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Mr. Chairman and members of the Committee:

Thank you for the opportunity to take part in this hearing. The subjects that we are to discuss today are the ones to which I have devoted much of my working life. For almost 20 years I was the head of the research effort of a major international corporation, (IBM). For the last 18 years I was the head of a major foundation (Alfred P. Sloan) deeply interested in science and technology. Today I am a Research Professor at New York University's Stern School of Business.

In addition, for almost my entire adult life, I have been active as an individual researcher - first in mathematics and more recently in economics. I am pleased and honored to be here today and to have this opportunity to testify.

Some of you may remember that I testified to the full Science and Technology Committee on June 12 of last year on the subject of the globalization of R&D. At that time I stated:

The effect on the United States of the internationalization of the scientific and technical enterprise can only be understood as one part of the revolutionary process of globalization, which is fundamentally revising the relation of companies to the countries from which they have originated. In this new era of globalization the interests of companies and countries have diverged. *What is good for America's global corporations is no longer necessarily good for the American economy.*

My testimony today will bear on this same question, viewed in the broader context of the evolving relation of countries and companies. I will address the impact of these events on the overall ability of this country to produce a large GDP (value of the total national product), as well as on the rapidly growing problem of extreme inequality in the distribution of that national product. Nonetheless, my conclusion will be exactly the same:

What is good for America's global corporations is no longer necessarily good for the American economy.

To see why this is so, let us review the fundamental social role that the corporation fulfills in this country and in other developed countries.

The Basic Social Function of the Corporation

For a very long time most of the work of the world was done on farms or in small shops. An individual could learn the printing trade or shoe making and graduate to his own shop; a family could run a farm. In both cases an individual or very small groups of people could grow crops or make shoes that could be sold to others and thus have the money to supply what was not made at home.

But today the goods we consume cannot be made at home; they are complex and require large organizations to create them. You cannot manufacture a car in your garage; it takes a large-scale organization to do it. The food you eat is not produced by a family on a nearby farm, but is made by large organizations on highly mechanized farms with machinery produced by other large organizations. The food itself then travels on highly organized transportation networks to get to huge outlets, where nearby you can pick up a refrigerator made by another large organization or a television set that no individual or small group could ever build.

The same is true of services: there is no way to build your own telephone service. And even medicine, one of the last strongholds of the individual practitioner, is rapidly agglomerating into large-scale enterprises.

A person must now be part of an organization that makes or distributes the complex goods and services that people buy today. Being part of an organization is what people must do to earn a living and support themselves and their families. The fundamental social role of corporations and other businesses is to enable people to participate in the production of the goods and services that are consumed in the modern world; the corporation enables them to earn a share of the value produced for themselves and their families.

My testimony bears on the question of how well America's global corporations are fulfilling that fundamental purpose today. The whole thrust of my testimony is that in the last few decades the shift in corporate motivation toward emphasizing profits above everything else has had a deleterious effect on the way they are fulfilling that role. That deleterious effect is now being enormously accelerated through globalization.

The Role of Profits and Competition

Business organizations today do not proclaim the social mission that I have just described; rather, they make clear that they are there to make profits for their shareholders.

I understand very well that profit is a creative force. Companies come into existence to create profits, and to do that they create GDP, the goods and services that constitute a nation's economic output. And in constantly striving for more profits, companies tend to become ever more efficient and create ever more GDP. As Adam Smith pointed out, "It is not from the benevolence of the butcher, the brewer or the baker that we expect our dinner, but from their regard to their own interest."

Today's butcher and baker are corporations, and their interest is profits.

But while it is true that profit can be a creative force it is also true that emphasizing profit above everything else can be bad for the nation. Profit under the right circumstances can be an energizing force that creates GDP. But we should remember that from a national point of view, profit is a means to the end of creating GDP, not an end in itself.

