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A recent GAO evaluation of the National Center for Productivity and Quality of Working Life dealt with the effectiveness of the Center and the Federal role in national productivity. Improved productivity is an important factor in economic prosperity because it can mean an improved standard of living for workers; it lessens inflationary pressures; and it is important in maintaining the competitive position of the United States in the international economy. The average annual rate of increase of productivity in the private business economy from 1967 to 1977 was 1.6%, half that of the period between 1947 and 1967. This rate is the lowest average annual rate in manufacturing productivity among six industrial nations during the period 1967-1977. Factors affecting the decline in productivity growth include: shifts in the industrial composition of the economy; changes in labor force composition; slowdown in the rate of improvement in the capital-labor ratio; slowdown in research and development expenditures; diversion of capital investment to meet environmental, health, and safety requirements; stagnation of some industries; and changes in worker attitudes. Future productivity rates are estimated at 2% or lower, with the outlook contingent on correcting the causes of the depressed rates. Improved productivity in small business depends mostly on improvements obtained from outside sources. The Federal Government can affect productivity indirectly by establishing policies and laws which affect demand, supply, and investments; setting standards and regulating quality of output and input; and defining the social and economic context in which business enterprise must operate. It has a direct impact through ongoing programs administered by individual agencies. (HTW)

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STATEMENT OF
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BEFORE THE
COMMITTEE ON SMALL BUSINESS
SUBCOMMITTEE ON CAPITAL INVESTMENT AND BUSINESS
OPPORTUNITIES
HOUSE OF REPRESENTATIVES

ON

PRODUCTIVITY AS A FACTOR IN ECONOMIC PROSPERITY
AND THE
APPROPRIATE FEDERAL ROLE

Mr. Chairman and Members of the Subcommittee:

We are here today at your request to discuss productivity as a factor in economic prosperity and what the appropriate Federal role should be in enhancing national productivity.

We in GAO have had a long and continuing interest in improving productivity of the Federal work force and have undertaken major efforts to monitor the status of productivity growth in all sectors of the economy and to identify problems associated with its improvement.

Our testimony today draws heavily on our recent evaluation of the National Center for Productivity and Quality of Working Life ("The Federal Role in Improving Productivity--Is the

National Center for Productivity and Quality of Working Life the Proper Mechanism?", FGMSD-78-26, May 23, 1978). In this review we not only evaluated the effectiveness of the Center but also assessed our national productivity and the Federal role regarding it. In the course of the review we interviewed numerous productivity experts and visited State and local governments and private organizations that had productivity improvement efforts. We also sent a questionnaire survey to private industry, State and local governments and organized labor to determine the extent to which productivity is perceived to be a problem, the specific needs and concerns of the respondents in the areas of productivity and quality of working life, and whether or not the Federal Government can effectively provide assistance in these areas.

Today, I would like to concentrate my remarks on four areas as requested in your letter of invitation

- the importance of productivity to economic prosperity and current trends,
- the factors affecting future productivity growth,
- how productivity improvement can be enhanced by the small businessman, and
- the appropriate Federal role in improving productivity.

PRODUCTIVITY AS A FACTOR
IN ECONOMIC PROSPERITY

Buried in the 1978 Annual Report of the Council of Economic Advisers (CEA) was the statement that the current

productivity improvement slowdown is "one of the most significant economic problems of recent years." Indeed, this is true. Unfortunately, productivity has yet to be elevated to a high level of importance by the Federal Government.

The productivity slowdown that the CEA expressed concern about is not merely a cyclical problem that will go away by itself. The average annual rate of productivity growth in the past 10 years has been only half that of the preceding 20 years. Moreover, the present rate of productivity increase is considerably less than that of other industrial nations.

Productivity improvement must be high on the Nation's economic agenda because it is so vital to three critical problems of the economy. First, productivity improvement is the means by which the American worker gets more for his wages, that is, improves his standard of living. Increasing productivity enables a worker to earn higher real wages without giving up leisure time in order to support a higher standard of living. The high standard of living enjoyed by Americans today is due to sustained productivity growth over the past century. The potential for a future increase in our Nation's standard of living will be similarly determined by the extent of changes in productivity.

