business environment requires that we remove the barriers that American workers and firms confront in competing with the rest of the world. A recent study conducted by the National Association of Manufacturers concluded that external overhead costs from taxes, health and pension benefits, tort litigation, regulation and rising energy prices add approximately 22 percent to U.S. manufacturers' unit labor costs (nearly $5 per hour worked) relative to their major foreign competitors. The Office of Management and Budget (OMB) estimates that since 1981, major regulations reviewed by OMB have added at least $117 billion to the overall yearly costs of regulation on the U.S. economy. The Department of Health and Human Services (HHS) just reported that healthcare costs have risen to 16% of GDP. And since 2003, the price of petroleum products used by the industrial sector rose, on average, by 60%, while the price of natural gas rose by 35% in the same time period.

In his State of the Union address, the President called for a number of initiatives to reduce these competitive barriers. He noted that the tax relief passed by Congress has left $880 billion in the hands of American workers, investors and small businesses, but that unless Congress makes it permanent, we will face a massive and anti-competitive tax

increase. The President's agenda for making health care more affordable includes the strengthening of Health Savings Accounts to provide greater choice and flexibility in how workers and employers spend their health care dollars, as well as reforming the medical liability system to provide access to the courts while reducing frivolous lawsuits and excessive jury awards. His energy agenda calls for breaking our addiction to foreign oil through the use of technology. To accomplish this, the President announced the Advanced Energy Initiative to provide a 22-percent increase in clean energy research.

The Department of Commerce's role begins by providing the data and analysis to better understand the changes underway in the global economy and what we need to do to maintain our leadership position. Our Economics and Statistics Administration, home to the Bureau of Economic Analysis, and the Census Bureau, provides critical insight into the macro-level trends in our economy, such as drivers of GDP growth. However, competitiveness is in large part related to what is happening at the more micro level, i.e., the firm, industry and regional level—and our data and analysis are helping us better understand changes in the competitive forces at work at these levels. In addition to improving our understanding at this finer level of detail, we also need to better understand the impact that variables such as intellectual and human capital, as well as business costs, have on competitiveness. This is especially true as services become an ever more important part of our economy and innovations increasingly come from new processes and ways of organizing.

At the Department of Commerce we are focused on understanding the competitive burdens faced by U.S. businesses and identifying ways to remove these burdens. The Office of Industry Analysis within the International Trade Administration's

Manufacturing and Services unit (MAS) was called for by the Department's "Manufacturing in America" report to ensure that U.S. industry perspectives are appropriately represented in interagency debates on policies affecting competitiveness. As you know, Federal agencies are required to conduct economic impact assessments when promulgating new regulations. However, the way that regulations impact U.S. firms is changing. When an industry's market is purely domestic, regulations are felt universally. But, when the competition is global, the industry may have to shoulder burdens imposed by new regulations that their global competitors do not face. The Office of Industry Analysis is making investments in data and analytical capabilities to help Federal rulemaking agencies consider the impact of regulation on global competitiveness and has begun to work with Federal rulemaking agencies to ensure that these implications are recognized.

In addition to establishing the Office of Industry Analysis, MAS has successfully implemented 33 of the 57 recommendations made by the Department's "Manufacturing in America" report, including seeking private sector advice about manufacturing competitiveness, identifying and prioritizing policies that have the most impact on competitiveness, and helping OMB to assess and choose 76 priority manufacturing regulatory reforms identified in their 2004 public call for manufacturing reform nominations, coordinating policy issues and structural costs affecting the manufacturing sector through the Interagency Working Group on Manufacturing, and implementing our Standards Initiative to reduce standards-related trade barriers.

Another critical component of a competitive business environment is a sound infrastructure. Broadband technologies are the roads and railways of the 21st century,

generating the next wave of economic expansion. Just as transport systems opened up new economic horizons in the last century, advanced telecommunications networks will pave the way for productivity gains across global economies in the new century. President Bush established a national goal of universal, affordable broadband access for all Americans by 2007. We are making strong progress towards this goal and the number of broadband lines has grown from 9.6 million when President Bush took office to well over 35 million. However, more needs to be done. Working with the FCC, the Department of Commerce has increased the amount of spectrum available for wireless broadband services such as 3rd Generation mobile services, Wi-Fi and WiMax. In addition, President Bush has supported market-based policies that are resulting in the required deployment of advanced high-speed fiber optic lines deeper and deeper into American neighborhoods. With each of these initiatives, we radically improve the competitive environment for broadband services. By developing the most competitive broadband marketplace in the world, American consumers will have the most affordable and innovative broadband services in the world.

The National Oceanic and Atmospheric Administration (NOAA) is also making critical contributions to our business infrastructure by providing weather information that helps reduce the high uncertainty and variability of environmental conditions that have an impact on our energy grids, our transportation systems, and the long-term business planning of American companies. In addition, 61% of U.S. trade moves through our ports and the sea. Land- and satellite-based observations collected by NOAA satellites help enable efficient and safe routing of resources through these ports.

A strong intellectual property system and effective enforcement of intellectual property rights are critical components of a competitive business environment. This is especially true in our IP-based economy. According to a recent study, 75 percent of the value of publicly traded U.S. companies—some $5 trillion—comes from "intangible" assets such as brands, copyrights, and patents. Entrepreneurs, firms and investors would not commit substantial resources to research, development and marketing of new technology if they were not assured of receiving and maintaining adequate patent protections.

The U.S. Patent and Trademark Office (USPTO) received over 400,000 patent applications last year. Applications have increased at a steady pace every year and that is a good sign that innovation is alive and well in America. This volume, along with the consistent growth rate and the increasing complexity of the applications, present significant operational challenges.

The USPTO has worked hard to improve quality and more efficiently process applications. In fiscal 2005, the USPTO hired 978 new patent examiners, and plans to hire 1,000 new examiners in 2006 and 2007. They have over 4,000 patent examiners today and plan to have 5,235 on board by the end of fiscal 2007. And, the President's budget for fiscal 2007 gives the USPTO full access to all the fee revenue it receives. The USPTO needs these resources to continue its hiring of new patent examiners and implement its 21st Century Strategic plan to improve patent quality and decrease pendency.

An efficient patent system is an important first step, but we must be serious about enforcement of intellectual property rights to protect their enormous economic value and

provide an incentive for entrepreneurs to innovate. The Administration is pursuing a comprehensive plan for intellectual property rights (IPR) enforcement. This plan includes the Strategy Targeting Organized Piracy (STOP) Initiative, launched by the Administration in October 2004, which brings together the Departments of Commerce, Homeland Security, Justice and State, as well as the Office of the U.S. Trade Representative to provide the foundation and focus for our efforts in the global fight against counterfeiting and piracy. In addition, we are working with the Chinese through the Joint Committee on Commerce and Trade's (JCCT's) Intellectual Property (IP) Working Group to help China take meaningful steps toward significantly improving IPR protection and enforcement. Through the JCCT, China has committed to increased criminal prosecution, enhanced cooperation with U.S. law enforcement and joining the World Intellectual Property Organization (WIPO) Internet Treaties. An International IPR Enforcement Coordinator has been established to lead the National Intellectual Property Law Enforcement Coordination Council (NIPLECC) and ensure an effective and efficient protection of intellectual property in the United States and throughout the world.

We must educate other governments about intellectual property rights. So far, the U.S. Government has conducted over 400 IPR technical assistance and enforcement projects in the United States and around the world, including the creation of the Global IP Academy at the USPTO. Additionally, we have initiated an IP experts program that will soon have an expanded presence in China and a presence in Russia, India, Brazil and elsewhere. The IP experts program will enhance our ability to work with local government officials to improve IP laws and enforcement procedures in addition to

assisting U.S. businesses to better understand the challenges of protecting and enforcing their IPR.

We must also effectively balance our economic and national security interests in the trade of sensitive high technology products. The United States is the world leader in the production of many high-technology products that are so sensitive that their export must be controlled to facilitate their flow to legitimate end-users while keeping them out of the hands of those who would do us harm. Examples of such products range from computers and microprocessors to encryption equipment to sophisticated machine tools. However, the United States often is not the sole producer of these items. Producers in Europe, Asia, and elsewhere are also eager to capture export markets for these sensitive items. The Department of Commerce is working to ensure that these other producers are subject to the same rules, controls, and restrictions as American firms, to ensure that the U.S. producers are not disadvantaged by export controls and that exports from these non-American producers do not threaten U.S. national security. The Department of Commerce is also taking active steps in a number of key industries such as night vision, composite materials, and semiconductors to ensure export controls are carefully targeted to meet our overriding national security needs without denying our companies legitimate markets.

While advances in communication technology and transportation have made the world a smaller place, location is very often still a critical determinant of a competitive business environment. Professor Michael Porter of Harvard Business School has identified the fact that the development and commercialization of new technologies takes place disproportionately in what he calls "clusters," or "geographic concentrations of

interconnected companies and institutions in a particular field." Prominent examples nearby include the telecommunications cluster in Northern Virginia or the biotechnology cluster in the Montgomery County, Maryland area. Regions and communities can find significant competitive advantage by identifying and then aligning research, education, infrastructure, and private sector activities around fields in which they have unique strengths.

The President's 2007 budget calls for a $47 million increase in Commerce's Economic Development Administration's (EDA's) budget so that it can contribute to the Nation's competitiveness by focusing on regional cluster development strategies, innovation and entrepreneurship. EDA's successes with this approach to date includes a $1 million investment in the Piedmont Triad Research Park in North Carolina, which is building a leading-edge biotechnology business around science derived from the region's older tobacco business. This investment is expected to create 178 high-skill, high-wage jobs and generate $87 million in private investment.

Open and Level Global Playing Field

Finally, an open and level global playing field is critical to the future success of American firms and workers. This Administration believes that America's businesses, workers and farmers can successfully compete against anyone in any market, so long as we have an equal footing.

The Bush Administration's trade agenda seeks to capitalize on the opportunities created by trade liberalization and the Commerce Department contributes in two key ways. First, we are working to open new markets and eliminate barriers to U.S. products

and services through trade negotiations. From bilateral meetings, to Free Trade Agreements and the Doha Round, we are creating new opportunities and expanding markets for American businesses and workers.

Second, we are focused on enforcing antidumping and countervailing duty laws that protect U.S. businesses and workers from unfair trade practices. We are currently administering 323 antidumping and countervailing duty orders, 58 of which are on products from China. These laws foster the competitiveness of the American economy by ensuring that U.S. and foreign products compete on factors such as cost efficiency, quality, customer service and innovation, rather than on whether the foreign producer benefits from subsidies.

A Confident Future

By working together on this bold agenda, we can ensure that American workers and firms continue to lead the world. I urge you to support the American Competitiveness Initiative and the President's broader efforts to confront the global economy with confidence.

Conclusion

Mr. Chairman, thank you again for the opportunity to appear before you today. This concludes my statement. I would be pleased to answer any questions you may have.

Chairman TOM DAVIS. Thank you very much. I think you noted accurately that, compared to Europe and the Western Hemisphere, we're doing very well economically, but a lot of new competition we're seeing now is from the other direction, from the Pacific Rim. In terms of the production of engineers, scientists, computer scientists and the like, basically, we see jobs migrating to those areas. The one thing we seem to have, as I talk to technology leaders in my district and around the country, is a lot of the innovation is still coming from the United States. You can put it in a box and give it to engineers in China and India and somewhere else, and they can solve the problem but the innovation really is coming from here because that's part of our culture, that's part of our economic system, and it's not just something they have grown into at the same rate.

But there is a problem when I talk to my tech leaders about getting qualified leaders in some of these high end areas. We're producing fewer engineers than we did a generation ago. A majority of the graduate students in engineering, the physical scientists and computer scientists in American universities are foreign born, and it's going to take some integration of immigration policy and a change in education to try to keep us holding the edge that we have in some of those areas. Because there the test is not just Europe, as you noted, but also from the Pacific Rim.

Any thoughts on that?

Secretary GUTIERREZ. Sure. Today we have—and I think what you're saying is exactly why we have the best economy in the world and why we are determined to keep it that way is because we are never satisfied; we are never complacent. I think many countries around the world would marvel at this conversation that we're having, given the state of our economy.

What is becoming very clear in this day and age is that the business environment that countries create can have a big role in how much innovation is done in that country. We know that innovators prefer to do innovation in the United States because the tax laws are transparent, because the rule of law is transparent, because they're not going to get hit with frivolous regulations, because their intellectual property will be protected. We know in many countries around the world that isn't happening. So that's another advantage that we have.

We have 5 percent of the world's population. We have one-third of the world's engineers and scientists. The key thing is we have to keep it going, and that's exactly why the President has issued not just an initiative but what I would call a national calling to get behind math and sciences, to get behind education, to get behind our business environment; that every company ask the question, what can we do to become more competitive? That's what the President is calling for at this point in time so that we can continue to be the greatest and most competitive economy on Earth.

Chairman TOM DAVIS. If you go back 100 years, a visionary in 1900 might have seen that oil would in fact be a dominant force in economic growth in the 20th century. And it was the companies and individuals and countries who had the oil, who could get it out of the ground, refine it, get it to markets that dominated much of the economy.

But you fast forward 100 years, the oil of the 21st century is information. And it is indeed those countries, those companies, those individuals who are able to get that information, collate it, transfer it across lines that are in fact the fastest growing companies. The fastest growing economy in the Middle East is Jordan, with no oil, surrounded by Syria, Palestine and Iraq. A tough neighborhood. But they get it.

Where our concern, is these areas continue to grow. Every company is an IT company now. Burger King is an IT company. Their product component is burgers but in terms of getting it and being productive and so on.

Our question is, we are going to need to continue to produce people not just at the innovative level—that's our niche—but also below. What suggestions do we have really for getting more of these engineers either through immigration or, more importantly, educating through our own system that's producing fewer engineers than 20 years ago?

Secretary GUTIERREZ. That's a great question, and if we go back to the President's No Child Left Behind Act, which that's really where it started, the recognition that we need to do a better job from K through 12. We know that our students at the fourth grade level are doing great versus other countries and somehow as we head toward the senior year of high school, we slip. So the President is saying, let's raise standards, let's ensure that all students have the benefit of our confidence that they can achieve higher standards. We are already beginning to see results.

Chairman TOM DAVIS. Our problem is getting qualified science and math teachers into some of these areas.

Secretary GUTIERREZ. That's correct.

Chairman TOM DAVIS. I don't know if we need to look at special incentives for that or whatever. If you're good in math and you're good in science, you can make a lot more money doing something other than teaching.

Secretary GUTIERREZ. What the American Competitiveness Initiative calls for is 70,000 new qualified math and science teachers. The other thing we'd like to pursue which we believe is part of this national calling is to get retired executives, engineers, folks who have been in the actual practice of engineering, in the math and sciences to dedicate time and volunteer and come out to the schools and teach our children.

So it's not just the teachers we hire but also to tap into the great talent that we have throughout the country who want to contribute to this calling that the President has asked for which we call the American Competitiveness Initiative.

So it starts in K through 12. We need to start at the pipeline level. And we believe that math and science is an important starting point, as well as what you say, which is computer sciences. We shouldn't forget that because, you are right, Burger King is an information company, and every manufacturing company has a huge component of services, and very often it's down to information.

Chairman TOM DAVIS. Thank you very much.

Mr. Van Hollen.

Mr. VAN HOLLEN. Thank you. Thank you, Mr. Chairman, and thank you for holding this hearing on this very important issue.

Welcome, Mr. Secretary. Thank you for your testimony. I would like to commend the President for his initiative in the State of the Union address on the American Competitiveness Initiative. It is an issue that many of us here in the Congress, as the chairman said, have been concerned about for some time. There are a number of pieces of legislation that have already been introduced that would implement parts of what the President is calling his American Competitiveness program. A number of us unveiled something called the innovation agenda.

I think there is bipartisan support in the country for moving forward on this. Of course the whole question of globalization has been popularized in many ways by one of my constituents books, Tom Friedman's book, the World is Flat, where he makes the important observation that Beijing, Bangor and Bethesda, MD, in my congressional district, are all really neighbors now in the good sense of being able to share information, but also in the sense we're now major competitors, and we want to make sure that competition works to the benefit of everybody instead of having big winners and losers. And if we're not in front of this issue, we are going to be losing out. And I would just quote from what I think was a very important report put together by a group that was assembled by the National Academies of Sciences and Engineering, chaired by Norm Augustine, former chairman and CEO of Lockheed Martin, where they, last October, came out with a report which I think was really sounding the alarm on a range of issues, and they made a number of recommendations. But just let me read from the report because it underscores the seriousness of the issue. This was a bipartisan group of experts in our country, and they said: "It's the unanimous view of our committee that America today faces a serious and intensifying challenge with regard to its future competitiveness and standard of living. Further, we appear to be on a losing path."

They go on to say: "One need only examine the principle ingredients of competitiveness to discern that not only is the world flat, but, in fact, it may be tipping against us."

And then they go through a number of criteria and measurements to make their case, including what the chairman alluded to. For example, about two-thirds of the students studying chemistry and physics in U.S. high schools are taught by teachers with no major or certificate in the subject. In the case of math taught in grades 5 through 12, the fraction is one-half. Many students are being taught math by graduates in physical education.

They also go on to point out that the number of graduates in our universities are more than well over half of them or close to half are foreign born and that those students are more and more thinking about returning to their home countries because there are greater opportunities there than there were before in countries like India and China and many others.

So I think we're agreed on the problem, and the question is, what are we going to do with it? And I think the President's initiative was good as far as it goes, but when the budget came down the next day, I must say, I'm not sure whether the reality of the budget met the rhetoric of the State of the Union speech.

About 75 percent of the investment the President's proposing to make in this area is simply a 1-year extension of the R&D tax credit. I'm a supporter of that, but if you look elsewhere in the budget, what you're finding in many areas is taking money out of one pocket, even in the education area, and putting into another.

For example, in the math and science area, we're talking about $380 million for that initiative; $115 million comes out of a program called Even Start, which is intended to give youngsters a good start in life, which I think any scientist, including neuro scientists, will tell you is an important time to make that kind of investment.

I also, while I applaud the increase in NIST, I think that is a very important investment, and the increase in physical sciences, which I do think have been neglected in terms of basic R&D, I think it's a mistake to essentially have a decrease in real terms in our investment in the biological sciences. If you look at the NIH budget, 18 of the 19 institutes see a cut in funding, and I think that if we're going to be competitive in those areas going forward, that's a mistake.

So I would like to ask you, Mr. Secretary, with respect to the investment in education, which I really do believe is an investment in the sense that it provides a national return, and one of the things that Norm Augustine and his panel pointed out is, what other countries are doing now is sort of learning the lessons of the United States. Investments we have made in the past in science engineering and math are a big reason for why we are doing well today, and if we don't continue to make those investments, we will not be ahead in the future.

So I'd ask you really two questions. One is the No Child Left Behind funding, because I agree No Child Left Behind has been a positive initiative in our country, but if we want to make sure that we have our local school systems in a position to hire the teachers who are qualified in math and sciences and engineering, who have many other opportunities, they are going to have to be in a position to pay those teachers a decent salary.

My question to you is, the Congress passed the No Child Left Behind legislation and set forth a marker as to what we thought would be necessary funding. The Education and Work Force Committee which I serve on had an authorized level. The Senate passed it. The President signed the bill. Shouldn't we as a Nation fully fund the amounts that were authorized for the No Child Left Behind in order to meet the goals that we all agree we need to meet for our Nation's competitiveness?

Secretary GUTIERREZ. I appreciate the question, and, respectfully, Congressman, I believe your question is better answered by the Secretary of Education. I will say that the American Competitiveness Initiative adds $380 million to the area of education and is very targeted at math and sciences, K through 12, and really building on the No Child Left Behind. There's an important component on community colleges, which is also part of our competitiveness; worker retraining. So the subject of education is very, very much part of this initiative. And I would be very glad to take up the specific question about funding for No Child Left Behind.

Mr. VAN HOLLEN. If I may, Mr. Chairman, this is the Secretary of the Department of Commerce, and your role in the competitiveness issue, would you not agree that it makes sense for the Congress and the President to fund the No Child Left Behind initiative at the levels that were set out in the authorization bill?

Secretary GUTIERREZ. I believe that the passion that the President and Secretary Spellings have for this project and for this initiative and the recognition of the importance of it, that if they have put a number to it and they believe that is what it takes, I am fully supportive of that.

Mr. VAN HOLLEN. I guess you're supportive of it being $15 billion less a year than what the Congress authorized and $55 billion short since the bill was signed. I think we need to be honest with the American people.

Chairman TOM DAVIS. Thank you.

Mrs. Miller.

Mrs. MILLER. Thank you, Mr. Chairman. And, Mr. Secretary, I certainly am delighted to see you here today. We share the same background coming from Michigan, so I'm so happy to see you here, and we miss you in Michigan, but we're delighted to share you with the rest of the country here. You're doing a remarkable job certainly for the country.

In Michigan, of course, we have some rather unique dynamics in our economy right now; most of them negative, quite frankly, in a very frightening way. We're going through a transformational economy, what's happening to the automobile industry. We have the highest unemployment in the Nation, lowest personal income growth in the Nation. Bond rating obviously is bad in the State. A number of different things that have happened to us in a relatively short period of time and yet we look to the Federal Government to provide the environment so businesses can do what they do best, which is to incentivize for job creation and investment and those kinds of things.

I do think that the President's economic growth package has been, and some economists have said it, has been historically the best-timed package to really stimulate the economy, and so we see that happening. The best economy of any of the industrialized nations, etc., but obviously, in Michigan, we have, as I said, some rather unique dynamics that have our total attention at this particular time.

One of the things that I think hampers—I look at the automobile industry—but in so many different businesses is the very onerous burden of regulatory kinds of things that the government places on our businesses; their ability to compete and their ability to be competitive in a global marketplace. The old saying, I'm from the government, I'm here to help you; I think the businesses dive under the desk when they hear that, but when you look at the National Manufacturers Association, I know we're going to, on the second panel, have some representatives from them, doing a study that shows that our structural costs for American manufactured goods are 22 to 23 points higher than foreign competitors, Canada, Mexico, wherever, and small business looking at $7,000 to $8,000 per employee just to comply with the regulatory burden. My question, I guess, would go to, how closely does your Department interact

with the other agencies that are promulgating some of these regulations?

And I give you just one example that I'm aware of, hexavalent chromium, which is maybe not the most interesting subject in the world unless you're involved in aerospace or metal finishing or these kinds of things. Our government, the EPA is currently promulgating a rule that will take the standard that was 50 points per billion—I believe is how they measure it—from 50 to zero. There will be thousands of jobs that we are going to lose as a result of that. I have a lot of consternation about that.

The smaller mom and pop shops, I have a lot of those in my district. Many of them have said they're going to close up because of that. I'm wondering, how closely does the Commerce Department work with some of these other agencies? We need to have regulations, of course, but they need to be reasonable.

Secretary GUTIERREZ. I totally agree with what you're saying. We do get involved in impact assessments of regulations, and I can't talk specifically about the impact assessment of that regulation, but we're all tied to the President's direction, and that is that if we have new regulations, they should add value. And regulations should not be put in place that simply create an obstacle to doing business and that we should recognize that what drives this economy and what drives our country, what drives our growth is private sector risk taking, entrepreneurship and people wanting to go out and make a difference.

To the extent that regulations get in the way of that, we're not following that lead. So the President has been very clear on that, and it's being followed throughout the administration.

Mrs. MILLER. I appreciate that. I do think there always has to be a cost-benefit analysis of some of these things being done, and I sort of think if some of the other agencies, particularly your agency, could be a little more interactive, because it does impact commerce, obviously.

My final question would be, and I appreciate it in your opening statement when you were talking about hydrogen fuel research. Again, being from Michigan, we light up when we see that. I think it is so important. I absolutely believe that understanding security equals economic security actually equals national security. They are all interrelated. It is so important. So I was delighted to hear the President say openly we are a Nation addicted to oil, and we have to get off this dependence on foreign sources of oil. You see what's happening around the Nation.

I'll conclude here. Ethanol and biodiesels and some of these other kinds of sources of energy are so important for us to continue to advance. So I am very appreciative that you are picking up the mantel as the President has requested you to do so.

Secretary GUTIERREZ. If I may say, I think that's one of the boldest statements that was said that evening during the State of the Union, a lot of bold statements, but a very very bold statement is to say that through technology we are going to reduce our dependence on oil. And we are going to look back 20, 30 years from now and realize that statement and that determination set us on a course that will do just that. He said we're going to do it through technology, and part of that is why we are investing more in the

Department of Energy. And you can see it throughout the country. I see it in manufacturing plants. I was at the Ford plant in Kansas City. They are already producing hybrid cars. I believe you are going to see a wave of investments and interest in this area as part of the President's calling. I appreciate that.

Chairman TOM DAVIS. Thank you very much.

Mr. McHenry.

Mr. MCHENRY. Thank you, Mr. Chairman. Thank you for calling this important hearing. Secretary Gutierrez, thank you so much for taking the time to be here, and I appreciate your leadership in the Department of Commerce. It's been very good working with you. I think you are one of the outstanding Bush administration appointees, and I certainly appreciate your hard work and dedication. Thank you.

The initiative we're talking about today, the Competitiveness Initiative is very important. My district in North Carolina, western North Carolina, is going through a time of immense change. Overall unemployment nationally is somewhere around 5 percent. That's wonderful. Historic lows.

In North Carolina, we are facing nearly full employment. In some cases, some economists would call it beyond full employment. Unemployment around 4.7 percent. My district, however, is facing a time of change. We have been traditionally relying on textile and furniture industry jobs, manufacturing jobs. I have two counties that led the State in unemployment. One faced last year for a few months an unemployment rate of around 13 percent. Another country faced an unemployment rate of around 11 percent at its height. That's mainly due to loss of furniture industry jobs.

Now certainly there are trade issues that we are dealing with, competitiveness issues with China, the fact that China won't float their currency. That's a question I'll leave up to Secretary Snow at the Department of Treasury. I will not burden you with those questions.

The focus that I have tried to place in my district is on getting the skills and the training necessary to compete going forward. We can't be reliant on yesterday's jobs, we have to train for tomorrow's jobs and today's jobs.

As a district, representing a district that is termed in the Almanac for American Politics as the most blue collar district in America, we are certainly going through change.

I wanted to ask you, what would you propose for a district like mine? What can I go home and tell my people that we should be doing?

Secretary GUTIERREZ. I recall we talked about this when we traveled together to North Carolina, and at that time, you were talking about a national education coordinating council, which I believe is the sort of initiative that you need throughout the country but especially in communities, as you said, where there is change that's happening because what ultimately will help our people is to upgrade their skills, adjust their skills, but enable them to move forward with the economy and enable them to move to jobs of higher paying wage but give them the ability to constantly be training and retraining.

So I would just say that your foresight on that and your vision on that is absolutely right to the extent that we can help to execute that vision, that will—that should help. Because that's what we've seen in communities that have made the transition. It has been about getting——

Chairman TOM DAVIS. Can you pull that mic closer?

Secretary GUTIERREZ. Getting the right programs in community colleges that are tied to the jobs that are available, and that's the sort of execution that needs to take place locally.

On textile, as you know, we just signed an agreement with China for 3 years. Hopefully that will give, and it's intended to give, both retailers and manufacturers transparency and predictability as to what's going to happen over the next 3 years to enable them to do what needs to be done to become more competitive.

So I hope that has been helpful, but I would urge you to stay on this coordinating council, and I think it's the right focus.

Mr. MCHENRY. I appreciate that. I did enjoy speaking with you. We had about 2 or 3 hours that day to talk on that trip, and I appreciated that opportunity.

Is there any expertise in the Department of Commerce you could point to that folks, my folks at home, could reach out and get help with?

Secretary GUTIERREZ. Depending on the specific area, but I would point to the ITA area where we do have an office for textiles, specifically focused on textiles. And I would also lead you toward Economic Development Administration [EDA], because their role is about economic development and helping communities create jobs, becoming more attractive to private sector investment. So I would start there, and I think those two areas could be very helpful.

Mr. MCHENRY. My predecessor had the foresight to actually work with the Department of Commerce to get a Regional Economic Development survey done to point us in the right direction, so we're very much appreciative, through an issue we call Future Forward for my region.

A final question for you, where do we need to go in terms of changing the Tax Code to be competitive internationally, around the world. There are a number of different initiatives. A previous statement pointed to the fact that we are held back by regulation and taxation in this country and lawsuit abuse that actually hampers our ability to sell products around the world because the added expense and cost of that.

Secretary GUTIERREZ. I would say two things there; one is just the recognition that the tax cuts that Congress and the President enacted have worked, and there is no question that the basic principle of putting more money in the hands of business and putting more money in the hands of consumers and that they will be able to allocate that money better than a centralized body is working. The challenge now is to make those tax cuts permanent and to recognize that, if we don't make them permanent, we're raising taxes. Because that will also incentivize investors to bring more capital to the country.

And then on the innovation front, we have the R&D tax credit. We believe there's work that can be done to simplify it. It is a little bit complex. It's subject to some interpretations, and we believe we

can make it more effective so that it yields more innovation. Those are two things I would do to work on tax policy.

Mr. MCHENRY. Thank you, Mr. Secretary.

And thank you, Mr. Chairman.

Chairman TOM DAVIS. Thank you.

Mr. Turner.

Mr. TURNER. Thank you, Mr. Chairman. Thank you for having this important hearing on an issue that is on the minds of many Americans. As they look to our economic recovery, many people are concerned about how our ability to sustain economic growth, specifically in the manufacturing area, will be faced in the future.

Mr. Secretary, I want to thank you for being here and for your dedication to probably what is the most important function that we can do as a government, and that is encourage an environment for job creation.

I want to encourage you in your support of both General Motors and Adelphi and the automotive industry as they look at their transition. I know that you are aware that those jobs are very important not only to families throughout our country, but they provide opportunities for economic mobility. They are important for the innovation culture that we have.

Many of the innovations that we have arise out of the automobile industry, its engineering and its manufacturing. It's important for our defense industry, as we look to our manufacturing capability. My community has a very large presence of General Motors and Adelphi. In fact, Adelphi, as you know, is the former Delco. The D in Delco is from Dayton, OH; it is from Dayton with the Dayton Electronics Corporation. So our community is very tied to the future of the automobile industry, and your attention there would be very much appreciated.

I also want to thank you and your staff for assistance in another industry sector that is important to my community, and that is the aerospace industry. Eric Stewart of your staff and others have been very supportive of an international air and space trade show that we are looking at trying to promote our aerospace industry.

One of the components, of course, for our success in international markets is our ability to market ourselves. The many industry sectors that have trade shows have those trade shows outside of the United States, which does not permit second- and third-tier suppliers to effectively market their goods in international markets.

Our ability to encourage those types of trade shows where we can show off innovation, technology that is here in companies that are smaller companies, that can't necessarily participate in the large international shows off our shores, is important, and your support and the support of your staff, as we look to how we might support the aerospace industry.

I want to put one footnote on this. I am on the Armed Services Committee, and a stunning response to a question, General Jumper was before the Armed Services Committee, and they asked him what one of the greatest threats was to our ability to maintain a preeminent Air Force. Many people thought it might be some issue of technology, some emerging country that was our threat. His answer was the ability of the U.S. aerospace industry to continue to support the Air Force in leading technology and in production. So

it's so important not only for jobs, families and economic mobility, but also, as you know, our defense that we maintain our manufacturing base.

So I want to thank you. I would love to hear your thoughts on both the automobile industry and the aerospace industry.

[The prepared statement of Hon. Michael R. Turner follows:]

Opening Statement
Michael R. Turner
Third District of Ohio
Thursday, February 9th, 2006
House Government Reform Committee

Thank you Chairman Davis for holding this hearing today on America's competitiveness agenda. Your leadership is important in examining the issues and solutions surrounding American competitiveness.

As a member of this committee, the House competitiveness caucus, and the Republican jobs action team, I have a vested interest in increasing American competitiveness.

Last spring I held my second annual manufacturing forum in my district. During that forum I heard the myriad of issues that are facing the strong manufacturing sector in Ohio's Third District.

Congress must protect American families. Building upon America's current competitive edge is a means to that end.

From how American children are educated to how American businesses are able to trade in the world economy, increasing American competitiveness will inevitably include aspects of education, tax, and trade policy, among others. A comprehensive solution will ensure that America will remain at the forefront of industry.

