

DOCUMENT RESUME

ED 356 389

CE 063 486

TITLE A Competitiveness Strategy for America. Second Report to the President & Congress.

INSTITUTION Competitiveness Policy Council, Washington, DC.

REPORT NO ISBN-0-16-041703-1

PUB DATE Mar 93

NOTE 69p.; For reports of the eight subcouncils, see CE 063 487. For the first annual report, see ED 349 443.

AVAILABLE FROM U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328 (\$4).

PUB TYPE Reports - General (140)

EDRS PRICE MF01/PC03 Plus Postage.

DESCRIPTORS Adult Education; *Capital; Competition; Dislocated Workers; *Economic Development; *Educational Change; Education Work Relationship; Elementary Secondary Education; Federal Government; Government Role; *International Trade; Investment; Job Training; *Labor Force Development; Lifelong Learning; *Productivity; Retraining; Vocational Education

IDENTIFIERS National Education Goals 1990

ABSTRACT

The Competitiveness Policy Council (CPC) concludes that the United States continues to face major competitiveness problems despite recent increases in the growth of both the economy and national productivity. It proposes sweeping educational reform in three areas: developing content and performance standards; ensuring that schools have the flexibility, expertise, and resources to achieve the National Education Goals; and holding schools accountable for students' achievement. CPC's recommendations for training have four dimensions: lifetime learning, school-to-work transition, retraining for dislocated workers, and improvement of worker training programs. Industry should be promoted in the following ways: enacting an innovation and commercialization tax credit; redirecting government spending to civilian and dual-use research and development; expanding federal support for cooperative projects with private industry; monitoring by boards of directors of corporate performance; preparing by companies of periodic analyses of long-term performance; and expanding exports. Private investment should be encouraged through a permanent equipment tax credit, authorization of industry consortia for joint production, and more rapid depreciation allowances. Recommendations to improve the public infrastructure, especially the transportation system, have also been proposed. The CPC recommends that national saving be increased by raising private saving and reducing public spending. (Members' biographies and subcouncil member lists are appended.) (YLB)

 * Reproductions supplied by EDRS are the best that can be made *
 * from the original document. *

ED356389

A Competitiveness Strategy for America

*Second
Report
to the
President
& Congress*

**COMPETITIVENESS
POLICY COUNCIL**

March 1993

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

This document has been reproduced as
received from the person or organization
originating it
 Minor changes have been made to improve
reproduction quality

• Points of view or opinions stated in this docu-
ment do not necessarily represent official
OERI position or policy

BEST COPY AVAILABLE

Competitiveness Policy Council

Appointed by the President

Barbara Franklin* (*Government*)
Secretary
US Department of Commerce

Albert Shanker (*Labor*)
President
American Federation of Teachers

Alexander Trowbridge (*Business*)
President
Trowbridge Partners

Edward O. Vetter (*Public Interest*)
President
Edward O. Vetter and Associates

* Resigned January 20, 1993.

Appointed by the Bipartisan Leadership of the US Senate

Rand V. Araskog (*Business*)
Chairman and CEO
ITT Corporation

John Barry (*Labor*)
President
International Brotherhood
of Electrical Workers

William Graves (*Government*)
Secretary of State
State of Kansas

Bruce Scott (*Public Interest*)
Professor of Business Administration
Harvard Business School

Appointed by the Bipartisan Leadership of the US House of Representatives

C. Fred Bergsten, Chairman
(*Public Interest*)
Director
Institute for International Economics

John J. Murphy (*Business*)
Chairman and CEO
Dresser Industries, Inc.

Edward V. Regan (*Government*)
Comptroller
State of New York

Lynn R. Williams (*Labor*)
President
United Steelworkers of America

Subcouncil Chairmen

Capital Formation
Peter G. Peterson
Chairman
The Blackstone Group

*Corporate Governance
and Financial Markets*
Edward V. Regan
Comptroller
State of New York

Critical Technologies
Erich Bloch
Distinguished Fellow
Council on Competitiveness

Education
Albert Shanker
President
American Federation of Teachers

Manufacturing
Ruben F. Mettler
Retired Chairman and CEO
TRW, Inc.

Public Infrastructure
Gerald L. Baliles
Partner, Hunton & Williams,
Former Governor of Virginia

Trade Policy
John J. Murphy
Chairman and CEO
Dresser Industries, Inc.