The Divergence of the Profit Motive and the Fundamental Role

Globalization has now made it possible for global corporations to pursue their profits by building capabilities abroad. *Instead of investing alongside U.S. workers and using their investment and R&D to increase their productivity, corporations today can produce goods and services abroad using low-cost labor and import those goods and services into the United States.* But in creating their profits this way, they are building up the GDP of other countries while breaking their once tight links with America's own GDP.

Economists will sometimes argue that this development of capabilities abroad is good for the U.S. economy as a whole. For one thing, we get cheaper goods. That is certainly true, but it is also true that if we lose our superior capabilities in many areas and are less competitive, we have less to trade for those goods, so that eventually the cheaper goods become expensive in real terms. I do not intend to repeat today the arguments that I have already outlined to the full committee in my earlier testimony and that are spelled out in the book on global trade and its consequences that I co-authored with Professor Will Baumol.

I would like to point out, however, that the view that the industrial development in your trading partner can be harmful to your total GDP is not new. There is a long history of well known economists making that observation, most recently Paul Samuelson.[1] What Professor Baumol and I have added to that long history in our book "Global Trade and Conflicting National Interests" is the realization that the benefits of your trading partner's economic development occur in the early stages of its development, and as your partner becomes more fully industrialized and is no longer confined to low value-added industries, further development is harmful to your GDP.

This result, which we derive rigorously from the most standard economic models, corresponds to the intuitive notion that we do well when we lose low-wage jobs and not well when we start losing high-wage or high-tech jobs .And that is what we are seeing today. And as I said in my previous testimony, in agreeing with my co-panelist Professor Alan Blinder, there are many reasons to believe that the impact on the United States will be severe.

In addition to the impact on GDP, the Effect of Globalization on Inequality

Globalization was not the beginning of the divorce between corporate profits and the economic welfare of the American people. It is rather a very large next step down a long road already traveled. To see how far we have come, let us look back 35 years.

Reginald Jones became CEO of General Electric in 1972, and shortly thereafter made two remarkable speeches to the Business Roundtable and the National Press Club. [2]

Mr. Jones said that with his appointment as CEO, he would henceforth view his responsibilities as being equally split among the company and its shareholders,

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[1] See References 1-6.

[2] This is summarized from Reference 7

employees, American industry, and the nation. This sense of broad responsibility became pervasive in American industry. In fact, urged on by Jones, the Business Roundtable - the organization of major company CEOs intended to look after the interests of business in the public policy arena - formally endorsed in 1981 the policy that shareholder returns had to be balanced against other considerations.

In the intervening years that view of corporate leadership has waned, largely replaced by the idea that the business of business is solely to make profits for shareholders, and that in the pursuit of profits, or shareholder value, all other values can be sacrificed.

In the decades from 1973 to now, GDP increased steadily as new technologies were introduced that increased productivity. If the gains in productivity had been reflected evenly in incomes, a typical worker would get 35% more today than in 1973. In fact, the typical worker saw a far smaller gain. Median *household* income grew about 16 percent since 1973, much of that gain being due to the fact that many households became two-earner households. So, instead of looking at households, if we look instead at individual workers - for example, men in the 35-40 age bracket - their inflation-adjusted wages have in fact decreased in real terms since 1973.

In fact the gains from productivity growth have been going to the rich - and even among the rich, primarily to the very rich - while most Americans have seen little or no growth in real wages.[3] While details can be disputed, as is the case with much economic data, the general trend toward a sharply increasing degree of inequality in incomes and wealth cannot be disputed; and we are seeing today a concentration of wealth at the very top, unmatched since the days of the so-called "robber barons" at the close of the 19th century.