I look forward to hearing ideas and suggestions from today's panels about how American competitiveness can be improved.

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Secretary GUTIERREZ. Well, we have all been very close to the automobile industry, and I can tell you that any time we read about layoffs or jobs lost that it hurts, and these are great companies. These are industries that not only are large from an economic standpoint, but they are also large symbolically. We have, and I can tell you I believe, that they are going to pull it through.

They are going through a lot of tough choices. This is a very tough time for them, but they are focused on innovation. They are focused on getting their costs down. They are focused on getting the right types of products on to the marketplace. I believe they will be able to do that, because these are great companies, these are great workers, these are great people, and they are going through a rough time.

But we need to continue to give them the environment and create the environment that allows them to pull their companies through. They don't need a tax increase. They don't need regulations that simply create an obstacle. At this point they need a playing field where they can innovate, create new products, and focus on the future and unfortunately get through this very tough period they are going through.

Chairman TOM DAVIS. Thank you very much.

Ms. Norton, any questions?

Ms. NORTON. No, thank you.

Chairman TOM DAVIS. Mr. Ruppersberger.

Mr. RUPPERSBERGER. I am sorry, I just came here late.

The issue of regulation, I think, is very important, I think. To have a good business attitude, partnerships between business and government are extremely important.

I do want to get into the issue, though, if you are going to talk about tax cuts, you have to talk about deficit, and the impact of the deficit—I think one of the last things that Greenspan—the issue—one of the issues he raised is that if we don't deal with the deficit, and the interest rates go up, that is going to be less investment in business, and that we have to deal with that issue.

How would you compare the tax cuts to the deficit, and what would you do to resolve that issue as it relates to what we are talking about here today?

Secretary GUTIERREZ. Sure. I would think about the deficit as the short-term deficit from now to the year 2009, and then the longer-term deficit that we have to face. We are on track to cut the deficit in half by 2009. Last year our deficit came in about $100 billion better than what we had expected, because tax receipts are coming in so much better than we had expected.

So it's quite an irony that after we reduce taxes, we are getting more revenues from taxes. And last year we had record levels of tax revenues.

So we are confident that we can manage through the next several years and cut the deficit in half. We will see some fluctuations in the short term. We have had to deal with the gulf coast spending, and that will have an impact next year. But we are headed down the track of cutting the deficit in half by 2009, and that would put us at a position where the deficit is—as a percent of GDP is actually below our historical average.

Where we should be concerned is the deficit 15, 20, 30, 40 years from now, with programs such as Social Security, where we are going to have more retirees than what the current system can support. That's not going to happen over the next 4 years, it's not going to impact us over the next 4 years, but it will impact us over the next 20, 30 and 40 years.

I am confident that we can manage our way through cutting the deficit in half by 2009. I would just say what we should be concerned about is longer term, 20, 30, 40 years from now, sir.

Mr. RUPPERSBERGER. How are you going to deal with the issue of cost as it relates to health care then? My concern is if you have to cut taxes, you have to stop spending. One has to go with another, or it's not going to work. With all of the obligations of the war, Katrina, we haven't really gotten into the health care issue yet. It is something we need to look at.

But let's get back to the issue of where we are, and we are all concerned about that. We are all concerned about China graduating more physicists, mathematicians and engineers. You know, if we don't invest in our future, if we don't invest in education, it's going to start to impact on our national security, it's going to impact on what we do in business, and it already has.

I think the way we turn that around is through education. To give you an example, Allison Transmission, which is in the district I represent, one of the most modern manufacturing plants in the United States. What happened, how that developed, is that there was an older plant in Baltimore that was closed down, but the workers at the older plant were retrained on how to operate and to work in a plant that deals with robotics and technology. As a result of that, that allows Allison, and Allison Transmission, to be able to compete worldwide, which is what we have to do with respect to technology and training.

My concern—I don't see a program out there yet that really is focused on educating, giving incentives to the—our younger generation to get into the area of engineering, math, science, physics, things of that nature. I think we have a lot more to do. We need to roll up our sleeves in a bipartisan way to do it.

To cut right now, if we are going to cut, cutting priorities, to cut in the area of scholarships, it's not going to work unless we reinvest. Do you have any comment on that?

Secretary GUTIERREZ. Well, I totally agree that this is the focus, and this is the focus of the education piece of the American Competitiveness Initiative. I think you are absolutely right. It has to be done in a bipartisan way. Sometimes a savings in the budget, or a reallocation to make the money work harder, can be perceived as a cut, but not all reductions are just sheer cuts of activity. I would look at some areas where it looks like a cut, but it's actually a savings. We are doing things more efficiently, we are doing things more effectively. We are reallocating the money to areas where we get more bang for the buck.

I think those are the types of things that we will have to do to address your concern of how do we deal with the deficit and at the same time not raise taxes. So it's always a matter of choices. And every day there are tough choices, and that is the challenge of managing through our current budget.

I believe we can do it, and I believe we can do it in a way that increases our competitiveness the way the President has called for.

Mr. RUPPERSBERGER. So far we haven't been able to do it. I hope we can do it for the benefit of our country as far as the spending side is concerned. But, again, I think everyone wants a tax cut, and I don't disagree with you that it can help the economy, but sometimes you can't afford—and the issue that we have with respect to the war, with respect to Katrina, some of these costs, and then there's some things that aren't getting done, like what we are talking with today, doesn't mean that we maybe—we might even want to consider a postponement.

What, in your opinion, would a postponement of a tax cut do until we are able to take care of our existing expenses and take care of our priorities now? Do you have any opinion of a year or two after a tax cut?

Secretary GUTIERREZ. Well, what the President proposes is just to make the cuts that have been made permanent. It's not really a further cut, but let's just make the cuts permanent. And if we don't do that, what we are saying is we are increasing our taxes.

Part of the issue here—and I saw this managing a smaller company, obviously not a company the size of the Federal Government, but very often a tax cut brings in more money, and that money will be spent, and it may—it may give us the impression that we have a lot of money coming in, and, therefore, the challenge is to spend more, not to cut more.

One of the advantages of having our taxes where they are is that it will force us to be more efficient. It will force us to do better things with taxpayers' money. I believe that's the big challenge, it's the big management challenge. Every company in the country has that challenge, and there's no reason to believe that we in the Federal Government don't have the same facts.

Mr. RUPPERSBERGER. But the facts are that hasn't happened yet. That's my concern. Is the discipline there with the administration to be able to do that?

One more question, then I will stop. It's my understanding that we have one of the largest deficits in the history of our country, and that 50 percent of that deficit is based on the tax cut, the revenue not coming in. Is that your understanding? Do you have a comment on that? Am I correct in my assumption?

Secretary GUTIERREZ. I haven't seen those numbers, sir. As I mentioned before, the tax revenue in absolute dollars last year were an all-time record. So what we are finding is that when we cut taxes, the economy grows faster, and that yields more revenues.

Mr. RUPPERSBERGER. Again, it's my understanding—I think we will relook at the numbers, I am sure, because this issue will be before us again in the next couple of weeks, that 50 percent of the deficit is based on the tax cut, the revenues that would normally come in that would not.

The issue that I raise with you is if, in fact, the tax deficits will continue to have interest rates move up, that lack—because of that, there will be a lack of capital investment in our business, which, in the end, will negatively impact on what we are trying to do here today. Do you care to comment?

Secretary GUTIERREZ. Again, I am not familiar with that 50 percent cut, but in terms of businesses, the way to continue to motivate business is to invest in our country, is to keep the tax rate low, to make the R&D tax incentives permanent.

You know, we have renewed the R&D tax incentive 12 times. The problem with that is it doesn't give business the certainty that they like, because an R&D investment, as you know, is a 10-year investment, but they don't know if they are going to have that tax incentive for 10 years. We give it to them one chunk at a time, 1 year at a time, a couple years at a time.

We should make it permanent and let them know that we are committed to a long-term incentive that will really take our country in the future with a long-term continuous plan and not a stop-and-start plan which doesn't really do the job. So I would just——

Mr. RUPPERSBERGER. That's a good point.

Chairman TOM DAVIS. Thank you.

I think one of the problems, though, is that you could look at these; if the tax level were at this point, we could expect X number of revenues, but that doesn't take into account the economic activity because of the tax cuts. One of the problems in scoring at CBO and at the Office of Management and Budget is that they don't have dynamic scoring models for that.

So if you were to raise the taxes, that doesn't mean that you halve the deficit, because you get decreased economic activity? I think that's the question.

Secretary GUTIERREZ. That's exactly right. That's exactly right. It's a little bit like do you sell more if you raise prices? Not always.

Chairman TOM DAVIS. Mr. Gutknecht.

Mr. GUTKNECHT. Mr. Chairman, as a former member of the Budget Committee, I just want to clarify. I think under the Congressional Budget Office's static scoring, they estimate that only about 20 percent of the current deficit is related directly to the tax cuts. The rest has been a change in economic activity or, I must say, more spending. I think that's something that Congress needs to do more about.

I want to thank you for coming today, because I think—I actually, believe it or not, just finished the Earth is Flat, and I think it does raise some pretty tough questions about policy in the United States. I think there are factors within the economy that can't be accounted for in just the terms that the author outlined.

I think there is an issue, though, that I would like to have you talk about a little bit, and that is this whole issue of affordability. In some respects, and we have heard you talk a little bit—well, we have to spend more on education. I think that's always something we all say. But I think at some point we have to ask ourselves, OK, how much does it cost, in some of these other countries, to educate a Ph.D. in physics or even to educate a high school student? I think one of the things that the Commerce Department could really provide for us that would be beneficial would be an honest and objective comparison of what it is costing to educate people in the United States versus Europe, versus India, versus China, versus Japan.

I think what we would find is—the reason I say this—we have gotten a lot of criticism recently about student loans. Well, there

was an article in the Minneapolis paper last week that said over the last 5 years, the cost of higher education to students in the State of Minnesota has gone up 60 percent. That's an average of over 11 percent per year. Now, that's even faster than the cost of health care has gone up.

So at some point I think we have to have an objective measure in terms of how much we pay and what ultimately we get in return. I think we have to put some pressure on the folks in that part of our economy to find efficiencies as well.

The other issue of affordability, I think this is important, and I think we can do something about this, that is the cost of energy. It was mentioned by Mrs. Miller from Michigan. I understand right now, for example, on the equivalent basis, we are paying about $13 or $14 per million cubic feet for natural gas. People in China and India and other parts of the world are buying it for as little as $5. That's a big difference, particularly if you are in the petrochemical business. As a result, we are losing a share of that.

Finally, in terms of these ideas, I would like to have you bounce them off—in terms of energy, I would like to have you come out to Minnesota sometime. We will show you some plants where we are producing today ethanol for $0.95 a gallon.

I am told—and the refineries are a little bit slow to give us the information—but the real cost of producing a gallon of unleaded gasoline today is north of $1.50 a gallon. Even on a BTU-basis-to-BTU-basis, right now ethanol is cheaper than gasoline.

That's a story that almost no one knows. It is better for the environment, it is better for the economy, and, by the way, it is cheaper. We need to get that story told. People say, well, if it is cheaper, why aren't we using more of it?

Well, the answer is, I think, because the oil companies currently have 98 percent of the market, and they are not going to give up market share voluntarily. I think we have to have not only a goal, but a specific matrix to measure how well we are getting to that goal, because we have had a goal of energy independence since 1974, and we are in worse shape today than we were then.

Finally, the last point, and this was raised by a union leader in my State, but it's a very good point and one I think we have to at least think about and discuss. He said one of the problems with dealing with countries like India and China is they haven't learned the Henry Ford principle.

The Henry Ford principle—and I think this is a great one. He said that people in factories have to be paid enough that they can afford to buy what they make. Until those countries begin to learn the Henry Ford principle, it strikes me that we are always going to be way behind the eight ball.

I wonder if you could just react to a couple of those points, and I would appreciate it. Thank you.

Secretary GUTIERREZ. And these are great questions, and hope to add a little bit of value to what you have already stated. But, yes, on the education piece, the one thing I would say is that qualitatively, we have the best advanced education system in the world. That's why students from all over the world want to come to the United States to study.

What the President has proposed and what he talked about in the American Competitiveness Initiative is that we should be keeping some of those students, the best and the brightest, to work in our country instead of training them in the best universities money can buy, and then sending them home to compete with us. So there is a qualitative aspect to our education system that I would just add to the comments that you made.

Natural gas is an interesting one. You mentioned that we have had a goal of energy independence since 1974. We have not built a natural gas terminal since the 1970's. We have not built a refinery since the 1970's. As you well know, this requires decisions, and it requires a commitment to energy independence. The President laid out a plan 5 years ago, and it was deemed to be a little bit too long-term in nature, but here we are 5 years later, and I wish we would are have had it in place 5 years ago.

So when price—when oil prices are up, we would like a solution immediately; when oil prices were down, the only one talking about a long-term energy plan was the President.

But it is interesting, 1974, we said energy independence, we haven't built a natural gas terminal since the 1970's, and we haven't built a refinery since the 1970's. I don't have the answer. I would just ask, as a challenge to all of us in the Federal Government, what do we need to do to change that?

Mr. GUTKNECHT. Mr. Secretary, let me correct you though. We have built 93 refineries in the last 5 years. They are called ethanol plants. We can build a lot more. The truth is there's not a city or a town or a county in a State in the United States that wouldn't welcome more ethanol plants. They are refineries. They do exactly the same thing.

Secretary GUTIERREZ. You are absolutely right. If you recall, the President mentioned ethanol in his State of the Union Address, and this is part of the drive to get us off the addiction of oil.

Part of the challenge that we have today is cars that take ethanol and consumers don't know it; then consumers who know it but can't find ethanol. So we do need to have enough communication, and an education to ensure that we take advantage of things like ethanol, and the President is right there. He talked about it in his State of the Union Address. It's a huge opportunity. It's one of those leaps that we can make beyond oil.

Mr. GUTKNECHT. Mr. Secretary, a goal is a dream with a deadline. It strikes me that I appreciate what the President said, and I appreciate what you are saying, but we have to set a specific goal. Then we have to measure our progress. I would submit we tonight have to spend a lot more money. With oil at $60 a barrel, right now there is plenty of money in the energy pipeline to encourage people to produce alternate forms of energy. What they need is access to the market.

The oil companies are never going to do this voluntarily. They want to solve the energy problem when they have sold the last quart. If you really want to get at this problem, you have to begin to specifically require certain percentages of our fuel supply, as the State of Minnesota is doing right now, and you will be amazed at how many people will invest in alternate energy if they know that there is an access to market.

I yield back.

Mr. GUTKNECHT. If I may add, I think that when the President of the United States says that we are going to wean ourselves off the addiction to oil, I think we will also be surprised at the impact that will have.

Mr. ISSA [presiding]. Thank you, Mr. Secretary, and certainly I share with the President the view that weaning ourselves off or at least percentage-wise cutting back on that specific fossil fuel also encourages, Mr. Gutknecht, I am sure, would agree, competition where there isn't competition for alternative for oil.

I am proud to say that every Indy car that goes around the track at the Indianapolis 500 doesn't use a drop of gasoline. So there are a few notable places.

Like Mr. Gutknecht, I just finished the World is Flat. But maybe a little differently, because I come from a business background, I may have gotten different interpretations, in some cases, of what action we should take.

I am reminded that when I first started in business, one of my first salesmen, when describing my product versus the competition, said, you know—his first meeting, he said, well, you know, it is just like the product I was selling last week, except now I am representing this guy. It is basically the same thing, it has only got two differences. It's a little bit better and more reliable, and it's just a little bit cheaper, but other than that, it's the same thing.

As you travel and I travel, and we have often bumped into each other around the world, that really is the difference of whether or not we succeed versus any European or any other competitor is are we just a little bit better? We don't have to be a lot better.

Bringing together what some of our colleagues to my left and right both asked about, which was sort of this education and skilled workforce, and particularly your last comment related to people that we educate here, that we recruit from around the world, the best and the brightest, but then they go home to help their home countries compete, because we don't allow them to stay here.

I know immigration policy is a hot button. It's a hot button on this side of the dais, and certainly it's a hot button for the administration. But what are your views as the Secretary of Commerce, looking at our competitiveness of how we should restructure our immigration policy vis-a-vis the half million that come here illegally every year, the half million or so that are allowed to immigrate here legally, the makeup of those people—and I think in fairness, disproportionately at the bottom of the economic rung, education rung, historic opportunity rung—versus the kind of people that you just talked about that you noted that we should try to retain or potentially attract? How big a shift is that if, let's say, a half million people a year were suddenly the best and the brightest people, already with education and drive, versus such a disproportionate amount of family unification or basic workers?

Secretary GUTIERREZ. There are two aspects to immigration. There is the high-skilled and then the lower-skilled workers that I believe you are talking about.

I would say two things, Congressman. One is we need to be more aggressive about enforcement, and I think that's just a very logical

position that we should know who is coming into our country, who is working, especially at a time when national security is such an important factor. So that is one aspect of the immigration dilemma.

The other aspect is we have jobs that are available that are necessary and that Americans don't want. I think it says a lot about our economy that we have moved on, we are seeking for other jobs, we are seeking higher-paying jobs, but these jobs are available.

Therefore, why not recognize that reality, recognize that it says a lot about our economy, and give these workers a guest worker's program, and not—because there is demand for the job, not force them to be coming in the dark of night and then hiding and having to be subject to people smugglers and all that is happening that we can get rid of by enforcing our borders and recognizing the economic reality that we have.

Mr. ISSA. I appreciate that. I certainly share with the President the need to enforce the borders and find a long-term solution for the labor force. But, if you will—and I know this is a conjecture, but, obviously, you are the Secretary for the next generation. What you do today will mostly be felt a decade from now.

As we consider immigration reform, if we were to fundamentally change the ratio and, let's say, reduce by 100,000 a nondescript group of legal immigrants and replace it with 100,000 designated best-of-class hires, what would be the impact to the economy of 100,000 or 200,000 net increases in, if you will, preferential hiring, for people who come with classically the H1B-type skill sets, the best, the brightest, those either with education or those who have been educated here that would otherwise return home?

Secretary GUTIERREZ. Well, specifically on the numbers—and I don't know what 100,000 more would do or 100,000 less. I think conceptually what we have seen throughout our history is that students will come to our country. They fall in love with the freedom, with society, with the tolerance. They decide to apply their skills here, they contribute to our society, they have a family. Their children become first generations, and they become as American as any of us.

That has been our history, and they add energy, they add ideas, they add a sense of hope, and they see that there is more promise here than maybe back home, and, therefore, they try as hard as they can to contribute. And I don't think I am saying anything new; I think I am simply just reciting the history of our country.

Mr. ISSA. Well, in closing, would you say then even if you can't quantify it, that a little bit like that salesman that taught me the business, we would be just a little bit better if we had that change?

Secretary GUTIERREZ. I think that new ideas, attracting the best and the brightest, making this the country that people yearn to live in is very good for us. It has been very good for us in the past. It's been very good for us in the future. I do believe that in this day and age we have a national security component that we didn't have in the past, so we have to be more diligent. We have to be more deliberate about it.

Mr. ISSA. Thank you, Mr. Secretary.

Chairman TOM DAVIS [presiding]. Thank you very much.

We talked about the deficit. I think my friend over here talked about the all-time highest deficit, but as the economy grows, the

deficit in absolute numbers grows, but as a percentage of GDP, I think we are historically in line with where we have been. Isn't that correct?

Secretary GUTIERREZ. That's correct. That's correct.

Chairman TOM DAVIS. Doesn't mean we don't want to get it down, or we shouldn't strive to get it down.

Let me just ask, although this may be a little bit outside your expertise, there's always a concern that with the size of the deficit, which is compared to some of our European competitors, and this is like not out of whack, but that there comes a tipping point where foreign investors in American dollars may take their money somewhere else. I don't know where they will take it at this point. The euro obviously has problems, but that is one concern about the deficit. Do you have any thoughts on that at all, or would you refer that to the Treasury Secretary?

Secretary GUTIERREZ. Well, I would refer any questions about currency to the Treasury Secretary.

I would just say that we have—as you were saying, Mr. Chairman, where else—the question is, is there a better place in the world in which to invest than the United States? What we are trying to do with the American Competitiveness Initiative is to continue to make the answer to that question no. The more we can do that, the better off we will be.

Chairman TOM DAVIS. Well, I want to thank you very much.

Secretary GUTIERREZ. Thank you.

Chairman TOM DAVIS. We are going to let you go. We are going to convene the second part of our hearing. I am going to try to move our second and third panels together, so we can move it in one set of questions. We will take about a 3-minute recess to get that ready. I will be back. I think Mr. Issa will reconvene in about 3, and I will be back in about 5 altogether.

[Recess.]

Mr. ISSA [presiding]. Ladies and gentlemen, I appreciate your all being here so that we could do a combined panel. I must apologize, because there's no votes on the floor today, the Members will be going in and out as they prepare for, on one side of the aisle, a retreat, and on the other side of the aisle, I suspect, a retreat back to their districts.

But I am pleased today to welcome all of you. Dr. Hector de J. Ruiz, I hope I did that somewhat right, president and CEO of Advanced Micro Devices; Brian O'Shaughnessy, who will be joining us, who has joined us, perfect timing, president and CEO of Revere Copper Products; Mr. Richard S. Garnick, president of North American Services for Keane, Inc.; Ms. Deborah Wince-Smith, president of the Council on Competitiveness. I will do this one without reading—and former Congressman Dave McCurdy, presently president and CEO of the Electronic Industries Alliance, which includes the vast majority of divisions involved in consumer, industrial defense.

Dave, good to see you. I have to confess, I was a member of his board for a number of years, so we go back—I don't go back to Congress when he was here, but I do go back to the industry when he joined us.

As is the requirement of this committee, I would ask that you all rise to take the oath.

[Witnesses sworn.]

Mr. ISSA. Dr. Ruiz, we would be honored if you would lead off this panel.

STATEMENTS OF HECTOR DE J. RUIZ, Ph.D., PRESIDENT AND CHIEF EXECUTIVE OFFICER, ADVANCED MICRO DEVICES; M. BRIAN O'SHAUGHNESSY, PRESIDENT AND CHIEF EXECUTIVE OFFICER, REVERE COPPER PRODUCTS; RICHARD S. GARNICK, PRESIDENT, NORTH AMERICAN SERVICES, KEANE, INC.; DEBORAH WINCE-SMITH, PRESIDENT, COUNCIL ON COMPETITIVENESS; AND DAVE McCURDY, PRESIDENT, ELECTRONIC INDUSTRIES ALLIANCE

STATEMENT OF HECTOR DE J. RUIZ

Dr. RUIZ. Thank you, Mr. Chairman, members of this committee. Thank you for the opportunity to be here before you today. As chairman and CEO of Advanced Micro Devices, the question of competitiveness is of particular interest to us, and to the semiconductor industry as a whole.

AMD is a Silicon Valley company—and just a brief description of what we do. Every segment of the economy of any country is now based on the information technology, from agriculture, to the health industry, to transportation, and, of course, to computers.

We are one of the two companies that make microprocessors in the world. The other one is Intel. So we view ourselves as being at the heart of every segment of the economy, of every single part around the world. For we are also aware that the world is changing, because we witnessed it firsthand, and we know that past performance is no guarantee of success in the future.

And we know that America's ability to compete in the 21st century economy hinges on one factor more than anything else, and that is our ability to innovate. Those of us in the semiconductor industry understand that better than anyone. The products that we make are the fuel that power the technology-driven economy.

We understand that leadership and innovation requires innovative leadership. AMD applauds President Bush's new American Competitiveness Initiative, and we believe that recent proposals by Members of Congress are similar steps in the right direction. We also applaud Mr. Chairman Davis' leadership in this particular arena. AMD fully supports these important efforts, and we urge all the makers to enact them.

We must increase Federal support for basic research. We must make permanent the R&D tax credit, and we must improve the quality of education, particularly in our K–12 schools. We must create a regulatory environment that is streamlined, effective and responsive to business, and we must enhance our public policy infrastructure to encourage and support innovation in both the public and the private sector.

But there is more. To this end I want to focus today on three critical points that I believe to be the three keys to enhancing American competitiveness in this increasingly flat world. First, you cannot have competitiveness without competition. Second, government procurement is competitiveness policy in action; and, third

and finally, investing in education is building competitiveness for the future.

Let me explain. First, you cannot have competitiveness without competition. All of the investment, research, specialized education in the world will not amount to a growing, dynamic economy without competition. We know that America's abilities to compete and lead in the 21st century economy and enhance the standard of living of citizens depends upon our ability to innovate.

Companies that fail to embrace innovation as a core business value will fail, as global competitors will do. Innovation is how we can take and maintain the lead, and competition is the heart and soul of innovation, because innovation happens when we feel like we have no choice but to think and act in different ways.

Competition drives us to push past all limits, to extend our vision beyond what we believe to be possible. It pushes us to achieve something greater, and it is competition that turns innovation into the real advantages that allows us to compete on a global scale.

We need competition to drive us to think outside the box. Fair and open competition is a necessity for our share of success, and we have a responsibility to ensure that no one is sheltered from competition. Everyone, every company and every nation deserves an equal chance to compete and succeed on the merits of the innovation that they offer to the world.

Enforcement of antitrust laws and standards of market conduct are critical to a competitive society, and the United States must serve as an example for the rest of the world in promoting free trade and protecting fair and open competition. At the same time, our public sector must serve as an example for our private sector.

That brings me to the second key. Government procurement is competitiveness policy in action. AMD recently commissioned a study, the results of which were released yesterday, showing that the Federal Government, and U.S. taxpayers, would have saved between $281 million and $563 million by adopting performance-based procurement standards for microprocessors. At a time when we face budgetary belt-tightening across the board, government contracts should favor the best technology at the best price, not a single company or a best-known brand.

The final key to ensuring U.S. competitiveness is one which is of great personal importance to me: investing in the improvement of our K–12 education system. Too often we think of competitiveness policy only in terms of graduate and specialized education, but I know from my own experience that our entire educational system is critical to our competitive business. It begins with making a considerable investment in improving our K–12 education system across all subject areas.

But I believe we must go even further. We have to plant the seeds for future economic growth. In this respect the private sector has a responsibility to lead. With that in mind, AMD has begun to form partnerships with leaders around the world. We invested a great deal in our 50x15 Initiative, a commitment to empower 50 percent of the world's population with affordable Internet access by the year 2015.

Today that number is less than 15 percent, so we currently have a great deal of work to do in the next decade, but I believe we can

accomplish this goal, and, perhaps more important, to maintain U.S. competitiveness in this century, I am saying that we must achieve that goal.

We are developing new technologies and solutions that will make Internet access and computing affordable and accessible in places that are far removed from this promise. The first step has been the development of a personal Internet communicator, which provides Internet access to first-time technology uses, and this is a sophisticated device that sells for around $200. Without having any familiarity with computers, people in lower-income and remote locations can, within minutes, access endless amount of information and stay in touch with family members and search the Web.

In Brazil, Russia, China, India and my native Mexico, our goal is to connect billions of people with a chance to—Internet providers to learn about the world, communicate with others, and become part of the growing economy.

We are bringing hope and possibility to places that have not simply been left behind, but have been completely left out. It may sound like charity, but it is not. It is central to our business strategy for the future, because while we are connecting people in the developing world to a greater opportunity, we are also building long-term relationships with infrastructure providers, government institutions and consumers themselves that are going to reap the benefits for many years to come.

In closing, let me leave you with one final thought, an explanation of why this issue is so important to me. I grew up in a small village in Mexico, and, to me, America beckoned as the land of opportunity. Each day I walked across the border to attend high school in Eagle Pass, TX, knowing that I was on the path to a better future. Education in the United States was my opportunity, the key to unlocking my potential.

But far too many of today's children don't have that opportunity that I was granted. With a public education system that consistently falls behind the rest of the world, the United States is failing our children right here at home in the most fundamental of ways. We have a responsibility to them and to future generations to ensure that America remains the land of greatest opportunity.

Indeed, America is still a Nation where opportunity not only exists, but a balance. The key to competitiveness in this century lies in giving our citizens the tools that will allow them to capitalize on that opportunity, the tools that will allow them to innovate, to compete and to lead.

Thank you, Mr. Chairman.

Mr. ISSA. Thank you, Dr. Ruiz.

[The prepared statement of Dr. Ruiz follows:]

Testimony of
HECTOR DE JESUS RUIZ
CHAIRMAN AND CEO
ADVANCED MICRO DEVICES
Before the
COMMITTEE ON GOVERNMENT REFORM
U.S. HOUSE OF REPRESENTATIVES
February 9, 2006

Mr. Chairman, Representative Waxman, Members of the Committee, thank you for the opportunity to appear before you today to discuss the state of U.S. competitiveness in the increasingly global 21st century economy.

As Chairman and CEO of AMD, this is an issue of particular interest, both to me personally as well as to the semiconductor industry as a whole. I believe AMD's commitment to continuous innovation and the pursuit of fair and open competition makes it particularly well-suited to serve as an example of how U.S. companies must adapt in order to compete in this newly globalized, some would say "flat," world.

Based in Sunnyvale, California, AMD is leading the world in the design and production of products that lie at the heart of today's technology-driven economy. In countries around the globe, AMD microchips power everything from supercomputers and industrial servers to laptop PCs and cell phones.

AMD is based in the U.S., but we truly are a global company. Our products are produced and sold all over the world. We employ thousands of the brightest scientific minds, both in America and abroad. And the research we conduct in facilities around the globe constantly challenges the frontiers of scientific knowledge.

As I share the experience of AMD with you today, I want to address the fundamental actions that I believe this nation must take in order to ensure that we retain our technological lead so that we can continue to compete in the 21st century economy.

Most importantly, I want to leave you with three key thoughts – what I believe to be the three keys to further enhancing American competitiveness in this increasingly "flat" world:

1) You can't have competitiveness without competition;
2) Government procurement is competitiveness policy in action; and
3) Investing in education is building competitiveness for the future.

I am proud of the contribution AMD's innovation leadership continues to make toward enhancing U.S. competitiveness. But, I also am keenly aware that the world is changing. I have witnessed this first-hand.

Past performance is no guarantee of success in the future. The same business models and government policies that propelled America to the top and helped build the world's greatest economy in the 20th century could hold it back in the 21st century.

We cannot allow this to happen.

New times require new ideas and new ways of doing things. America must adapt to the changing world and recommit itself to achieving the technological leadership that will fuel the 21st century economy. And make no mistake, we must do so now – the need is, indeed, urgent.

While America maintains its preeminence in the world economy, it's no secret that the global playing field is being leveled. There is mounting evidence that other nations are better prepared and more motivated to compete in this new economy.

China, which has overtaken the U.S. as the world's largest exporter of high-tech products, now graduates four times as many engineers as the United States. Japan graduates twice as many and South Korea the same number as the U.S., despite the fact that they have one-sixth of our population.

China has more than doubled its R&D investment in the last decade, while the U.S. Congress has repeatedly cut back federal investment in technological research and development. What's more, many foreign governments offer favorable tax structures and other financial incentives to companies which conduct their research and development in their nations, while the U.S. has made no significant effort to reform tax policies in order to attract and retain such business. Foreign-owned companies and foreign-born inventors now account for nearly half of all U.S. patents. And even more frightening in the context of all of these statistics, U.S. 12th graders recently performed below the national average of 21 countries on a test of general knowledge of math and science.

Clearly, we must take action now to correct this imbalance before the economic scales are permanently tipped against us and we are no longer able to compete on a global scale. We cannot afford to be complacent. Nor do we have the luxury of time to spend blaming others. We must come to terms with just how competitive – and how quickly so – the rest of the world has become. And we must recognize that losing our competitive edge is as much a threat to national security as it is to economic vitality.

In this regard, let me emphasize one critical point: Although we must benchmark ourselves against other economies – just as competitive companies benchmark themselves every day against their competition – the world economy is not a zero-sum game. I firmly believe that the United States must work hard to be as competitive as it can be. But we should welcome, as well, other nations when they make themselves more competitive. The way to sustain our own economy is to encourage others to compete, rather than try to hold them back. More than that, economic growth can bring stability to a world with all too much unrest and violence.

Thus, we must understand that in confronting this challenge there is also tremendous opportunity – opportunity both to grow our economy while also enriching the lives of all of the world's people.