Training
Lynn R. Williams
President
United Steelworkers of America



A Competitiveness Strategy for America

*Second
Report
to the
President
& Congress*

**COMPETITIVENESS
POLICY COUNCIL**

March 1993

COMPETITIVENESS POLICY COUNCIL

WASHINGTON, DC

C. FRED BERGSTEN
CHAIRMAN

RAND ARASKOG

JOHN BARRY

BARBARA FRANKLIN

WILLIAM GRAVES

JOHN J. MURPHY

EDWARD V. REGAN

BRUCE SCOTT

ALBERT SHANKER

ALEXANDER TROWBRIDGE

EDWARD O. VETTER

LYNN R. WILLIAMS

March 15, 1993

Honorable William J. Clinton
President of the United States
The White House
Washington, DC 20500

Dear Mr. President:

The Competitiveness Policy Council is pleased to deliver its Second Report to the President and the Congress. This Report fulfills the commitment we made a year ago to develop and deliver a comprehensive competitiveness strategy for the United States.

Our program supports many of the initiatives you presented in *A Vision of Change for America*. We believe that the American people are ready for concerted action by the government and the private sector to improve US competitiveness. The Council — which has equal representation from business, labor, government (federal and state) and the public — stands ready to assist the Administration and the Congress in acting on the recommendations included in our Report.

This Report represents a consensus of the Council members. Not every member agrees with every word in the text. But we agree that a series of steps along the lines we propose can make a major difference to the future standard of living of the American people and we strongly commend the program to the Congress.

The Competitiveness Policy Council is a 12-member federal advisory committee. All of our meetings are open to the public. One-third of our members were appointed by the President, one-third by the Speaker and Minority Leader of the US House of Representatives acting jointly, and one-third by the Majority and Minority Leaders of the US Senate acting jointly. The Omnibus Trade and Competitiveness Act of 1988 (P.L. 100-418), as amended by the Customs and Trade Act of 1990 (P.L. 101-382), created the Council “to develop recommendations for national strategies and on specific policies intended to enhance the productivity and international competitiveness of United States industries.”

Honorable William J. Clinton
Page 2

As announced in our Report of March 1992, the Council established eight Subcouncils on capital formation, corporate governance and financial markets, critical technologies, education, manufacturing, public infrastructure, trade policy and training. These Subcouncils brought together over 200 leading Americans from across the nation. Their ideas and innovations to a large extent form the basis for the recommendations which we make today.

We look forward to discussing the findings and recommendations of this Report with you as we all seek to build a more competitive nation. We hope that our Report, and the subsequent efforts of the Council as outlined in it, will make a useful contribution to this effort.

Sincerely,



C. Fred Bergsten
Chairman

Enclosure

NOTE: Identical letters were sent to Albert Gore Jr., President of the Senate, and Thomas S. Foley, Speaker of the House of Representatives.

7

Table of Contents

Introduction	page 1
The Problem.....	page 1
The Council.....	page 3
Setting National Goals.....	page 4
Investing in Our Workforce	page 7
Education.....	page 8
Training.....	page 12
Promoting Industry.....	page 17
Technology.....	page 17
Corporate Governance and Financial Markets.....	page 21
Trade Policy.....	page 22
Investing in Physical Capital	page 27
Private Investment.....	page 27
Public Infrastructure.....	page 31
The Bottom Line	page 37
Private Saving	page 38
Public Savings: The Budget Deficit.....	page 39
The Future Work of the Competitiveness Policy Council	page 45
Conclusion	page 48
About Our Members.....	page 51
Subcouncil Members	page 53
The Competitiveness Policy Council's Mandate.....	page 61

List of Figures

Figure 1	US National Saving	page 2
Figure 2	Job Recovery After Recession.....	page 3
Figure 3	International Comparisons of Educational Performance, 1990-91	page 8
Figure 4	Public Expenditures on Training, 1990-91	page 12
Figure 5	Private Investment in R&D and the Role of Manufacturing.....	page 18
Figure 6	Trade as a Share of GDP	page 22
Figure 7	Science and Engineering Degrees Awarded, 1988	page 28
Figure 8	Real Growth in US Industrial Investment.....	page 28
Figure 9	Federal Investment in Infrastructure	page 32
Figure 10	The Budget Deficit and Health Care Costs	page 41

Introduction

The Problem

The United States continues to face major competitiveness problems. Productivity has grown by less than one percent annually for the last twenty years. Real average wages are lower today than in 1973. America invests only half as much in its future as other major industrial countries and only one-third as much as Japan. We have just completed four years of sluggish economic growth.