Second, productivity improvement is useful in lessening inflationary pressures by offsetting the effects of rising

wage rates on unit labor costs and thereby reducing upward pressures on prices. In effect:

--Growth in output per staff-hour allows wages and salaries to be increased without proportional increases in unit labor costs and the prices of goods and services.

--More efficient use of energy, materials, and capital makes it possible to offset the rising prices of these resources.

Third, productivity improvement is important in maintaining the long-run competitive position of the United States in the international economy. A lag in the growth of U.S. manufacturing productivity over the past decade is one of the factors that has weakened the ability of some American industries to compete with foreign producers both at home and abroad. While fluctuating exchange rates and sharply rising labor costs abroad have helped the trade balance, the basic problems associated with a slower growth rate in output per staff-hour remain. An increase in the rate of productivity improvement could help to safeguard jobs and improve the climate for investments which will create more jobs for American workers and, thus, reduce unemployment.

Interest in productivity is now at an all-time high in all sectors of the economy. Concern about our competitive edge in the world economy and the so-called taxpayer's revolt

against government costs and spending places added emphasis on productivity improvement as one important strategy for dealing with these problems.

RECENT TRENDS IN PRODUCTIVITY

Private sector

U.S. productivity, as measured by output per staff-hour, increased at an average annual rate of 1.6 percent from 1967 to 1977 in the private business economy. This rate of increase is only half that of the 3.2 percent experienced between 1947 and 1967. For the manufacturing sector, the annual rate of productivity growth between 1967 and 1977 has been only 2.1 percent, compared to about 2.7 percent between 1947 and 1967.

The depressed rate of growth is also reflected in the 64 separate industry measures published by the Bureau of Labor Statistics. These measures show that three-fourths of the 64 industries had lower average annual productivity gains in the more recent period than in the earlier postwar years. Some of these industries even experienced significant productivity declines during recent years. For example, coal mining has experienced an average annual decline in productivity of 4.5 percent for the past 5 years.

Although these statistics focus on private sector productivity, available data on public sector productivity reflect many of the same trends found in the private sector.

International comparisons

The significance of recent trends is further demonstrated by comparing U.S. productivity experience to other major industrial countries. The United States is not doing very well. In fact, the United States has the lowest average annual rate of change in manufacturing productivity among six industrialized nations over the period 1967-1977. The range is from Japan's high of 6.8 percent to the United States' low of 2.3 percent.

Table 1

Average Annual Rates of Productivity Change
(Manufacturing)
1967-1977

<u>Country</u>	<u>Percent</u>
United States	2.3
Great Britain	2.5
Canada	3.5
France	5.2
West Germany	5.3
Japan	6.8

While there is a tendency in the United States to regard Great Britain as the world's example of industrial decline, it is disconcerting to note that the United States' 2.3 percent average annual rate of productivity change is less than Great Britain's 2.5 percent.

Such international comparisons are considered suspect by some because they point out that the United States starts from a much higher plane and others are "catching up." Actually, some of the other nations have nearly caught up because of sustained growth rates two or three times that of the United States. Of greater importance is that they are sustaining higher rates of growth in productivity.

EFFECTS OF THE DECLINE

According to the 1977 annual report of the National Center for Productivity and Quality of Working Life, if productivity over the past 10 years had increased at the same 3.2 percent annual rate of growth of the previous two decades, the output per hour would have been 11 percent higher in 1977. This difference would have meant an additional \$100 billion in terms of real GNP at the 1977 employment level. Therefore, the lag in productivity growth has cost the United States immensely in lost economic growth.

This lag in productivity growth has also contributed to high and sustained rates of inflation. A high rate of productivity growth allows wages and salaries to be increased without proportionately raising unit labor costs and the prices of goods and services. For example, unit labor costs increased slowly, averaging 2 or 3 percent per year between 1950 and 1967, because significant productivity gains offset compensation increases. However, since 1967 unit labor cost increases

have averaged over 5 percent per year because of a smaller offset from productivity gains as well as an acceleration in the rate of wage increases. Similar trends can be seen in the rate of inflation, which averaged 2 or 3 percent annually in the 1950s and 1960s, but since 1967 averaged over 5 percent per year. In fact, in both 1974 and 1975 the inflation rate exceeded 10 percent.

