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REMARKS OF
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COMPTROLLER GENERAL OF THE UNITED STATES
BEFORE A CONFERENCE ON INFLATION
SPONSORED BY SENATOR CHARLES H. PERCY

[IMPROVING PRODUCTIVITY: AN IMPORTANT TOOL IN THE
CONTROL OF INFLATION]

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Most Americans would agree that the need to reduce the present high inflation rate in the United States is near the top of the priority issues facing the Nation. There is wide disagreement, however, as to the causes of our inflation and how to bring it under control. Most would agree that control of inflation will not come about quickly nor will it come about in response to a single solution.

As one who has had a long interest in the subject of productivity growth, I am encouraged by the increasing attention being given to the part which improved productivity growth can play in the long-term fight against inflation. This conference, sponsored by Senator Percy, reflects that growing interest and I commend him for underscoring its importance as a key factor in the fight against inflation.

Let us take a moment to look at the record. After the Nation's experience with double-digit inflation during 1974, the rate has continued at an unacceptable level in the 6- to 8-percent range. The price situation appeared to worsen in the first half of this year with both the Consumer Price Index

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and the Wholesale Price Index rising 5 percent in a 6-month period.

Although finding solutions to inflation appears to be as difficult as isolating its causes, productivity gains would provide immediate relief and perhaps a long-run cure for a substantial portion of today's inflation.

Productivity is one of the few economic solutions which benefits all segments of society. Higher productivity enables workers to take home pay checks that do more than offset price rises.

Productivity increases enable the businessman to be more competitive with lower prices and to compete more effectively in international markets--helping out the lagging U.S. trade situation. In summary, productivity is the one thing that can keep prices down and the Nation's standard of living up.

Yet, with this potential for productivity to combat inflation, productivity achievement in the last decade has been poor. Productivity gains have averaged 1.6 percent during the last decade--a discouragingly low figure compared to the 3.2 percent average of the first two decades in the postwar period and compared to the 5 and 6 percent figures of our major trading partners.

This depressed and slow rate of growth of productivity was recently reflected in results of a survey by the Labor Department's Bureau of Labor Statistics. In about three-fourths of the industries surveyed, productivity growth was lower in 1977 than in 1976.

The real concern to the U.S. economy of high inflation and low productivity is dramatically visible in recent figures on unit labor costs, which are running at approximately 8-1/2 percent a year. Since we now face a situation where the prospects for price moderation are not bright, those increased labor costs are passed on to the consumer in the form of higher prices for the goods and services they purchase. If the productivity gain is small, then virtually all the increased unit labor costs are passed forward. If the productivity in the economy were at previous historical rates, the inflationary component of unit labor costs could be halved.

Other concerns contribute to the bleak inflation outlook. Already this year minimum wage and social security tax increases have added almost one percent to labor costs and over one-half percent to the Consumer Price Index. Next year, wage agreements covering over 3-1/2 million workers will be renegotiated. Further, there is growing evidence that a tight labor market situation, a scarcity of skilled workers, and little excess capacity in manufacturing, may be exerting upward pressures on prices. One indication is that the index of "help wanted" advertising reached an all-time peak in August. And finally, cost-of-living increases will be working their way into the cost structure of business as cost-of-living provisions of wage contracts are triggered.

The role of productivity in stemming inflation is

accompanied by its role in promoting a higher standard of living. Three-fourths of the long term expansion of the economy has been directly attributable to increased productivity. The slowing of productivity growth in the past 10 years, however, has resulted in slowing economic growth. If productivity over the past 10 years had increased at the same 3.2 percent annual rate of growth of the two previous decades, then output per hour would have been 11 percent higher in 1977. This difference would have meant more than a \$100-billion increase in terms of real gross national product (GNP) at the 1977 employment level. The lack in productivity growth, therefore, has cost the United States immensely in lost standard of living improvement.

In attempting to explain the slowdown of productivity advance in the past decade and to project to the future, economists tend to concentrate on four measurable factors: slowdowns in the growth of capital stocks per worker, increasing proportions of inexperienced employees, changes in the industrial composition of employment, and declines in research and development. Other factors believed to have depressing effects on productivity include sharp increases in energy prices, a slowdown in the pace of technological progress, changing attitudes toward work and leisure, a questioning of the role of science and technology, and the increase in government involvement in the economy.