Our high school students perform far worse than their counterparts abroad. Twenty percent of our adults are functionally illiterate. A country cannot compete effectively unless its human resources are world class, and ours are falling toward the bottom of the league.

Most of our economic growth in the 1980s was financed by debt, much of it borrowed from abroad. The national debt has reached \$4 trillion. The federal budget deficit devours virtually all of the meager savings generated by the private sector, leaving few resources to fund private investments.

Over the past decade, the United States has run merchandise trade deficits that total \$1 trillion, and that



are continuing to grow at an annual rate of close to \$100 billion. These trade deficits must be financed with foreign capital, and the United States has shifted from the world's largest creditor to the world's largest debtor.

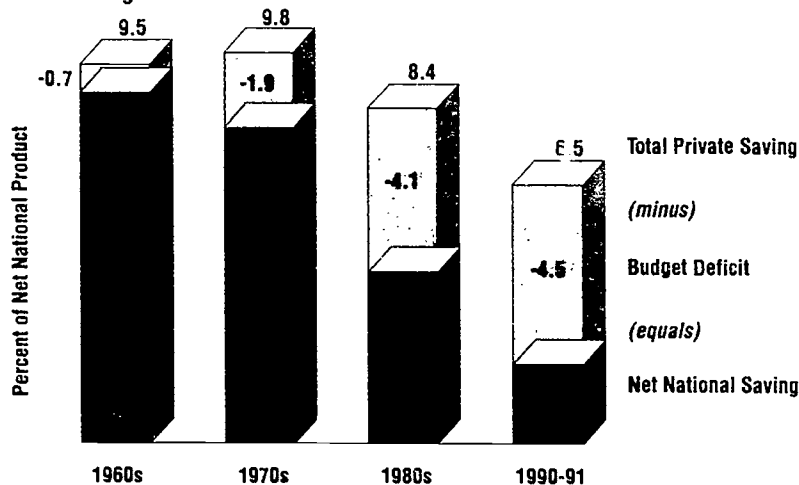
To be sure, there is some good news as well. Productivity growth seems to have rebounded strongly in 1992. Economic recovery is clearly underway. The equity markets have hit record highs. The new Administration is moving quickly to address some of the fundamental problems identified in this report.

But three sobering conclusions still emerge. First, it will take some time to restore America's competitiveness. The problem has been developing for two to three decades. It cannot be solved overnight. The Council believes we should seek to achieve a fundamental turn-around by the year 2000—the end of the decade, the end of the century, and the end of the next two Presidential terms.

Second, the best short-term strategy for the United States is to decisively attack its underlying long-term economic problems. Every effort should be made to promote more rapid growth and job creation, and some of our proposed responses to the fundamental difficulties will pay off fairly quickly. But the current predicament derives from a long-term build-up of deep structural difficulties:

- America has the lowest investment rate among major industrial countries, half that of most and one-third that of Japan.

Figure 1
US National Saving



SOURCE: US Department of Commerce, Bureau of Economic Analysis

- Our national saving rate is even lower: less than half that of Japan and most European countries.
- As noted, the budget deficit eats up virtually all of our national saving, leaving few resources available to finance private investment (Figure 1).
- We already spend 50 percent more of our gross domestic product (GDP) on health care than other major countries; on our current path, we will spend 100 percent more by 2000, diverting resources from more productive uses.
- Our K-12 education results are below all other industrial countries (and some developing countries).
- We spend only one-fifth as much of our GDP on training workers as other industrial countries.
- In relative terms, we spend only two-thirds as much as our competitors on civilian R&D.
- Our public investment in infrastructure has fallen by two-thirds over the past three decades.

Only by attacking these problems at their roots can the long term prognosis of our economy be improved. We believe that the American people want and will support this attack, and that they clearly voted for such change in the election of 1992.

Third, there is no single remedy for our problem. The United States must adopt a comprehensive competitiveness strategy. Each key component of the problem must be addressed. Among other things, this will require new governmental mechanisms to formulate and coordinate policy across the widely diverse array of issue-areas. Such mecha-

nisms include the National Economic Council inaugurated by the Clinton Administration, but more is needed.