And just to remove any ambiguity about what is going on, in 2004 the Business Roundtable revised its earlier position on CEO responsibility and publicly asserted that the obligation of business is only to maximize shareholder wealth.[4]

While many explanations have been brought forward for this divergence of the richer and the poorer in our country, one very simple one has received remarkably little discussion. Companies today are aimed primarily at maximizing shareholder gains, and their shares are held overwhelmingly by those who are already wealthy[5] or by those, like top executives, who will become wealthy if share values go up. Corporations today are motivated to cut wages and benefits whenever they can to increase profits and shareholder value. The money saved from wages and benefits comes out of the middle and lower income groups; the gain in profits goes to the wealthy.

As we remarked above, important American corporations have found that the easiest way to maximize shareholder wealth today is to take their technology, know-how and capital overseas to wherever labor is cheapest and subsidies are the greatest. The capital, know how and technology that once made American workers the most productive

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[3] This is discussed in much greater detail in Reference 8 Chapter 1, especially pages 22 and 23 and in Reference 9 Chapter 7. See also Reference 7.

[4] From Reference 7.

[5] Reference 8, page 23.states that almost that 90% of shares are held by the top 20% of stock owners and has further data.

in the world are being transferred overseas to other workers who will do the same job for a fraction of the wage. This makes for good corporate profits, but it leaves American workers far behind. Corporate goals, as they are now being stated, have been diverging for a long time from what is good for the country. Now, however, that decades-long history of workers and more generally the middle class losing share in the productivity gains is being accelerated by globalization. In globalization, jobs leave the country altogether and only the corporate profits remain.

We need to realize that the interests of the American global corporation, whose interest is profit, and the interests of most Americans, who want a higher standard of living, have been diverging. Globalization is causing that divergence to occur faster and further than ever before.

Can Anything Be Done?

This testimony does not pretend to take on in any systematic way the task of answering the question, "What is to be done?" I will be content if I can contribute to the clarification of some of the issues.

While the United States has no stated national strategy aimed at the goal of greater GDP, there is no lack of individual suggestions about ways to improve the U.S. economic situation vis-a- vis the more rapidly developing nations. This often translates into asking for improved K-12 education, especially in science and technology. While improved education can only do good, education improvement is hard to come by and it is hard to imagine an improvement in education so profound that it turns out Americans who are so productive that they are worth hiring in place of the four or five Asians who can be hired for the same wage.

Another emphasis is the quest for innovation, usually innovation that is closely linked to R&D. More R&D can only help. But the role of science and technology in globalization needs to be understood. R&D does not contribute to a nation's wealth directly by employing large numbers of people in high value-added or high-wage jobs. It contributes by supporting a small number of people whose work is intended to give a competitive edge to the end product, whether that is goods or services. It is these end products, whether they are cars or computers or medical services that make up the bulk of a corporation's revenues and support the wages of its employees.

If in the process of globalization the production (or delivery in the case of services) of the good moves overseas, so do the wages. Even if R&D remains behind, the vast bulk of value creation has moved to another country, and it is there that it supports the wages of employees.

It is also hard to envision a significant industrial advantage vis-à-vis other countries derived from more university research, when a large fraction of graduate students in science are from Asian countries and who return home after obtaining their advanced degrees. Understand, too, that the great global companies Intel and Microsoft have research centers in leading universities and are well positioned to spread the latest research to their labs and development sites in other countries around the world.

Proposals of this sort about education and R&D can be helpful. But they can also be harmful if they create the mistaken belief that these measures alone can deal with the problem.

Another class of suggestions points to the U.S. infrastructure, correctly observing the crumbling bridges, crowded airports, and the inadequate broadband, which restricts the bit traffic of the future. Again, addressing these domestic needs is worth doing as it does add to U.S. productivity across the board.

The main thrust of this testimony, however, points to the divergence of company goals, focused almost exclusively on profit, and the broader goals of greater GDP and less inequality in the United States. Therefore, we need to turn our attention not only to the familiar suggestions I have just listed, but also to the issue of better aligning corporate and national goals.