While some of the developments in recent years may

reverse themselves in the years ahead, the outlook is still unfavorable. Edward Denison of the Brookings Institution, a recognized expert on the subject of productivity, points out that optimistically, productivity will grow at no more than 2 percent per year. He states that "...we have lost fully one-third of our productivity growth and productivity is the only source of an expanding economic pie from which competing social claims can be satisfied."

One thing is now clear to us. The processes of productivity growth are not automatic, and the future could be disappointing if factors which sustain growth are not strengthened. Let us now explore in more detail some of the major factors affecting productivity growth.

Technology, Productivity Growth,
and Capital Investment

The greatest hope for increasing the rate of productivity growth lies in advances in technological innovations--resulting chiefly from organized research and development--and by increasing the growth in productive capital to keep pace with the growth in the labor force.

There has been a failure to recognize that productivity growth is not only affected by the efficiency of labor but also comes about by incorporating new and more advanced technologies (such as computer-aided design) into new business capital. Growth of capital investment (which has lagged behind historical rates in the current economic recovery) and increased outlays

for research and development are critical, both absolutely and in relation to the rate of growth of the labor force.

A particular point of concern has been a relative decline in research and development outlays over the past decade which will have an adverse impact in the rate of productivity growth increases in the years ahead. For example:

--Total research and development spending in 1977 is estimated by the National Science Foundation at 2.2 percent of the gross national product compared to 3.0 percent in 1964.

--The United States spends over half its research dollars in defense efforts, while the bulk of expenditures by other major industrial nations with better productivity records has been in nondefense areas.

--In 1975, private industry employed 5 percent fewer scientists and engineers than it did in 1970.

--The overall U.S. patent balance declined almost 47 percent from 1966 to 1975.

Because of the importance of technological innovation to productivity and our overall economy, these indicators are distressing. Research evidence developed by the National Science Foundation has concluded that the "contribution of

research and development to economic growth and productivity is positive, significant and high." In fact, according to a 1977 Commerce Department report, technological innovation was responsible for 45 percent of the Nation's economic growth from 1929 to 1969.

In order to measure the role of technology in productivity and in total economic growth, a study was performed of company economic growth during the 25-year period from 1950 to 1974 between high and low technology industries.^{1/} The study indicated that high-technology industries surpassed low-technology industries according to all meaningful economic indicators. The indicators show that when high and low-technology industries are compared, high-technology firms have

- productivity rates twice as high,
- real growth rates three times as great,
- one-sixth the annual price increases, and
- nine times the employment growth.

The same kind of favorable ratio prevails in terms of international trade. The trade balance for research and development-intensive manufactured products have been generally rising through the period 1960-76 and is now over \$28 billion.

^{1/} High-technology industries are those that use professional and scientific instruments, electrical equipment and chemicals. Low-technology industries include textiles, food products, wood products, paper products, etc.

This trade balance for nonresearch and development-intensive products is down from a break-even level in 1960 to a \$16-billion deficit. Clearly the technology-intensive industries are important in maintaining an overall favorable trade balance.

While these trends show the importance of high-technology industries to the economy, their growth has been reduced drastically. As recently as 1968, 300 to 400 high-technology industries were founded, but in 1976 the number founded was zero.

The ability of established firms to develop productivity-enhancing technology is controlled primarily by the incentives they have, basically financial, for becoming involved in research and development in order to generate the desired level of technology. Many believe, however, that the financial incentives, which in the past encouraged long-term risk projects, no longer exist due to such factors as the level of the capital gains tax, environmental and consumer safety standards, and uncertainty over future Government regulations.

In recent years, private sector research and development has concentrated on low-risk, short-term projects directed at improving existing products. Emphasis on longer-term projects that could lead to new products and processes has decreased. For example, industry now spends only 25 percent of its research and development expenditures on research, down from 36 percent in 1957.

With the winding down of space and defense programs, Government support of industrially performed research has also diminished. Throughout the 1950's, the Government annually supported more than one-third of industrial research activity. This level of support reached almost 40 percent in 1962, but has been falling consistently and is 25 percent today.

Other governments are doing much more than the United States to support civilian research and development. Japan, for instance, is putting \$300 million of government money into microelectronic research this year. West Germany is providing from 50 to 95 percent of the research and development funds for those civilian industries requesting aid and judged to be important to the economy as a whole. In addition, both countries have supported the creation of specialized institutions responsible for the financial support of small firms involved in patenting new products or creating new enterprises.