FACTORS AFFECTING PRODUCTIVITY-GROWTH

There are numerous reasons for the declining rate of productivity improvement in recent years, including the effects of

- shifts in the industrial composition of the economy,
- changes in labor force composition,
- apparent slowdown in the rate of improvement in the capital-labor ratio,
- slowdown in research and development expenditures,
- diversion of capital investment to satisfy the requirements of environmental, health, and safety regulations,
- stagnation of some industries, and
- changes in worker attitudes toward work.

The Bureau of Labor Statistics appropriately points out that there is no simple explanation for the decline nor is there general agreement as to the quantitative impact of these

various factors. Moreover, the Bureau states that it is difficult to separate the short-term cyclical factors from the long-term factors. We agree.

However, the trends in three factors which most experts agree are important for productivity growth--investment in capital equipment improvement, development of new technology through research, and changes in labor force composition--have impacted the rate of productivity growth during the past few years. Since labor force composition is uncontrollable and is expected to have little if any negative effect on the future, we will concentrate our comments on investment and research and development.

Investment:

Investment in capital improvements is considered very important to productivity growth, yet the U.S. rate of investment has been growing at a slower pace in recent years. The Council of Economic Advisers reports that the ratio of gross capital per hour of labor input grew at an annual rate of 3.1 percent between 1948 and 1966. The rate of growth fell to 2.8 percent between 1966 and 1973 and since 1973, has apparently fallen to 1.7 percent after adjustment for cyclical factors.

An even more significant factor, in our opinion, has been the apparent shift from direct production investments (in new or improved manufacturing processes) to pollution control, safety, or health investment. A major business

research organization reports that productive business investment grew at an average 3.8 percent per year between 1956 and 1966, but less than 1 percent per year between 1966 and 1976. This organization states that investment in such items as pollution control has more than doubled in the past decade.

This increase in investment in pollution control and employee health and safety, particularly in recent years, is reducing the annual productivity growth rate. This is not to say that such investments are not prudent, but they do have an effect on measured productivity growth. According to Edward Denison in the January 1978 issue of State of Current Business, the annual increase in productivity by 1975 was being reduced by about 20 percent due to expenditures for Government-decreed pollution, worker health, and worker safety standards. When converted to dollars, the 20 percent reduction equates to about \$14 billion in lost output annually.

Research and Development

Advances in scientific and technical knowledge, resulting chiefly from organized research and development, contribute significantly to long-term productivity growth through the subsequent application of more efficient equipment and processes. There has been a relative decline in research and development

outlays over the past decade, which will have an impact on the rate of productivity growth in the decade 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 of its research dollars in defense efforts, while the bulk of expenditures by other major industrial nations with better productivity records has been in non-defense areas.
- In 1975 private industry employed 5 percent fewer scientists and engineers than it did in 1970.
- Private sector research in recent years has concentrated on low-risk, short-term projects directed at improving existing products.
- Government support for research and development has dropped off, and private expenditures by American industry have stagnated while other countries have escalated their research and development outlays.
- The amount of basic research that industry performs has dropped from 38 percent of the national total in 1956 to 16 percent in 1976.

OUTLOOK FOR THE FUTURE

Most experts feel that a long-term productivity rate of 2.0 percent is probably a good estimate and chances for departing from the rate are mostly in the downward direction. The revised productivity rate of 1.8 percent for 1977 and results for the first two quarters of 1978 bear this out. In our opinion, even achieving a 2.0 percent average annual gain is not likely without some positive steps to effect improvement. We believe the future outlook is contingent on an active effort to correct the problems which are causing the depressed rates.

PRODUCTIVITY AND THE SMALL BUSINESSMAN

Considering the bleak outlook for productivity, I would like to turn now to how small businessmen can improve their productivity.

It is difficult to separate the productivity performance of small businessmen from the overall private sector statistics. However, small businessmen certainly are part of the low productivity growth rate.

Based on a report we released in 1976, ("Manufacturing Technology: A Changing Challenge to Improved Productivity," LCD-75-436, June 3, 1976), we know that small and medium sized U.S. manufacturers are vulnerable to emerging international competition both in domestic and foreign markets. Many foreign

firms are in countries that have high annual productivity growth and more constructive relationships among industry, government, academia and labor. In addition, tax, capital and anti-trust policies in other nations tend to be more favorable to business and industry than in the U.S.

