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Good morning. I see many friends and colleagues and the Stanford Institute for Economic Policy Research is a leader in providing quality analysis, so it is a special pleasure to be here to speak to you today.

I'd like to cover two topics. First, I will briefly provide an overview of the economy. Second, I will talk about the changing structure of the economy and its relation to globalization.

**The U.S. Economy**

I would love to take credit for the condition of today's economy, because it is indeed very strong. But the seeds that grew today's economy were sown well before I became the President's economic adviser. The President saw early in his term that the economy would be best served by limited government and low taxes, and he initiated policies to reduce our tax rates on wage income and on dividends and capital gains. Those policies paid off with high rates of economic growth, high levels of productivity improvements, high profits, and the strong labor market we now enjoy with rising real wages. We have had a robust economy over the past few years. Despite energy prices, which have been higher than in our recent historic past, and despite the pronounced decline in the housing sector, the economy continued to grow at a solid pace last year. Despite a nearly 20 percent decline in residential investment, the revised fourth quarter

GDP growth was 2.2 percent, bringing the year's growth rate to 3.3 percent, an increase in growth from 2005. This is especially impressive if one considers that residential investment subtracted 0.8 percentage point from growth over 2006. And it is all the more remarkable since we are well into the expansion that followed the 2001 recession.

The first quarter of 2006 was very strong as the economy bounced back from the effects of Hurricane Katrina, but rising energy prices slowed growth during the second and third quarter. Fortunately, gasoline prices fell dramatically during the late summer and early autumn, which resulted in inflation rates that were substantially lower than those of the previous year.

There are two trends that are most important when looking the economic scene as we move into 2007. First, the labor market has been very strong. The unemployment rate fell from 5 percent in late 2005 to 4.6 percent in January. We added over 2 million payroll jobs over the past 12 months, and most impressive is that wages grew at an after-inflation rate of 2.1 percent which is higher than the average rate during the second half of the 1990s. Jobs are available, employers are searching for talent, layoff rates are at a low point, and the high profits that businesses have enjoyed during the past few years are now spreading to the average worker.

Second, part of our healthy economy has been fueled by demands for American goods abroad. In 2006, exports grew nearly 12.8 percent while imports grew 10.5 percent. This was the first time in nine years that exports outgrew imports. But it is not so much this fact that strikes me as important. What is important is that export demand has increased significantly, and export growth has been an important engine that has pushed the American economy forward during a period when many were predicting a slowdown. Real export growth outpaced import growth in all four quarters of 2006. With consistent and open economic policies, these trends should continue through 2007 and into the next year.

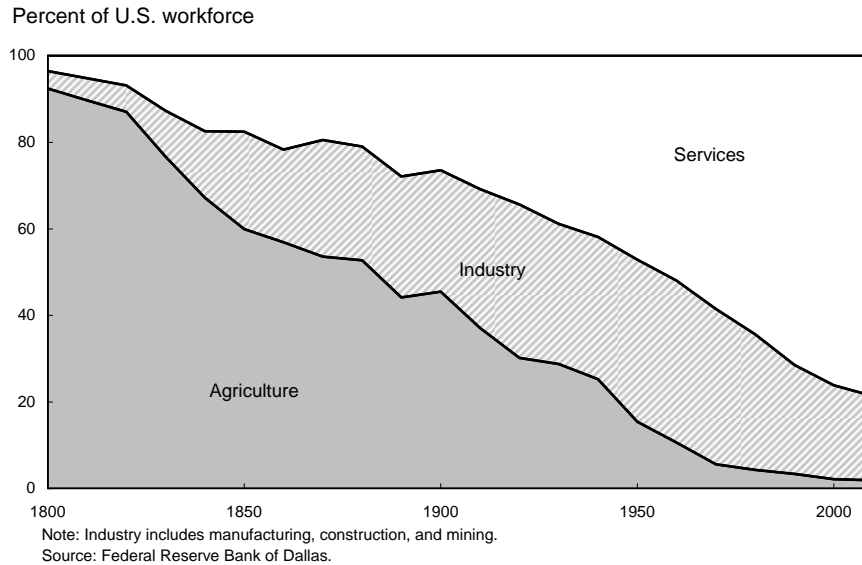
The President has laid out a broad set of policies to continue this economic growth, improve upon the strong productivity performance of the past few years, and extend prosperity to every citizen. He recognizes the importance of making important investments while keeping the burdens of government low. In the State of the Union Address he outlined his efforts to improve incentives in health care, diversify our energy supply, develop a more comprehensive immigration system, and reauthorize the No Child Left Behind Act. Perhaps most importantly, he remains committed to the tax relief passed earlier in his Administration. His budget released last month provides a roadmap to control spending and reach a balanced budget by 2012 without raising taxes.