I. The Three Keys to Competitiveness

While the United States must examine and address our basic public policy needs as a nation in order to compete and lead in the 21st century economy, I believe we must first and foremost understand that a competitive society is not based only on the creation of a research-based infrastructure, as critical as that may be.

That is why I want to emphasize this morning three parts of society that, although often seen as beyond the scope of competitiveness policy, are actually fundamental to its success.

The principles which make up "The Three Keys to Competitiveness" are:

1) **You can't have competitiveness without competition;**
2) **Government procurement is competitiveness policy in action; and**
3) **Investing in education is building competitiveness for the future.**

I will address these principles in order.

First, you can't have competitiveness without competition. All the investment, research and specialized education in the world won't amount to a growing, dynamic economy without healthy competition that invites and rewards innovation by many – not just a few.

Consider the Internet as an example. Federal support was critical to its creation. But competition was fundamental to its success. As we have learned over the last decade, vibrant competition allows consumers to choose between winners and losers. Google wasn't always the leading search engine – both AltaVista and Ask Jeeves got there first. But Google developed better technology and was able to bring that innovation to customers because the marketplace was open to new and better choices, not unfairly controlled by entrenched incumbents.

In other words, the triumph of the Internet is really a triumph of fair and open competition.

We know that our ability to compete and lead in the 21st century economy depends upon our ability to innovate. Companies that fail to embrace innovation as a core business value will fall to global competitors that do.

Innovation enables sustained economic growth, allowing us to take and maintain the lead. And competition is the heart and soul of innovation. Because innovation happens when we feel like we have no choice but to think and act in new and different ways, to take risks to achieve audacious goals.

Competition drives us to push past old limits, to extend our vision beyond what we believe to be possible. It pushes us to achieve something greater. And it is competition that turns innovation into the real price and performance advantages for consumers and citizens that allow us to compete on a global scale. We need competition in order to drive us to think outside the box.

Fair and open competition is a necessity for our shared success. And we have a responsibility to ensure no one is sheltered from competition. Everyone – every company and every nation – deserves an equal chance to compete and succeed on the merits of the innovation they offer the world. That means that enforcement of antitrust laws and adherence to accepted standards of market conduct are critical to the creation of a sustainable competitive society.

As a society, we must follow the standards designed to promote competition and encourage innovation. We must support open standards in technology.

In both the public and private sector, competition – not protection – is the answer. And the United States must serve as an example for the rest of the world in promoting free trade and protecting fair and open competition.

That brings me to the second key to competitiveness: Government procurement is competitiveness policy in action. Just as the United States will serve as an example for fair and open competition to the rest of the world, we must ensure that our public sector serves as an example for our private sector.

This is especially important in technology contracts. AMD recently commissioned a study by R. Preston McAfee, the J. Stanley Johnson Professor of Business, Economics and Management at the California Institute of Technology, which found that during the calendar year of 2004 approximately 69 percent of federal procurement solicitations for computer hardware posted on the federal online service *FedBizOpps.gov* contained language that either required the use of a specific brand of microprocessors or specified that the processor should be equivalent to that brand-name model microprocessor. Further economic analysis from that study, the results of which were released yesterday, shows that the federal government and U.S. taxpayers likely would have benefited from approximately $281 million to $563 million in total present-value savings by adopting vendor-neutral contract specifications based on performance benchmarks. Brand name specifications prevent federal procurement officers from choosing the best product to fit their demands and ultimately places at risk the quality and suitability of government purchases. And such limited choice leads to higher prices for federal agencies and American taxpayers.

At a time when we are faced with budgetary belt-tightening across the board, any fiscal conservative should find this practice outrageous. And it must end. We must ensure that our own government contracts favor the best technology at the best price, rather than a

single company or the best-known brand. That is the best deal for our taxpayers and it is the best example for our nation – and other nations.

Indeed, open government procurement contracts should be a central goal of our trade negotiations with other nations, so that their public sectors may serve as similar examples in support of fair and open competition and innovation. In fact, we believe that the United States Trade Representative should make fair and open procurement a key objective of international negotiations.

The final key to ensuring U.S. competitiveness is one which is of great personal importance to me: Investing in the improvement of our K-12 education system. Too often we think of competitiveness policy only in terms of graduate and specialized education. But, I know from my own experience, that our entire educational system is critical to competitiveness.

As a teenager growing up in a small village in Mexico, America beckoned to me as the land of opportunity. Each day, I walked across the border to attend high school in Eagle Pass, Texas, knowing I was on a path toward a better future. Education was my opportunity – the key to unlocking my full potential.

But far too many of today's children do not have that same opportunity I enjoyed. With a public education system that consistently falls behind those of other nations in the world, we are failing our children right here at home in the most fundamental way. We have a responsibility to them and to future generations to ensure that America remains the land of greatest opportunity.

That begins with making a conscious and considerable investment in improving our K-12 education system. And while math and science education are critically important, especially in this new technology-driven economy, I firmly believe we must focus on improving our entire education system across all subject areas.

This is crucial to our ability to compete in the global economy for so many reasons, not the least of which is the fact that companies will be compelled to go where the talent is. We must make every effort to attract, educate and retain the very best and the brightest in the world, nurturing talent in America from a very young age.

I take this issue very seriously, and AMD has dedicated significant resources to improving K-12 education in the communities in which we operate. In 2004, AMD invested more than $717,000 in educational institutions and programs in the communities surrounding our domestic and international sites. And we donated another $1.5 million to engineering programs at universities throughout the U.S. We are a founding sponsor of GirlStart, an Austin, Texas-based non-profit aimed at educating and empowering girls ages nine through fifteen by encouraging their interest in math, science and technology. AMD scientists and engineers also volunteer as science fair project advisors to Sunnyvale, California-area middle-schoolers through the Science Buddies online mentoring program. And since great teachers are key to successful learning, AMD also

funds programs aimed at developing and supporting effective classroom instruction, through programs like Sunnyvale's Industry Initiatives in Science and Math Education which provides hands-on experience in the high-tech workplace for science and math teachers that can be translated back into the classroom.

In addition, we've partnered with local community colleges, like Austin Community College, in developing Semiconductor Manufacturing Program scholarships to train new workers in our field. And in 2004, we devoted $7.8 million to training our current workforce and offered $1.4 million in tuition reimbursement to employees seeking to further their education.

These are just a few of the many examples of the ways in which AMD has dedicated itself as a company to this principle. We see it as more than a chance to give back to our communities and employees – it's another way in which we can contribute to competitiveness, both in the United States and globally.

II. Actions Fundamental to U.S. Competitiveness – Investment, Talent and Infrastructure

While competition is the linchpin of competitiveness, we cannot ignore our basic needs as a nation. It is important that we identify the areas in which our current policies and business practices are lacking in the context of the new economy. If we are to ensure U.S. competitiveness in the 21st century, we must take action in critical areas of need: investment, talent and infrastructure.

Indeed, President Bush took a bold step to address these issues when he announced the "American Competitiveness Initiative" in his State of the Union Address. AMD applauds the president's efforts to elevate competitiveness to the forefront of the national public policy agenda.

The United States Congress also took an important step in the right direction in December, when Senators Ensign and Lieberman, along with 22 co-sponsors, introduced bipartisan legislation entitled the "National Innovation Act of 2005." Allow me to take this opportunity to voice AMD's wholehearted support for the measures provided for in this bill – measures aimed at investing in a future built upon innovation and competition and measures which, if enacted, will ensure American competitiveness well into the 21st century.

The first area of critical need in which the U.S. must take action in order to retain its competitive advantage is investment, and more specifically, investment in the research and development of technology.

Many believe microprocessors to be the fuel powering the technology that is driving the 21st century economy. In today's world, technology is pervasive – no company, no

country and no citizen is untouched. Technology is the great equalizer of the 21st century, changing all of the rules by allowing countries to rapidly increase their competitive edge.

It is for this reason that we must ensure that the federal investment in research and development is re-focused on technology and exploring and challenging the frontiers of knowledge. While private companies like AMD devote a large portion of our revenues to research and development of new technologies, we cannot place enough emphasis upon the importance of federally-funded R&D. Federal funding for research and development, in large part, goes to the long-term basic research projects that pose too high of an investment risk to private companies because they may not produce a return on investment for decades.

It was federally-funded R&D that gave us the Internet, fiber optics, global positioning systems and nanotechnology, just to name a few world-changing innovations. And these are the types of breakthroughs that are critical to our future competitiveness, because they improve lives, create new jobs, open new markets and contribute to the entire nation's economic vitality. It is critical that this type of research continue. That is why we support measures which encourage federal agencies to allocate a greater percentage of their R&D budgets toward high-end innovative research, as well as proposals to significantly increase funding for the basic research conducted by the National Science Foundation.

In addition, we support the proposal to expand and make permanent the Research and Development (R&D) tax credit, thus making it easier for private companies to engage in long-term research projects. Other nations are offering more and more incentives to draw research and development to their shores. Only by making the United States an attractive location for research and development, can we continue to lead the world in this critical area.

The second area of need which is fundamental to ensuring U.S. competitiveness in the technology-driven economy is talent. If we are to not only compete, but lead, in this new economy, we must increase our base of homegrown talent in science and technology.

The statistics are staggering. China and India alone graduate 6.4 million from college, over 950,000 of which are engineers, while in the U.S. only 70,000 engineers are among the 1.3 million who graduate from college each year. More than 50 percent of our current science and engineering workforce is approaching retirement. All while the percentage of American high school seniors who plan to pursue a degree in engineering is down 30 percent from a decade ago.

If the United States does not take action to change these statistics, there is no doubt in my mind that it will lose its global reputation for "American ingenuity."

Our schools must be second to none. We must continue to attract the best and the brightest. And education must continue; we must be constantly training and preparing our workforce for what is on the horizon. It is important that we begin to develop and

implement practices – new ways of doing things – that allow us to utilize the new technologies which are the fruits of our innovation to our advantage.

The first step toward accomplishing this tremendous task is addressed in the National Innovation Act through increased funding of advanced degree and training programs in the sciences, technology, engineering and mathematics. AMD supports this, along with provisions which address the need to balance our competitive needs with national security concerns and make it easier for foreign-nationals educated and trained in the U.S. to remain here and continue their research and contribution to the U.S. economy.

The final area of fundamental need captures many smaller needs into the broader category of infrastructure. It is critical that the U.S. develop an "innovation infrastructure" to support and encourage innovation in both the private and public sectors. Public policies related to education, training, research and development, taxation, intellectual property, immigration, competition and market access all impact the ability of the private sector to innovate. The United States must aim for policies that stimulate maximum creativity and provide for free trade and fair and open competition, rather than policies which only provide for narrow benefits to one nation or one company.

We must carefully re-examine well-intentioned policies which, nonetheless, stifle and discourage innovation. AMD supports efforts to create a regulatory environment in this nation that rewards innovation and entrepreneurship. It is imperative that the American regulatory system be streamlined and responsive to businesses. That is why we strongly favor the renewal of the Paperwork Reduction Act.

AMD also supports the National Innovation Act provision for the creation of the President's Council on Innovation, with the purpose of developing a comprehensive agenda to promote innovation in the public and private sectors. Maximizing our "innovation infrastructure" to allow for greater competitiveness must be an ongoing conversation between public and private entities – no one side and no one player can dictate a blueprint for progress to the others.

III. Competing in an Increasingly "Flat" World

AMD is a company which has confronted and continues to face the challenges of competing in the new global economy of the 21st century. And I believe our experience is instructive for finding solutions that will allow us to better compete as a nation in the "flattened" world.

While AMD is based in the United States, we truly are a global company whose products are manufactured and sold all over the world. Our microprocessors are built in our state-of-the-art manufacturing facility in Dresden, Germany. We have research and development facilities in the United States as well as other countries. And we have sales and marketing centers across the globe.

As I said before, world trade is not a zero-sum game. That is why the United States should encourage and support developing economies. There's an old saying, "A rising tide lifts all boats." With the proper policies in place, the entire world ultimately stands to benefit from increased competition from America and other nations.

In this new global economy, collaboration is central to achieving this goal. That means collaboration among academic, business and government leaders in this nation. And it means collaboration among these same leaders in the U.S. and those leaders in other nations. It's just another form of innovation.

Recognizing that the private sector has a responsibility to lead this charge, AMD has already begun to form these kinds of collaborative partnerships with leaders around the world.

We've invested a great deal in our "50x15 Initiative," a commitment to empower 50 percent of the world's population with affordable access to the Internet by 2015. Today, that number is less than 15 percent, so we clearly have a great deal of work to do in the next decade. But I believe we can accomplish this goal. And perhaps more important to our company and the issues of maintaining U.S. competitiveness in the 21st century economy, I am saying we must.

AMD is developing new technologies and solutions that will make Internet access and computing capability affordable and accessible in places that are presently far removed from its promise. The first step has been the development of our Personal Internet Communicator, or PIC, which provides instant Internet access to first-time technology users. It's a sophisticated product, but it sells for only about $250, including the monitor. Without having any familiarity with computers, people in lower-income and remote locations can – within minutes – access endless amounts of information, stay in touch with family members, and search the web from their home.

In Brazil, Russia, China, India, and my native Mexico, our goal is to connect billions of people with the chance the Internet provides to learn about the world, communicate with others, and become part of a growing economy. We are bringing hope and possibility to places that have not been simply left behind, but completely left out.

Yet, I don't need to tell anyone in this room, that we would not be around for long if this initiative were about charity. It is not. It is central to our business strategy for the future. Because, while we are connecting people in the developing world to greater opportunity, we are also building long-term relationships with infrastructure providers, government institutions, and consumers themselves. And that will reap benefits for years to come.

AMD is also partnering with Google, Samsung, and Nicholas Negroponte of MIT Labs, among others to deliver on the promise of an initiative we call "One Laptop Per Child." AMD is a founding partner in this initiative, and we are directly involved in the development of the notebook computer central to its mission of providing Internet access to all of the world's children.

Through each of these initiatives, AMD is entering markets that have never been tapped. It's a risk, but we're confident the return that results from giving people the tools they need to participate and succeed in the new economy will pay off in the end.

AMD is proud to being doing our part to encourage fair and open competition, to foster innovation and to enhance competitiveness in the 21st century global economy driven by technology.

But our long-term success is dependent upon policymakers taking the steps that will allow us to continue to do these things and build upon what we have accomplished so far.

The only way for any of us to succeed in this new economy is through innovation. Constant, tireless innovation in technology, in business models, in education and in public policy. We must have the policies in place which allow us the flexibility to continually reinvent ourselves and the goods and services we have to offer in response to the ever-changing world in which we live.

From the very beginning of our history, this nation has been about discovery – about finding new beginnings and challenging frontiers. We are still the world's leading economy, home to a wealth of venture capital, many of the world's finest research labs and universities and a culture uniquely supportive of risk-taking.

Now, we must honor our history and rise to meet the challenge presented by the 21st century, and in so doing capitalize upon the incredible opportunity that comes with it to improve the lives of all of the world's people along with our own.

Mr. ISSA. Mr. O'Shaughnessy.

STATEMENT OF M. BRIAN O'SHAUGHNESSY

Mr. O'SHAUGHNESSY. Good morning, members of the committee. My company, Revere Copper Products, was founded in 1801 by Paul Revere. We believe we are the oldest manufacturing company in the United States. We don't make pots and pans anymore. That was sold to Corning about 20 years ago. So for about 75 years, we made them. The rest of the 205 we made sheet, strip and coil products of copper and brass. Think about an aluminum rolling mill and those big coils that you see. We do the same thing, but we make them out of copper and brass. We do that in Rome. We have a small plate mill over in New Bedford, MA, not far from the original plant built by Paul so long ago.

Now, you are thinking, here is an old-line manufacturing company, right? Let me explain something. Eighteen years ago, when I acquired the company—I am somewhat of an entrepreneur—we had a payroll of about 750 people. Three had degrees in engineering and computer science. Within 3 years, our payroll was 550, and we had 55 people who had degrees in engineering and computer science.

We are not a low-tech company, we are a high-tech company. When you look at our rolling mills, you will see a lot of electronics on those rolling mills. We are customers for those PCs and other chip devices to run our machines. When you look behind our machines up on the wall, you will see a glass window, and behind that window you will see $3, $4, $5 million worth of computers to run that one machine, that one mill.

Now I want to talk about why are we losing manufacturing jobs to the rest of the world? The numbers are about to come out. I think it will be somewhere around $200 billion deficit with China on manufactured goods in the United States. The EU is going to probably come out $150 million. I am just rounding off to the nearest $50 million there, because I don't know——

Mr. ISSA. Please, stay with the billion, I get confused.

Mr. O'SHAUGHNESSY. I am sorry, did I say million?

Mr. ISSA. It happens here all the time.

Mr. O'SHAUGHNESSY. All right. First of all, let's talk about what it is not. A local furniture company up in Booneville, NY, shut down, and they consolidated their operations down into the Carolinas somewhere. They had five plants; they went down to three. They announced they were consolidating and doing all of this. Their press release didn't say that they were now buying furniture from China and shipping it in.

My point here isn't about outsourcing. I think outsourcing is a phony issue. I think it has—it's an effect, not a cause of our problems. The point I am trying to make is that the press release the company put out didn't mention that we are not making those products here now because the costs are too high and this and that; we are going to make them in China.

Similarly, a lock set manufacturer in California, and in this case I will mention the company's name, Schlage Locks—do you know what lock sets are? Those are on doors where you get the door han-

dle, the brass plate, the whole mechanism. That is all called a lock set.

Well, they said they were moving closer to the market, and so they and every other lock set manufacturer in the United States left the country. Nobody has left to serve this market. But that isn't true. You walk into any big box store, you walk into Wal-Mart, Kmart, Ace, and pick up anything that is made of brass, and you will see it is made in China.

So again my point is the press release doesn't tell you the story. I don't think America knows the full story of what is going on in manufacturing and what is causing this big deficit.

So, if it's not us—and I will answer questions on that later if you like. It is certainly not the tax policies, the dividend cuts, the death tax cuts, the income tax reduction. No. Those are all good things, and those are things that need to continue.

Several years ago I started walking down a path that led me to understand better what was going on in manufacturing and the competitive situation of the United States. Our plant in New Bedford was facing very strong competition from a plant in the U.K. We were competing with them in the Middle East, in Japan and South Korea, and in the United States. But the owners of that plant were having a tough time because we were outperforming them insofar as productivity. The owner decided he had enough, and he wanted to sell.

So we looked at his books. What we discovered were, to our chagrin, to our amazement, was that his tax load was much smaller than ours. We couldn't believe this. It just happens that the VP and general manager of my plant in New Bedford is British. So he said, well, Brian, look at it, here is the situation. In that country, they have a VAT tax structure that takes up part of the costs of manufacturing. When they export to the United States, we have to face them here, they get that back, and they do everywhere else.

So I started looking around and discovered this huge discrepancy that has to do with VAT taxes, and that we are the only major industrial country that does not have a VAT tax system.

Now, what I would like to do is to put into the record my view of what a good VAT tax structure is. But, I want to make a very strong cautionary note here. It's very easy to make things worse. Here is what you can do. You can put a VAT tax in and leave the existing system and use VAT taxes to try to close some deficit.

You will make it worse for manufacturing. That would be a horrible, horrible approach to take. If you are interested in reviewing this document, you can also go to reverecopper.com and just click on VAT USA.

I quickly want to go into another couple of major points on energy. The sad truth about windmills is, you know, when they first came out, everyone was concerned about environmentalism. We wanted them to work. We wanted them to be effective. But the windmills, if we increased our number of windmills 10 percent a year for 20 years, the effective addition to our Nation's capacity would amount to 1 percent. Windmills are one of those incredible things where 1 and 1 doesn't make 2, because if the windmill is operating, the standby plant shuts down. When a windmill doesn't

operate, the standby plant comes up; 1 and 1 doesn't make 2, it actually makes about 1.08.

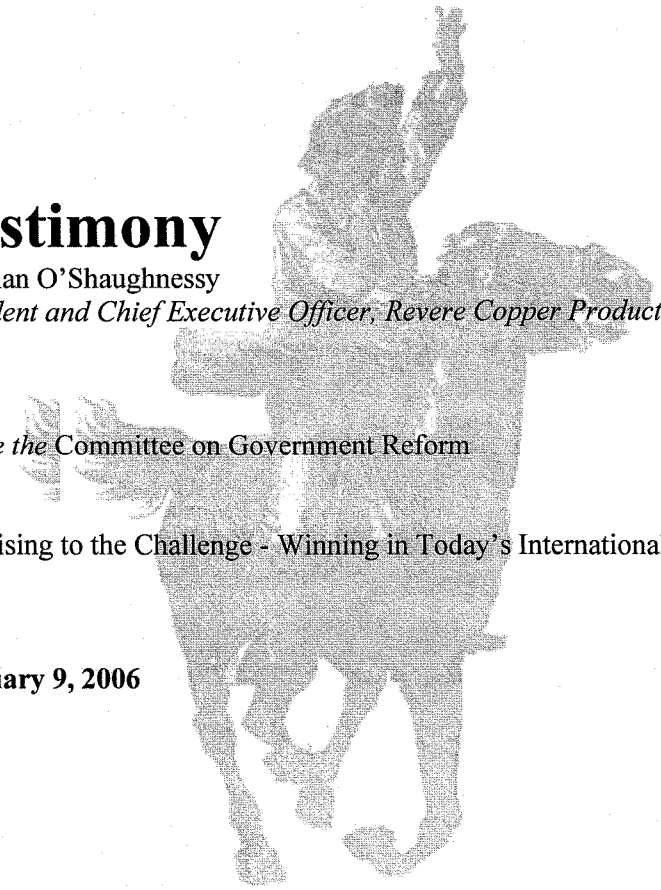
Now, some States have pushed that up to 12 percent, even 20 percent. I suspect some of those people are the ones that did the calculations on the dam in New Orleans.

Finally, on currency. China's Government recognizes the great truth that an entity that provides or creates skilled jobs is a precious thing. It is not something to be taxed, sued and regulated to death. The challenge, the impact of the regulated currency on the United States and the rest of the world is astonishing, and the world is sleeping.

So I will just ask you one question. If Paul Revere rode into this room today, what do you think he would say? The Chinese are coming. Unfortunately, they are already here, and they are taking our jobs. Thank you.

Chairman TOM DAVIS [presiding]. Thank you very much.

[The prepared statement of Mr. O'Shaughnessy follows:]



Testimony

of Brian O'Shaughnessy
President and Chief Executive Officer, Revere Copper Products, Inc.

Before the Committee on Government Reform

On Rising to the Challenge - Winning in Today's International Climate

February 9, 2006

TESTIMONY OF
Brian O'Shaughnessy
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Good afternoon, Mr. Chairman and members of the committee. I am Brian O'Shaughnessy, President of Revere Copper Products, Inc. My company was founded by Paul Revere in 1801 and may be the oldest manufacturing company in the USA.

Paul Revere grew up in his father's silversmith shop and was destined to become America's finest silversmith. A big issue in 1773 was the British tax on tea. One night Paul Revere plus about 100 members of the Sons of Liberty disguised themselves as Indians and tossed tea from three merchant ships into Boston Harbor to protest the tax.

But just imagine how Paul would have reacted if his silversmithing business had to put up with the tax scheme that burdens US manufacturing today. The current tax code represents a major drag on our economy and we need a tax code designed for the 21st century. In order to improve the competitive position of U.S. companies, policy makers should move towards a simpler and fairer tax code that encourages savings and investment and promotes economic growth. Tax relief enacted in recent years, including the lower tax rates for many small businesses, has been very helpful and Congress needs to build on these changes and make them permanent.

In April of '75, Paul was a member of yet another secret society watching the movement of British troops. He waited with a swift horse for the signal…two lanterns would be shown if the British moved by sea and one, if by land.

"He springs to the saddle, the bridle he turns,
A second lamp in the belfry burns!
And yet, through the gloom and the light,
The fate of a nation was riding that night."

But Paul was more than an expert horseman and a master silversmith. In his spare time, Paul engraved copper plates and printed money to support the cause. Powder was in short supply so Paul built a factory to make gunpowder. Next, he began manufacturing cannon. I'm sure you never heard about this side of Paul Revere, but then history pays so much attention to battles and wars and so little to the mining and manufacturing base that makes winning them possible.

Imagine once again how Paul would have fared if he faced the legal tangle that manufacturing faces today. The liability costs imbedded in health care, plant operations and product use is unlike anything faced by manufacturing companies anywhere else in the world.

Following the revolutionary war, American ships were besieged by Algerian pirates. The United States began building a naval fleet including a mighty warship, The Constitution. Paul Revere already manufactured numerous brass parts for ships. But The Constitution would need sheet copper to sheath its hull.

Ever the entrepreneur, Paul put up $12,000 of his own money, secured a $10,000 loan from the US Navy and constructed a copper rolling mill – the first in the new world. Revere and Son started up in 1801 while many of our founding fathers still ran the country. They provided the loan because they recognized the critical importance of domestic manufacturing for national defense.

Now you might conclude based on these remarks that I am a strong supporter of domestic content laws and opposed to outsourcing…but that is not the case and let me explain why. About eight years ago, the British government decided it needed a new parliament office building across the street from Big Ben. So the contractor bid out the roof which was to be made of a complex alloy – copper nickel aluminum bronze. Revere was awarded the job because we had the best price and the best reputation in the world for producing such a complex product. So think about it – today those British government employees are working under a roof supplied by a company founded by Paul Revere!

On May 10, 1818, Paul passed away but the midnight ride continued in a way that would have made America's first industrialist proud. Along with his country, Revere and Son prospered and became Revere Copper Products. Like many manufacturing companies, Revere benefited from an abundant supply of low cost energy. Although the oil industry has developed new techniques to reduce environmental impact, instead of drilling for oil where it can be found in Alaska and offshore, we are building costly windmills. The true costs are hidden as they are so bad that wind power must be mandated, subsidized and surcharged. Even if construction of such wasteful windmills increased 10% a year for 20 years, it would then only represent 1% of the nation's capacity but the blight of scenic areas would be massive. This is because only a small fraction of its designed capacity can be counted towards a state's reserve requirements because it is so unpredictable and therefore unreliable.

Our nation's economy is suffering from the burden of increasing energy costs that are stealing the savings of families and the manufacturing jobs of its workers. France uses clean, low cost nuclear technology for 80% of its generation. The USA has coal reserves for clean coal generation equal in btu content to all the oil in Saudia Arabia. The Chinese plan to build 20 nuclear power plants in the next 20 years, and so should we, along with 20 new clean coal plants. The US federal government should precertify generation sites that balance environmental concerns with economic demands and national security.

Those of us who have invested in technology development have all experienced the mounting frustration as fruition always seems just over the hill. Investing in technology development for nuclear and coal generation is intelligent but then doing nothing else while waiting and hoping for successful deployment of some new technology is national economic suicide.

US tax, legal, energy and environmental policies are all combining to place an unfair and, indeed, unsupportable burden on the manufacturing worker in the USA. Manufacturing companies such as Revere are being taxed, sued and regulated to death. Significant reform is needed of US tax, legal, energy and environmental laws in order for our country to continue to provide American workers with the skilled jobs needed for products "Made in the USA."

But that is only half of the impact on manufacturing jobs. Just as significant as the damage we are doing to ourselves is the damage caused by one country to the rest of the world. The Chinese government recognizes this great truth....an entity that creates skilled jobs is a precious thing! While we are mindful of the great need of the Chinese government to create jobs for its people, all manufacturing outside China is being severely impacted by China's policy of controlled exchange rates, unfair subsidies – including subsidies for copper and brass scrap, and rampant theft of intellectual property including both copyright piracy and trademark counterfeiting. This is a huge challenge to world manufacturing and the world is sleeping.

So, if Paul Revere rode into this room, what would he say?
THE CHINESE ARE COMING!

Chairman TOM DAVIS. Mr. Garnick.

STATEMENT OF RICHARD S. GARNICK

Mr. GARNICK. Thank you very much, Mr. Davis and members of the committee. Thank you very much for holding this important hearing. I applaud you and your committee for your leadership in the area of concern of American business and family.

The United States economic competitiveness and technology in the years ahead is at stake. I am president of Keane, Inc., a Boston-based information technology and business process servicing organization.

As to my performance in the context of my comments, I would like you to know that prior to joining Keane late last year, I spent 4-plus years as a senior executive for one of the leading IT services firms based in India, serving as the only American on the management board of any major Indian IT services firms. Thus, I think I have a unique perspective of the global landscape and the competitive threat to U.S. providers.

Many of the comments of the World is Flat I have lived over the last decade. I am also here today in another capacity, and that is as a board member of the Information Technology Association [ITAA], which represents over 325 member companies in the information technology industry.

These are the companies that are the enablers of the information technology economy that Dr. Ruiz spoke about. These range from startups to some of the largest corporations in North America, and they serve companies on a truly global basis. We are united by our concern that if the United States is to remain at the forefront of global high tech economy, we must take practical, prudent steps to preserve our competitiveness today and tomorrow.

I would like to begin my remarks by stating that I truly believe the way forward is clear. Without disciplined, purposeful action, the Nation's high tech future and therefore its economic future is at risk. To remain globally competitive, America must at least double the number of science, technology, engineering and math—or I will use the term "STEM"—graduates over the next 10 years, from approximately current levels of 430,000 to 860,000. If we don't create a more equitable platform for global competition and a larger, better equipped technology workforce, we will surely lose much of the economic edge we have enjoyed for the past 50 years.

Consider, global environments where global collaboration enabled by powerful high speed networks level the traditional barriers to domain expertise and professional interaction. A burgeoning appetite for white collar employment pits country against country in a race to perform services in competitive bidding heretofore unimaginable, target national investments in science education, develop a large cadre of STEM workers to pursue those global opportunities and in the process rewrite the rules of global economic engagement.

The big question in front of us is can a high standard of living country like the United States compete in this transformed business environment? Unequivocally in my opinion, the answer is yes. But innovation and creative scientific engineering and technical disciplines may be the last line of defense against an otherwise uncomfortable future.

In the past, scientific discovery could yield practical knowledge in commercial products capable of sustaining an entire community for years. Scientific innovation has produced roughly half of all U.S. economic growth in the last 50 years. Foreign suppliers certainly contributed to the value chain during this time, but they did not supplant it.

The road to the future, STEM. In the early days of the Republic, the Nation's manifest destiny lay on the trails and canals running West. Pioneers used these difficult avenues to pursue a still more difficult American dream of individual freedom and national strength. Today and into the foreseeable future, the road to global competitiveness, and therefore America's destiny, runs through education and the STEM fields. We fundamentally need more trailblazers from our entire diversified community of Americans, and they will be needed because the more we have, the more trails we can blaze.

The power of computers, software communication is enormous today, but will be dwarfed by computational resources available to typical users 10 years from now, again due to the thanks of the semiconductor industry and all the providers of technology platforms like Dr. Ruiz's company. This computational power sets the stage for enormous discoveries in virtually all aspects of human endeavor, ranging from preventing diseases to modeling behavior of markets. Advances in technologies like data mining, data storage, high speed networks, etc., will launch a new information revolution and endow these societies able to harness this power with global economic leadership.

STEM graduates will channel this force and allow the United States to realize its fullest potential. As Brian spoke about earlier, he lowered his number of total workforce but increased the high quality of his workforce and improved productivity of his business. But there are warning signs out there. U.S. self-sufficiency in math and science is at issue.

We spoke about it through earlier sessions, but American universities granted 50 percent of the doctorate degrees in computer science to foreign born students working in industry. The percentage of doctoral degrees in engineering is even higher; 22 percent of our science and engineering jobs in the United States are now held by the foreign born. While the Nation may be able to meet short-term labor shortages by relying on this talent pool, such workers may ultimately decide to repatriate, taking with them their advanced degrees and American industry experience.

The number of undergraduate degrees awarded to science and engineering students is falling. Between 1985 and 2000, bachelor degrees awarded to engineering and math and computer science, etc., had fallen by 18.6 percent. Roughly one-third of the students declaring an engineering major switch prior to graduation. The number of newly declared computer science undergraduates has dropped 33 percent, and computer science master's degree candidates have declined 25 percent since only 2002.