Aligning Country and Company

Some Asian countries, for example Singapore and China, have national strategies aimed at the rapid increase of their GDP. As past of that strategy they align corporate goals with their national goals. They have made it profitable for foreign (often U.S.) corporations to create high value-added jobs in their countries. They do this by offering tax and other incentives that make it *profitable* for corporations to locate high value-added jobs in their countries.

We need to consider a U.S. national economic strategy that includes incentives for companies to have high value-added jobs in the United States. If we want high value-added jobs, let us reward our companies for producing such jobs - whether they do that through R & D and advanced technology, or by just plain American ingenuity applied in any setting whatsoever.

The Asian countries have done this usually by individual deals with individual companies. We have neither the tradition nor the knowledge nor the inclination in the U.S. government to do that. An approach that is better suited to what the United States can do, would be to use the corporate income tax. We have already used the corporate income tax to spur R&D, so why not apply it to directly reward what we are aiming at - high value-added jobs.

For example, the corporate tax rate could be scaled by the value added per full-time employee, by the workers of corporations operating in the United States. A company with high value-add per U.S. employee would get a low rate, a company with low value-add per U.S. employee would get a high rate. This tax could be made revenue neutral by having a high tax rate for unproductive companies and a low (or even negative) tax rate for productive companies. Depending on the rates, it could be as strong or as weak an incentive as desired. This is quite doable, as value-add is measurable. It is measured today in Europe as the basis for the value-added tax.

Critics may say that our national economic strategy is, in fact, to leave markets alone and take whatever free markets produce. They may also suggest that this is the best possible economic strategy. But “free market” is not a single, simple concept. Do we mean free markets with or without anti-trust laws, with or without child-labor laws or with or without the ability for labor to organize? Do we mean free markets that do or don’t have access to government sponsored research, etc. etc? The presence or absence or degree of these restrictions or abilities will produce very different results, all coming from “free markets”; as will different tax policies or special loans for special industries, and so on and so on.

On the subject of government incentives, a present day General Electric CEO Jeffrey Immelt recently stated [6]:

If the U.S. government "wants to fix the trade deficit, it's got to be pushed," he said. "GE wants to be an exporter. We want to be a good citizen. Do we want to make a lot of money? Sure we do. But I think at the end of the day we've got to have a tax system or a set of incentives that promote what the government wants to do."

On Inequality

In this part of my testimony I have discussed mainly total GDP. But we have seen that who benefits from GDP is important too and that globalization affects the distribution GDP of wealth as well as the total GDP.

So far I have discussed mainly increasing GDP. But there is also the question of extreme inequality, the concentration of wealth and power, and the influence over government that goes with it.

To reduce the natural forces working toward extreme inequality we should obviously consider what can be done through taxes, individual or corporate, but also consider charters for corporations that require consideration of other factors than profit maximization. Today in the United States, a Delaware-chartered corporation gives nothing in return for its charter. It is interesting that Theodore Roosevelt saw the role of corporations quite differently from the current Delaware perspective. Roosevelt's agenda was to control and regulate corporations in the public interest. "Great corporations exist only because they are created and safeguarded by our institutions," he stated in his 1901 State of the Union Message. "And it is therefore our right and our duty to see that they work in harmony with these institutions."

We have an interesting mild precedent for broadening the goals of corporations in

[6] See Interview in Reference 10

the British Corporations Law of 2006. This law is explicit in allowing directors to consider employees, the community and many other factors in their decisions. Many U.S. states have in recent years passed similar statutes, but they have had little impact so far on the actions of corporations.

Controlling our own Destiny

To obtain the benefits of trade in the narrow sense we need free trade. This means, in particular, that we need to address the major distortions in the market caused by the systematic mispricing of Asian currencies and other mercantilist practices. If we do not have a free market in currencies we cannot claim that the benefits of free trade are being achieved.