### **The Changing Structure of the U.S. Economy**

Globalization is increasingly on the minds of policymakers throughout the United States and around the world. So in my remaining remarks I would like to focus specifically on the roles of the manufacturing and services sectors in our Nation's economy, and how these sectors relate to the importance of international trade.

I would like to make three points. First, the United States, like all developed countries, has a service economy. Second, the evolution from manufacturing to services that occurred in the latter part of the twentieth century parallels the evolution from agriculture to manufacturing in the latter part of the nineteenth century and early twentieth century. Sometimes the evolution is painful. Job changes sometimes mean wage loss and it is important to ensure that our economy remains flexible so as to minimize the adverse consequences to those workers affected. Third, the strength of the service sector in the United States is indicative of strength in manufacturing rather than the reverse.

### The U.S. has evolved from an Agriculture Economy to an Industrial Economy to a Service Economy



The United States is heavily a service economy. Seventy-seven percent of private output and eighty-four percent of payroll jobs are found in the service sector. Part of this is a question of definition. Prepackaged computer software is classified as a manufactured good while custom software is classified as a service. The former is more likely to come in a box, but both in large part reflect the intellectual activity of the code-writers. Another definitional issue involves the spinning off of activities to outside firms. For example, when a manufacturing firm decides to do its accounting outside, using the services of an accounting firm, those services that used to be counted as part of the GDP and employment of manufacturing, now become allocated to the service sector. This is appropriate, but part of the trend that we have seen over time reflects changes in definition and devolution of activities.

That said, there is no denying that the importance of services in our economy has grown dramatically over time (See Chart 1), nor is this unique to the United States. Seventy percent of GDP and employment in OECD countries is in the service sector. We look very similar to our developed trading partners in this respect. Indeed Germany, which many think of as a source for

high quality capital and manufactured goods, is not much behind the United States in its service component. Seventy percent of the German economy consists of services.

Because of the growing share of services, employment and output in the service sector have grown out of proportion to the service sector's share of the economy. It is common to associate low-paying jobs with the service industry, and indeed there are some low-paying sectors in services. But it is just as true that there are many very high-paying industries as well, where the wages are well above the national average. Information services, financial activities, professional and business services, and education and health services all have average wages that are above the average wage in manufacturing. Furthermore, the four service industries mentioned combine to employ over 3 times the number of workers in the manufacturing sector.

Like manufacturing, the service sector has benefited from technological advances in information technology and communication. The productivity gains that were associated with new technologies first showed up in manufacturing. But in recent years, productivity in services has been rising at almost the same rate as the high level of productivity growth in manufacturing.

We can continue to expect the demand for services to grow. In two areas—health and education—there are strong forces pushing in the direction of increased demand. Changing demographics and an aging population will mean more demand for health care. Education has become all the more important in a modern economy. The return to skill is very high right now, and higher than it has been in recent history. Indeed, the median wage of a college graduate is now more than 70 percent higher than the median wage of a high school graduate. In 1980, the difference was about half as large. The rising demand for skilled workers means that individuals will continue to invest in education in rising numbers, despite reductions in the relative size of the population of school-age individuals.

## A Parallel Change

The United States has seen transformations of the economy before. Many worry about the move from manufacturing to services. Somehow the notion is that manufacturing is “real.” Manufacturing produces goods that we can actually use, whereas services produce amorphous outputs like the kind of articles that economists write. You can’t drive an economist’s article from your house to the supermarket, so what good is it? Well there may be something to that, but the same kind of argument might have been made one hundred years ago as the United States was transitioning from agriculture into manufacturing. One could have asked, “Who needs these silly automobiles? Horses have worked well for centuries, and you can’t eat a car. What’s really important is food, and we have to make sure that we continue to have an agricultural economy.”

When this nation was founded the overwhelming majority of Americans were employed in agriculture. Today less than 2 percent of the labor force works in agriculture. But that 2 percent produces vastly more food than our ancestors did and enough to feed the population of 300 million. At the time of the Civil War, America still had a majority of its workforce employed in agriculture. Although we both import and export significant amounts of our food, the point is clear. Agriculture has been able to release workers because productivity in agriculture rose so rapidly. A few people can now do the work of many, and the growth in productivity allowed workers to move to other sectors without reductions in agricultural output. As the agricultural share of employment dropped from nearly half to less than 2 percent over the past century, real farm output more than tripled.

Since the 1950s services have accounted for more than 50 percent of the workforce, yet as was the case with agriculture, manufacturing output has grown. In 1950 14.0 million workers produced \$253 billion of output in manufacturing. Today 14.2 million workers produce \$1.5 trillion of output in manufacturing. Chart 2 reveals an important fact. The number of goods that

we produce has risen dramatically, despite no increase in the number of people working in manufacturing. Also true is that although our population has been growing, goods production has been growing more rapidly so that the amount of goods that the US economy produces per American has also grown rapidly (see chart 3). Just as with agriculture, gains in productivity have meant that we can produce more goods now than we ever have and do so with less labor.