In addition, tighter customs and immigration controls in response to homeland security concerns are dissuading foreign students from study in the United States. A 2004 survey by the Council of Graduate Schools found that a number of foreign students in

U.S. science and engineering programs is down 24 percent in terms of the former and 20 percent in terms of the latter. Moreover, foreign students who are electing to study hard science disciplines may face a harder time with visa screenings and the entire processes.

So this brings us to the question: How do we sharpen America's competitiveness and edge in the 21st century? From my perspective, it means that we need to begin by focusing on three things: Education, government policies and industry efforts in partnership.

Education. The STEM workforce. The key is expanding this. Again, we have to at a minimum double the workforce over the next 10 years. This seemingly monumental goal will still put us at a competitive disadvantage in the way of pure numbers to the STEM workers in India, where I spend so much time, China, where I spend a lot of time, as we continue to lose ground due to demographics and emphasis of their overall economy.

In 2004, the Academy of Natural Sciences reported that 350,000 students from China graduated with bachelor of science degrees, compared to only 140,000 in the United States.

Last, India is graduating over 300,000 engineers in 1 year alone and that is expected to continue to grow to over half a million. And that compares to our graduating of less than 75,000 engineers a year.

Competition is a numbers game, and at a minimum doubling the number of STEM graduates is necessary to best position the United States for economic prosperity.

Government policies. How can the government step up and lead? You can help by helping facilitate the doubling of the STEM workforce. Doubling this will pull adequate student enrollments from groups that are currently underrepresented in the math and science professions. We have a major disconnect. Women are one dramatically underrepresented group. The percent of women in the IT workforce declined from a high of 41 percent in 1996 to 32.4 percent in 2004, while the total number of women getting college degrees has grown.

Just 3 percent of 12th grade African Americans and 4 percent of Hispanic Americans are proficient in science, a situation that doubtlessly limits the number of minority students in the STEM college programs and the STEM workforce over all.

The actions I have described today will play out over many years. There are, however, practical steps that can be taken in the near term to hone the Nation's competitive advantage. One such step is in the area of increased access to foreign born talent.

Congress should move to make the current limits on business, immigration programs reflect real world conditions. In the real world, the 65,000 visa cap placed on the issuance of H1B visas in 2006 was reached 2 months prior to the start of the fiscal year.

Other important policy steps to double the number of STEM graduates: Extending training and assistance to workers in services industries, to workers when they are displaced through other means of economic transformation, controlling health care costs. In addition, there are other fundamental policies that need to be evaluated, policies that support free but fair trade. We need economic

policies that support an equitable platform for stimulating investment for enterprises.

Companies out of India, software services companies, pay zero taxes on revenues and profits for the services that they render. That creates a disequilibrium in their ability to invest back into their businesses.

Our industry is a national agenda item for many countries or regions of the world, including China, India, Eastern Europe, South America, just to name a few, because our industry is truly transforming their economies.

I would like to correct the record earlier today. One of the Congressmen spoke about the Henry Ford principle. One of the things that our industry is doing in India is creating a stronger middle class that is creating potential markets for free trade, so Dr. Ruiz can sell chips to the PC manufacturers that sell PCs to companies like I that put them on the desktops for companies and the employees that are over in India and for the computers that they build on their own. However, there is a competitive disadvantage due to some tax burdens and other factors that the government has put in place.

Industry. What role do we have? In addition to the action by government, the industry can play a role through community involvement, scholarships, mentorships, internships. The STEM workforce will grow only to the extent that young people see a future in career opportunities. U.S. high tech companies must help the newcomers see the potential of careers, interesting work and interesting opportunities.

One of the things I have done since joining Keane is we are going to be initiating programs to ensure that we attract the best talents and give opportunities to the best and brightest out of colleges and universities here in North America. We are investing programs to recruit and train college graduates for positions throughout North America and help in the next generation of managing teams globally, and truly making global work work.

So in conclusion, true leadership requires reasoned responses to present evidence. Despite its many comparative advantages—a democratic tradition, a system of laws, access to education for all, protections for intellectual property and a culture which nurtures and rewards entrepreneurship—the United States has entered an era of unprecedented global competition. At the same time American students are turning away from math and science programs that would equip them to compete for the future.

The Nation's best response to the new competitive reality posed by these nations is to apply American ingenuity and innovation across the spectrum of human endeavor. As a businessman who has been involved deeply in the international high tech marketplace, I can tell you that the global race has not only started but that countries, including China and India, are pulling ahead in many areas. They are making the investment in education. They are producing world class research and development, and they have the will to win. And so must we.

I would like to thank the committee for this opportunity and I look forward to working with you on legislative proposals to eliminate our disparities in education and workforce development.

Chairman TOM DAVIS. Thank you very much.

[The prepared statement of Mr. Garnick follows:]

STATEMENT OF RICHARD S. GARNICK, PRESIDENT, NORTH AMERICAN SERVICES FOR KEANE, INC. TESTIMONY BEFORE THE HOUSE GOVERNMENT REFORM COMMITTEE

February 9, 2006

Chairman Davis, Ranking Member Waxman, and Members of the Government Reform Committee: Good morning and thank you for holding this hearing on "Sharpening Our Edge – Staying Competitive in the 21st Century Marketplace."

I applaud you and the Committee for your leadership in an area of concern to every American business and family: The United States economic competitiveness and vitality in the years ahead. I am Richard Garnick, president of North American Services for Keane, Inc.

Keane is a leading business process and Information Technology (IT) services firm. We deliver Application and Business Process Services to help clients transform their business and IT operations to achieve demonstrable, measurable, and sustainable business benefit. As a trusted advisor and partner for its clients, we solve real business issues through the development and implementation of cost-effective, change-oriented and industry-specific solutions.

We believe that business and IT improvements are best realized by streamlining and optimizing business and IT processes, implementing rigorous management disciplines, and fostering a culture of accountability through meaningful performance metrics. We deliver our services through an integrated network of regional offices in the United States, Australia, Canada, India, and the United Kingdom, and are via SEI CMMI Level 5 evaluated Advanced Development Centers (ADCs) in Canada and India.

Summary

Sharpening America's competitive edge in the 21st Century simply means expanding the US Science, Technology, Engineering and Math (STEM) workforce. To remain globally competitive, America must double the number of STEM graduates over the next ten years, from approximately 430,000[1] to 860,000. In 2004, the National Academy of Sciences reported that 350,000 students from China graduated with Bachelor of Science degrees compared to 140,000 US students. In addition, 290,000 students graduated with three-year degrees from China compared to 85,000 US students with two-year degrees. Without disciplined, purposeful action, the nation's high tech future, and therefore its economic future, are at risk.

[1] Science and Engineering Indicators 2004, National Science Foundation

Workforce development is an imprecise undertaking at best. Although short-term labor surpluses in select areas can foster a desire to find the next vein of "hot jobs" in the economy, mapping today's education and training regimes to future job availability can be a confusing and frustrating process. Competition is a numbers game and doubling the number of STEM graduates is necessary to best position the United States for economic prosperity going forward.

Warning Signs are Evident

Competition for the future begins with competition in the classroom. If present day trends continue, America's ability to produce industry-defining innovations will dissipate and its role on the global economic stage could be reduced substantially. Warning signs are evident:

- Demographics are moving in the wrong direction. The college age population in many developed countries is declining, shrinking the pool of potential STEM graduates. Over 50 percent of STEM, degree holders are older than 40 years of age, making shortages in the next 20 years all but certain.[2]

- US self-sufficiency in math and science is at issue. American universities grant 50 percent of doctoral degrees in computer science to foreign-born students working in industry. The percentage of doctoral degrees in engineering is even higher.[3] 22 percent of science and engineering jobs in the US are now held by the foreign born.[4] While the nation may be able to meet short-term labor shortages by relying on this talent pool, such workers may ultimately decide to repatriate — taking with them their advanced degrees and American industry expertise.

- Tighter customs and immigration controls in response to homeland security concerns are dissuading foreign students from study in the US. A 2004 survey by the Council of Graduate Schools found the number of foreign students in US science and engineering programs is down, 24 percent in terms of the former and 20 percent in terms of the latter. Moreover, foreign students electing to study "hard" science disciplines may face a harder time in the visa screening process.[5]

- Federal government support for research and development has slipped substantially. In the aftermath of the Soviet Union's Sputnik launch, federal R&D funding of basic research swelled to 75 percent of all such spending. Seventy cents of every R&D dollar now comes from the private sector.[6] Federal R&D spending creates jobs for STEM graduates directly. This support also underwrites the development of valuable intellectual property that, through a process of

[2] National Science Board, The Science and Engineering Workforce, Realizing America's Potential, page 7
[3] Ibid, page 8
[4] Ibid, page 9
[5] Mary Beth Marklein, "Fewer Foreigners Enrolling in Grad School," *USA Today*, September 7, 2004
[6] John A. Douglass, R&D and the U.S. Economy: A Sputnik Reflection, University of California, Berkeley

technology transfer from the public domain to the private sector, forms the basis of still more capital investment, job creation, and wealth creation.

- While the number of undergraduate degrees awarded in the US is rising, the number of degrees awarded to science and engineering students is falling. Between 1985 and 2000, bachelor's degrees awarded in engineering, math, computer sciences, physical sciences and geological sciences fell 18.6 percent.[7] Roughly one-third of students declaring an engineering major switch prior to graduation.[8] The number of newly declared computer science undergraduates has dropped 33 percent and computer science masters' degree candidates have declined 25 percent since 2002.[9]

Turning Around, Stepping Up: Why Government Must Lead

Doubling the size of the STEM workforce is a challenge for STEM-focused and STEM-reliant industries. However, this is not a challenge for industries alone. Placing intelligent wagers on the nation's economic future must bring all players to the table, including government and, by extension, taxpayers. Fostering the type of workforce capable of accelerating invention and innovation across STEM competencies requires both a long-term view, and a broad view.

Businesses confronting the pressure to produce quarterly profits for shareholders are not ideally suited to the job of promoting STEM education and ultimately doubling STEM undergraduate enrollments. Failure is a potential outcome for all attempts to expand scientific knowledge, create inventions, or commercialize results. By its nature, businesses seek low risk, incremental product improvements and not transformational changes through high-risk research and development. Even corporations with a strong commitment to in-house research tend to downplay or spin off inventions not considered central to enterprise business strategies.

Innovation as a national economic strategy is a path marked by many hurdles. Only government can make the type of wide-scope investments in the STEM people, processes and applications required to assure the U.S. economic competitive leadership in the years ahead. Government as steward for the American people stands to benefit from the unpredictable, but economically powerful spillover effect of broad- gauged research and development investments. In addition, government benefits from STEM investments as knowledge transfers from the public to the private sector, generating business growth, job growth, and, as a result, tax revenue growth.

Comparative advantage in many high paying white-collar occupations is being erased rapidly. US supremacy in many high technology domains is eroding. If the surest path to

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[7] Ibid, page 16

[8] Rising Above the Gathering Storm, National Academy of Science citing Myles Boylan, 2004, "Assessing Changes in Student Interest in Engineering Careers Over the Last Decade," National Academy of Engineering

[9] Computer Research Association, Taulbee Survey, 2004.

economic growth is an accelerated cycle of basic research, invention, innovation, and technology transfer, then government, industry and academia must work together to identify priorities and shoulder appropriate responsibilities.

Roles for Industry

The STEM workforce will grow only to the extent that young people see future career opportunities. US high tech companies must help newcomers understand the potential of such careers, the background requirements and experience needed to obtain this work and offer programs that assist students in gaining meaningful work experiences.

For example, Keane has initiated programs to ensure that the best and brightest college graduates are offered rewarding career opportunities in the US. We are investing in programs that recruit and train college graduates for positions throughout our North American Operations – from consulting engineers to technical sales consultants.

We are working with colleges at the earliest stages of career development to create internships and co-op programs that expose promising young engineering and business students to career opportunities at Keane. These programs target academic records of accomplishments that represent the intersection of business and technology and are designed to foster and reward the continued pursuit of innovation in these areas. We believe these efforts are important first investments in the future of Keane and the United States.

Corporations must play a role in public private partnerships at the national, regional, and local level. Quite often, this means funding fellowships and research, providing opportunities for student mentorship and internship programs and job shadowing, creating summer employment assignments for teachers, and participating in "adopt a school" programs. Industry engagement can also mean interaction and leadership on workforce investment boards, support of community colleges, and outreach to one-stop employment centers.

Many high tech corporations have adopted global delivery models, an approach that allows these enterprises to source expertise regardless of location and accelerate the pace of technology development. These factors may enter into a decision to seek skills and source jobs on a global rather than domestic basis. Clearly America cannot expect to be all things to all STEM markets, but industry must help the nation place its best possible bets now and in the future.

Roles for Government

It is evident that the government has an overarching responsibility to protect the national interest by investing in the nation's STEM workforce. With a policy commitment in place to double the number of STEM graduates over ten years, the federal government should likewise commit substantial funding to this purpose. We applaud the vision articulated by President Bush in his State of the Union address for an American

Competitiveness Initiative, and we look forward to working with the Bush administration and Congress on these efforts.

As members of Congress, I encourage you to plan a steady increase in Research & Development funding for both the National Science Foundation (NSF) and the National Institutes of Science and Technology for the 2007 Fiscal Year. NSF provides important stimulus to advancing the nation's STEM capabilities. The connection between high-risk basic research and economy lifting innovation is irrefutable, from the work leading to the discovery of lasers to fiber optics, and to the development of nylon and Teflon.

In addition to funding basic research, Government can play an important role in facilitating private sector research by making permanent the Research & Development tax credit. The existing R&D tax credit reduces the cost of capital, thereby mitigating the risks and allows companies to "push the envelope" in their technology development. A more aggressive approach to research in turn yields more bountiful returns to company investors, shareholders, and in the economy as a whole.

The Bush administration should continue to create incentives for the formation of highly useful public-private partnerships. Such partnerships help level set expectations, identify critical knowledge, and assure that STEM skill sets of US workers match the jobs of the 21st century.

Only three percent of 12th grade African American students and four percent of Hispanic American students are proficient in science — a situation that doubtless limits the numbers of minority students in STEM college programs and in the STEM workforce overall.[10] How will you as policymakers increase this percentage so all Americans are competitive tomorrow?

The action I have described today will play out over many years. There are, however, practical steps that can be taken in the near future to hone the nation's competitive advantage. One such step is to double the number of STEM graduates, which will include:

- Extending other training and assistance to workers in the services industries. In particular, the federal government should assist mid-career individuals who, through no fault of their own, have lost jobs in response to market pressures. Encouraging displaced professionals in and out of STEM-related industries to seek grants and other educational assistance in STEM fields will enhance the STEM ranks.

- Controlling health care costs so that employers can afford to keep jobs in this country. Companies and employees should be focused on getting the job done, not keeping a lid on health care expenses. Too often, the rising cost of health care enters into the company's plans for R&D investment, business expansion, and, ultimately, the hiring decision. Health care should be an affordable employment

[10] National Assessment of Educational Progress, 2000

benefit, not a major factor in a company's strategic staffing calculations. Health care costs are especially important for companies wherein competitiveness equates to intellectual capital and human asset availability.

- Nurturing the cross-pollination of technology and entrepreneurial education. A focus on entrepreneurial education for STEM students bridges the gap between theory and practice, draws more students to STEM programs, increases the likelihood that individuals starting in STEM disciplines will remain in STEM careers, and accelerates the economy's push for greater growth through innovation.[11]

Our elementary and secondary educational system must equip students to pursue STEM-related undergraduate and graduate degrees. Studies show that six out of ten high school students advance to Algebra II, and only one in ten high school students advances to trigonometry or calculus.[12] While retraining is always a possibility, students without inadequate foundation in math and science fail to qualify for opportunities as we look to higher-level education in STEM areas and STEM jobs down the road.

Conclusion

As a businessman who has been involved in the international high tech marketplace — most importantly, as a member of the Information Technology Association of America IT Services Board of Directors, I can tell you that the global race has not only started, but that countries including China and India are pulling ahead. They are making the investment in education. They are producing world-class research and development. They have the will to win, and so must we.

True leadership requires reasoned responses to present evidence. Despite its many comparative advantages — a democratic tradition, a system of laws, access to education for all, protections for intellectual property, a culture which nurtures and rewards entrepreneurship — the US has entered an era of unprecedented global competition. At the same time, American students are turning away from the math and science programs that will equip them to compete for the future.

The nation's best response to the new competitive reality posed by China, India, and other nations is to do what it does best — apply American ingenuity and innovation across the spectrum of human endeavor.

More than 2600 years ago, the master Kuan Chung said: "If you plan for a year, plant a seed. If for ten years, you plant a tree. If for 100 years, teach the people. When you sow a seed once, you will reap a single harvest. When you teach the people, you will reap a hundred harvests." It is important that Congress must now plant those seeds of education

[11] Ohland et al, "The Effect of an Entrepreneurship Program on GPA and Retention." Journal of Engineering Education, Vol. 93, No. 4, pp. 293-301.
[12] C.B. Cleweel & P.B. Campbell, "Taking Stock: Where We've been, Where We Are, Where We're Going," Journal of Woman and Minorities in Science and Engineering, Volume 8, pp. 255-284, 2002

and job training skills in our public school system. China and India have already begun, when will we?

I would like to thank the Committee for this opportunity. I look forward to working with you on legislative proposals to eliminate our disparities in education and workforce development.

Chairman TOM DAVIS. Ms. Wince-Smith.

STATEMENT OF DEBORAH WINCE-SMITH

Ms. WINCE-SMITH. Chairman Davis and members of the committee, thank you for this opportunity to present testimony on the competitiveness of U.S. businesses and the pivotal role that government can play in supporting America's business success at home and successful competition in a fiercely global economy.

I would like to thank Secretary Gutierrez for his leadership because he truly is a champion of economic competitiveness, as is the Deputy Secretary. They are indeed forceful advocates for the innovation imperative that will drive our productivity and ensure prosperity for all Americans.

I would also like to commend my colleague and friend Dave McCurdy, and he serves on the leadership council of our National Innovation Initiative. But I want to also recall his leadership back as a Congressman when he was one of the sponsors of the 1988 National Super Conductivity Competitiveness Act. And I was working in the Reagan White House at the time. And it was a fabulous example of bipartisan moving forward, which really signals today where we are with the bipartisan legislation, with the Innovate America Act and the new PACE legislation. So really we are at a threshold, or a tipping point, for national awareness, commitment, and bipartisan action.

In the State of the Union address last week, in the President's unveiling of his American Competitiveness Initiative, he really clearly set forth a policy and an investment platform for students, for workers, for entrepreneurs and our global business, and the Council on Competitiveness commends the President and his administration for this groundbreaking initiative.

The Council, by the way, is entering its 20th anniversary, and our CEO, University Presidents and labor leaders are all committed to developing an action agenda to drive competitiveness and productivity. Indeed, it is our enduring mission and the reason we were created by John Young over 20 years ago.

In January, we welcomed our new chairman, Chad Holliday, the president and CEO of DuPont, who succeeded Duane Ackerman, the chairman of BellSouth. And I can't help but mention that from its inception DuPont's business has been innovation driven. And indeed, some of the talk this morning about the transformation in energy renewables, sustainability, moving away from petroleum based products is already underway at DuPont, and we are going to see that really permeate our business in the years ahead.

The National Innovation Initiative is a flagship work of the Council and it is entering its third year and we are very proud. It is led by Craig Barrett, the chairman of Intel and Bill Brody, the president of Johns Hopkins. These are leaders that have taken forward the work that we launched back in 2004 under the leadership of Sam Palmisano of IBM and Wayne Clough of Georgia Tech. But this is an initiative that galvanized over 500 leaders across the country to probe the changing nature of 21st innovation and then construct a policy agenda for America.

Now when it comes to competitiveness, I think Americans tend to veer between complacency and hysteria. On the one hand many

Americans find it hard to conceive of a world where we are not the world innovation leader, but others recognize that our leadership is being challenged by other nations who are taking our model to heart.

Indeed, if current trends continue—and we have heard many of these trends and statistics this morning—our economic prowess and national security will be seriously compromised. The United States is still the global leader and benchmark for competitiveness. As the Secretary described this morning, our economy continues to deliver unprecedented productivity growth while productivity growth in the rest of the world is relatively stagnant. And we have low unemployment and our creativity and entrepreneurship and business models and business innovation is indeed the envy of the world.

Yet we know that the waters we must navigate in the future 21st century that we are in today are not those that propelled us to a safe harbor in the 20th century. The pace of technological change, its rapid deployment across the globe, the emergence of new competitors, fueled by a demand driven economy with powerful consumers in charge, means that the policies of the past cannot be the policies of the future.

Low wage nations around the world are developing high skilled, high performing workforces, investing in their talent, in their R&D and in their infrastructure and creating optimal business climates and tax incentives to indeed propel their innovation. They are hungry for the world's work. And let's accept the reality. Every day it is easier to ship that work around the globe in bits and bytes. Indeed, at the Council we believe and know that if work is routine, rule based, digitized and reliably codified, there will be a source of labor somewhere in the world to compete for that investment and that job. So we cannot compete on standardized services, commodity products, only on innovation.

And let me define innovation, because I think we all talk about it but what is it really? At the Council we say it is 1 to the fifth power. It is the intersection between ideas, imagination, insight, invention and implementation, and it is ultimately about new value creation.

We have to have an innovation ecosystem with a highly skilled, creative and flexible workforce, the investment in the long-term basic research at the frontiers, and this infrastructure of regulations as well as the physical and digital world that enables our people and businesses to harness their knowledge and new ideas and technology to indeed be competitive globally. The recommendations in our NII agenda reflect this, and indeed we look at the whole system as a very dynamic innovation ecosystem.

But we are not stopping still. While we will continue to push on the legislation and the President's initiative, we are already undertaking what we refer to as the over horizon innovation challenges, with new initiatives to propel America into the leadership role in 21st century manufacturing. There is indeed a renaissance in manufacturing. It is in transformation, with the power of desktop fabrication, T to T sensing, the use of supercomputing in design and the power of logistic supply chain control.

We are also focused on how to have the users and the demand side of the energy equation drive our independence and sustainability.

In implementing our NII recommendations, we also are focusing on what is going on in the United States in our regional innovation capacity. Working with the Department of Commerce's Economic Development Agency and the Department of Labor, Secretary Chao rolled out right after the State of the Union a fantastic new initiative called WIRED, regional economic development for workforce innovation, and we believe that this is going to catalyze and trigger across our country the emergence of innovation hotspots consistent with the public-private partnerships that we are talking about today.

And I might say that every week at the Council we are having requests from all over the world to talk about innovation hotspots and why in the United States we really have a lot of the ingredients and road map for that.

But of course the government also has a very, very important role across the continuum of talent investment and infrastructure. The government has to ensure that in the United States we have this optimal, high performing, innovation friendly climate for our enterprises to develop and compete at home and abroad.

And this deals with the whole issues of the balance between risk and reward, our regulatory system to protect our citizens but not hurt our companies. We really need to get the R&D tax credit permanent. It's been on the book for years and years and years. It is kind of time to put that, I think, behind us. And of course the protection of intellectual property, ensuring the rule of law and transparency globally, all of these things the government has a strong responsibility for.

And let me say that with our commitment for STEM education and ensuring that our children have the skills, the analytical capability, and the creativity to go forward, we have to increase this investment in the frontiers of knowledge through NSF, the Office of Science mission, and our DOD world.

But I want us not to forget that we should draw on our culture of creativity. I believe that America is indeed a place that has a mix of creativity that is unsurpassed in the world. And so as one of our members said, we need artists who can think like engineers and engineers who can think like artists.

And finally, let me share with you, it was not—I think it was very powerful that the President mentioned two areas in his speech, nanotechnology and supercomputing. We are leading in nanotechnology. Are we going to capture the value here in the United States or will it be in China and other parts of the world? Our manufacturing prowess depends on that. And clearly supercomputing and enabling that down to the level of our small suppliers and entrepreneurs will give us a huge competitive advantage. And again we are on a renaissance in that world.

Let me conclude by sharing with you a comment from one of our members, Roger Enrico, the former CEO of Pepsi and now the CEO of Dreamworks Animation. He recently talked about the importance of making big changes to big things, and change in progress, he explained, will never come if we don't free ourselves from the

tyranny of incrementalism. Dramatic results do not come from undramatic action, and innovation is a race with no beginning and no end. And it is time for all of us to get started and ensure that we create a legacy for our children that takes the power of innovation to the next level.

And I would be happy to answer any questions and look forward to working with this committee.

Chairman TOM DAVIS. Thank you very much.

[The prepared statement of Ms. Wince-Smith follows:]

Deborah Wince-Smith
President, Council on Competitiveness

Testimony before the House Government Reform Committee

Thursday, February 9, 2006
2154 Rayburn House Office Building

Good morning, I'm Deborah Wince-Smith, the President of the Council on Competitiveness. Thank you, Chairman Davis and the members of the committee, for this opportunity to present testimony on the competitiveness of U.S. businesses and the important role government can play in supporting these businesses. The Council on Competitiveness is a membership organization of CEOs, university presidents and labor leaders committed to developing an action agenda to drive U.S. competitiveness and productivity, so this hearing is of great interest to our organization and, in particular, our chairman, Chad Holliday, President and CEO of DuPont.

One of our members at the Council likes to say that when it comes to competitiveness, Americans tend to veer between complacency and hysteria. On the one hand, many Americans find it hard to conceive of a world where the US is not the global innovation leader. But others point to increasing signs that America's leadership is being challenged in certain areas and could even fall behind if current trends continue. We, as a nation, do not on the cliff's edge as some would argue, but instead at a crossroads. Complacency, a defense of the status quo, leads down a path that could take us to the cliff, but at the very least risks subjecting the United States to a slow erosion of economic leadership and a reduced standard of living for its citizens. Down the other path lies entrepreneurship, risk taking and a national commitment to innovation that can ensure continued economic growth.

A Strong Foundation

Given America's still dominant position in the world and our leadership through most of the twentieth century, I suppose a certain amount of complacency is inevitable. And, the good news. Statistics indicate that our glass is more than half full and we have a strong foundation on which to build our future. Let me share a few key metrics.

- The US consumer market is the largest in the world by far. It is more than twice the size of Japan's- the next largest consumer market.
- While developing nations like China are growing much faster than the US, the US economy is still responsible for a larger share global economic growth than any other country. Over the past five years China has grown more than three times as fast as the US. But since the US economy is 8 times larger than the Chinese economy, that cumulative 3% growth over 5 years added $1.7 trillion to our economy (an amount that exceeds the total size of China's economy).

- Total U.S. R&D spending is greater than all of the other G-7 countries combined and accounts for nearly 44% of all R&D spending in the OECD.[1]
- The US holds nearly 40% of the total global financial stock
- US GDP per capita is among the highest in the world (It has doubled since 1970)
- The US has the highest proportion of population in the workforce of any country in the industrialized world and the lowest long-term unemployment rate in the west
- Despite a dramatic drop in 2003, the US remains the top destination for Foreign Direct Investment. China overtook the US in 2003, but the US has bounced back.

So clearly, the US is still a global leader and the benchmark for competitiveness. So it would seem as though the complacent among us would have the upper hand and say, continue to do what we have done and not rock the boat.

The Challenge

But all of us in this room know that the waters we must navigate in the future 21st century are not those that propelled us to our safe harbor in the 20th century.

Consider these statistics:

- In 1970 the US enrolled approximately 30% of tertiary level students in the world, and over half of s&e doctorates were granted by US institutions of higher education. In 2001-2002 UNESCO data shows that US enrolled just 14% of tertiary students
- Asia now spends as much on nanotechnology as the United States[2]
- Only six of the world's 25 most competitive Information Technology companies are based in the United States; 14 are based in Asia.[3]
- Federal funding of basic research is now only half of its mid-1960s peak of 2 percent of GDP.
- Total scientific papers by American authors peaked in 1992 and have been flat ever since.[4]

Yes, the US still leads the world in many areas, but our competitors are rapidly moving up in the rankings and, in some cases, have already surpassed us. Other countries are adopting America's innovation-led growth strategy. And they are doing it with more focus and intensity than we are.

As Americans we know that we cannot, nor would we want to, compete on low wages, commodity products, or standardized services but on high value economic activity that commands a premium in fiercely contested global markets. Low wage nations around the world are developing high skilled, high performing workforces. And those nations are hungry for the world's work, and it is easier every day to ship that work around the globe

[1] NSF, Science and Engineering Indicators 2004
[2] Lux Research, *The Nanotech Report 2004*, August 15, 2004. https://www.global salespartners.com/lux/.
[3] *BusinessWeek*, "The Information Technology 100 Scoreboard," June 21, 2004. http://www.businessweek.com/pdfs/2004/0425_it100.pdf.
[4] NSF, *Science and Engineering Indicators*, 2004. http://www.nsf.gov/sbe/srs/ seind04/c5/c5s3.htm#p1.

in bits and bytes. At the Council we say, if work is routine, rule-based, if it can be digitized, and reliably codified, there's going to be a low cost source of labor somewhere in the world to compete for that work and for those jobs.

So the global playing field is leveling and it's becoming clear that we are going to have to work a lot harder to stay ahead in an interconnected global economy. But just when we find it essential to invest in our innovation capacity, we see our ability to invest threatened by our growing triple deficit—in the federal budget, in the current trade balance and in personal savings.

- Between fiscal year 2001 and fiscal year 2004, the federal budget went from a surplus of $127 billion to a deficit of $412 billion.[5]
- And unfunded liabilities like Social Security and Medicare threaten to take up an increasing share of the budget.
- Our trade deficit in 2004 was $617.7 billion, the highest on record. As a percentage of GDP, it increased from 4.5 percent in 2003 to 5.3 percent in 2004.[6]
- The U.S. has the lowest savings rate among developed countries.
- We are now relying on foreign governments—especially China and Japan—to finance our deficit.

Former Chairman of the Federal Reserve Alan Greenspan called these deficits untenable. Together these trends will make it increasingly difficult for us to find domestic sources to fund innovation and to remain the preeminent place to attract high value investment and perform high value economic activity.

The Role of Innovation

Innovation is the key to meeting these challenges.

Building upon the Council's long standing focus on innovative capacity as the productivity driver for U.S. prosperity, we brought together over 500 of the country's most talented thinkers and leaders to ponder the changing nature of innovation, the evolution of the global economy, and, most importantly, what the US needs to do to remain the world leader in innovation. They developed an action-agenda that calls on all sectors of society to work together to solve the great challenges of our day.

Why focus on innovation? Well, our members—CEOs from across industrial sectors, university presidents and labor leaders—firmly believe that innovation will be the single most important factor in determining America's success through the 21st century.

The Council's National Innovation Initiative defines innovation as the intersection between ideas, imagination, insight, invention and implementation. We call it, "I" to the fifth power. Fundamentally, it is about the creation of new value. And the Council's

[5] Global Insight
[6] U.S. Census Bureau, Feb. 10, 2005 (http://www.census.gov/indicator/www/ustrade.html)

long-standing policy research has demonstrated that innovation has been the principal driver of U.S. GDP and productivity growth and a rising standard of living for the past 50 years. More specifically, studies show that total factor productivity—generally attributed to innovation—was responsible for 47% of U.S. economic growth between 2000 and 2004.[7]

But, let me emphasize—for this is crucial to building the public institutions to support new policies and new behaviors—innovation is more than just a driver of economic growth. Innovation has always been the way people solved the great challenges facing society. Today, innovations not yet imagined may enable us to achieve dramatically higher levels of health across the planet; feed vast populations with the protein-based diets essential to health; meet the challenge of a rapidly aging population; find plentiful, affordable, environmentally-friendly sources of energy; and, continually push the frontier of exploration. And innovation will lead to the solution of problems that do not even exist yet and to the opening of new vistas of undreamt of opportunities for ourselves and for future generations.

Innovation has changed tremendously from the days of large industrial research laboratories and ivory tower universities. Where, how and why innovation occurs are in flux – across geography and industries, in speed and scope of impact, and even in terms of who is innovating. We see this transformation in a number of areas.