The Competitiveness Policy Council discussed and analyzed America's competitiveness problem in some depth in its First Report to the President and Congress, *Building a Competitive America*, which we delivered on March 1, 1992. The events of the past year confirm our concern:

- The economy suffered a fourth consecutive year of sluggish growth (or recession).
- The overall recovery from the recent recession has been the weakest in postwar history, averaging less than one half the postwar norm to date.
- These developments reinforced public concern over the country's competitiveness as indicated by

numerous outcomes of the election campaign: the early success of Paul Tsongas, the unprecedented support for independent candidate Ross Perot, and most of all, the victory of Bill Clinton.

- Despite recent statistics suggesting a recovery from recession, major job layoffs remain an almost daily occurrence in numerous firms throughout the economy, ranging from General Motors to IBM (Figure 2).
- Real wages remain flat or declining.
- Until recently, real long-term interest rates remained at historically unprecedented levels of 4 to 5 percent, despite four years of weak economic performance due to the huge debt overhang and doubts about the future.

- Our trade deficit has again increased almost 30 percent, from \$65 billion in 1991 to \$96 billion in 1992.
- Since the end of 1989, our economy has produced zero net new jobs.

The Council

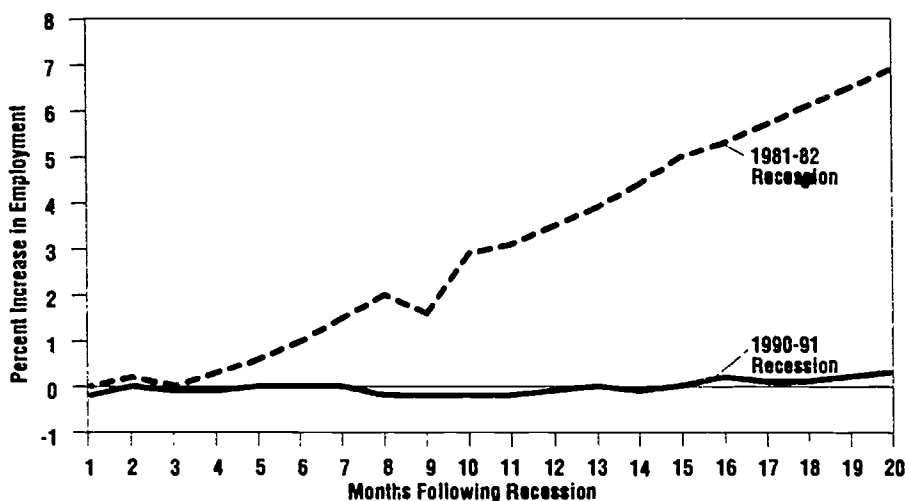
The Competitiveness Policy Council is an independent national commission created by the Congress. Its mandate is to advise the President and Congress on improving the competitiveness of the United States. It is to act as a "national forum" for addressing competitiveness.

The Council's membership is quadripartite: three corporate leaders, three labor union presidents, three high level government officials (federal and state) and three representatives of the public interest. The President, the joint leadership of the House and the joint leadership of the Senate each appointed four members. The group is comprised of six Democrats and six Republicans.

The First Report of the Council announced the establishment of a number of Subcouncils, as authorized in our legislative mandate. These Subcouncils were instructed to develop specific policy recommendations in the following areas:

- Education
- Training
- Critical Technologies
- Corporate Governance and Financial Markets

Figure 2
Job Recovery After Recession



SOURCE: US Department of Labor, Bureau of Labor Statistics

- Trade Policy
- Manufacturing
- Public Infrastructure
- Capital Formation

Over 200 leading Americans participated in these eight Subcouncils, preparing detailed analyses and proposals that provide the foundation for most of the recommendations that the Council is making in this Second Report to the President and Congress. This Report selects and presents the most important programs recommended by the Subcouncils; the complete Subcouncil reports are presented in a separate volume. The Council deeply appreciates the creative and diligent work of each of these groups, especially that of their distinguished chairmen, while not necessarily endorsing every detail in their reports.