Most productivity improvements in business and industry are due to improved technology. Most small businessmen, however, cannot afford to develop their own technology. Their productivity growth is, therefore, largely dependent on the ability of their equipment and material suppliers to incorporate productivity enhancing technologies into their products and services. Our recent work in the footwear industry has confirmed this point.

From this perspective, the key to enhancing productivity in small business lies primarily with the suppliers rather than with the small businessmen themselves. (We hasten to add that there are outstanding exceptions to this generalization. Perhaps the greatest exception is found in the small high-technology firm where venture capital is the critical element in financial and productivity success.) The ability of suppliers to provide productivity improving technology is controlled primarily by the incentives they have (basically financial) to become involved in research and development in order to generate the desired level of technology. This issue is germane to the overall health of the U.S. economy as well

as to small businessmen. However, 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. Industrial research managers have stated that they are having to put a larger share of their income into so-called "defensive" measures to meet new environmental and consumer safety standards. With evidence that equipment and facilities in this country are aging and not being replaced fast enough to keep American industries competitive, this situation poses a serious threat to the survival of the small businessman. In response to this situation, the President has recently established an interagency committee to conduct a comprehensive review of issues and problems related to industrial innovation.

Other productivity improvement techniques for small businessmen are also obtained from outside sources. These would include new management techniques, marketing approaches, accounting procedures, etc., that are obtained from colleges and universities, consultants, and government agencies.

Naturally, small businesses vary in their degree of dependence on outside sources for productivity improvements. Some small businesses have formed associations or trade groups that are active in developing more productive methods of operation while others have entered joint ventures with other companies.

For the most part, however, the small businessman is relatively under-represented in the area of productivity enhancement. From our view, there has been insufficient emphasis on the small businessman's position. Although the studies we have underway and are planning will add to our knowledge, our work has not progressed to the stage where we can make specific recommendations aimed at the small businessman's productivity growth. However, we do believe that new equipment and managerial technologies are vitally important. Reversing the declining trend of innovative research will go a long way toward providing the technologies that small businessmen need to improve productivity.

THE FEDERAL ROLE IN IMPROVING PRODUCTIVITY

What can the Federal Government do to reverse the declining rate of productivity growth? The Government already plays a significant role that has a pervasive impact on the Nation's productivity. First, the Federal Government has an indirect impact on productivity by

- setting pricing policies in regulated industries, such as transportation, power, and communications,
- establishing fiscal and monetary policies that alter demand, supply, investment and income distribution,
- establishing tax laws which affect investments in productivity enhancing enterprises,

- setting standards for quality of output (e.g., drugs, food and environmental pollution),
- regulating quality and quantity of input (e.g., equal opportunity laws or occupational safety and health laws), and
- defining the general social and economic context in which the business enterprise must operate.

The Federal Government directly impacts productivity through ongoing programs administered by individual agencies. The National Center for Productivity and Quality of Working Life estimated that agencies spent \$933 million on projects directly related to national productivity growth in fiscal year 1976. These costs are incurred for numerous programs sponsored by Federal agencies which provide research and development, information and assistance, and capital related to various aspects of productivity improvement. Some Federal agencies, like the Department of Agriculture, conduct research to provide knowledge and technology to particular industries, such as farming; some, such as the National Science Foundation, support research through grants; others, such as the Small Business Administration, provide loans to help finance plant construction and acquire equipment; and still others, like the Department of Commerce, provide information and assistance related to particular aspects of productivity.

The many Federal policies and programs which impact on our 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.

There are many productivity efforts now underway in the private sector and in State and local governments. These are worthwhile and deserve support and encouragement. However, these efforts in themselves are not adequate. Federal involvement is required because only the Federal Government has the breadth of authority to deal with issues on a national basis and to bring about some of the changes that are needed to correct the downward trend and produce larger increases in productivity in future years.