- The pace of innovation is increasing. For example: while it took 55 years for a quarter of the country to get an automobile, 35 years for the telephone, and 22 years for the radio, it has only taken 16 years for the PC, 13 years for the cell phone and just 7 years for the Internet to penetrate a quarter of the U.S. population (and those trends are just as quick in other countries).
- Innovation has become multidisciplinary. It arises from the intersections of different fields or spheres of activity.
- At the same time, it is collaborative – requiring active cooperation and communication across organizations, companies, regions and countries. "Co-creation" is the new buzzword.
- Consumers are now in charge as we have moved from a production-driven world to one in which discerning customers are in charge with choice and power.
- And it is rapidly becoming global in scope – with advances coming from centers of excellence around the world.
- Manufacturing and services are merging
    - The sharp dividing line between manufacturing and services is increasingly blurred.
    - Manufacturing companies are transforming themselves from product suppliers into solutions providers—melding services seamlessly into product lines.
    - When they blend like this we're actually creating whole new markets and market opportunities.

[7] Global Insight

At the same time that innovation has become a global enterprise, the world economy has globalized and integrated at a pace few predicted even 10 years ago. In less than 20 years, many nations have at last embraced market economies and moved toward political democratic norms. And this is a fantastic metric of success for world stability and quality of life. It also means that countries can now compete on traditional cost and quality terms, but they know that it is innovation—the ability to create new value—that will confer a competitive advantage in the 21st century. The playing field is leveling, and the barriers to innovation are falling.

My core message is that America's long-standing lead in innovation and entrepreneurship is by no means assured. We must create an environment in which innovation can flourish and transformational value can be achieved.

The National Innovation Initiative

This challenge is why the Council launched the National Innovation Initiative. Co-chaired by Sam Palmisano, the chairman and CEO of IBM, and Wayne Clough, the president of the Georgia Institute of Technology, the initiative was guided by a Principals Committee of 17 other CEO's and university presidents representing organizations as diverse as American Airlines, Amgen, Pepsi, GM, Morgan Stanley, Columbia University, MIT, Stanford and the University of Michigan. Engaging more than 500 leaders and experts across industry, academia, government and labor, the NII epitomizes the changing nature of 21st century innovation itself—exemplifying a dynamic process of collaboration and competition. This unprecedented group of thought leaders came together to understand the changing nature of innovation in the 21st century, and—even more important—to generate a set of actions for companies, universities, community colleges, state and local government and entrepreneurs to ensure that the U.S. stays at the leading edge of innovation. In December 2004, our work culminated at a National Innovation Summit where we released *Innovate America*, a report that lays out the challenges we face, the opportunities that lie ahead and the path to get us there.

The Innovation Agenda has three foundational platforms or building blocks —Talent, Investment and Infrastructure. Each platform has three primary objectives and specific recommendations and collectively these recommendations constitute an integrated sustainable path for 21st Century prosperity. Let me just highlight one or two for each of the objectives.

Talent addresses our human capital needs. In this area we have three objectives:

1. Build the base of scientists and engineers
    - For example, by pioneering an extensive portable graduate fellowship program to give control of educational choices back to students. Attract the best and the brightest students and workers from around the world by reforming our immigration system.
2. Catalyze the next generation of innovators
    - By funding internships for innovation-oriented students to experience

local startup and small business environments, and,

3. Empower workers to succeed in the global economy
    - Ensure federal job training programs have the flexibility to target the skills needed for the jobs of the 21st century.
    - Improve the portability of healthcare and pension benefits.

The Investment area addresses the balance between risk and reward and the incentives—or disincentives—for people and institutions to invest in innovation. Our priorities here are:

1. Revitalize frontier and multidisciplinary research
    - Increase federal funding of basic research, with an emphasis on the physical sciences.
    - By reallocating 3 percent of all federal agency R&D budgets toward "Innovation Acceleration" grants that invest in novel, high-risk and exploratory research
2. Energize the entrepreneurial economy
    - Establish10 Innovation Hot Spots™ at regional locations across the United States over the next five years through public-private partnerships explicitly focused on supporting regional innovation.
3. Reinforce risk-taking and long-term investment
    - Make the R&D Tax credit permanent..
    - By setting the national goal to reduce cost of tort litigation from its current level of 2.23 percent of GDP (or $809 per person) down to 1 percent.[8] No other country bears such a large burden.

And that brings me to a core reality. Investing in innovation demands adherence to two fundamental principles: a willingness to accept risk and a willingness to wait for the return on investment. Although America's entrepreneurial economy understands and embraces these principles, the much larger financial mainstream may be now moving in the opposite direction. Investment time horizons are getting shorter. Long-term innovation strategies remain undervalued. And business executives in publicly held companies now face a regulatory climate that is blurring the line between business risk and legal risk. Intangible assets, which represent an increasingly large percentage of the value of corporations, still don't show up on the balance sheet, reducing incentives to invest in creating more value. The challenge is transparency, disclosure and corporate governance.

The Infrastructure area covers not only the physical infrastructure that supports innovation but also to the political, regulatory and legal infrastructure that facilitates innovative behavior.

1. Create a 21st century intellectual property regime
2. Strengthen America's advanced manufacturing capacity
3. Put in place a national, coordinated innovation policy with representatives from the public and private sector.

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[8] Towers Perrin, "U.S. Tort Costs 2003 Update," http://www.towersperrin.com/tillinghast/publications/reports/2003.

The National Innovation Agenda is quite broad, covering the range of elements that makes up the innovation ecosystem. This point is worth emphasizing as Congress considers the President's recently announced American Competitiveness Initiative and related congressional proposals that would implement various parts of the innovation agenda.

The Administration's competitiveness initiative endorses the critical idea that innovation is an ecosystem requiring a highly-skilled workforce, investment in long-term basic research, and an infrastructure to glean value from the knowledge and new ideas we create.

The evolution of China, India and other countries as legitimate competitors on the world stage has changed the global economic dynamic for good. We cannot look back as a nation and seek to recapture the jobs or industries of the past. We must look forward to create new ideas, new technologies and new jobs that will drive America's future prosperity.

The Path Forward

Not resting on our laurels, the National Innovation Initiative continues to evolve and with the tremendous support of many of our members we are moving forward with the next generation of programs to build upon the findings and recommendations of *Innovate America*. Initiatives around the future of manufacturing, a national high performance computational infrastructure, regional innovation, energy and sustainability in the 21st century, and innovation metrics are being developed as we map out tipping points facing our nation and the actions needed to bolster long-term prosperity in America.

This effort is being led by a Leadership Council of many of the business and academic leaders that contributed to the NII, but also includes several new CEOs, university presidents and labor leaders.

Craig Barrett, the Chairman of Intel, and Bill Brody, the President of Johns Hopkins, are leading this initiative and it was under their stewardship that 140 CEOs, governors, university presidents and luminaries signed their name to the campaign that ran in the Wall Street Journal and Washington Post earlier this week calling for a national innovation agenda.

Going forward, we will follow-up on what we call the NII "over the horizon" initiatives. It is important that we work to extend this agenda at home, in new regions and across the globe in order to maximize the potential for collaborative efforts and the benefits of innovation to our economy.

21st Century Manufacturing

New value creation is the goal of the innovation continuum.

We are on the cusp of a technological renaissance in advanced manufacturing with the emergence of desktop fabrication, touch-sense-feel process controls, T-to-T, production slicing, nanoscale manipulation of matter and the acceleration and transformation of product development through high performance computing tools that will radically change the move from mass production to mass customization and by the acceleration of product design and realization into the hands of entrepreneurs and small businesses.

The NII report warned that the nation has been too quick to write-off manufacturing with the 4Ds: dirty, dumb, dangerous—and disappearing. Or to try to save 20th century mass production from global competition.

Indeed, in emerging areas like nano and biotechnologies, we should be balancing our leadership in cutting-edge science with leadership in cutting-edge manufacturing (like the Japanese, Germans, and increasingly, the Chinese). In fact, Japan has been repatriating its most advanced manufacturing.

We are also in the midst of a process revolution that will require a completely new set of skills and strategies. Governor John Engler, the President of the National Association of Manufacturers and Mike Burns, the CEO of Dana Corporation along with a number of their colleagues on the Leadership Council will undertake an effort to better understand this phenomenon and make recommendations to ensure America's future manufacturing capacity.

A critical part of this initiative is the power of High Performance Computing to keep alive the manufacturing renaissance.

In today's competitive global market, HPC has become essential to accelerating innovation. HPC assists companies in creating new inventions and products; in designing better, more reliable products, processes and services; in minimizing the time to build engineering prototypes; and in streamlining production processes and reducing production costs.

One of America's greatest comparative advantages is our global leadership in HPC. The Council has a major HPC initiative led by Karen Holbrook, the President of The Ohio State University, and David Shaw, of D.E. Shaw & Co., Inc., to study how HPC is, or is not, utilized by the private sector and what role public/private partnerships can play in facilitating that use.

Energy

A 21st century energy infrastructure is one of the linchpins of America's ability to compete in the global economy. The tight linkage between energy and the economy is not a new concept; every president since Nixon has made energy independence, efficiency and diversification a national priority. What is new is that geo-strategic, geo-economic

and bottom line interests are converging with technological opportunity -- creating a tipping point for action.

At the same time, the technological options for energy efficiency and fuel and feedstock diversification create significant opportunities to effect real change in the marketplace. At the federal level, the National Energy Plan lays out the urgency to develop reliable and affordable energy supplies. For the first time, perhaps, America's major energy providers are investing hundreds of billions of dollars in alternative energy sources while leading corporations are proving the business case for sustainability.

The nation can rise to the global energy challenge by applying both its capacity for innovation and it ability to forge public-private partnerships that share ideas, talent and investments. Never has it been so critical to create innovative energy solutions that will sustain both our global economic leadership and domestic prosperity. This year the Council will launch an initiative to create a private sector energy roadmap – grounding the nation's investment and policy priorities in the business case for sustainability, diversification and energy efficiency.

Regional Innovation

The United States is not an innovative country -- it is an agglomeration of innovative, and non-innovative, regions. Our national innovation output is hindered by the many regions have not successfully implemented innovation-based growth strategies. As the *Innovate America* report argues, for America to prosper, we must help all our regions reach their full potential to support innovative firms and organizations.

The good news is that most US regions have embraced innovation as the key driver of economic growth. They are benchmarking their vulnerabilities and strengths, addressing challenges and building from a position of strength. Many have created leadership networks and identified private sector champions to lead community efforts to re-position the region for future success. Some have embraced the concept of regionalism, refusing to be hamstrung by invisible jurisdictional and institutional boundaries.

The Council on Competitiveness is undertaking two core sets of activities as part of a Regional Hot Spots Initiative: policy and technical assistance and innovation tool development.

The Council is working under a grant from the Department of Labor to assist with the rollout and implementation of the Workforce Innovation in Regional Economic Development WIRED program, a path-breaking effort to trigger "innovation hotspots" consistent with the type of public sector innovation called for in the NII and our regional innovation efforts.

In parallel, the Council will design new programs and tools to assist regions as they work to become innovation hot spots. The Council will explore three groundbreaking areas for innovation tool development:

- Better linking business people and community entrepreneurs to local universities and research centers to improve the commercialization of innovation
- Leveraging national supercomputing assets to provide support to regional firms economic development efforts
- Integrating product design principles into regional firms' competitive strategies

Conclusion

Government plays critical roles in enhancing and supporting the competitiveness of American businesses starting with ensuring there is an innovation friendly climate for U.S. enterprises to develop and compete at home and abroad. Today, more than ever before, the government must invest in the long term vitality of our greatest asset, the American people. We must ensure that our children are equipped with the knowledge and problem solving skills through better math, science education that will allow them to reach their full potential as high performing entrepreneurs. Another Council member once commented that "We need artists who can think like engineers, and engineers who can think like artists." These are the small and medium sized business leaders that will drive America's economic growth in the future if government makes the investments in their future now.

Government must accelerate its long standing commitment to invest in research and development at the frontiers of knowledge and ensure that America's universities and colleges remain preeminent in the world. Finally, the government must look for avenues to support the development of an advanced manufacturing capability in the United States that will position us to take full advantage of the investments in research and human capital. At one of our recent meetings, Roger Enrico, former CEO of PepsiCo and now CEO of Dreamworks Animation, talked about the importance of making big changes to big things. Change and progress, he explained, will never come if you don't free yourself from the tyranny of incrementalism. Dramatic results do not come from undramatic action. Innovation is a race with no beginning and no end. Let's get started.

Chairman TOM DAVIS. David, welcome back.

STATEMENT OF DAVE McCURDY

Mr. MCCURDY. Thank you, Mr. Chairman. I want to specifically thank you for your leadership. It feels like old home week when I come to testify before you and Darrell Issa. I don't know of two Members of the House that have more experience in high technology and bring business acumen to this process and only wish half the other Members had as much experience and your dedication to technology.

I know time is short. I guess I am the cleanup batter here, so I am not going to take the whole bucket of balls here. I just ask that my statement can be admitted into the record.

Chairman TOM DAVIS. Without objection.

Mr. MCCURDY. I would like to just make a couple of quick points. As you know, EIA has been deeply involved in the issue of innovation. As a matter of fact, since we do represent such a wide range of the technology in this country and high tech, we frame all of our initiatives within the context of innovation and global competitiveness because that is where our industries succeed. We have a foundation.

You know, everyone talks about math and science education. In 1981, actually my first legislative victory and disappointment was to have an amendment attached to the Higher Education Act. Carl Perkins was the Chair, and it became authorized to provide scholarships to math and science teachers and summer internship programs with industry in order to supplement their income and provide some real-world experience. Unfortunately, in this place, you not only have to worry about authorization, you have to get the appropriations, and it was not appropriated, and I think we have missed some opportunities.

So as much as we have this momentum, and I think there is good momentum for innovation in the innovation agenda, we have to be very diligent and continue to keep an eye on where this actually ends up.

Our foundation at EIA called NSTEP, National Science Technology Education Partnership, has been working; and Darrell Issa has contributed and others not only financially but to provide mentorship for young Americans to understand math and science and how it affects them in their daily lives.

TIA, our communications sector, has an incredible research division. Meredith Singer is here, and they have a CTO Council which has provided in incredible detail about the decline of research and development in the communication side and where we need to provide some emphasis.

Last, I just want to mention just a quick commercial. Over 2½ years ago, we published this document based on a prosperity game that we played with CEOs and academics and industry leaders and members of government that came up with a series of 40 recommendations to improve innovation; and even though I am an absolute passionate advocate of innovation, I think we have to be very, very careful about our rhetoric and the hyperbole.

I think most of us agree—and Deborah and I have worked on this issue a long, long time. She has provided incredible leadership.

But we are really not at a crisis yet. We are really at a crossroads, and I think now is the time for the leadership of our country to step up and say we do have some tough choices to make. We need to make the investments now.

That is why I agree with everyone that has appeared before this panel today, the Secretary of Commerce and my association colleagues, when we say that the Secretary is right, the President was right. We are pleased that he raised the level of attention in this State of the Union for innovation.

But there is a very important movement here on the Hill, in the Senate. We see extremely strong leadership with Senator Ensign and Senator Lieberman with their bill.

After the Augustine report, we see very broad-based legislation from Senators Alexander and Bingaman and others, with over 60 cosponsors in the Senate, bipartisan. I know the Democratic leadership in the House has advocated an innovation agenda, and I understand that the Speaker and Mr. Goodlatte will be unveiling the Republican leadership proposal on innovation perhaps today.

My only hope is that from past experience and one who admires this Institution is that we do our best to make this a bipartisan effort. This should not be a partisan issue.

Quickly, in just one quick insertion on a thought, as much as we want this legislation to pass and the budgets can be an improvement and we want to see the prioritization and the emphasis, I would certainly urge your leadership in strong support for reducing the number of congressional earmarks when it comes to research and development in science, which I think really does hamper the ability to have an effective U.S. leadership.

I mentioned R&D. We all support making permanent the R&D tax credit. It is costly. But I think it is one of the best investments we as a Nation can make. I will mention again there are a number of very good proposals not only with the President's outline but also in these key bills.

But I want to give one example of an area when it comes to business climate, and this is the one point I will finish with. That is innovation, and the key to innovation is having IT diffused throughout the economy. That is why we have an advantage over other countries. But they are reading our blueprints on our success, and they are going to try to copy it.

They have had these—Europe has their six framework, China has a 5-year plan, Japan had a 5-year plan. They all have these plans, and the United States is yet to really step forward with a clear vision for innovation, and that is why we encourage you to provide leadership on.

But the one area, an example, is from the semiconductor space, and Dr. Ruiz talked about the need for competition.

But it is a simple fact that when the cost of a new fab production capability for semiconductors costs $1 billion more in the United States to build and operate than it does in China, Israel, Ireland, parts of Asia—two-thirds of the No. 30 millimeter fabs are being built in Asia—but when there is such a discrepancy in the cost, it is no longer a question of are you protecting American jobs or are you a patriot—and we heard those arguments, those fallacious arguments in the past about the Benedict Arnold CEOs. That is

wrong. That is not the case. They are real business decisions when you are talking about that kind of investment and that kind of change. So those differentials are important.

I know this is not the Ways and Means Committee, but I do think we need to look at some of the proposals of where these incentives are being laid out, why the United States has a 35 percent corporate tax rate and in Ireland it is 12.5 percent. China provides a fab 5-year tax holiday and then, after that holiday, half the normal rate of taxes for the next 5 years. Israel has a 20 percent capital grant. A new fab going up in Israel.

An example I heard the other day, a real-life example, the State of Arizona is having a new fab built in the State that provided up to $20 million in incentives. It is good. It is positive. Same plant in Israel has a $700 million set of incentives. So, at some point, the shareholders themselves start to say, how can you disregard the economics? So I think there is a very important point.

And, last, we don't want to forget about small business. They live and the startups live and die by the sword of innovation, and we shouldn't just ignore their capabilities as well.

Mr. Chairman, thank you; and I will be glad to answer any questions.

Chairman TOM DAVIS. Thank you very much.

[The prepared statement of Mr. McCurdy follows:]

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TESTIMONY OF ELECTRONIC INDUSTRIES ALLIANCE PRESIDENT AND CHIEF EXECUTIVE OFFICER DAVE McCURDY BEFORE THE HOUSE GOVERNMENT REFORM COMMITTEE ON GLOBAL COMPETITIVENESS & INNOVATION
February 9, 2006

Thank you, Mr. Chairman, Ranking Member Waxman and Members of the Committee. I am appearing today as the President and CEO of the Electronic Industries Alliance (EIA). EIA is grateful for the opportunity to appear before you today to discuss the issues of global competitiveness and innovation, and what the federal government can do to improve the business and job creation climates in the U.S.

EIA's Focus on Global Competitiveness and Innovation

As one of oldest, largest high-tech trade associations representing the full spectrum of the electronics industry, EIA frames its policy priorities in the context of innovation & global competitiveness.

The best hope for the U.S. to maintain its edge against rising global competition is by fostering and expanding our most prized intellectual asset: innovation. For decades, innovation has given the U.S. and the rest of the world wave after wave of technological advancement and generated millions of jobs, economies of scale and direction for future growth. If we want to ensure that successive waves of innovation begin in the U.S., we have to have the necessary innovation infrastructure in place.

I commend President Bush for raising innovation in his State of the Union Address and budget. I also want to note the bipartisan leadership in the leading Senate measures and encourage the House to develop and advance bipartisan approaches to this

critical measure. The House Democratic leadership has made an encouraging start with its recent Innovation Agenda, and we hope these efforts will bear bipartisan fruit.

EIA realizes that making innovation and global competitiveness a policy priority is no easy task when other important domestic and international issues are at stake for Congress and the Administration. Nonetheless, the call for a national innovation vision and strategy is no less compelling today than it was when we began our work three years ago, and we deeply appreciate the interest this Committee has shown in examining these concerns.

As a passionate advocate of innovation, I am careful, however, not to hype or overstate the challenge we face. In my opinion, we are not in "a crisis." As the title of our 2004 policy playbook, *The Technology Industry at an Innovation Crossroads* (to download, go to www.eia.org/playbook.) indicates, we believe America is at an important national juncture. Currently, the U.S. is far ahead of the foreign competition in our national ecosystem that supports innovation and creativity. It is an enormous advantage that has created vast economic growth and prosperity for our nation. However, other nations have read the blueprints of America's success and are attempting to duplicate our model. Accordingly, we cannot and should not rest on our laurels. It is absolutely imperative that we continue to renew the innovation pipeline and infrastructure to remain the preeminent leader of technology development.

EIA's Policy Efforts: Policy Playbook and Engaging Policymakers

EIA has been examining the significant structural changes taking place in the world economy and in the high-tech industry in particular for some time. Over the past three years, the Alliance has devoted its resources to promoting a bipartisan national vision and strategy on innovation and global competitiveness.

In January, 2004 at EIA's Executive Leadership Forum and Board of Governors Meeting, we held a unique exercise known as Prosperity Games™ -- essentially war games for the business world – that brought together members of our board, legislators, Administration staff, industry experts and thought leaders for two days and emerged with the outline for *The Technology Industry at an Innovation Crossroads.* Published in the

spring of 2004 with 40 specific recommendations, the playbook has been endorsed by Members of Congress and thought leaders on both sides of the aisle.

EIA's policy playbook addresses many of the issues that have grown in prominence and been echoed by our colleagues throughout the technology and business community, including those in the recent policy report developed by Norm Augustine and the National Academies of Sciences (NAS) entitled "Rising Above the Gathering Storm."

Since 2002, EIA has also met with numerous competitiveness proponents in the House and Senate as well as key Bush Administration officials, including Dr. John Marburger. We appreciate Dr. Marburger's leadership as head of the White House's Office of Science and Technology Policy. In addition, for the past decade, the National Science and Technology Education Partnership or NSTEP, EIA's philanthropic partner, has focused on the need to strengthen science, technology, engineering and mathematics curriculum known as STEM so that the U.S. high-tech industry has a workforce geared to the future demands of a global innovation economy.

These issues are important to me personally as well. In fact, my first legislative achievement – and disappointment -- in the House was having an amendment added to the Higher Education Act for Math & Science Teacher scholarships and providing summer jobs in industry. The fact that the program was never appropriated should serve as a cautionary note for all of us who are trying to balance the realization of important policy goals with the fiscal realities of budget demands.

EIA also participated in the National Innovation Initiative led by my friend Deborah Wince-Smith, also testifying here today, and we are working to advance positive, bipartisan legislation such the National Innovation Act (S. 2109), introduced by Senators John Ensign and Joe Lieberman in December, and the three bills prompted by the NAS "Gathering Storm" report that make up the Protecting America's Competitive Edge (PACE) legislation introduced last month by Senators Lamar Alexander, Jeff Bingaman, Pete Domenici and Barbara Mikulski.

EIA's sector partner, the Telecommunications Industry Association (TIA), is also providing policy leadership on the issues of innovation and competitiveness. Through its

Communications Research Division, whose efforts are led by the president of research for Telcordia Technologies and the chief technology officer for Bechtel Telecommunications, TIA's chief technology officers are working to ensure that the U.S. communications sector continues to be a world leader in advanced research. TIA is also providing expert advice to the government on the status and impact of research and technology to the communications industry and educating the public on the importance of communications research as a foundation for the communications products and services on which they depend.

We have met repeatedly with the Administration over the years and earlier this year, I wrote to President Bush on behalf of the Alliance and urged him to promote U.S. competitiveness as a national policy goal in this year's State of the Union Address and to "make 2006 the year of innovation." We are heartened that the President devoted part of his address to innovation-related issues such as basic research, math and science education and a skilled workforce. In fact, many of the approaches the President is urging the U.S. to adopt as part of his American Competitiveness Initiative reflect EIA's past recommendations. EIA has therefore publicly pledged our support for the President's American Competitiveness Initiative, as well as for the welcome focus on these areas that a number of Members of Congress have initiated. We are also cognizant of the fact that the myriad goals and recommendations established in these critical policy areas will be costly to realize, and we welcome the critical debates and prioritizing that must occur as we move forward.

Proposals to Improve U.S. Environment for Competitiveness and Innovation

Improving the landscape for high-tech companies doing business in the U.S. and employing American workers can be accomplished in a number of ways. We can provide an incentive for research and development by modernizing the R&D tax credit and finally making it permanent, as the President and others have recommended. The federal government has a crucial role to play in fostering research at the most basic and experimental level, and our technology industry must invest in the later-stage research and in development to bring consumers the next generation of innovative products. R&D

involves great risk and great expense for an uncertain outcome, and companies must have reasonable incentives in place in the U.S. to mitigate that risk. The expiration of the credit at the end of 2005 meant as much as a 7.5% increase in the cost of doing qualifying R&D in the U.S. for many companies, potentially leading to a shift in R&D to other countries with more generous tax incentives. Those R&D centers tend to leave and not return home. The credit's lapse, even if it's just for a short time, leads to uncertainty regarding the availability of the credit, leaving companies unable to plan and causing them to discount its long-term value, which reduces the credit's benefit to the economy. R&D planning requires a long-term view, but short-term extensions and lapses dramatically dilute the incentive. A strengthened R&D credit will provide companies with a strong reason to undertake and increase domestic research work, and we endorse the President's idea to modernize the credit, in addition to making it permanent. We also thank Committee Members Shays, LaTourette, Souder, Cannon, Miller, Issa, Westmoreland, McHenry, Dent, Foxx, Lantos, and Higgins for their co-sponsorship of legislation (HR 1736) calling for a permanent and enhanced credit.

The President's American Competitiveness Initiative includes a series of education initiatives such as the Advanced Placement/International Baccalaureate (AP/IB) Program; the Adjunct Teacher Corps; the National Math Panel; Math Now for Elementary and Middle School Students; Evaluation of Federal STEM education programs; the inclusion of Science Assessments in No Child Left Behind accountability; and grants to local educational agencies to increase the achievement of high school students. These initiatives are worthwhile proposals that deserve the consideration and attention of industry and policymakers alike.

As part of his American Competitiveness Initiative, the President also calls for Career Advancement Accounts of up to $3,000 available to for workers entering the workforce or transitioning between jobs. We find this proposal encouraging in that it helps to create a system of continual skills training and worker education as also outlined in our policy playbook; in the past, EIA has proposed the availability of wage insurance for high-tech workers who enter the teaching profession.

The U.S. must also be a place that continues to attract the foreign talent that has always helped imagine, create and perfect America's innovative products and services. Bright students and skilled professionals from around the globe see the U.S. as the place to make the most of their talents and as a nation that recognizes and rewards unique abilities and hard work. While we must foster the skills and talents of our own citizens, as well, we cannot afford to turn away the best and brightest from all corners of the world. By facilitating expedited visa processing, as recently outlined by Secretary of State Rice and Homeland Security Secretary Chertoff, and by ensuring a reasonable balance between security and our historical acceptance of foreign talent, the U.S. can continue to lead.

We should also devote attention and resources to improving the U.S. business landscape, including the tax burdens for companies trying to innovate and create jobs here. Let me give you one example: It costs $1 billion more to build and operate a semiconductor factory in the U.S. than it does outside our borders, and the biggest factor – about 70% of that $1 billion difference – is taxes. Two-thirds of new 300mm fabs under construction, equipping, or in production are in Asia. Why? Because China offers a five-year tax holiday for a new fab and then a 50% rate cut for another five years. China's business-friendly approach was prompted in part because Malaysia offers a 10-year tax holiday. The use of these types of business recruitment tools is not limited to countries in the Far East. Israel recently offered a leading high-tech company a $700 million tax credit to build a fab there. It would be wise for the U.S. to consider adopting approaches similar to these nations.

Along these lines, Members should also be aware that the ability of states to offer incentives for businesses to locate production is called into question in the *Cuno vs. Daimler-Chrysler* case, which will be argued before the Supreme Court in March. Such state actions are an important element in the competitiveness equation, and the Congress should act to protect this state right, if it is struck down. Some of the options we need to consider to attract highly productive investments in the U.S. include a meaningful corporate tax rate reduction, full expensing of a factory in year one, or an investment tax credit.

EIA Testimony
February 9,2006

Small Business Innovation Needs

Recently, the CEO of one of EIA's member companies outlined the challenges faced by smaller, start-up high-tech businesses operating in the global economy. He noted that we often speak on issues of immigration, visas, employment outsourcing, and technology innovation. Politicians, he observed, often use them as hot button issues, while others discuss them as and independent silos within the current public discourse, unaffected by each other. However in his world of start-ups, these issues are closely intertwined. "Start-ups live by the 'sword' of innovation," he said. They rely on technical innovations to attract the critical first-round of investors, favorable immigration and visa policies to refine their technological achievements by attracting the best talent to work in the U.S. in a cost-effective manner, and business opportunities in other markets to help their startup survive, let alone expand, in an incredibly competitive environment.

He is concerned that the U.S. is not doing enough to encourage innovation and suggested that America must foster a business environment that rewards entrepreneurs. He is not suggesting government intervention. Instead, he proposes partnerships between business and government such as those recently initiated in Canada and Israel, and partnerships between small businesses and large corporations.

These are interesting comments that I think this committee would do well to take into consideration.

Concluding Remarks

EIA has been calling for a shared commitment in the effort to create a national technology vision and strategy that can bolster U.S. competitiveness by nurturing and expanding our innovation economy for some time. With that in mind, I would like to emphasize that all the components of an innovation agenda – a commitment to R&D, an improved, STEM-oriented education system, continuous worker training expedited visa reform and an environment more conducive to doing business in the U.S. – should be considered together, not each in its own vacuum.

With the President's American Competitiveness Initiative, the Administration has added its significant voice to this call. We commend President Bush and the bipartisan

leadership shown by members of the Senate and encourage members of the House to continue working to craft similar innovation efforts.

The President's American Competitiveness Initiative, coupled with Senate action, growing interest and anticipated legislation in the House, and efforts by EIA, TIA and our other sector partners, the Council on Competitiveness, the National Innovation Initiative, the National Academy of Sciences and a host of others, suggests that we are on the cusp of improving the nation's future competitiveness. We welcome the opportunity to provide the leadership and expertise of the U.S. high-tech industry in realizing these goals.

I am grateful to Chairman Davis and to this Committee for the interest you have shown in examining these concerns, and I welcome your questions and comments. Thank you.

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Chairman TOM DAVIS. Let me just start. You ended your comments on small business. Sometimes the only way a small business can get into the marketplace is with a congressional earmark.

I just met with a company yesterday out of Syracuse, NY, that is doing work on IEDs. They have a breakthrough technology that we think has proven far more effective. They couldn't go through the Defense Department and get any kind of traction, so they had to go through the Appropriations Committee who brought them to front.

The difficulty with earmarks is there are good ones and bad ones. Many times we use the earmark process for a full employment process for Members' districts, and that is not good. On the other hand, we have a responsibility to kind of bring new technologies to the fore that if they work their way through the established chains in the bureaucracy get shut down. So I don't know what the right balance is. But I would hate to throw the baby out with the bath water when we talk about Congress' ability to intervene. It helps when some of these emerging technologies that may not be able to get their way through the minimal process.

Mr. MCCURDY. Mr. Chairman, can I make one quick comment on that?

I agree there are many times—I was on the R&D Subcommittee of the Armed Services. I was on the Science and Space Committee. I chaired the Intelligence Committee. It is important for Congress to raise the level of awareness on many types of technology, but I do hope that we can work with—something is wrong when the Department of Defense and these other agencies are not recognizing that their acquisition policies are biased against some of these new capabilities. In fact, we also are constantly talking to some of our large multinational corporations to don't forget the R&D and some of the real innovation that is coming out of the small business.

Chairman TOM DAVIS. Absolutely, and any time we do the Trade Agreements Act and Buy America, it cuts down our ability to get out there. Yet there is a strong urging with some Members that we ought to be buying America, not recognizing that when we do that other countries set up barriers in retaliation; and, No. 2, that means we may not get the best body armor for our troops if it is not American made, if we don't do the best in everything in this day and world, and our taxpayers deserve to get the best product for their tax dollars. I agree.

I want to go to this idea of innovative friendly climate, because there has been a thread throughout the testimony today in both panels that America is still the innovators, that they can produce the scientists and engineers abroad, but we are the innovators because we have a political culture and economic culture that is different from other countries, and I guess to some extent that is true.

But Mr. Garnick, let me start with you. Other countries—although we have had 200 years in the free enterprise experience and in the democratic experience and some of these other countries are getting it in a kind of hopscotch fashion, just because we have been successful as innovators doesn't mean that we will stay that way. Can you talk a little bit about your experience as you go around the globe with that?