As indicated in our First Report, the Council decided soon after its creation—correctly, it now seems—that 1992 would be a year for debate rather than action, while 1993 might offer a unique opportunity for policy reform. Our First Report therefore focused on highlighting the seriousness of the competitiveness problem, analyzing its underlying causes, outlining possible responses without making firm recommendations, and launching a process to develop such recommendations on the basis of in-depth analyses of the most important components of the issue. This Second Report now seeks to fulfill the pledge we made at the end of our First Report: to submit specific proposals for a compre-

hensive competitiveness strategy for America at a time when—for the first time since America's competitiveness problems began over twenty years ago—a national consciousness may be developing to address them.

Setting National Goals

The Council believes that the United States can restore its economic vitality and world leadership—but that time is running short and early action to achieve these goals is

Competitiveness and Productivity

Competitiveness is defined as our ability to produce goods and services that meet the test of international markets while our citizens earn a standard of living that is both rising and sustainable over the long-run. The Council's definition focuses on four criteria. First, US goods and services should be of comparable quality and price to those produced abroad. Second, the sale of these goods and services should generate sufficient US economic growth to increase the incomes of all Americans. Third, investment in the labor and capital necessary to produce these goods and services should be financed through national saving so that the nation does not continue to run up large amounts of external debt as in the 1980s. Fourth, to remain competitive over the long-run, the nation should make adequate provisions to meet all these tests on a continuing basis.

Productivity growth is central to our ability to compete internationally while improving our standard of living at home. The United States is still the most efficient economy in the world, although our productivity levels in some industries lag behind those in other countries. On the other hand, productivity growth rates in the United States have lagged behind most other industrialized countries since the mid-1970s. US manufacturing productivity growth outpaces that in the services sector; the services sector brings down productivity growth for the economy as a whole because of its large share of the total economy.

From 1973 to 1991, US productivity grew at an average annual rate of only 0.7 percent. Had productivity growth remained at its pre-1973 rate of 2.5 percent, each American would have increased his or her standard of living by now by more than one-third.

Productivity growth rates give us a sense of how well we are doing but do not give any indication of what might be causing these changes. Changes in productivity can come about from a variety of factors operating singly or in tandem—including changes in technology, capital investment, capacity utilization, size or skill level of the workforce, managerial skill, the organization of production, and the use of resources such as energy and materials.

essential. America's competitiveness strategy should thus seek to achieve several ambitious but feasible goals.

The central objective should be to increase the growth of national productivity—from less than 1 percent annually to at least 2 percent annually. Higher productivity is the only way to raise the national standard of living. Meeting the target of 1 percent annually would raise family incomes by one-third in a single generation. America achieved such productivity growth in the first postwar generation and must achieve it again by the start of the twenty-first century, reversing the trends of the last two decades. The apparent increase in productivity growth in 1992 is an encouraging sign that this goal is within reach.

Faster productivity growth is not enough, however. Companies can become more efficient simply by laying off workers, as many are currently doing. To achieve and maintain full employment, the economy must grow by at least 3 to 3½ percent annually, combining our targeted productivity growth of 2 percent with the expected annual growth of 1 to 1½ percent of the nation's labor force.

Even full employment is not enough, however. The quality as well as quantity of jobs is of critical importance. America must create a high-income as well as a high-employment economy. The stagnation of real wages over the past decade is one of the clearest measures of the

erosion of our competitiveness.

A modest pick-up in productivity and overall economic growth, perhaps on the order of one-quarter to one-half percent per year, can be expected to result from corporate restructuring efforts over the past decade and the beginning of constructive policy change. Manufacturing productivity growth accelerated rapidly in the 1980s, although less rapidly than initially thought. Service sector productivity could also do so in the 1990s, and there is evidence, including from the aggregate results for 1992, that some services industries have already made impressive strides.

But much more is needed. There are two ways to spur productivity and economic growth: by devoting more resources to the effort and by getting a higher return from those resources. Both are essential.

Economic models suggest that doubling productivity growth will require increasing national investment by at least 4 to 6 percent of GDP, or about \$300 billion annually at current prices. Most of the expansion must come from the private sector. Such increases would still leave us far short of Japan but would match or supersede the Europeans.