Chart 2

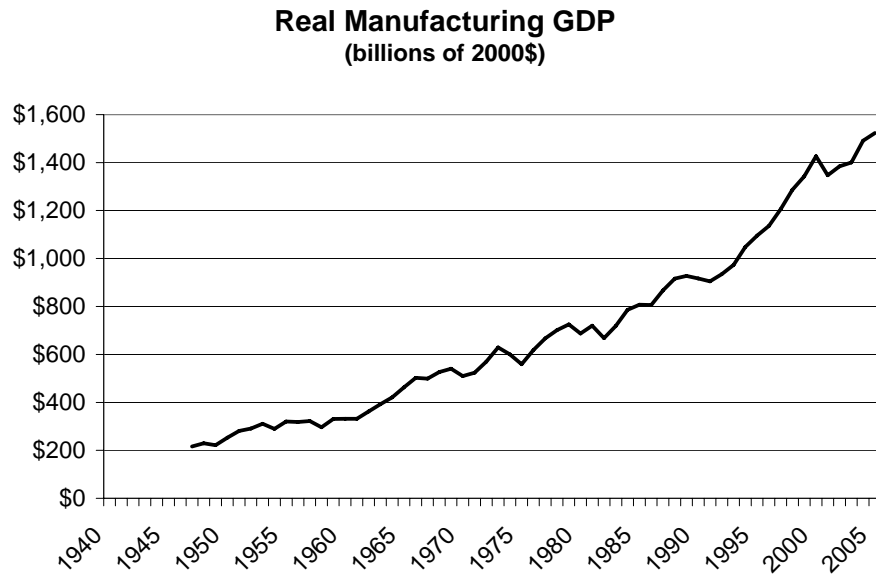
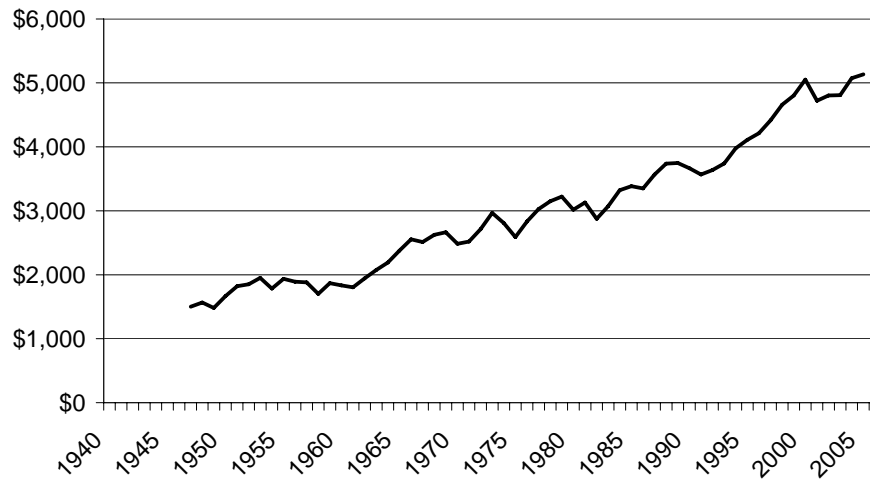


Chart 3

**U.S. Real Manufacturing GDP per Capita  
(2000\$)**



Output in manufacturing continued to rise during a period when labor has not grown because the amount of output per worker has risen dramatically. In 1950, the average manufacturing worker produced \$18,000 of goods. Today, the average manufacturing worker produces \$107,000 of goods. The dramatic increase in productivity in manufacturing is what has permitted workers to move to the service sector, while output in manufacturing has continued to grow.

Does the move out of manufacturing and into services reflect the pressure of foreign competition, most recently coming from China? The deficit is important in understanding the phenomenon. When imports grow some suggest that manufacturing jobs will fall and when exports rise manufacturing jobs will increase. The deficit measures the difference. Although some jobs are clearly lost when transitions induced by trade, technology or other factors occur, the decline in manufacturing jobs as a share of the workforce began after WWII and has continued almost without interruption since then. The trade deficit, on the other hand, is anything but smooth over time. For example, since the mid-70s, it rose then fell, then rose again.



It does not mimic the pattern seen in manufacturing employment. The US ran a trade surplus during most of the 1950s and 60s and the deficit was less than 1% of GDP as recently as 1992. All the while, manufacturing jobs were declining as a proportion of the labor force.

The decline in manufacturing share does not closely parallel trade patterns. Instead, it is more closely linked to changes in demand for services and technical change that allowed for enhanced manufacturing productivity.