Mr. GARNICK. Sure. I don't think it is an entitlement that we dominate the innovation and continue the self-fulfilling prophecy that we will always dominate it. I think it comes down to economics and an environment where it is a game of numbers.

In India, for example, it is recognized clearly they have made tremendous progress since they opened up their economy in only 1991. It has only been 16 years since they really started liberalizing their economy. The rate of change of their infrastructure is so fast and with so much investment and resources available, just human resources, that they are capable of I think over the next couple decades of displacing or at least inhibiting our career leadership in that area.

Is that a bad thing for America? I don't think it is necessarily a bad thing. It is just a changed environment that we need to deal with.

Competition, as Dr. Ruiz said, is critical to continue to raise the bar for our own economy and our own companies serving that economy. However, it should be recognized that these countries recognize that innovation is critical. They have created an environment where they are extremely bright, motivated individuals that aspire not to be viewed as back-office engineers just doing coding or body shopping as often relayed or doing just work that is redundant and repeatable, that is digitized and moved over. The workforce is motivated to changing their environment and changing their environment in such a way that they are reading our blueprint. That again is something we should be proud about but recognize the reality that is what we are facing.

You know my own old organization, we had an organization of 45,000 people that worked for me. We had the ability to dedicate over 1,000 engineers almost to the innovation segment of the business that in my current company, with 10,000 employees and a different economic model, I am not capable of matching that 1,000 people head count in innovation. Over time, that will inhibit or create a different economic value proposition.

The company I was with in the past is about a $2 billion company on a trajectory of rapid growth. Today, this current company I am with, Keane, is a $1 billion company. We are accelerating the growth, but our ability to invest, because of the economic platform that is in front of us, is different. We have to think through different ways of solving the problem; and it is both technological, it is business model, and it is economic. But we will get there. But I think we have to recognize that we do not own a patent on innovation in the world.

Chairman TOM DAVIS. Anyone else want to comment?

Ms. Wince-Smith, I like your comment about artists thinking like engineers and engineers thinking like artists, because that is really what innovation is, as opposed to just the drudgery of performing the work. Our tax system, to some extent, as we see from some of the testimony is not helpful in this area. We have a Tax Code that was designed for a different time in a different era. In the chip business we are seeing the chip business in America just migrating over to Korea and to Japan and other areas. And if China will ever get their intellectual property rights together, the chip business, they dominate that and we see us losing in those areas as well.

What is the future for American manufacturing as we stand today? Anybody want to comment on that? Mr. O'Shaughnessy?

Mr. O'SHAUGHNESSY. I would, because Revere Copper prospered from Revere and Son to Revere Cooper Products over 200 years because the country had low-cost energy. And one of the solutions that we need is, in my opinion, nuclear energy. France uses—80 percent of it is nuclear; Sweden is about 35; South Korea, I was told the other evening by a South Korean businessmen, is about 40 percent. China is building 20 new nuclear plants in the next 20 years. We need to do the same.

What we ought to do is the Federal Government ought to precertify site selections. Pick out five sites and then use a BRAC-type process to get it done. Because nobody wants any kind of a facility in their backyard, nuclear or otherwise. I mean, there are cows, citizens opposed to windmills. So I think the Federal Government has to step in with site selection, get energy right, make it cheap. The fundamental way you raise a country up is to provide it with good, low-cost energy; and we can do it.

Chairman TOM DAVIS. We get a crowd out in Fairfax to oppose cell towers going up. You get better cell phone service, so I can talk to my kids on the bullet train in Japan faster than I can driving through Bethesda or Vienna.

Mr. Van Hollen.

Mr. VAN HOLLEN. Thank you, Mr. Chairman.

Let me thank all of you for your testimony and just really pick up where Chairman Davis left off.

We, in this country, have been able to keep ahead in many ways because of our technological edge, our innovation. Despite the fact that other countries have been able to produce products at lower wages, we have been able to keep that edge through productivity gains and other issues.

Now, Mr. McCurdy referred in his testimony to the fact that there comes a point where simply the cost of manufacturing a product overseas is cheaper. And as you have these others—you know, we don't have a monopoly on innovation. We have been a leader, and we need to invest to keep ahead, but we don't have a monopoly. As you know, the population in India and China and others sort of adopt our model and invest in education. That is why we are here today, is to talk about that loss of edge, which means that the actual cost of economics is obviously a big issue.

You mentioned different corporate tax rates. Another big issue we well know is the question of health care. We haven't talked about it a lot this morning, but we all know and we have heard the figures. When GM rolls a car off the plant, the first $1,500 whatever goes to provide health care. We recently saw that IBM decided to discontinue some of its pension benefits.

We, for historical reasons, have had a system where we have an employer-based health care, and yet at the same time we spend more as a percentage of GDP on health care than any other country in the world. And at the same time we have 40 million Americans unemployed.

How do we deal with this issue going forward? It seems to me that many of our competitors, as the employers, don't have to pay that cost to health care; and yet, at the same time, I think we all

agree that one of the things we want to do in this country is to provide health care universally as possible that is our goal. How do we deal with this very important issue as a Nation?

Dr. RUIZ. If I could, you know, I am the farthest thing from an expert on the health care, but I do understand the cost of health care in our business. And the one thing that seems apparent to me in not only health care but many other issues similar to that is that we have not put technology to its fullest use to solve those issues.

I happen to know, for example, Mr. Paul O'Neill, who used to be in the government here, a Secretary, who has done some research and found that—and I have seen the work—he is very compelling that through the use of IT technology as we know it today, without making any improvements to the technology, that health care costs could be reduced by 40 percent. And I think one of the things perhaps we could find a way to collectively encourage and embrace is the use of technology to solve these issues.

IT, information technology, is very powerful; and I believe that it could go a long way to address health care rather rapidly. But it would take a very concerted effort between industry, government and just the population at large.

Mr. MCCURDY. Mr. Van Hollen, I spent a good deal of my career working on health care issues. I am married to a physician. I have a daughter in medical school, and my wife sometimes wonders why my daughter wants to go into medical school, considering the changing nature of health care and litigation and some of the costs.

It is an interesting fact that we in the United States pay more on litigation than China spends on R&D as a nation. I would love to sometime talk about just China, because there is a great deal of reaction to what China is doing. I think the thing that we need to realize is with China physics it is really not the mass right now that is the issue. It is the velocity of their growth. It is the velocity of growth, pace of change which is so dramatic. They have mass with the potential for this huge market and the labor force. But we have some advantages, but I am not sure we are maximizing that advantage.

In America, we are going to grow—we have grown rich before we are growing old as a Nation, but our baby boom generation is approaching the older age, and we have this savings mismatch in the world. There is a world imbalance with regard to national savings. We are the richest nation in the world, and yet we have negative savings. And you go to China, one of the poorer nations of the world, believe it or not, and they have a huge savings rate. Why? Because they haven't had the institutions of Social Security, Medicare and others. They are going to hit a wall there, and I will tell you this is not going to be 10 percent annualized growth indefinitely. I had a CEO tell me the other day that he believes that right after the Olympics you are going to see some really major problems. Experts have told me in 6 to 8 years you are going to see huge roadblocks in China's development. Now there are international implications of that and potential nationalism and all the rest, but I think we have to be very mindful of what is happening there.

We have to look at—and someone earlier in the committee talked about the trade deficit meaning more than the national deficit. Much of my background is in international economics; and, quite frankly, I would reverse that and say the way you start dealing with trade deficits is you get the national savings rate and the deficits here under control, because that has a huge impact on the cost of money and the potential cost of money over time.

So, actually, I spend most of my time dealing with China; and I would like to get on that at some point.

But I think the point you raised about the cost of health care, our industry is not going to remain competitive if they are strapped with this huge cost. The question is where they shift it to. If the Federal Government is where we see it currently—and I don't care about halving the deficit. I am talking about the need to have true savings and the ability, flexibility to deal with this burgeoning crisis which—it doesn't effect just individual consumers and the elderly. These businesses cannot compete. Our industry cannot remain the best if all of a sudden they become a pension manager, an insurer of last resort and the provider of health care.

Ms. WINCE-SMITH. I'd just like to take the Chinese analogy a little bit and carry it into health care, because it's ironic that our system is really like a Chinese rice bowl. If the rice bowl is broken, you don't have health care.

So the whole portability issue I think is absolutely critical. And, this is one of a few sectors in our economy that is not consumer driven. It's almost an inverse relationship between—as more innovation comes, the costs go up, and there is a specter of rationing and quality.

So clearly when we think of innovation, we need a lot of innovation in the design of this health care system to meet some of the realities that we're talking about and really bring it back to a patient-controlled system, which it is not right now.

And the other link into manufacturing with this is that there are very advanced sectors of manufacturing where nobody can beat us in the world. And when you look at those, there are a number of reasons why. I mean, Proctor & Gamble, they are producing what you would think of as low-value consumer products, toothpaste, potato chips, diapers. Here in the United States, competitive throughout the world, they're using high performance computing to completely change the cycle, and the value of a lot of their manufacturing is in the design; it's in the logistics supply chain.

And also we have to factor in what's going on in labor. Timkin has, I'm told, I have not seen it, one of the most advanced facilities in North Carolina for this T to T sense manufacturing where within minutes or hours they can move from very, very complex fabrication. And then we have the other situation in Ohio with the real hostile relationship between business and labor.

So there are a lot of things going on in manufacturing. But if Brazilian companies can be competitive in the United States, owning steel mini-mills, there's some things that are going on here.

But back to the health care, I think looking at this sector and the productivity that will come from some innovative design I think we have to really do, and that's a big, big challenge.

Chairman TOM DAVIS. Mr. Issa.

Mr. ISSA. Thank you, Mr. Chairman.

Dave, a little bit like Europe, not using the whole bucket of balls. I notice I'm last over on this side of the dais. I'd like to wrap up a couple of things I heard here today and make sure that we are all as unified as I think this panel has been. I would like to congratulate you. Often we have an A-B panel in which one side is saying one side and the other side is talking completely past, and that doesn't seem to be the case today. I think I have heard far more similarities. Matter of fact, I haven't heard any real differences in any subjects, which is good. Of course it also isn't very bright. It's kind of gloomy, all your predictions, but at least we're on the same sheet of music.

Mr. O'Shaughnessy, I don't have a question for you, but I do have a comment. I really believe that when the trademark dispute that was—had your company in bankruptcy for so many years, hoping to be able to preserve the identity, the unique identity of your—formally your copper clad product, I wish that had been decided in the opposite way in which Revere Wear's unique look would have been recognized by the courts.

Having said that though, the question I have is, do you think if they had, if you were still in that business, or let me rephrase, if whoever was still in it had that protection, intellectual property protection, do you think those pans and pots would be made here in the United States or would they have gone to China regardless?

Mr. O'SHAUGHNESSY. First, when I acquired the company, Revere Wear had already been sold, and they had the use of that logo, and I could use it for our type of products but not for cookwear for 5 years. So we could have gone into cookwear.

What happened is Corning bought the company, and after producing the cookwear in the United States for an additional 5 or 7 years, they moved the facilities to, I believe, Thailand, and then they sold them.

In their case—I think you make a good point in general, and I agree with it, but in their case, in that particular product line, technology passed them by. Copper is still the best conductor of heat that there is, but all of those beautiful ceramic dishes and new cookwear, that's what did them in.

Mr. ISSA. I see. I always wanted to because I still believe it's a fine product.

Mr. O'SHAUGHNESSY. Thank you.

Mr. ISSA. And, besides, I thought it was the best example of a secondary meaning; when you said Revere Wear, it really meant a particular product.

Dr. Ruiz, I asked the Secretary, and this question is open to all of you, but I asked the Secretary earlier if a change in immigration policy—and I think your testimony is very on point, you were among the best and the brightest and most ambitious to cross the border each day to seek out an education and relentlessly try to better yourself, and today you're at the pinnacle of the corporate ladder.

However, our immigration policy today, I'm talking about legal immigration, is a business, a family reunification. It does not in any way, except for the H1B and some other limited areas, it does not promote a best of X type competition.

If you have a Ph.D., or even a lesser degree, but if you are incredibly skilled through whatever process, including a U.S. education, you're not at a particular advantage in getting that 500,000 or so opportunities to become an American on a permanent basis.

In your opinion, particularly with a technology company like this, if we were, during our debate on immigration reform, to provide either new, significantly new, several hundred thousand, large quantity, or take a different approach to the existing amount and increase a net, let's say 200,000 highly skilled, highly educated as a preferential class in immigration in this country, what would that do to your business and to your ability to recruit and succeed against global competition?

Dr. RUIZ. Well, we have a near-term problem, in industry, particularly in high tech, is we are short of talent in this country. Any immigration reform that allows us to fill that stop gap problem or stop gap the challenge that we have would be very helpful to high tech and I believe that, without a doubt, would have a very positive impact on industries such as ours. There's no question about that.

One of the reasons, whether you call it an H1 visa or whatever, there is a method by which you can get a Ph.D. from India or China or Germany to come work in this country in our industry, that would be a welcome immigration reform that would certainly help our industry. However, I would like to emphasize that our whole industry is also strongly encouraging the fact that while that may be a short-term solution, that the long-term view of this problem, which is we still have minorities and women in this country not being able to go to get the kind of education that they need, that we could make a huge impact in the shortage of the people that we need over the long run if we just could address our own deficiencies in our education system.

Mr. ISSA. I certainly agree with the latter, but I asked my question narrowly, recognizing even half a million immigrants with high skills would pale in comparison to a shift in U.S. education. But because immigration reform is at the top of the President's agenda and it's high on the agenda of the House, I was hoping to get a comment from each of you. Go right down the line.

Mr. O'SHAUGHNESSY. I absolutely agree with you. Revere has taken immigrants and run them through the process to get electrical engineers and so on. I'm Canadian originally; maybe you're aware, with the experience Canada did out of Hong Kong.

Mr. ISSA. I actually—my suppliers from Hong Kong are now some of the Vancouver residents.

Mr. O'SHAUGHNESSY. I totally agree with you. It's so logical.

Mr. GARNICK. For our business, it's paramount. I think it's critical we create ease of access to find talented people. I fully support that endeavor, but I would reiterate Dr. Ruiz's comment about long term. We've got to build a foundation to tap into our vast untapped community that needs to migrate to a technology community. It's interesting from a standpoint of what we do graduate here in North America. We promote an environment that is rewarding areas of industry and other facets that are just not producing long-term productivity results to the economy, including litigation. We produce more lawyers than many other countries in their entirety. Nothing negative about lawyers, but we need to repartition a large

portion of that population seeking that career into the technology community to improve the outlook long term.

Ms. WINCE-SMITH. I would support what my colleagues have said but I would add to that one of the very powerful pieces of our network for retraining our workers as these jobs change, which we should not ignore investing in, are our community colleges. We know people are going to have many jobs and many skills over their life. It's hard to think of someone who's 50 or 55 in a displaced manufacturing environment moving into one of these, but we certainly should be targeting our young people in their 20's and 30's.

One of our proposals at the council that was a little extreme, but we had a lot of support for it, even inside the administration in talking with people, was when we invest in the education and our colleges and universities, the best and brightest from all over the world, we are investing in these people as taxpayers. And when they receive their degrees, we think they should be given an automatic green card. And everything that's done on the security checks should be done up front when they apply.

And so when they come in, it's as if a business person, you invest in an asset, and you're ready now to reap the reward, and you say that's gone. So I think that would be something that would really kind of be very, very transformational, and, again, it's a bold thing to address a bold need.

Mr. ISSA. Only in this body could someone be forced to say something was extreme when it was clearly common sense.

Dave.

Mr. MCCURDY. I want to commend and associate myself with Deborah's statement with regard to the green card. There is an interesting statistic, though, and this is where you all have jurisdiction and probably could help some, too. We cannot find a Federal agency that can tell you how many and where the students are in graduate schools around the country, especially in the areas of math, science, physics and others.

The one person who has that is at Oak Ridge National Labs, and there is a group there, and the statistic is that 58 percent of foreign born postgraduate students remain in the United States. Now that's still a fairly significant number, and so that's a good investment because that is the best and brightest from around the world, but we should be able to raise that number, notwithstanding all the other issues, long term, improving our own supply here.

Another interesting fact is that a lot of these H1B caps are used by family members of the person with the special skills, and they should not be counting against—why have a family of four count for really the one person who is the Ph.D. That needs to be the attracted person here. We don't want to be separating families.

Mr. ISSA. If I can, just one small followup. Dave, with your intelligence background and following up on the chairman's statement, you know the predator system was an earmark. And I would certainly say that we need to find a way to make sure that those of us who look at so many more projects do preserve certain rights to look for innovative products in some well thought out way even if it's not 14,000 well thought out ways a year—for good earmarks and against bad earmarks.

Mr. MCCURDY. You need to change the term earmarks. I think there is a misperception about the ability of committees to do its constitutional right in the Armed Services Committee or wherever, and Predator was one.

Let me just put one bug in your ear before we wrap up for perhaps a future hearing. I keep coming back to this because this is my favorite topic, but with regard to China, the single biggest issue that the technology industry faces vis-a-vis China is intellectual property. And we as an association—and our industry is working and will soon release similar to this play book we did on innovation, which was broadly embraced by Congress and many people, we're doing one on intellectual property protection and working with some experts that have great experience in the trade world and China. And I think that at some point it would be worthwhile for this committee perhaps to spend some specific time on that issue because I think it has great leverage for us.

Chairman TOM DAVIS. Let me just say, Tom Friedman has been a leader in writing about observing what globalization has done, but if you go back a generation to when I was in college, Toffler wrote about the third wave and basically talked about how this would be similar to the Industrial Revolution, that every major institution would end up changing. And from hearing you today, our tax system has to be overhauled to keep us competitive, immigration system, educational system. That's where we're going.

The sooner we do it, probably the better. Because they get closer and closer and closer. These aren't ifs, it's whens. And, hopefully, the parties can come together on this. We've had some arguments over trade that were needless, in my opinion, but we had them. But on some of these other areas, we need to work together as Americans or the American economy as we know it is going to be running third or fourth place.

Mr. GARNICK. If I could just add a comment on that. We see, as we consult with many companies on IT and business processes, there's a fundamental shift with many companies transforming themselves. And I think much to your point, the government and our systems need a full transformation to compete on this new global landscape. Not to throw, as somebody said, the baby out with the bath water. We're doing so many good things. But you can't wait until, in a business or an economy in a country, we can't wait until the problem is beyond us and we'd have to do it in a period of weakness. It's better to transform in a period of strength. And we recommend corporations that we help transform to take decisive action to recognize the facts, to not stick your head in the sand and deal with the issues on a fact-based environment, and transform in a period of strength versus waiting until you're in a period of weakness.

So think through that and if we can as an organization, as a corporation and as an association help the process, we would be glad to participate in any way we can.

Chairman TOM DAVIS. Let me just add, I mean from my own experience, January 1, 1992, I took over as the head of the county government in Fairfax County, VA, which is across the river. We were in desperate shape. We didn't have enough money in the bank to make our payroll the next month. Our commercial tax base had

dropped over 30 percent in 1 year. We had, from a real estate perspective, a depression.

The thing I asked in every decision we made, are these decisions going to attract capital or chase capital away from the county? When Tony Williams took over as a mayor, I said, you need to ask that fundamental question. You have all these issues coming at you that are unrelated; social issues, justice issues. But fundamentally, you have to ask these questions, either attract capital or chase it away?

We just can't be making decisions as a government that's going to chase it somewhere else. Because once it migrates there, it stays there and gets a hold, and those are just fundamental issues we ought to ask. We can disagree on social issues or we can disagree on some other issues, but on those issues, we need a competitive policy that is going to continue to attract capital, keep our dollar where it is and everything else.

I think this has been very helpful toward that. I would just add, in Fairfax now I think our economy is the envy of the world. Succeeding boards have continued to ask those kind of questions. It doesn't mean no regulation or no taxes, because you have to invest. We've asked intelligent questions, and ultimately, we asked, is this going to attract capital? That's what we need to continue ask here because our competitors are doing that around the globe. They're doing some innovative things we wouldn't even think of doing.

Mr. Ruiz, as you said, competition is good. We're going to get better as a result of this. But competition isn't just among companies; it's among nations. And we need to stay on top. And this has been very, very helpful, and I appreciate everybody being here today.

The hearing is adjourned.

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

[The prepared statement of Hon. Elijah E. Cummings and additional information submitted for the hearing record follow:]

Opening Statement

Representative Elijah E. Cummings, D-Maryland

Full Committee Hearing Entitled:

"Sharpening Our Edge - Staying Competitive in the 21st Century Marketplace"

Committee on Government Reform
U.S. House of Representatives
109th Congress

February 9, 2006

Mr. Chairman,

Thank you for calling today's critically important hearing to examine how America can best meet the challenges of increased global competition.

Today, Americans routinely encounter the dual realities of the 21st Century marketplace, where the promise of new markets and low-cost imports coexists with the devastating hardships of job loss and wage contraction. The American people, government, and business interests, have grown justifiably concerned about our nation's ability to withstand intensifying foreign competition.

Our long term economic health is imperiled by a record trade deficit totaling an expected $725 billion, a budget deficit totaling approximately $423 billion, and the disappearance of millions of American jobs to overseas labor markets.

In response to this gathering storm, the National Academies reported that "this nation must prepare with great urgency to preserve its strategic and economic security." I firmly believe that any effort to increase America's competitive edge must include a rededication by the federal government to scientific, mathematic, and engineering innovation.

For that very reason, the President's competitive initiative is in principle a step in the right direction because it attempts to increase vital funding for research and development and strengthen K-12 math and science education.

However, the President's commitment to address the competitiveness deficit would seem less contradictory if

this very Administration had not in recent years failed to support programs essential to American competitiveness. For instance, as part of the American Competitiveness Initiative, the President's FY07 budget calls for doubling National Science Foundation (NSF) funding. Ironically, however, just last year, the President's budget cut NSF funding 34% below the authorized level.

Further, while the President proposes to expand K-12 programs in math and science as part of his American Competitiveness Initiative, his FY07 budget proposed an overall cut in education funding by 3.8%, representing the most significant cut in a decade.

Although the National Academies recommended the creation of a program capable of creating 10,000 science and math teachers a year by awarding four-year merit-based scholarships, the Congress with the full support of the President recently helped close the door to college for many Americans by passing as part of budget reconciliation

the most draconian cut to the federal financial aid program since its inception.

Make no mistake, while we are struggling to invest the necessary funds to provide our citizens with a quality and affordable education, our economy suffers. All the while, countries like China and India are utilizing every resource necessary to develop the human capital of their citizens.

In closing, federal policymakers would do well to remember that our long term economic competitiveness is in large measure dependent not only on our resolve to spur innovation, but the strength of our commitments to education, healthcare, transportation, the environment, fair trade, and regulatory safeguards.

For example, the inadequacy of our healthcare system is a burden blunting the competitive edge of American business, as evidenced in recent plant closures and layoffs in the automobile industry. Although a comprehensive effort to bring down healthcare costs and to expand access

to meaningful healthcare coverage offers positive human and economic benefits, the President's budget fails to address our healthcare crisis comprehensively.

Mr. Chairman, let us embrace the calls of the American people to develop a robust and comprehensive plan to ensure our nation remains a preeminent global competitor. I look forward to the testimony of today's witnesses and yield back the balance of my time.

Statement
of the
U.S. Chamber
of Commerce

ON: **Sharpening Our Edge – Staying Competitive in the 21st Century Marketplace**

TO: **THE HOUSE COMMITTEE ON GOVERNMENT REFORM**

DATE: **FEBRUARY 9, 2006**

The Chamber's mission is to advance human progress through an economic, political and social system based on individual freedom, incentive, initiative, opportunity and responsibility.

The U.S. Chamber of Commerce is the world's largest business federation, representing more than three million businesses and organizations of every size, sector, and region.

More than 96 percent of the Chamber's members are small businesses with 100 or fewer employees, 71 percent of which have 10 or fewer employees. Yet, virtually all of the nation's largest companies are also active members. We are particularly cognizant of the problems of smaller businesses, as well as issues facing the business community at large.

Besides representing a cross-section of the American business community in terms of number of employees, the Chamber represents a wide management spectrum by type of business and location. Chamber membership in each major classification of American business – manufacturing, retailing, services, construction, wholesaling, and finance – numbers more than 10,000 members. Also, the Chamber has substantial membership in all 50 states.

The Chamber's international reach is substantial as well. We believe that global interdependence provides an opportunity, not a threat. In addition to the U.S. Chamber of Commerce's 104 American Chambers of Commerce abroad, an increasing number of members are engaged in the export and import of both goods and services and have ongoing investment activities. The Chamber favors strengthened international competitiveness and opposes artificial U.S. and foreign barriers to international business.

Positions on national issues are developed by a cross-section of Chamber members serving on committees, subcommittees, and task forces. Currently, some 1,800 business people participate in this process.

Statement for the record
Sharpening Our Edge – Staying Competitive in the 21st Century
Hearing before the
HOUSE COMMITTEE ON GOVERNMENT REFORM
On behalf of the
U.S. CHAMBER OF COMMERCE
By
Dr. Martin Regalia
Vice President for Economic and Tax Policy & Chief Economist
U.S. Chamber of Commerce
FEBRUARY 9, 2006

Chairman Davis, Ranking Member Waxman, and members of the Committee, I am Dr. Martin A. Regalia, Vice President for Economic and Tax Policy and Chief Economist of the United States Chamber of Commerce. It is my pleasure to submit the following testimony for the record on behalf of the U. S. Chamber of Commerce. The U.S. Chamber of Commerce is the world's largest business federation, representing more than three million businesses and organizations of every size, sector, and region. Over ninety-six percent of Chamber members are small businesses with fewer than 100 employees, yet a large percentage of the nation's largest companies are active members.

Mr. Chairman, you are to be commended for holding hearings on such an important topic as the competitiveness of American businesses and the U.S. economy in the 21st century. You have specifically requested that I comment on the competitive challenges facing American businesses, what changes American businesses must make to meet those challenges and what changes must be made in federal policies to maintain America's pre-eminence in the world economy.

Clearly, in the post WWII period, the U.S. economy has been the model for virtually all other economies to emulate. We have generally exhibited strong growth, mostly stable prices, low interest rates and high levels of employment. In the relatively few instances when we have experienced problems such as low growth or recession, high inflation and interest rates, and weak employment, we have been able to institute policies that limited the duration and scope of these episodes. As a result, we have experienced positive productivity growth and a rising standard of living.

Our pre-eminent position has not gone unchallenged. In the 1950s and 1960s, the Russian space program threatened our technological leadership, and in the 1970s and 1980s, Germany and Japan threatened to eclipse our production and manufacturing capabilities, but in each case we met the challenge and remained out in front.

Today, our economy is still leading the world. In 2005, our real Gross Domestic Product (GDP) grew 3.5 percent, outstripping that of the European area, Canada, Japan and Mexico. Our economy created over 2 million new jobs and the unemployment rate ended the year below 5 percent – lower than the average of the last three decades. Inflation and interest rates, while up from a few years ago, are still low by historical standards. Almost 70 percent of Americans own their own homes and household wealth hit an all-time record level of over $51 trillion.

While we clearly have a strong economy today, our prosperity and our leadership are being challenged by two fundamental realities growing daily in scope and urgency – the rise of global competition and changing demographics at home. How we address these challenges will determine whether we maintain and enhance our position of world leadership or finally succumb to the challenge and adopt the role of follower.

The face of global competition is changing dramatically. For decades, America has effectively dealt with competition from cheaper foreign labor by creating and employing a more productive labor force, better educated and better trained than our competitors. Even though our hourly wages were higher than many of our competitors, we produced more per hour of work and thus were able to provide a competitively-priced product. American innovation and capital formation fostered this productivity growth and kept us one step ahead of the competition. Some less-skilled jobs were shifted abroad but the higher-skilled and higher paying jobs remained at home.

Now we are faced not only with cheaper foreign labor but with foreign labor that is better educated and more skilled than in the past. At the same time, the American education system is not keeping pace. As a result, more of the innovation which is so vital to our productivity growth is taking place abroad.

Our competitors are opening their economies, embracing free markets, encouraging entrepreneurs, building critical infrastructure, competing for energy and natural resources, and challenging us in third country markets – in

other words doing all the things that we encouraged them to do for the past 50 years. A recent report of the National Academy of Sciences included a number of anecdotes and indicators highlighting this troubling trend.

In the last 20 years, the U.S. share of the world's high technology exports has fallen from 30% to 17% and the U. S. has become a net importer of high-technology products.

In a recent year, chemical companies closed or marked for closing 110 facilities in the U.S. and of the 120 chemical plants costing $1 billion or more being built around the world only one is in the U.S. and 50 are in China. Only three American companies ranked among the top ten in patents granted by the U.S. Patent Office in 2003. And, the most recent data available indicated that U.S. companies spent more on tort litigation than on R&D.

Less than a third of 4th and 8th graders in the U.S. were "proficient" in mathematics and U.S. 12th graders scored below the average of 21 other countries in their knowledge of mathematics and science. In the United States, 32% of undergraduates receive their degree in science and engineering – in Germany the figure is 36%, in China 59% and in Japan 66%. China graduates more than eight times as many engineering students than the U.S. … India five times as many.

The United States ranks only 12th in the world in broadband penetration. One in four South Koreans has high-speed internet access, double the percentage of Americans.

At the same time, 77 million baby boomers are preparing to retire. This population shift will swell already exploding health care costs and frustrate attempts to control federal deficits.

If we are to once again rise to the occasion and successfully meet these challenges, we must do so with a renewed sense of purpose and urgency. We must realize that our place in the world was not a birthright but was earned with hard work, sacrifice, and risk-taking. The path to success cannot be gained by protectionist policies that seek to wall-off the rest of the world but rather by embracing the competitive environment and renewing our commitment to efficiency, excellence and innovation. We must create a more flexible, more open, and less bureaucratic economy.

There are a number of areas where Congress can play a key role in securing our economic future.

Legal and Regulatory Reform

Today, many Americans are losing faith in the legal system. They are tired of seeing people using it as lottery to get rich quick. A recent poll found that 83% of Americans believe that our legal system makes it too easy to make invalid claims and over half don't believe that the system will protect them from baseless claims.

Nearly 90% of U.S. corporations are faced with some type of litigation and the average company balances a docket of 37 U.S. lawsuits. Companies with $1 billion or more in annual revenues face 147 lawsuits at any given time. The national cost of the tort liability system is estimated at $246 billion – more than 2% of GDP. By comparison, costs in Canada, Japan, France and the United Kingdom average less than 1% of GDP. Put another way, tort costs in the U.S. amounted to more than 8 times what the federal government spends on homeland security and 4 times more than it spends on education.

Abuse of the tort system is going international with the trial bar not only forum shopping abroad but also attempting to open the U.S. system to foreign plaintiffs under the Alien Tort Claims Act.

Not only do these costs divert money from investment and job creation, they stymie innovation, research, and development. These costs also place U.S. companies at a competitive disadvantage.

Congress should halt this global forum shopping and stop gratuitous legal assaults on companies and entire industry segments such as the food industry. The Congress should pass legislation that sets standards for medical screening to stop fraudulent practices in mass tort litigation and reduce the number of questionable claims. Congress should enact a comprehensive and rational solution to the burgeoning asbestos-related liability crisis.

American employers must comply with labor laws and workplace regulations such as the Occupational Safety and Health Act, the Fair Labor Standards Act (minimum wage and overtime), and the Family and Medical Leave Act, to name but a few. In 1994, the GAO listed nearly 30 labor laws as being the most significant that affect American employers. Among them were: Age Discrimination in Employment Act, Americans with Disabilities Act,

Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA), Contract Work Hours and Safety Standards Act, Davis-Bacon Act, Drug-Free Workplace Act, Employee Polygraph Protection Act, ERISA, Equal Pay Act (amendments to the Fair Labor Standards Act), Immigration Reform and Control Act, Labor-Management Reporting and Disclosure Act, National Labor Relations Act, Service Contract Act, Title VII of the Civil Rights Act, and Workers' Adjustment and Retraining Act. Since then, others have been added such as the Uniformed Services Employment and Reemployment Rights Act. Similar levels of workplace regulation are not associated with countries such as China or India which are often cited as the primary threats to the competitiveness of American companies. These requirements are not going away and American employers have been extraordinarily resourceful over the years in absorbing these burdens. However, as new requirements are added the gulf between the obligations American companies face and the level of burden their competitors face grows ever wider.