We should finance this increase in investment domestically. The United States is already the world's largest debtor country and cannot prudently continue to depend on foreign capital. Another national goal is thus elimina-

NATIONAL GOALS

- **Increase national productivity growth—from less than 1 percent to 2 percent annually.**
- **Increase national investment by 4 to 6 percent of GDP.**
- **Finance new investment through increased domestic savings.**

tion of the net inflow of capital from abroad, which requires elimination of our current account deficit.

The national saving rate will have to rise by 5 to 7 percent of GDP to fund both the targeted increase in national investment (4 to 6 percent) and the trade improvement (about 1 percent). This would restore national saving to the level that prevailed prior to 1973. As with investment, America would then compare favorably with most other industrial countries, and would halve the gap with Japan. Increases in private saving are highly desirable but difficult to achieve; hence most of the improvement may have to come from correcting the federal budget deficit.

It is crucial to understand the importance of increasing national saving. The ultimate goal of a higher *level of consumption*—a higher standard of living—is possible in the future only if we as a nation invest more today, thereby increasing the size of the

economic pie. This in turn requires that we save more now to finance the necessary investment. Since all income is either consumed or saved, the *share* of income that is consumed must drop temporarily. A reduction in the growth of consumption now will produce a higher *level of consumption* in the future.

America can restore its competitiveness only with achievement of these targets. Hence this report makes specific proposals for reaching them. The central thrust of our recommendations is a sharp increase in private investment and a cutback in the growth of consumption, especially by the public sector.

We will focus primarily, however, on how to better deploy America's resources to achieve the needed acceleration of productivity and growth—on getting a bigger bang for each investment buck. Our private and public investment both need to be channeled in more productive directions. Our capital must be teamed

with educated, trained workers. Firms must be encouraged to adopt new world-class business practices typified by "lean production" and "total quality management" approaches. We need more modern public infrastructure to galvanize, and elicit the full contribution of, private investment. Adroit commercialization of the latest technology is essential to improving the country's performance.

In addition, effective corporate governance is needed to utilize all these resources with maximum efficiency. In an interdependent world economy, international economic and trade policies must be oriented towards achieving market growth and access for American firms abroad and defending them against unfair practices in our domestic market. We make recommendations in each of these areas as components of the comprehensive strategy that is required to improve US competitiveness.

Investing In Our Workforce

Investment in American workers is central to restoring the nation's competitive position. As much as one quarter of all US economic growth since 1929 has been attributed to educational advances. No amount of physical capital will increase productivity unless educated and skilled workers and managers are able to use it.

The figures tell much of the story. Twenty percent of our adults are functionally illiterate, compared with only one percent in Japan. Four in ten business executives say they cannot modernize their equipment because their workers do not have the appropriate skills. Only one in five firms believes that high school graduates can write adequately, while more than two-thirds consider their reading and arithmetic skills sub-standard. The ability of some Japanese firms to introduce flexible manufacturing systems twice as fast as American firms may stem from their having five times as many engineers and four times as many workers trained on numerically controlled machines.

Unlike physical capital, much of which is mobile internationally, most of our workforce—or “human



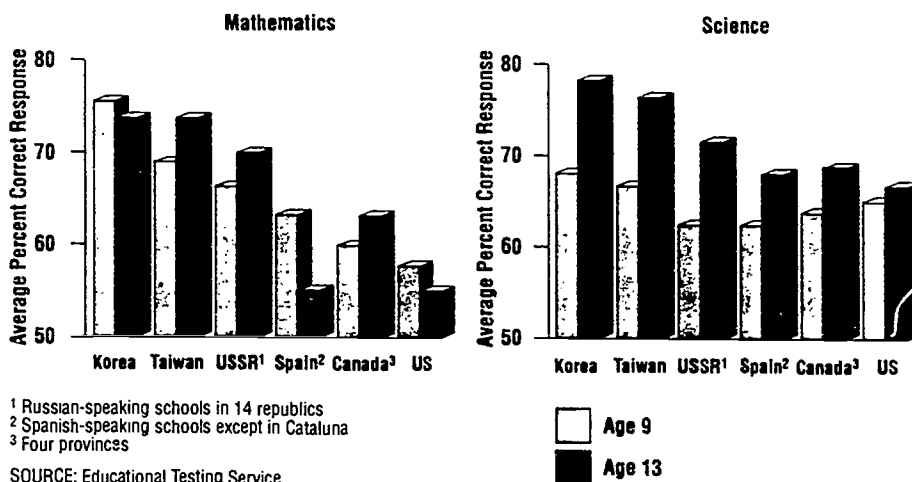
capital”—stays within national borders. Thus investment in human capital maximizes the national return on investment. To survive in a highly competitive environment and generate high-wage jobs, a country's workers must add more value to products than other nations' workers. Our Subcouncils on Manufacturing and Technology, as well as those assigned to Education and Training, strongly endorse these conclusions.