The growth of the service sector reflects the strength, rather than the weakness of U.S. manufacturing. Workers have been able to move to the service sector, responding to demand for increasing services, without harming the amount of manufacturing output because our manufacturing productivity has been so impressive.

### Transition Without Pain?

It is important to note that any transition from one industrial or occupational structure to another involves worker displacement and some of this displacement is painful. Workers whose skills or industries move elsewhere or become obsolete sometimes suffer unemployment and wage loss. We cannot minimize the impact that this may have on families and it is essential that our safety net remains strong to deal with the problem. The President has pursued a variety of policies to help all citizens have access to education and to assist transitions. These policies range from improving K-12 education with the No Child Left Behind Act and partnering with Community Colleges to reforming job training programs for workers needing assistance later in life.

In particular, the President has proposed Career Advancement Accounts that workers could use to obtain the education and training they need to compete in the global economy.

Career Advancement Accounts are self-managed accounts that enable current and future

workers to gain the skills needed to successfully enter, navigate, and advance in the 21st century labor market. The President has also called for reauthorization of Trade Adjustment Assistance and for exploration of reforms to improve this program.

### Services and Trade Opportunities

Given that services are so important, I would like to discuss another aspect of services—namely international trade in services. In his January speech on the state of the economy, the President made clear that furthering international trade is an important goal for the United States. Nowhere is opening up of trade opportunities more important than in services. Because the United States is so strong in services, our inability to export our services freely to other countries, as well as import some from our trading partners, has limited significantly the gains that we enjoy from trade. One estimate suggests that the United States could gain over half a trillion dollars per year, or about 4 percent of GDP, from free trade in services. Much of this would come from telecommunications and financial services, but there are other areas in which we excel as well.

Some examples of difficulties that we face abroad make this vivid. Malaysia caps the amount of foreign investment in insurance companies, which makes it less attractive for American companies to operate. Yet our insurance industry is one of the most sophisticated in the world and could provide valuable services to Malaysia while also opening up profit opportunities for American investment. Korea has restrictions on investments in the telecommunications sector. Brazil also maintains the right to limit foreign participation in telecommunications. In India, foreign firms are often required to cooperate with Indian firms before they can be awarded government contracts. The examples go on.

Despite the potential gains from trade in services, much of the Doha round has been stalled in discussions of agriculture, which is, as mentioned earlier, only a very small part of the American economy. Although we are anxious to provide markets for our farmers and to make available to people in other countries the fine and competitive output of American agriculture, our ability to open up manufacturing and services has been hampered by negotiation difficulties. This is unfortunate. As we speak, Ambassador Schwab is actively trying to advance negotiations in the WTO Doha round, and we remain hopeful that breakthroughs can yet be achieved.

### A New Initiative

Finally, I would like to highlight a new initiative of which we are particularly proud. One of the problems associated with the transition from manufacturing to services is that our economic data have not kept up with the rapid pace of transition. There are currently two surveys that cover the service sector and survey it more frequently than the Economic Census that is conducted once every five years. But these surveys, called the Quarterly Services Survey and the Services Annual Survey, cover only a sub-set of the service sector. As a result, we have significant gaps in our knowledge not only of the service sector, but of where the economy stands and is headed. Prior to 2004, we had spotty coverage of the service sector with any frequency. Things are better now, but both the Quarterly Services Survey and the Services Annual Survey still do not match the Economic Census coverage of services. Twenty-five percent of GDP is unexamined by the annual survey, while 38 percent of GDP is not covered in the quarterly survey. The President's 2008 budget calls for additional funding for the Census Bureau to fully expand both of these surveys so that we can eliminate the service coverage gap. We are happy about this development and believe that it will add to our understanding of the economic world in which we are operating.

### **Conclusion**

Let me conclude. The American economy is strong. It is robust and stable. Because of enhanced flexibility and in part because of the move toward services, the economy is now less sensitive to business cycle fluctuations than it was a few decades ago. This is good for the United States and for the American worker.

The American economy and the service sector in particular owe their growth in part to the strength of manufacturing. We have increased our imports and exports as globalization has continued, all the while increasing our manufacturing output. The movement of jobs from manufacturing to services is not primarily a reflection of the pressure of international competition. Instead, it came about because increasing incomes pushed demand toward services and because enhanced productivity in manufacturing permitted our economy to keep manufacturing output up even as labor declined. We must ensure that those displaced by transitions from one industrial structure to another have the opportunity to retrain. We must also ensure that workers who are adversely affected by shifts over which they have no control have an adequate safety net to minimize the pain associated with the displacement. If we do this, then we will be proud of the strong role that enhanced manufacturing productivity has played in our economy and we can view the gains in productivity as a development that bodes well for our future.

Thank you.