Accordingly, the goal for workplace regulations should be to minimize the impact so that American employers are able to make the necessary adjustments with minimal disruption and commitment of resources. To achieve this, a number of changes are needed. Legislation and regulations must be as narrowly tailored as possible. Agencies charged with implementing laws and issuing regulations must provide useful and easily accessed compliance assistance to make sure companies with limited resources are able to comply without hiring expensive outside consultants or additional staff. Enforcement of regulations must be limited to those cases where legitimate violations have occurred and employers should not be harassed by agencies merely for the sake of creating the impression that a regulatory mission is being satisfied, nor should the federal government use its superior resources to extract one-sided settlements from employers. Small employers should have the opportunity to recover their attorneys' fees when they are successful in challenging a government citation and frivolous private litigation based on open-ended laws must be deterred so that employers are not faced with a perpetual threat of being "one lawsuit away" from being put out of business.

Health Care and Pension Issues

Some of the best health care in the world is delivered in the United States, but the cost of providing it is severely impairing the competitiveness of U.S. companies and putting coverage out of reach of many American workers.

U.S. companies provide health care coverage to 136 million Americans but the cost places these companies at a distinct disadvantage when compared to their foreign counterparts. For example, General Motors spends more than $1,500 on health care for every vehicle it produces, more than it spends on steel. Ford is experiencing similar costs.

Here again, Congress can help. Congress should pass legislation allowing small businesses to pool risk and access health coverage without regard to state mandates and make it easier for small businesses to participate in Health Savings Accounts. Congress should modify the existing "use or lose it" rules for Flexible Savings Accounts. Congress should also provide a comprehensive reform of the health care liability system, including placing caps on non-economic damages and limits on attorneys, and ensuring that liability for employers and health plan sponsors is not expanded.

As businesses compete in a global market, it is important that employee benefit plans remain a viable tool for American employers to attract and retain high-quality workers. For this to continue, employers must have the necessary flexibility to respond to the needs of a changing workforce and of a more volatile market. It is also imperative that employers maintain the flexibility necessary to fulfill promises that have been made to workers. For example, pension funding rules that allow employers to contribute more in good economic times and less in bad economic times are vital, as is the ability to offer a variety of options for providing employees assistance with meeting their health care needs. In addition, burdensome rules and regulations hinder the effectiveness of such tools and mandates of any sort are anathema to the current voluntary benefit system.

Energy

The U.S. economy runs on energy. If businesses cannot get a stable supply of affordable energy in this country, they will be forced to go where they can.

The global energy markets have undergone a dramatic change in the past decade. We are no longer **the** major purchaser of oil; we must compete with China, India and the rest of the developing world. China is now the second biggest energy consumer after the United States. Moreover, in the next twenty years, China and the rest of Asia will need 129% more energy than today and the U.S. demand will rise by a third – even with continued improvements in efficiency.

We cannot continue to depend on the fickle supplies and uncertain politics of the Middle East, Venezuela, Africa and Russia. We must develop additional traditional energy supplies in our own country, pursue alternative sources of energy, and promote the development of new technologies and greater efficiency.

The energy plan that was signed into law last year was an important step, but we need additional legislation to increase refinery capacity, open up more federal land to energy exploration, and increase incentives to expand nuclear power plants.

Workforce, Education and Immigration

With the current unemployment rate below 5%, American businesses face a growing crisis in finding enough qualified workers. Moreover, this labor market squeeze is coming from both ends – our workforce is aging and our education system is not producing sufficient numbers of qualified replacements.

Many of the jobs becoming available today look much different and require a different skill set than they did yesterday. They demand greater technical skill and a greater understanding of mathematics and science. Other countries are producing students better suited to the demands of today's economy - engineers, for example - in greater numbers than we are.

We support the goals of the President's "No Child Left Behind" program and we want to work with Congress, local chambers, local businesses, and education and training institutions to ensure that federal education and training programs authorized under the Workforce Investment Act focus on the elements necessary to help American workers obtain high-wage, high-skilled jobs. We also urge Congress to reauthorize the Higher Education Act with provisions that recognize the needs of adult workers and ensure that there is equitable treatment for - and expanded access to - proprietary postsecondary education companies. Also, the President has recently unveiled a program designed specifically to address education in mathematics and science, and we urge Congress to move quickly and work with the Administration to push this initiative forward.

While we grapple with the problems in education and training, we must also reform our dysfunctional immigration laws. We urge Congress to pass comprehensive, fair immigration reform that, along with improved border security, will meet the labor demands of today's economy.

Such reform must provide an earned pathway to legalization for undocumented workers already contributing to our economy, provided that they are law-abiding and prepared to embrace the obligations and values of our society. We must create a carefully monitored guest worker program to fill the growing gaps in America's workforce, recognizing that, in some cases, permanent immigrants will be needed to fill these gaps.

We must also refrain from unduly burdening employers with worker verification systems that are underfunded or unworkable, and address delays, backlogs, and disruptions in our immigration and border management systems that impede the movement of legitimate cargo and travelers across U.S. borders.

Finally, reform must ensure the continuity and expansion of H-1B and L-1 visas for professionals and highly valued workers.

Telecommunications, Infrastructure, and Taxes

Telecommunications is the central nervous system of the U.S. economy. It allows the distribution of voice, video and data for almost every business in the U.S. as well as providing communication with others around the world. Presently, we have a system in which the government determines the competition not consumers or technology. As a result, we have a telecommunications industry that is still losing jobs and is unable to bring new technology to the marketplace.

Meanwhile, India and China are using cell phones in lieu of computers for broadband connections at much greater speeds than we have. This fosters the transmission of voice, data and video instantaneously. If we cannot deregulate the present system, we will be at a vast disadvantage to our foreign competitors.

To address our nation's decline as a leader in telecommunications, the Chamber urges Congress to reform the 1996 telecommunications law that was written before the Internet was in common use or broadband was even a term in our vocabulary and replace it with a law that fosters innovation and investment in the telecommunications industry.

Specifically, Congress should repeal the 1996 Act by deregulating the industry and allowing consumers and technology to decide economic winners and

losers, not the government. Such reform should address the extraordinary taxes now imposed on telecommunications which are now three times higher than taxes imposed on business in general. Finally, Congress should release to the private sector, for innovative wireless uses, the large amount of spectrum now owned by the federal government.

The new role of the Federal Communications Commission should be to ensure an open and fair market for telecommunications services. This new role would be modeled after the Federal Trade Commission, which has been an excellent model for maintaining competition for almost a century.

Other forms of infrastructure are also in need of repair. Now that Congress has reauthorized SAFETEA-LU, it should fully fund the nation's waterways programs; support increased investments in the Federal Aviation Administration and the Air Traffic Control System; and protect the Aviation Trust Fund so that the necessary funds are dedicated to the aviation infrastructure.

Finally, Congress should address inequities in the tax code. U.S.-based companies generally face higher tax rates than their foreign-based competitors. While some help has come courtesy of recent changes to the tax code, including lowered corporate income tax rates, reduced double taxation on dividends and capital gains, a deduction for income from U.S. production activities, and several items of simplification and reform in the areas of interest expense allocation rules, foreign tax credits, and temporary incentives to reinvest foreign profits in the U.S., more needs to be done.

In order to ensure our companies' competitiveness in the global marketplace, Congress should: make permanent the recent tax cuts; accelerate cost recovery for business assets; consider movement to a system that taxes revenue on a territorial basis, based on where it is earned (as many foreign tax systems do for their residents); refrain from hobbling our businesses' ability to restructure themselves internationally; and press for rapid modernization and updating of vital tax and trade treaties.

Trade Issues

With 96% of potential future markets outside the United States, it is clear that trade will play a large role in our future. It is vital that we continue to knock down trade barriers abroad while simultaneously keeping our markets open at home. This is especially challenging when viewed against the backdrop of our

need to maintain homeland security during a global war on terror. We must also protect our intellectual property and stop the pirating and counterfeiting of our products.

We must build support among government and business leaders for an ambitious outcome in the WTO's Doha Development Agenda negotiations, with the goal of new market access around the globe for agricultural products, manufactured goods, and services. At the same time, we advocate the negotiation of ambitious and comprehensive free trade agreements (FTAs) with commercially significant markets overseas and urge their timely approval by Congress and their effective implementation at home and abroad. We also urge the renewal of the generalized system of preferences program as well as approval of legislation granting Russia NTR and entry into the WTO when Russia demonstrates progress towards securing intellectual property rights. We support an amendment to the atomic energy act of 1954 enabling the sharing of civilian nuclear technology with India. The U.S. Chamber of Commerce has formed the coalition for partnership with India to support this effort.

We must promote regulatory compatability between U.S. and foreign regulatory bodies with respect to product standards and competition policy. At the same time, we oppose barriers to international business that needlessly curtail global sourcing, deny U.S. firms access to foreign markets through ineffective unilateral sanctions, limit inward foreign investment, and bar U.S. exports of widely available technology products.

Strengthen U.S. Capital Markets

Today, nearly half of all American households – 57 million in all – own stock either directly or through mutual funds. That's nearly double what it was just 16 years ago. Since the corporate scandals and the passage of Sarbanes-Oxley, we have imposed many serious changes on our public markets and our public companies – some of them needed reforms but others that threaten the competitiveness and innovative spirit of business. Moreover, the SEC, state attorneys general, and other prosecutors have at times disregarded the due process rights guaranteed to all Americans.

The Chamber continues to speak out against these abuses as well as the regulatory overreach that has unduly burdened honest companies and caused many to flee or avoid our public capital markets altogether.

Specifically, Section 404 of Sarbanes-Oxley has had unintended impacts on corporate leadership and the use of company resources. It has discouraged participation on corporate boards and audit committees, and has damaged relationships between auditors and their clients. The Chamber has issued detailed suggestions for improvements in the application of Section 404 rules and we advocate their acceptance.

Conclusion

American business and the U.S. economy have faced challenges before and always overcome them. Innovation has been the key to our success in the past and can be again. But, if we are to succeed, we must remove the shackles of costly unnecessary regulation, eliminate legal impediments, unlock our reserves of human capital, embrace competition that drives efficiency and engage our international competitors. Complacency is tantamount to defeat.

tax analysts viewpoints

The Urgency of Border-Adjusted Federal Taxation

By David A. Hartman

David A. Hartman, an economist and retired banker, chairs both the Lone Star Foundation, Austin, Texas, and the Rockford Institute, Rockford, Illinois, and is a frequent contributor of articles on economics and public finance to their respective publications. He recently served as editor and a contributing author for the Institute for Policy Innovation's "Road Map to Tax Reform" project. His special report, "The Strategic Steps to Tax Reform" appeared in *Tax Notes*, Mar. 31, 2003, p. 2033.

In this article, Hartman writes that the urgency of adopting border-adjusted supply-side reform of federal taxation as proposed in "Strategic Steps to Tax Reform" has been made evident by the crisis in the manufacturing sector. That crisis, he says, has been primarily caused by *every* OECD country, *except* the United States, employing border-adjusted taxation in the form of value added consumption taxes on manufactured goods that are rebated on exports and levied on imports at an average rate of 17.7 percent ad valorem. Those VATs, Hartman argues, are a sufficiently insurmountable barrier to U.S. competitiveness to be the primary cause of the negative U.S. balance of trade deficit in manufactured goods with every other major country. The consequences he sees have been a precipitous decline in manufacturing as a share of U.S. value added and employment, a declining "blue-collar labor" share of national income, and transition of the United States from the world's largest creditor to the world's largest debtor, which in turn threatens future U.S. prosperity and security. Hartman exposes what he calls the naivete of those who claim that the seriousness of the problems is imagined or that the crisis will be self-remediating.

The border-adjusted tax reform Hartman proposes would, he argues, be best achieved via the business transfer tax, a subtraction-method VAT that credits employer FICA, exempts investment and exports, and taxes imports. Hartman's first step toward reform would create a 5.5 percent BTT that would replace the corporate income tax and credit employer FICA. The second step would increase the BTT to 10 percent, allowing the imposition of a single 14 percent consumed income tax and elimination of all discriminatory elements of the federal tax code. In the final step, the BTT would be increased to 20 percent and replace the entire federal tax code other than individual FICA, with rebates to all taxpayers of the equivalent of BTT on poverty-level income.

The border-adjusted tax reform proposed in this article, Hartman concludes, would meet the goals of supply-side federal tax reform: It would be neutral, transparent, and impose a single rate of taxation on consumption at the lowest possible marginal rate. But at least as important, he says, is that tax reform using the border-adjusted BTT would level the playing field for U.S. manufacturing and therefore help to close the trade deficit, increase labor incomes, and restore long-term prospects for U.S. competitiveness, prosperity, and security.

Crisis in U.S. Manufacturing

Despite the deep plunge in the stock market, the recent U.S. recession was the shortest and mildest of the post-WWII period when judged by the effect on total U.S. employment. From the peak in July 1998 to the low in January 1999, just six months later, employment declined by only 1.43 million workers. By May 2004, 7.5 million additional people were employed.[1]

But for the U.S. manufacturing sector the employment recession has been the longest and most severe since the Great Depression. Employment in manufacturing jobs fell 3.5 million workers, 19.7 percent of peak payroll in June 1998. As of May 2004, only 187,000 were re-employed, just 1 out of every 19 laid-off employees.[2]

Manufacturing's dollar share of the U.S. economy has been in a relentless decline to less than 50 percent of what its share of Gross Domestic Product was in the 1950s and employment

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[1]*Employment Level (Unadj.)*, Series ID: LN 002000000, U.S. Department of Labor, http://www.bls.gov, July 2004.

Total U.S. Employment Level, Thousands

July 1998	132,769 (peak)
January 1999	131,339 (trough)
Decrease	1,430 (7/98 to 1/99)
May 2004	138,867 (most current)
Increase	7,528 (1/99 to 5/04)

(Footnote continued in next column.)

[2]*Manufacturing: All Employees (Unadj.)*, Series ID CEU3000000001, U.S. Department of Labor, http://www.bls.gov, July 2004.

(Footnote continued on next page.)

in manufacturing as a share of total U.S. employment has fallen proportionately,[3] as shown in Exhibit I (Appendix).

This trend originated because of relatively greater productivity in manufacturing than in the rest of the U.S. economy, and relatively higher growth of consumption of services and government. However, starting in the 1970s an additional factor has exacerbated this trend: The growing relative competitive advantage of foreign competitors due to border-adjusted taxation not afforded U.S. manufacturers under the federal tax code. As a consequence, a trade deficit in goods began in 1971 and has increased ever since (Exhibit II). Today, when U.S.-produced manufactures for consumption and export are compared to imports, U.S. companies are producing the equivalent of only $4 worth of every $5 of manufactured goods consumed in the United States.[4] The U.S. trade deficit in goods for the past full year (2003) was $547 billion, the bulk of which was due to the $469 billion manufacturing trade deficit.[5]

The United States has a sizable negative trade balance in goods with every principal nation and region (Exhibit III). A substantial offset provided by U.S. services exports has leveled out, while the merchandise deficit is predicted to continue to grow through at least 2005, *despite* the recent devaluation of the dollar.[6] The deficit on trade is currently approaching $600 billion per year, more than 5 percent of GDP, and the net amount of U.S. assets now owned by foreigners is currently estimated to total $3.7 trillion,[7] roughly comparable in scale to the total privately owned portion of the U.S. federal debt. The United States, which was the world's largest creditor in 1982, has since become the world's largest debtor as a consequence of the relentless growth of the trade deficit (Exhibit II).

The National Association of Manufacturers (NAM) warned earlier this year that "the country may be dropping below critical mass in manufacturing."[8] That is not hard to believe as depressed manufacturing centers lose vital supporting services and declining output of traditional industries provide neither the volume nor financing required for the new factories and equipment that employ newer and most productive technology. The United States is the leader in high-tech product innovation, yet the value of current exports is only one-third the value of imports in EDP and office products.[9]

Many optimists look to our strong improvement in manufacturing productivity as the source for restoration of U.S. competitiveness. However, a recent *Business Week* article, "U.S. Factories Falling Behind," showed that even higher increases in manufacturing productivity than current U.S. rates of increase are being achieved by many of our principal foreign trading partners, raising serious doubt that productivity alone can reverse the decline of the manufacturing sector.[10] Claims that devaluation of the dollar will right the trade balance have not proved reliable in the past either.

Others see no problem, because foreigners must reinvest their dollars in the United States if they do not buy our merchandise. However, those dollars invested in U.S. debt and equity securities or productive assets by foreigners have a price tag — the interest, dividends, and rentals that will increasingly leave the United States even more indebted.

How, then, is the United States to "balance the books" in foreign trade? The answer is obvious, but has been subject to censure by ideological commitment to the dominant "prevailing wisdom" of the internationalists.

The removal of tariff barriers has been nullified by their equivalent in the form of border-adjusted taxation of merchandise adopted by every one of the United States's principal trade partners. As will be shown in the following, U.S. manufacturers cannot realistically be expected to compete effectively until this foreign tax advantage is remediated by replacing current U.S. income taxation with comparable border-adjusted taxation as an urgent requirement for federal tax reform.

All Manufacturing Employees, Thousands

June 1998	17,708 (peak)
January 2004	14,213 (trough)
Decrease	3,495 (6/98 to 1/04)
May 2004	14,400 (most current)
Increase	187 (1/04 to 5/04)

[3]*Statistics for All Manufacturing Establishments: 2001 and Earlier Years*, and *Exports and Imports of Goods by Principal SITC Commodities*, U.S. Department of Commerce, http://www.census.gov (hereafter *Statistics for All*).

Value Added in Manufacturing % GDP

1953	29.66%
2003	12.7%
% Decline	(57.2%)

[4]*Id.*

% Manufactured Goods Consumed U.S. Produced, 2001

GDP in Manufactures	$1,423.0 billion
Net Imported Manufactures	368.9
U.S. Consumption Manufactures	$1,791.9 billion
% Consumption Manufactures U.S. Produced (Line 1 divided by Line 3) = 79.4%	

[5]*Survey of Current Business, June 2004*, U.S. Department of Commerce, BEA, Table F, p. D-62, and *Statistics for All*, note 3 *supra*.

[6]*USA Inc., 2004 Annual Report*, BCA Research Montreal, Quebec, Canada, June 2004, p. 14.

[7]*Survey of Current Business*, note 5 *supra*, Table F.1 and Table G.1

U.S. Investment Position Y.E. 2002 (@Mkt.)	($2,861 bil.)

(Footnote continued in next column.)

Add: Deficit Balance on Current Account 2003:	(541.8)
Deficit Balance on Current Account mid-2004 est.:	(300.0)
Est. U.S. Investment Position @mid-yr. 2004	$3,702.8

[8]"Group (NAM) Warns Factory Weakness Could Hurt U.S.," *The Wall Street Journal*, June 11, 2003, pp. 2-4.

[9]*Exhibit 15. Exports and Imports by Principal SITC Commodites*, U.S. Department of Commerce, http://www.census.gov. foreigntrade.

ADP Equipment; Office Machines (2004 YTD)

Exports	$11.51 billion
Imports	$35.21
Exports % Imports	32.7%

[10]"U.S. Factories Falling Behind," *Business Week*, May 14, 2004, p. 44.

Note: "Internationalists" are defined for the purposes of this statement as those who give international interests primacy over national interests, as compared to nationalists who value international interests to the extent they serve their national interests. Rational nationalists need not be isolationists or protectionists; free trade is in the best interests of all nations if afforded equal terms of trade.

Foreign Taxation vs. the U.S. Tax Code

As a consequence of the horrors of two World Wars, over the course of the 20th century a consensus emerged rejecting mercantilism, colonialism, and ideology in favor of free trade as the basis for worldwide peace and prosperity. The "invisible hand" of free markets, "comparative advantage," plus mobility of capital, technology, and labor would disperse the means and fruits of free enterprise worldwide. To enable such a transformation, protectionism in the form of quotas, "red tape," and high tariffs would be progressively reduced and ultimately abandoned as barriers to free trade.

The United States, as the dominant economic and military superpower of the "Free World," led the movement to dismantle trade barriers by example and by support for a "New World Order," characterized by international trade regulation (the General Agreement on Tariffs and Trade and the World Trade Organization), economic cooperation (Organization for Economic Cooperation and Development), and customs unions (such as the European Union and North American Free Trade Agreement). According to the OECD, its members had average tariff rates of 40 percent at the end of WWII; tariffs have since been reduced to an average of 4 percent.[11] The U.S. average import duty on goods is currently 1.7 percent.[12]

However, the decline of tariffs masked a trend that started in Europe toward adoption of "border-adjusted taxation" in the form of value added taxes. Those taxes were purportedly adopted to "level the playing field" for the cost of government welfare spending by destination taxation of consumption expenditures and were principally levied on manufactured goods. VATs were determined to be "indirect taxation" qualified by the WTO to be rebated on exports, and levied on imports. Led by France, which first adopted a VAT in 1968, European Common Market countries added VATs over the next five years, although Germany and Italy did not so abruptly go to current levels of VAT rates as did France, Belgium, and the Netherlands.[13] Today the EU 15 have an average "standard" VAT of 19 percent, and the average OECD "standard VAT" is 17.7 percent.[14] During the 1990s, Mexico and Canada increased composite VAT rates to 15 percent from 10 percent and 7 percent, respectively,[15] and China adopted a 17 percent VAT in 1994.[16]

U.S. corporate income taxation poses an additional difficulty for U.S. corporations in general, and manufacturers in particular. As foreign governments have increased VATs, they have been reducing effective corporate income taxes.[17] Also, U.S. taxation of resident corporations' foreign income is causing flight of corporations' headquarters to countries that exempt taxation of overseas income, which is not allowed by the U.S. tax code.

The OECD's summary of its members' tax trends in "Revenue Statistics 1965 — 2002"[18] clearly identifies the role of VATs:

> Despite a small recent fall, the share of taxes on consumption (general consumption taxes plus specific consumption taxes) hardly changed between 1975 and 1995. But the *mix* of taxes on goods and services has fundamentally changed. A fast growing revenue source has been general consumption taxes, especially *the value-added tax (VAT) which is now found in twenty-nine of the thirty OECD countries.* General consumption taxes presently produce 18 percent of total tax revenue, compared with only 12 percent in the mid-1960's. *In fact, the substantially increased importance of the value added tax has everywhere served to counteract the diminishing share of specific consumption taxes such as excises and custom duties.* (Emphasis added.)

The only nation of the 30 OECD countries without equalizing border adjustments in its federal tax code is, of course, *the United States.*

While the objectives of internationalists are commendable, and without question have promoted prosperity worldwide, particularly in the less developed countries of Asia and Latin America, there are limits to the extent the United States should sacrifice the long-term best interests of its citizens as a whole in pursuit of world prosperity and those who profit overseas. It will be shown that the United States is unnecessarily endangering its security and prosperity, and particularly the economic well-being of blue-collar workers and their families, by failing to construct a level playing field for U.S. manufacturers and corporations through adoption of destination principle consumption taxation, more commonly referred to as "border-adjusted taxes" such as a VAT.

Denying Reality of the U.S. Manufacturing Crisis

A U.S. Department of Commerce report released in January, entitled "Manufacturing in America,"[19] sets

[11] *Manufacturing in America*, U.S. Commerce Department, Washington, D.C., January 2004, p. 25.

[12] *Statistics for All*, note 3 *supra*.

[13] *VAT Rates Applied in the Member Accession States of the European Community*, European Commission, Brussels, Belgium, October, 2003, p. 3, 31.

[14] *Consumption Tax Trends*, OECD Publications, Paris, France, 2001, Table 3.5, p. 16.

[15] *Id.*

[16] *Turnover Taxes*, Lipsher Accounting Service, Los Angeles, February 25, 2004, p. 1.

[17] Engen, Eric and Hassett, Kevin A., "Does the U.S. Corporate Tax Have a Future?" *Tax Notes*, 30th Anniversary Issue, p. 15 (2002).

[18] *Revenue Statistics 1965-2002*, OECD Publications, Paris, France, 2003, p. 22.

[19] *Manufacturing in America*, note 11 *supra*.

forth the Bush administration's plan for meeting the challenges of U.S. manufacturers. It notes the efforts of the United States to reduce tariffs as trade barriers but fails to address the problems of the VATs adopted by all major U.S. competitors that replaced those tariffs. Its six-point plan mentions neither the competitive disadvantages for U.S. manufacturers because the U.S. lacks border tax adjustments nor the need for territorial corporate taxation. In short, the plan is positive but naïve, failing to identify or commit to the most necessary element of the very "level playing field" it prescribes.

The "prevailing wisdom" of neocon and libertarian economists is just as muddled regarding the plight of U.S. manufacturing, its causes, cures, and potential consequences. Most consider manufacturing's problems resolvable by tax reform providing greater savings for investment and lower composite marginal rates of taxation. But neither greater investment in manufacturing productivity in the 1990s,[20] nor lower marginal rates in the 1980s[21] reversed the downslide. And most of those economists are "joined at the hip" in proposing the Hall-Rabuska tax reforms centered on a "flat tax" that is *not* border-adjusted.

The House Ways and Means Committee held hearings on extraterritorial income in 2002 in which prominent tax policy experts, economists, and tax attorneys testified on the international implications of tax reform.[22] The witnesses were divided on the question of whether border adjustability was necessary or not. Eric Engen called for corporate tax reform and proposed alternatives, including reducing AMT, reduction of the doubling of taxes on dividends, or replacing the AMT with a national sales tax, a VAT, or the X-tax, a combination of a corporate VAT and a compensation tax; he also emphasized the importance of promoting saving and investment. Herman Cain recommended adoption of the Fair Tax, a retail sales tax. Ernest Christian outlined the steps to the business transfer tax, a VAT that would replace the corporate income tax. Michael Graetz observed that the United States taxes income too heavily and consumption insufficiently, recommending reform based on a VAT with an upper-income surtax. Steve Entin spoke to tax reform via the single-rate consumed income tax. William Gale proposed that the issue is whether or not to replace the corporate income tax with a VAT, not a sweeping tax reform. Dale Jorgensen outlined fundamental tax reform consisting of a capital income tax that equalizes before tax rate of return, and a proportional tax on equal income. Overall the hearings were useful as a general discourse on tax reform, but did not focus specifically on the crisis in the manufacturing sector.

A sampling of prominent opinions regarding the manufacturing sector's problems is depressing at best. NAM presents in "Facts About Modern Manufacturing" (6th edition 2004) a graph of "real" (physical output) share of manufacturing in U.S. GDP showing that it has been relatively *constant* since WWII.[23] However, *actual* manufacturing share of U.S. GDP in dollars has declined to below one-half its mid-50s level. Are not the *dollars* that employers can take to the bank, or employees can take to the grocery store what matters, not *units* of output? The report also states that U.S. manufacturing employment "has remained fairly constant at around 16.5 million,"[24] whereas the number of employees has declined 60 percent since 1953, and 27 percent since 1979 to 14.4 million; 3.5 million manufacturing employees lost their jobs only since June 1998.[25] The NAM/MAPI report on structural costs targets improvements of U.S. competitiveness similar to the U.S. Commerce Department plan,[26] but does not address remedy of the federal tax code to compete with either VAT taxes or corporate territorial taxation.

In a *Wall Street Journal* op-ed "Don't Blame the Yuan,"[27] the Bush administration's former Chair of the Council of Economic Advisors, Glenn Hubbard, also emphasizes the comforting but misleading "constant 'real' goods physical product share of U.S. GDP in manufacturing," ignoring the plummeting *actual* dollar share of GDP. He then proceeds to compare manufacturing to agriculture, where jobs have also plummeted due to high productivity gains, but fails to note that the U.S. agriculture sector shows robust ability to be a *net exporter* despite excessive federal regulation, whereas the U.S. manufacturing sector is a *net importer*. The U.S. Department of Commerce's *Survey of Current Business* joined the purveyors of misleading data on U.S. manufacturing with its June 2004 issue's "Improved Annual Accounts for 1998-2003." Discussion and exhibits likewise centered on the relatively irrelevant *real* (physical output) share of manufacturing in GDP, which declined only in 2001, then made only casual reference to the fact that *actual* manufacturing share of GDP declined in all five years, which is what *really* matters.[28]

The Cato Institute's "Job Losses & Trade: A Reality Check," by Brink Lindsey, claims that "Deindustrialization is a myth," also stating " . . . the absolute number of manufacturing jobs has been quite stable."[29] He also uses the inappropriate comparison of U.S. manufacturing to U.S. agriculture. A "POLICYWIRE" from The Heritage Foundation headlining "Manufacturing Rebounds" states, "the numbers are in: manufacturing employment

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[20]Note 4 *supra*, p. D-56.

[21]Facts and Figures on Government Finance, 37th Edition, Tax Foundation, Washington, D.C., 2003, p. 125-128, 138, 140, 146.

[22]*Second in Series on the Extraterritorial Income Tax Regime*, Committee on Ways and Means, House of Representatives, Washington, D.C., May 2002.

[23]*The Facts About Modern Manufacturing* (6th Edition) National Association of Manufacturing, Washington, D.C., 2004, p. 7.

[24]*Id.*

[25]*Manufacturing: All Employees*, note 2 *supra*.

[26]Leonard, Jeremy A., *How Structural Costs Imposed on U.S. Manufacturers Harm Workers and Threaten Competitiveness*, NAM/MAPI, Washington, D.C., 2003 (hereafter *How Structural Costs*).

[27]Hubbard, Glenn, "Don't Blame the Yuan," op-ed, *The Wall Street Journal*, Sept. 9, 2003, p. A22.

[28]*Survey of Current Business*, note 5 *supra* at 23, 24.

[29]Lindsey, Brink, *Job Losses and Trade, A Reality Check*, Cato Institute, Washington, D.C., March 2004.

is expanding again and payroll jobs are growing at the fastest pace since 1990."[30] Is the return of 187,000 workers in the first five months of 2004 of the 3.5 million laid off from June 1998 to January 2004 a cause for celebration?

Paul Craig Roberts, a prominent economist in the Reagan administration, recently questioned whether the condition can be met for free trade on mutually beneficial terms, given mobility of factors of production to cheap labor countries.[31] The intrepid investor Warren Buffett cites deterioration of the U.S. balance of trade and resultant net foreign investment balance as serious enough to warrant "managed" trade.[32]

"Revitalizing American Manufacturing," published by the Industrial Council of the AFL-CIO,[33] makes a clear and accurate statement of the seriousness of the manufacturing crisis. It then cites unfair trade practices, an overvalued dollar, and tax policies favoring moving manufacturing offshore. But its proposals for dollar devaluation, making corporations pay taxes on offshore profits, government incentives, healthcare reform (more public dollars), and labor law "reforms" do not add up to an effective remedy.

To summarize, there is a serious crisis in manufacturing that is being obfuscated by those of the internationalist persuasion and those who are profiting from the unfair trade advantage of foreign goods in competition with those produced by U.S. manufacturers. The federal government has gratuitously negotiated bilateral trade agreements that have exposed U.S. manufacturers and their workers while receiving no commensurate concessions in return, which is not in America's national interest. Yet all who have profited from or gave their blessings to this folly are joined in a chorus of denying reality. That includes the politically powerful U.S. financial services sector, which plays the leading role in international finance but incurs no such border-adjusted tax disadvantages. Perhaps the apologists not directly profiting from foreign competition perceive a legitimate role in representing the interests of the information economy workers enjoying cheap foreign imports along with low-wage services of discharged production workers and excessive immigration of the unskilled; nonetheless, they too will join their compatriots in sharing a diminished future for America.

Predictable Consequences of the Crisis

The deterioration of the U.S. manufacturing sector threatens future progress and prosperity of the U.S. economy, and risks loss of a vital source of military security. Manufacturing has perennially been the leading sector in the provision of technological progress that drives productivity across all sectors of the U.S. economy. The growing U.S. dependency on foreign manufacturers and service of the growing accumulation of foreign indebtedness and productive assets owned by foreigners will lower the prospective relative standard of living of the average American. That accumulation of overseas obligations is irresponsible public policy for a nation facing multitrillion-dollar unfunded welfare liabilities by the end of this decade. The defensive military capability of the United States has been substantially created by its manufacturers' leadership in new technology and the ability to apply this technology to the manufacturing of defensive weaponry; thus U.S. military capabilities are dependent in large measure on preserving our world leadership in the manufacturing sector.