In response to the decline in U.S. technological competitiveness, the President has recently established an interagency committee to conduct a domestic policy review of industrial innovation. This appears to be a good first step in determining what Government action is needed and in developing a coordinated Government policy. However, because of the long lead time between technological innovation and its

impact on productivity, the results of this review must be quickly translated into Government action.

Regulatory reform

Another factor is the impact of Government regulations on private sector productivity. The role of regulation in inhibiting productivity growth is a factor which only the Government can change. More than 72 percent of the firms responding to a GAO survey last year stated that easing Government restrictions and regulations would be a highly desirable way for the Government to contribute to productivity improvement. In addition, the Council on Wage and Price Stability has estimated that new and revised Federal regulations add three-quarters of a percentage point to inflation each year.

Although improvements in the rulemaking process have been made, the current regulatory decisionmaking environment is not conducive to the open development of new proposals since the affected parties have high personal stakes in the outcome of the process.

Less regulation or deregulation may yield a more competitive business environment and lower prices. This is what has recently happened in the airline industry. A broad base of support could be built for reform proposals if they were endorsed by representatives of interested parties, i.e., regulators, public interest groups, the

regulated, and other concerned public and private parties. Such endorsement could be forthcoming if the proposals were jointly developed by those whose support is desired. This process would differ from existing procedures because it would be designed to avoid the adversary environment and time-consuming, administrative and judicial proceedings that are now involved.

Human resources

Human resources are a major force behind productivity improvement. Efforts to meet the expectation of workers for better working conditions and to make more effective use of their ingenuity and creativity represents one of the significant opportunities for productivity growth. We must remove the old--and still latent--impression that increased productivity is just a euphemism for beating more work out of labor for the same pay.

In a quality of employment survey taken by the Labor Department in 1969 and 1972, workers ranked pay high, but they also wanted other opportunities: training; better use of their talents; greater flexibility in work patterns, leisure, and retirement; health and safety protection on the job; and greater control over performance of work.

To achieve the twin objectives of greater productivity and worker satisfaction, a variety of human resources programs have been tested. Those that seem to show the

most promise are systems that take into account various aspects of the workplace, including recognition for performance and training, a voice in plans and decisions about how work is to be done, safety and health protection, and appropriate equipment to do the job.

The National Center for Productivity concentrated on making employers and unions aware of opportunities for improving productivity through the establishment of joint labor-management committees. It functioned effectively as a catalyst in the formation of a number of these committees. Since there seems to be a greater potential for this type of in-plant cooperation than is generally realized, there continues to be a need for the Government to act as a catalyst in this area.

NEED FOR A FEDERAL PRODUCTIVITY PROGRAM

As you can see from this sampling, the factors and policies which affect productivity growth are complex, and the actions needed to improve the rate of growth are only partially understood. However, at least one thing is clear: we can no longer afford to let productivity "take care of itself." This principle is recognized by every other industrial nation--all of which understand the critical role of productivity in meeting their national objectives and all of which have had extensive national

programs to promote productivity growth for many years. These countries have found ways to achieve close harmony among government, industry, and academia in attacking productivity problems. In the United States, by contrast, many perceive an almost adversary relationship among these elements. As a result, there is no effective arrangement to bring together labor, management, and government to attack our productivity problems. In brief, we have not developed the elements of a concerted national productivity program.

Although the Congress established a National Center for Productivity 3 years ago, it never received the support it required and was consequently ineffective. Given the President's decision to discontinue the Center at the end of last month, there remains a need for a productivity program at the Federal level to harness and direct the many activities and functions of the Federal Government that affect productivity.

I believe a Federal program to improve national productivity is needed that includes the following 10 functions:

1. Develop periodic needs assessments to determine the nature and extent of public and private sector productivity problems.
2. Act as a facilitator in bringing together various groups on neutral ground to discuss

- widespread industry productivity problems.
3. Operate a productivity clearinghouse to provide national and international data and knowledge on various aspects of productivity to all sectors of the economy. In particular, we need to provide private industry with more knowledge as to developments in foreign countries which may have applicability in the United States or which may impact on our competitiveness.
 4. Promote a better understanding of all the factors affecting productivity, including human resources, capital, technology, research and development, transformation of knowledge into practical terms, and the importance of productivity to our national economy.
 5. Provide for a periodic joint assessment by the Joint Economic Committee of the Congress, the Council of Economic Advisers to the President, and the Federal Reserve Board of the productivity impact of fiscal, monetary, tax, and regulatory policies on the private sector.
 6. Take the lead in developing improved and acceptable measures of productivity.