As we stated in our report, the National Center for Productivity and Quality of Working Life was not effective in leading and coordinating Federal efforts to enhance national productivity. This was due primarily to the lack of

Presidential, congressional, and agency support and commitment and the Center's inadequate authority and resources. Given the President's decision to discontinue the Center at the end of September, there is no productivity program at the Federal level to harness and direct the many activities and functions of the Federal Government that affect productivity.

In our report we identified the major functions that should be carried out by the Federal Government for each sector. For the purposes of this testimony, I will briefly discuss the Federal role as it relates to the private sector.

Last fall, GAO sent questionnaires to 1,200 firms throughout the country to obtain their perspectives on productivity and determine whether there is an appropriate role for the Federal Government. A vast majority of these firms said they did not want Federal assistance, and most were adamantly opposed to any further Government interference in private sector operations. What most of them wanted was more favorable tax structures for corporations, investment tax credits and depreciation formulas, and an easing of government restrictions and regulations. Given a choice between receiving help from the Federal Government or from private sector institutions, 85 percent opted for the private sector.

During the last five years--and this included the 1973-1975 recession--most of these firms experienced growth in productivity, higher sales, and hired more people. Few were

concerned about national issues--unpredictable markets, failure to exploit technology, availability of investment capital, return on investment, or import penetration of the U.S. market.

We in GAO are concerned that individual business managers may not be aware of such adverse national symptoms, nor aware as to how those symptoms apply to their own business operations. Unfortunately, recent experiences suggest that firms and even entire industries do not become aware of a potential market loss until a loss has occurred. Then it may be too late. We are also concerned that many in Government may not be sensitive to important needs of the private sector.

Perhaps the chief problem inhibiting Government-industry cooperation is a lack of mutual trust. Many Government officials are suspicious of industrial motives and the potential economic and political power of large corporations, especially those with multinational affiliations. On the other side, industry is concerned that Government officials do not understand and appreciate the profit motive.

Ultimately, improvements in national productivity growth must be the cumulative results of improvements by individual business enterprises, industries, communities, and institutions throughout the United States. Unless national productivity issues are reduced to specific local actions, and unless local interest and concern can be spurred to take these needed actions,

no appreciable improvements are likely to occur.

We believe that the Federal focus for the private sector productivity effort should be limited to five functions:

- Develop periodic needs assessments to determine the nature and extent of private sector productivity problems, and refer identified labor-management and regulatory problems to the proper agencies for consideration.
- Act as a facilitator in bringing together various groups on neutral ground to discuss widespread industry productivity problems.
- Operate a productivity clearinghouse to provide national and international data and knowledge on various aspects of productivity--effective methods, their costs, how long they take to provide results, etc. This would benefit all sectors of the economy.
- Promote a better understanding of all the factors affecting productivity, including human resources, quality of working life, capital, technology, research and development, transformation of knowledge into practical terms, and the importance of productivity to our national economy.
- Interact with the Joint Economic Committee of the Congress, the Council of Economic Advisers of the President, and the Federal Reserve Board to assess

the productivity effect of fiscal, monetary, tax and regulatory policies on the private sector.

The Federal role for private sector activities would also be to serve as a focal point for the growing network of non-federal institutions already dealing with productivity, such as trade associations, public interest groups, and private organizations. This role would also include an emphasis on productivity measurement at the plant and industry level as well as at the overall economy level.

In our report on the Center, we made suggestions for reassigning the Center's responsibilities to ongoing agencies. We understand the Office of Management and Budget is examining this issue and developing a productivity plan for the Federal Government. While we cannot yet comment on the plan, we would like to emphasize that wherever the functions are assigned, the organizations must be provided adequate funding and support in order to be successful. Without this, the productivity effort will be no more effective than it was under the Center's direction.

In closing, it seems clear to us that the decline in the rate of productivity improvement in the United States is a major national problem because of its importance to our economic growth. We firmly believe the time has come for the Government to help solve this problem. The organizational assignment of functions and responsibilities is not the

important issue. What is crucial is that the Federal Government have an integrated national productivity program that has the backing and support of the President, the Congress and Federal agencies.

We have learned some important lessons from our experiences with the Center and its predecessor organizations. We must make sure the same mistakes are not made again.

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This concludes my statement Mr. Chairman. We will be pleased to respond to any questions that you and other Members of the Subcommittee may have.