The declining employment and earnings in U.S. manufacturing is a principal root cause for the declining share of U.S. income earned by blue-collar workers. The average factory wage per hour in real dollars *declined* 11.3 percent from 1978 to 2001,[34] despite an increase in productivity by *one-half* in the business sector, and a *doubling* of productivity in manufacturing.[35] The laid-off workers from manufacturing seeking re-employment in highly priced elastic service markets has added further negative pressure on blue-collar workers' incomes in general. The often-cited increasing share of income enjoyed by the top 10 percent of incomes is *not* because of excessive growth of returns to physical and intellectual capital;[36] it is because of the stagnation of labor income, and the principal causes are the stagnant demand for manufacturing employment joined by excessive immigration of unskilled labor. Perhaps during the early post-WWII period, at the zenith of organized labor, labor was receiving an excessive share of income. But today the opposite is the case, when it takes two workers to provide the bare essentials of a living income for a sizable number of families. The United States, which adopted the 40-hour work week in the 20th Century, enters the 21st Century with a generally adopted 80-hour family work week, of necessity more often than not.

On being apprised of the accelerating loss of manufacturing jobs, a prominent libertarian shrugged and said, " . . . maybe they will have to find something else to do. . . . " It was reminiscent of Marie Antoinette's famous comment "let them eat cake," and unless this crisis is remedied may similarly lead to more serious consequences.

The Vital Need for Border-Adjusted Taxation

The principal problem that lies at the roots of the U.S. manufacturing crisis is the inept and outmoded U.S. tax code compared to those of our foreign competitors; most particularly, the advantage provided foreign competitors

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[30] *Manufacturing Rebounds*, Policywire, The Heritage Foundation, http://www.heritage.org, May 11, 2004.

[31] Roberts, Paul Craig, *Clarifications on the Case for Free Trade*, Ludwig Von Mises Institute, http://www.mises.org, January 12, 2004.

[32] Buffett, Warren E., "America's Growing Trade Deficit in Selling the Nation," *Fortune*, McGraw-Hill, New York, November 10, 2003.

[33] *Revitalizing American Manufacturing*, Industrial Council, AFL-CIO, Washington, D.C., 2004.

[34] *Statistics for All*, note 3 *supra*.

[35] Industry Analytical Ratios for the Manufacturing Sector, U.S. Labor Department, BLS

	1980	2002	% Change
All Business Output/hour	79.0	124.0	57.0%
Manufacturing Output/hour	70.1	146.3	108.7%

[36] Hartman, David A., *Does Progressive Taxation Redistribute Income?* Institute for Policy Innovation, Lewisville, Texas, 2001.

by border-adjusted taxes in the form of value added taxation. Comparison of relative cost factors of the United States versus its principal competitors makes clear both the overwhelming importance of the problem caused by foreign border-adjusted taxation not matched by the United States, and how unlikely will be the achievement of U.S. cost parity without effective tax reform.

The study of how structural costs threaten U.S. manufacturing competitiveness prepared by the Manufacturing Alliance/MAPI for NAM published in December 2003[37] provides a useful format for comparison of manufacturing costs for the United States versus its principal trade competitors. That study, using labor "raw cost index" per hour, shows the U.S. cost of $24.30 per labor hour exceeds the $19.30-per-hour average of nine principal trade partners by $5 per hour. The study goes further to show that cost disadvantages targeted for remediation by NAM — added costs of regulation, energy, employee benefits (particularly health insurance), and the difference in effective corporate income tax rates — together add an additional equivalent of $4.45-per-labor-hour burden. The total disadvantage as determined by NAM is the $9.45-per-labor-hour equivalent.

What is *not* considered by the NAM study is the effect of border-adjusted VATs imposed by U.S. competitors on imports from the United States, and rebated on exports to the United States that *exceed the total* of the average U.S. disadvantage in labor and burden costs identified by MAPI. The average VAT imposed on U.S. exports by OECD trade competitors is 17.7 percent ad valorem, which expressed as MAPI's labor "raw cost" index is the equivalent of $14.71 per hour, over *half again more* than the *total* MAPI-determined labor and burden cost disadvantages. A conservative estimate of the average VAT rebated on OECD exports to the U.S. is $13.04 per hour in labor "raw cost" equivalent, nearly 40 percent more than the *total* of all MAPI adverse cost factors (Exhibit IV).

The 1990s showed how serious the dilemma is, unaddressed by the federal tax code, that foreign border-adjusted VATs pose for U.S. manufacturers. Despite a 50 percent increase in manufacturing productivity for the decade, the United States has been experiencing merchandise trade deficits now exceeding 5 percent of GDP, and exports of goods whose value is only 56 percent the value of imports.[38] China, which currently is the largest trade competitor of the United States, has added substantially to its huge labor cost advantage by adopting a 17 percent VAT in 1994. Amazingly, the United States has continued to dismantle its trade barriers by reducing its average tariff on goods from 7 percent to 1.7 percent since 1967 without addressing the offsetting effect of VATs.[39] As a consequence, U.S. trade deficits in goods are projected for the currently envisionable future in excess of one-half trillion dollars annually.

As the only OECD nation without border-adjusted taxation, the United States is the most profitable market for foreign competitors, including their home markets. In effect, their exports to the United States are incentivized to the extent of their VAT rebate (on average 17.7 percent) for either higher profit, unfair competitive advantage, or a combination of the two. At the same time, they enjoy the same advantage in their home markets versus U.S. competition as a consequence of the VAT added to U.S. income taxes contained in imports. As an added bonus, they can accumulate dollars awaiting the next devaluation to buy a U.S. competitor to aid their technical capabilities and acquire an established market. The same advantages are available to a U.S. manufacturer that moves its production abroad but retains its U.S. marketing capability.

The composite cost disadvantage facing U.S. manufacturers is unlikely to be remediable without federal tax reform effectively addressing the huge price advantage enjoyed by foreign competitors because of border-adjusted VATs. Often cited as the potential remedy is the remarkable ability of U.S. manufacturers to innovate new or improved products, processes, and forms of enterprise. But this "intellectual capital" is just as mobile and exportable today as physical capital and as *Business Week* soberly noted recently, despite currently high rates of improvement in manufacturing productivity in the United States, foreign competitors in Asia and Europe are increasing productivity even faster. Foreign countries' schools better educate workers in math and science, and teach English as a required second language, which enables American-designed high-tech products and processes to be proficiently produced abroad (often without first being produced in the United States, as with electronic and EDP products), and it is those new plants that incorporate the newest and most productive technology. The current edition of endless ineffective "reforms" of U.S. public education has to face a real *external* problem: Why should students take tough math and science curricula to prepare for nonexistent job openings in manufacturing? The more mature U.S. industries are lagging in the productivity race in obsolete plants while Asian countries assault U.S. markets with new, high-productivity facilities, and that is where the jobs are going.

Contrary to popular economic dogma of the internationalists, devaluation of the dollar offers only limited

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[37] *How Structural Costs*, note 27 *supra*.

[38] *Survey of Current Business*, note 5 *supra*. Table F-1, p. D-62; Table 1-1-5, p. D-3.

1st qtr. 2004: Trade Balance on Goods $603 bil./yr.
÷ Gross Domestic Product 11.45
5.26%

1st qtr. 2004: Exports of Goods $776 bil./yr.
÷ Imports of Goods 1,379
56.37%

[39] *Statistics for All*, note 3 *supra*.

Labor Share of Manufacturing Value Added, 2004

Labor Wages	$343.0 bil.
Ratio, Total Comp to Wages	x 26.02/hr. ÷ 17.43/hr.
Labor Compensation	$512.0 bil.
÷ Value Added in Mfg.	÷ 1,853.9 bil.
Labor Share Mfg. VA	= 27.6%

short-term relief, and even more limited remedial prospects for enabling competitive U.S. manufacturing. In an open world economy, the parity achieved by devaluation is temporary, given world commodity pricing and the mobility of intellectual and physical capital in pursuit of prevailing world returns to capital and compensation. What devaluation *does* achieve is recurrent "bargain basement" prices for the most strategic and productive American economic assets, which is the sorry price of "America for sale." When adjustment to the new exchange rates is effected, the principal burden of lower real prices is forced onto labor, which in the U.S. manufacturing sector averages slightly above one-quarter of value added.[40] Arnold Harberger arrives at the same conclusion — that the "wedge" of the corporate taxation has incidence primarily on labor — in *ABCs of Corporate Taxation*.[41] If governments at the federal, state, and local levels raise taxes that are not border-adjusted to augment depressed revenues and rising welfare costs, they only pour fuel on the fire. The experience of the United Kingdom during the post-WWII period, when it opted for "quick fixes" by devaluation, was prolonging, rather than remediating, uncompetitive manufacturing until competitive VAT taxation and supply-side income tax reductions were finally adopted.

Supply-side economic prescriptions — lower government spending, lower marginal income tax rates, and deferred taxation of saving for investment — will definitely be helpful, but will *not* be sufficient to overcome VAT tax advantages of 17.7 percent on average for OECD competitors rebated on exports to the United States, and added to imports from the United States. Consider the impact of a 17.7 percent selling price advantage for a foreign competitor when the average U.S. manufacturer had a pretax operating profit of 5.4 percent of sales in 2003.[42] That is particularly true given foreign competition simultaneously lowering effective corporate income taxes relative to U.S. levels and increasingly undertaking fundamental tax reform as well. Witness expensing of fixed investment in the Netherlands and Russia's adoption of the flat tax. As Enger and Hassett observed in their recent review of international corporate taxation "... if current EU trends continue, the corporate income tax may virtually disappear and be replaced by revenue from the VAT in just a few decades."[43]

An additional taxation disadvantage of U.S.-based international corporations is U.S. taxation of foreign earnings. This has added to incentives to move U.S. corporate headquarters abroad, which eventually results in sourcing corporate services abroad as well, reducing U.S. ability to help partially finance its merchandise deficit from its services trade surplus. The adoption of territorial taxation for U.S. corporations would restore the United States as the preferred location for corporate headquarters.

The Strategic Steps to Border-Adjusted Tax Reform

The time has come for the United States to afford its manufacturers relief by replacing the corporate income tax with a border-adjusted and territorial tax code that levels the economic playing field with foreign competitors. The tax selected should also meet the requirements of supply-side tax reform, including neutrality of taxation of savings versus consumption, reduction of marginal rates, equitable assessment, and transparency.

There are four principal candidates for supply-side tax reform:

1. The Hall-Rabuska "flat tax," which is a single-rate tax on wages and an equal-rate tax on origin-based corporate cash flow tax that exempts returns to capital at the personal level.

2. The "consumed income tax," (CIT) which taxes all income once only at the personal level after exemption of saving for investment.

3. The "Fair Tax" (RST), which is a flat-rate retail sales tax on consumption that replaces all federal taxation, including social insurance taxes, and abates the tax on the equivalent of poverty-level income to all taxpayers via rebates.

4. The business transfer tax (BTT) as proposed is a subtraction-method VAT levied on value added determined as the difference between revenues and purchased goods and services for all enterprises and employers. It exempts fixed investment and exports but includes imports and credits employer-paid social insurance taxes. Rebates would be used to remit tax on "necessities," as with the "Fair Tax," which is the principal difference between the BTT and the "USA Tax."

Each of these candidates has distinctive characteristics regarding suitability for destination (border-adjusted) taxation and supply-side tax reform.

The flat tax, being a "direct tax," is not border-adjusted by WTO standards, which effectively excludes it as basis for relief for U.S. manufacturing. Although it is promoted as a simple tax, as a political reality it would be subject to continuing redefinition of income, and is potentially susceptible to return to a progressive rate schedule. It would also prove to be politically difficult to convince the majority of wage-earning taxpayers of the equity of returns on capital previously taxed being exempt at the personal level, making it a dubious political prospect for successful tax reform.

The CIT shares with the flat tax the problem of WTO classification as a "direct tax," making it ineligible for border adjustment. While it has the perceptual advantage of taxing all income the same when received after exempting saving for investment, it still depends on future definition of income and is potentially susceptible to progressive taxation, resulting in higher-than-necessary marginal rates.

This leaves only two border-adjusted tax reform candidates, the retail sales tax and the business transfer tax.

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[40]*Statistics for All*, note 3 *supra*, and *Statistical Abstract of the U.S. 2003*, U.S. Department of Commerce, U.S. Govt. Printing Office, No. 646, p. 426.

[41]Harberger, Arnold C., *The ABCs of Corporate Taxation*, Tax Policy and Economic Growth, American Council for Capital Formation, April 1995, p. 61.

[42]Table 1.0, Income Statement for Corporations in the NAICS Manufacturing Sector, U.S. Department of Commerce, U.S. Census Bureau.

[43]Note 17 *supra* at 29.

The RST and the BTT are both consumption taxes, but would likely differ as to tax base and therefore the required tax rate for tax revenue neutrality. The retail sales tax has as its base all personal consumption expenditures *in theory* — but experience with state retail sales taxes shows that it is very difficult politically to directly tax "necessities." So a large portion of consumption — housing, medical care, food, legal fees, hair care, and so forth — is exempt from state retail taxes. Even without exemption of certain necessities justified by tax rebates the RST would have a smaller potential base, requiring a higher rate than the BTT and incentivizing tax evasion. Were an RST to replace *all* federal taxation as the "Fair Tax" proposes, then it would either have a smaller base than the proposed BTT or it would have to introduce a companion tax suitable for taxing payroll and consumption expenditures of government and not-for-profits to provide as broad a base as the BTT.

The business transfer tax offers many advantages as the principal levy for federal taxation besides border adjustability and territoriality as corporate taxation. As proposed, the base for the BTT would include all commerce and employers, eventually including employment and purchases of both the government sector and employment of the currently ballooning not-for-profit sector. That would provide the most equitable and efficient tax neutrality and the lowest possible marginal tax rate. Although in effect it would be primarily incident at the consumption level, the BTT would be collected uniformly at the employer level with little justification for allowing exemption, and would also provide equitable rebates on the equivalent of income for necessities as replacement for exemptions, deductions, and credits if adopted as a single flat tax for complete elimination of income taxation. Perhaps the BTT is not as transparent as the RST; however, the BTT could be shown on invoices and would be well-recognized as present in all consumption prices. Citizens in Europe certainly know their prevailing VAT tax rates.

Protests by economists that value added taxation has been the *cause* of the runaway growth of government in Europe are misguided. VATs may have provided the means, but were not the cause; the culprit was the adoption of VATs in *addition* to rather than in *replacement* of income taxation.

In summary, as the most efficient and effective of the alternatives considered for federal tax reform, the BTT provides the following benefits:

1. As a WTO-approvable border-adjusted direct tax, the BTT would exempt taxation of U.S. exports and tax imports, "leveling the playing field" for U.S. manufacturers with foreign competitors.

2. As territorial taxation replacing corporate income taxation, the BTT would eliminate the double taxation of income earned abroad, restoring the United States as the preferred domicile for corporate headquarters.

3. By replacing the corporate income tax, the BTT would tax all forms of commercial income at one flat and far lower rate and eliminate double taxation of corporate income and expense physical capital, thereby meeting the principal objectives of supply-side corporate tax reform.

4. As a further replacement for the personal income tax, the BTT would tax all personal income at one flat rate after exemption of saving for investment, and eliminate all preferences and discrimination by rebates of tax on the equivalent of poverty-level income as a proxy for "necessities" returned to *all* taxpayers.

5. By levy on the broadest possible base, the BTT would provide the lowest possible tax-neutral rate and the most substantial reduction in *composite marginal tax rates* to provide the lowest cost of capital for justification of new investment.

6. By crediting employer share of social insurance taxes against the BTT tax levied, the burden would be shared proportionately by all consumption and the regressive "bubble" caused by the FICA income limit would be removed from the employer share of FICA.

7. By its widespread recognition of rate and the requirement of showing the BTT rate on all invoices, the BTT can meet the test of "transparency" (visibility).

8. By being levied on employers, the BTT would be the most collectable and most difficult to evade of tax reform alternatives.

The BTT also provides the most direct and acceptable politically strategic steps to supply-side tax reform. For purposes of demonstrating the steps for tax reform and rates for the BTT, economic data for fiscal year 2000 was used as the last year of a balanced budget for assurance that the revenue-neutral steps proposed would provide ample revenue yield.

Step I: *A 5.5 percent BTT would replace the corporate income tax, plus allow credit of employer's share of Social Security taxes against the BTT* (Exhibit V-A).

This step would replace the 35 percent corporate income tax with border-adjusted and territorial taxation, neutralizing one-third of foreign VATs' tax advantage (averaging 17.7 percent) by exemption of exports and levy on imports, and would end U.S. taxation of foreign corporate income, expense investment, and equalize the burden of employers' social insurance subsidization proportionate to all consumption. Governments and not-for-profits would not be taxed on payroll at this step, but purchases would not be exempted. It is proposed that all "corporate welfare"[44] expenditures be terminated concurrent with BTT adoption. Replacement of the corporate income tax would reduce composite marginal federal tax rates by 9.5 percent compared to current taxation.

[44]*"Corporate Welfare" Update*, Cato Institute, Washington, D.C., Tax & Budget Bulletin #7, May 2002.

Step II. *Increase the BTT rate to 10 percent and use the additional revenue to eliminate all discriminatory taxation of personal income, and flatten the personal income tax under the current code to either a single 14 percent consumed income tax, or alternatively a dual 10 percent/20 percent moderately progressive schedule* (Exhibit V-B, C).

This step would eliminate the estate and gift taxes, the alternative minimum tax, the dividend and capital gains tax preferences, the phaseouts of exemptions and deductions, and the so-called marriage tax penalties, would convert the earned income credit to healthcare vouchers, and would exempt saving for investment until consumed. Payrolls of governments and not-for-profits would be subject to VAT tax commencing with Step II. For those who insist on some continuing progressivity of the tax code the 10 percent/20 percent alternative dual personal income tax rate would be levied with the upper 20 percent rate commencing at the maximum FICA income level. This step would reduce composite marginal tax rates to 24 percent with the 14 percent flat personal rate, and 30 percent with the 10/20 alternative, versus current composite marginal rates of 50 percent or more.

Step III: *Complete reform of the federal tax code to a single consumption tax by increasing the BTT rate to a single 20 percent rate or alternatively a 15 percent BTT with a 10 percent income surtax and replace all income tax credits, exemptions, and deductions with a voucher rebating tax on necessities* (Exhibit V-D, E).

Under this final step the reform of the federal tax code to a single consumption tax would be completed, other than the retained personal portion of Social Security taxes, achieving comparable parity of U.S. federal taxation with foreign VAT taxation, tariffs, and excises regarding border adjustability, given elimination of all federal excises and tariffs. The rebate on necessities would be determined as the BTT-equivalent taxation on federal poverty-level income. The recommended 20 percent VAT rate would be the only marginal federal tax rate; the progressive dual tax alternative would result in a 25 percent composite marginal rate. For a more detailed description of the BTT consult "The Strategic Steps to Tax Reform," *Tax Notes*, Mar. 31, 2003, p. 2033.

The consequences of federal tax reform according to the proposed steps above would be an equitable, neutral, transparent, and above all, *politically feasible* supply-side and border-adjusted reform of the federal tax code for dramatic remediation of perennial trade deficits on manufactured goods, and optimal growth in *all* sectors of the U.S. economy. What is most important is the "leveling of the playing field" for U.S. corporations in general and manufacturing in particular, and for U.S. blue-collar workers, whose earnings have been increasingly depressed for the past three decades. That would result in a return to more equitable sharing of increased rate of growth and prosperity of the U.S. economy, not only for those in manufacturing, but in all sectors of the U.S. economy as well.

Summation of Observations and Recommendations

It is indisputable that the severity of the ongoing decline of the U.S. manufacturing sector endangers the national interests regarding future growth, prosperity, and security. The burden of the crisis has most particularly fallen on blue-collar workers' incomes and employment.

The principal cause of this crisis is the federal tax code. It is generally recognized that multiple layers of progressive taxation result in double taxation of savings for investment and excessive marginal rates, requiring "supply-side" tax reform. But of even greater disadvantage to U.S. manufacturing has been mutual tariff elimination, supposedly in the interests of international free trade, replaced by comparably high border-adjusted VATs adopted by all of America's principal trade partners, but not provided to U.S. manufacturers. At average levels of 19 percent for the EU 15, and 17.7 percent for the OECD, those levies on U.S. exported goods and abated tax on goods exported to the United States pose barriers to U.S. competitiveness in manufacturing that are insurmountable given the mobility of capital, technology, and management in today's open world economy.

It is urgent for the survival of U.S. manufacturing and its role as the leader of U.S. technology, productivity, and military security that the United States convert its income-tax-based federal revenue code to a border-adjusted and territorial-based code, with low marginal rates, exemption of saving for investment, and transparency, based on consumption taxation.

The business transfer tax proposed in this article best meets all those criteria and should be implemented by the strategic steps of first replacing the corporate income tax with a 5.5 percent BTT; then flattening the income tax to a 14 percent consumed income tax with a 10 percent BTT; and finally replacing the entire tax code other than personal FICA taxes with a 20 percent BTT. For those determined to retain progressivity, dual rate alternatives are offered.

A final consideration for governing representatives of the U.S. taxpayers is equitable taxation as defined by a majority of U.S. citizens, not by a clique of self-appointed statists. A *Readers' Digest* poll[45] addressed the question "What is the highest rate of taxes Americans should pay regardless of income level?" A statistically sound sample of Americans across races, gender, creeds, incomes, and political affiliations or inclinations definitively answered: "Twenty-five percent." The proposed changes to the federal code meet this criterion.

The irrational opposition to a U.S. VAT, the denial of a U.S. manufacturing crisis, and the obfuscation of the extent and seriousness of current reality serve only the interests of the few who currently profit at the expense of all Americans' prospects for the future.

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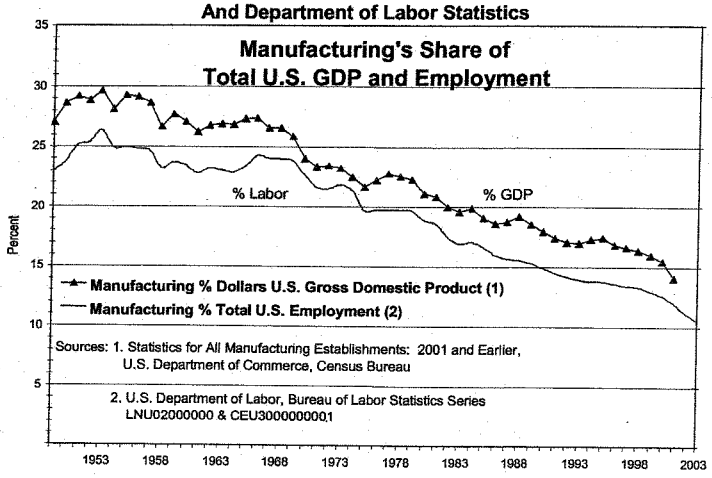
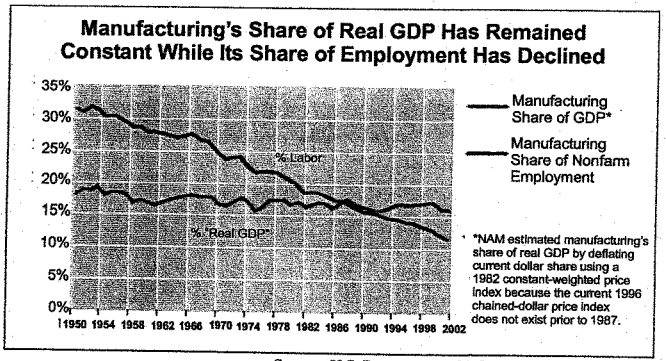
[45]Wildavsky, Rachel, "How Fair Are Our Taxes?" *Reader's Digest*, February 1996, pp. 57-61.

Exhibit I

A. From: Unadulterated U.S. Department of Commerce And Department of Labor Statistics



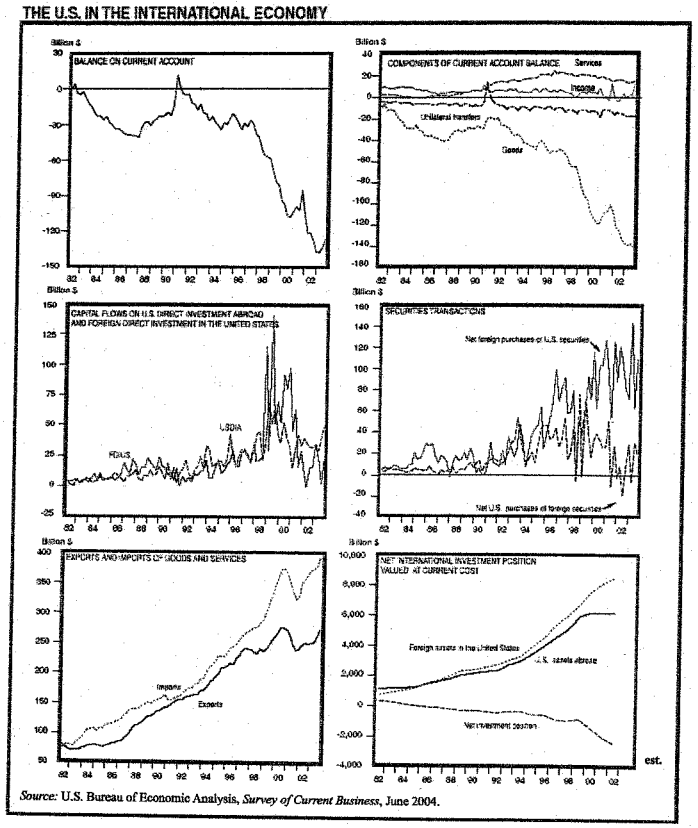
B. From: NAM/Manufacturing Institute Statistics Presented in 'The Facts About Modern Manufacturing'



Source: U.S. Department of Labor and NAM calculations from U.S. Commerce Department data

Exhibit II

All figures except INVESTMENT POSITION are quarterly rates; to annualize = x 4



Source: U.S. Bureau of Economic Analysis, *Survey of Current Business*, June 2004.

Exhibit III
U.S. Trade in Goods With Selected Countries and Areas
(For 2003 in Billions of $)

Country/Area	Exports	Imports	Trade Balance
Canada	169.8	225.9	(56.10)
Mexico	97.2	139.0	(41.80)
Latin America	137.4	206.0	(68.60)
United Kingdom	32.9	42.4	(9.50)
Germany	28.3	62.5	(34.20)
Western Europe	161.4	266.3	(104.90)
China	28.3	162.4	(134.10)
Japan	50.3	118.0	(67.70)
Asia	203.3	494.9	(291.60)

Source: Survey of Current Business, April 2004, U.S. Department of Commerce, BEA, Washington, D.C.

Exhibit IV
Relative Effect of VATs vs. MAPI Cost Factors on U.S. Manufacturing Competitiveness

MAPI Cost Factors*			
Labor Cost Differential			
U.S. Raw Labor Cost		$24.30/hr	
less: Avg. 9 Trading Partners Labor Cost		$19.30/hr	
			$5.00/hr
Cost Pressures @% U.S. Raw Labor Cost			
Corporate Tax Rates	@ 5.6%	$1.36/hr	
Employee Benefits	@ 5.5%	1.34/hr	
Litigation Costs	@ 3.2%	0.78/hr	
Pollution Abatement	@ 3.5%	0.85/hr	
Natural Gas Prices	@ 0.5%	0.12/hr	
			$4.45/hr
Total MAPI Cost Factor Differential			$9.45/hr
VAT Cost on Exports From U.S.**			
Value Added by U.S. Manufacturing		$1853.9 bil	
÷ Total Production Labor Hours	÷	22.3 bil	
Value Added Per Labor Hour		$83.13/hr	
x Average OECD VAT Rate	x	17.7%	
Equivalent VAT Cost to Manufacturing			$14.71/hr
VAT Abated on Imports of U.S.**			
Value Added Per Production Hour		$83.13/hr	
less: Foreign Cost Advantage		(9.45/hr)	
Estimated Avg. Foreign Cost		73.68	
x VAT Abated Per Labor Hour	x	17.7%	
VAT Rebate Cost Reduction			$13.04/hr

*Data From: Leonard, Jeremy A., *Structural Costs Imposed Upon U.S. Manufacturers Harm Workers*, MAPI, Washington, D.C., 2003.
**Data From: *Annual Survey of Manufacturers*, U.S. Department of Commerce, Census Bureau, 2002.

Exhibit V
BTT Steps to Border-Adjusted Taxation

A. STEP I: 5.5 Percent BTT Replaces Corporate Income Tax and Credits Employer-Paid Social Insurance		
1. BTT Receipts Required		
Corporate Income Tax		$207.3 bil
Private Employer Health Insurance		
OASI	411.7	
DI	68.9	
HI	135.5	
Total	616.1	
Employer Share	308.1	
Private Share	x 88.65 %	
		273.1
less: Corporate Welfare		(87.0)
		$393.4 bil
2. BTT Base for STEP I (Excludes Government Payrolls)		
Final Domestic Sales	$10,126.6 bil	
less: Gross Private Investment	(1,755.4)	
plus: Owner-Occupied Residences	333.4	
less: Owner-Occupied Imputed Rent	(712.5)	
less: Government Payrolls	(548.8)	
		$7443.3 bil
3. BTT Rate, STEP I		
BTT Receipts Required	393.4	
÷ BTT Base	÷ 7,443.3	
		5.3%
B. STEP II: 10 Percent BTT Ends Preferences and Discrimination and Exempts Savings for 14 Percent Consumed Income Tax		
1. BTT Receipts Required		
STEP I Receipts		$393.4 bil
Eliminate Preferences and Discrimination		
Estate and Gift Tax	29.0	
AMT (absorbed)	-0-	
Phaseouts	5.5	
Custom Duties	21.1	
Marriage Tax Penalties (absorbed)	-0-	
		55.6
FIT Required for 14 Percent Flat Rate		378.2
Convert EIC to Health Care Vouchers		(39.0)
Tax "Other" NIPA Income 544.2 @ 14 Percent		(76.2)
Exempt Savings		
Current Saving	201.5	
Increased Saving (to 6% PI)	302.9	
Deferred Savings @ 14% FIT	504.4	70.6
		$782.7 bil
2. BTT Base for STEP II		
BTT Base for STEP I		$7,443.3 bil
add: Government Payrolls		548.8
		$7,992.1 bil
3. BTT Rate for STEP II		
BTT Receipts Required	782.6	
÷ BTT Base	÷7,992.1	
		9.8%

Exhibit V
BTT Steps to Border-Adjusted Taxation

C. Alternative STEP II: 10 Percent and Dual 10 Percent/20 Percent FIT		
1. BTT Receipts Required		
BTT Receipts STEP II:	$782.6 bil	
FIT Required 10/20 vs. 14 Percent	(8.2)	
	774.5	
2. BTT	÷ 7.992.1	
3. BTT Rate for STEP II 10/20 Alternative		9.7%
D. STEP III: 20 Percent BTT Rate to Replace Current Code Other Than Personal Share Social Insurance		
1. BTT Receipts Required		
Total Federal Receipts	$2,033.9 bil	
less: On Budget Surplus	(88.9)	
Pers. Social Security Contributions	(358.4)	
Corporate Welfare	(87.0)	
EIC as Health Care Vouchers	(39.0)	
		1,460.6
2. BTT Base		
BTT Base STEP II	$7,992.1 bil	
less: Rebated Poverty Level Income	(1,357.0)	
		$6,635.1 bil
3. BTT Rate Required		22.0%
less: 10% Increased Growth		(2.2)
		19.8%
E. Alternative STEP III: 15 Percent BTT Plus 15 Percent FIT Surtax		
1. BTT Revenue Required STEP III		$1,460.6 bil
2. BTT Base STEP III	7,992.1	
less: Rebated Income	(1,357.0)	
	6635.1	
3. BTT Revenue @ 15 Percent		995.3
4. Balance to 15% FIT Surtax		465.3
5. Surtax Yield @ 15 Percent		(283.3)
6. Balance to Finance		182.0
7. Growth Dividend @ 10 Percent		(146.1)
8. Deficit Remaining		35.9