Our current productivity statistics are weak and do not adequately reflect the role which capital investment, improved technological processes, and innovation can play in improving productivity. The Bureau of Labor Statistics and the National Academy of Sciences have done good work, but more more needs to be done.

7. Adopt policies which will stimulate additional investments for research and development by the private sector through tax and other incentives and encourage industry to recognize the importance over the long term for R&D rather than focusing on investments which will yield high short-term returns. The new tax bill will help but the question is whether it goes far enough. Extending the investment tax credit specifically to research and development outlays might provide further assistance. Hopefully the Domestic Policy Review of Industrial Innovation, scheduled to report to the President next year, will result in a new, cooperative approach to industrial innovation.

8. Provide new and better ways for measuring the costs and benefits of both existing and new regulations which can impact on productivity. The Regulatory Analysis Review Group, established by the President to review selected new regulations, is a step forward, but the entire regulatory process needs to be subjected to a rigorous discipline of costs and benefits analysis, particularly those regulations which have been designed to deal with health, safety, and the environment.
9. Continue Federal management-labor cooperative programs for upgrading the skills of the labor force with added emphasis to service trades which now make up 60 percent of the total labor force and which is expected to grow to 75 percent by the end of the century.
10. And, finally, the Federal Government should accelerate its efforts to measure and improve productivity within the Federal Government and take a strong leadership role in assisting State and local governments to reduce their costs through

improved productivity. A recent study estimates that 20 to 30 percent of State and local government employment growth between 1967 and 1976 resulted from low productivity. Underscoring the importance of this point is the fact that State and local governments now employ 80 percent of all government employees in the Nation.

The Federal productivity effort should be led by a National Productivity Council consisting of representatives of selected Federal agencies having productivity related missions. I have recommended that it be chaired by the Secretaries of Commerce and Labor, not the Office of Management and Budget, as planned. There should also be an external advisory group reporting to the Council made up of representatives from industry, labor, and the general public. The advisory group would suggest to the Council particular productivity issues to address.

In addition to a productivity program, there is also a need for increased awareness in all segments of the population of the magnitude of our productivity problems. At a recent conference in New York on productivity and inflation, over 200 business leaders agreed there is little appreciation of the importance of productivity.

It was pointed out that business is more concerned with steps to increase profits in the short run than a productivity increase which will determine profits in the long run. Labor, likewise, is more concerned with short-term wages than the long-term competitiveness of their firms and industries.

The success of any national effort to improve productivity will depend on the support it receives from the President, the Congress, and the private sector and the awareness it can develop throughout the Nation regarding the importance of productivity to our economy.

I hope that you here today recognize, as I do, how important it is for government and the private sector to work in closer unity. Any honest appraisal of how America created the strongest economy in the world must conclude that this success was achieved by private and government cooperation.

Incidentally, perhaps one of the best examples of this success may be found by examining how the Department of Agriculture has worked with American farmers to create the most productive agri-industry in the world. By developing joint mechanisms for rural development, rural electrification, world-wide marketing and commodity programs, plus a host of others including capital formation and unquestionably the most effective R&D base

and technology diffusion channels, U.S. agriculture not only feeds America, but also a major portion of the free world. In fact, we see this model copied over and over in other nations which, in many instances, have expanded the application to their manufacturing base as well. No doubt this has contributed to their more advanced productivity growth rates.

Clearly, there is a good precedent for our government to continue to provide the framework and the incentives within which the energies of American know-how were unleashed and allowed to attain remarkable success. This is the partnership that needs to be renewed to improve our productivity growth and strengthen our economy.

The simple but basic point needs to be better understood by all--price rises will slow down if America can get a larger output of goods and services from the same or lower input of labor, capital, and energy. This translates into a higher standard of living, more competitiveness in international markets, and a stronger economy.

It is through meetings like this that we can help increase awareness and, I hope, begin to reestablish the private sector/public sector partnership we need. I hope you will take this message back to your friends and associates. We have no time to lose.