If the imbalance of trade continues there is nothing to stop the current trend of selling off pieces of the United States to Sovereign Wealth Funds to balance the import of underpriced foreign goods. There would also be nothing to prevent U.S. companies from leaving the country, and, working from abroad, continuing to send in goods and services thus exacerbating the imbalance and weakening the productive capabilities of the country. On the other hand, if trade is balanced, the value of goods imported is matched to the value of goods exported from the country; and those goods and services are provided by corporations that comply with the U.S. standard of what a corporation should be. Balanced trade therefore is necessary if we are to control our own economic destiny.

Again, there is a litany of approaches to balancing trade ranging from jawboning to tariffs. One simple approach advanced and advocated by Warren Buffet, however, could really make a difference. It is well described in his 2003 article in Fortune[7]. This approach, in contrast to import quotas or tariffs aimed at imports from particular countries, creates a free market in import certificates. It would balance trade and would give us control over own economic destiny. Since the import certificate approach is a major departure from the past it should be introduced gradually. But we should take this approach seriously. In fact, a bill based on the Buffet approach has been introduced into the Senate by Senator Dorgan and Senator Feinstein.

ConclusionWe live in a world of rapid technological change. That change has made possible a degree of globalism in economic development that was previously not possible. In so doing it has strongly accelerated the emerging gap between the goals of global corporations and the aspirations of the people of individual countries. This is true not only in the United States but also in less developed countries. Even when globalization increases a country's wealth, which it does not always do, most of the gains are going to a thin upper crust, and the bulk of the people do not participate.

We need to change this and better align the goals of corporations and the aspirations of the people of our country. This is not an idle dream, the growth we had in America in the decades after WWII and before 1970 was both rapid and well distributed.

[7] Reference 11

Americans of almost every stripe benefited.

To do this today we must realign the interests of global corporations with those of the country. We have given a few examples of changes that could push in that direction. However, much more thought is needed in that direction. If we look we will find more and better ways to do this.

In addition, in a globalizing world where nations pursue their own interests with mercantilist policies, we must balance trade if we are to control our own destiny. Fortunately, there is at least one way to do that, the Buffet proposal.

There are many things we can work on to make the United States a stronger nation. Let us clear our vision and start now.

References

[1] Hicks, J.R. 1953. ***An Inaugural Lecture***. Oxford Economic Papers 5: 117-35

[2] Dornbush, Rudiger W., Stanley Fisher, and Paul A. Samuelson 1977 Comparative ***advantage, trade and payments in a Ricardo model with a continuum of goods*** American Economic Review 67 pp 823-829

[3] Krugman, Paul R. 1985. ***A "Technology Gap" Model of International Trade*** in K. Jungenfelt and D. Hague eds. "Structural Adjustment in Developed Open Economies", New York, St. Martin's Press pp 39-45

[4] George E. Johnson, Frank P. Stafford "***International Competition and Real Wages"*** *The American Economic Review*, Vol. 83, No. 2, Papers and Proceedings of the Hundred and Fifth Annual Meeting of the American Economic Association (May, 1993), pp. 127-130

[5] Samuelson, Paul A, 2004, Where ***Ricardo and Mill Rebut and Confirm Arguments of Mainstream Economists Supporting Globalization Journal*** of Economic Perspectives – Volume 18, Number 3 – pp 135-146

[6] Ralph E. Gomory and William J. Baumol, 2001, ***Global Trade and Conflicting National Interests***, MIT Press

[7] Barron's On Line Monday, August 13, 2007 "A Plea for Corporate Conscience" by Leo Hindery Jr.

[8] Robert Kuttner, 2007, "The Squandering of America" Alfred A. Knopf Publisher

[9] Paul Krugman, 2007,"The Conscience of a Liberal" W.W. Norton & Co. Publisher

[10}Jeffrey Immelt, Interview in Manufacturing and Technology News, November 30, 2007, Volume 14, No. 21

[11] Warren Buffet, Fortune Magazine, October 2003, "America's Growing Trade Deficit Is Selling the Nation Out From Under Us. Here's a Way to Fix the Problem—And We Need to Do It Now."