The bottom line is simple: if we want a higher standard of living, we will have to earn it by improving the education and training of our workforce. Otherwise, we will end up competing on price alone—by lowering our wages and steadily depreciating the value of our currency. The latter is a race we probably cannot win, and do not want to run in any event. The former is a race worthy of our proud past and holding promise for our future competitive success. None of our competitiveness strategies can be effective without an enlightened citizenry and a workforce that is involved in continuous learning.

Education

Our K-12 system is faring badly. The poor performance of our schools and students is a nationwide problem. It is particularly acute in disadvantaged school districts, and its solution there will need strategies that go far beyond the school-house door. But even our well-off school

Figure 3
International Comparisons of Educational Performance, 1990-91



districts are achieving poorly relative to international standards. The fact that half our high school graduates enroll in post-secondary school is less a product of high student achievement than of low admission standards for higher education. Of those students who do enroll in college full-time, nearly one half never make it to graduation day.

Our Education Subcouncil focused its attention on the K-12 system. Our low expectations for student performance begin there and tend to be self-fulfilling. Most of our students are fed a steady diet of low-level basic skills. Textbooks are “written down” to the lowest common denominator. The minimum competency high school graduation requirements of most states and districts call for no more than a sixth to eighth grade level of knowledge and skill. The average high school student in 1987 had 3.5 hours of

homework each week, squeezed into a busy schedule of 25 hours of television and 10 hours of employment. Meanwhile, students from countries such as Canada, Korea, Spain and Taiwan now surpass our students in both science and math proficiency (Figure 3).

Although educational attainment continues to have a substantial effect on a person's long-term economic status, the short-term signals given to high school students by both the labor market and colleges and universities suggest that high school performance simply doesn't count. Almost every graduating student, regardless of grades, can enter college (though not the most elite colleges). Numerous state colleges are mandated to accept *any* in-state high school graduate. Hundreds of other colleges are far more concerned with maintaining enrollment than maintaining academic standards,

and have no rigorous entry requirements.

For the “forgotten half” of high school graduates who go directly into the work force, there is no systematic relationship between school performance and employment. Few, if any, companies examine transcripts of high school graduates in making hiring decisions. Only the diploma counts. A student who takes rigorous courses and works hard has no competitive advantage in getting a job over a student who does not. Employers are isolated from schools, indifferent to academic excellence in hiring high school graduates, and rarely hire youths under the age of 21 for full-time jobs with promotional opportunities. Exactly the opposite is true in our competitor nations such as Germany and Japan.

While all these problems are well-documented, the solutions—contrary to recent rhetoric—are by no means clear. Past history offers numerous lessons but there is no Golden Age of education to which we can return. Nor can we import the most effective education practices of our competitors without figuring out how to adapt them to the values and conditions of American society. There are no shortcuts to thinking—and experimenting—for ourselves.

But the direction of change is increasingly clear. Our Education Subcouncil concluded, and the full Council agrees, that the key to improving American education is the establishment of rigorous standards for what students should know and be able to do as a result of their

schooling—standards for academic content and student performance. We must change our expectations from minimum competency to high achievement both for college-bound and work-bound students. Our K-12 students must become productive workers instead of entitled consumers. Six specific steps are required to meet this goal.

First, we must redirect the multiple and uncoordinated layers of our education system toward achieving the National Education Goals (see box on next page) and becoming a standards-based system. Without a shared understanding of what we want schools to accomplish with students, it is pointless to undertake additional education reforms. As first steps:

- Congress, the states, and local school districts should formally adopt the National Education Goals.
 - States and districts should use the National Education Goals, particularly those that pertain to educational achievement, as the basis for restructuring and coordinating curriculum and testing programs, textbook adoption methods, regulations, teacher licensing requirements, in-service staff development programs, and accountability systems.
 - Local school districts should use every available means to communicate to parents and the public the meaning of shifting expectations from minimum competency to high performance.
- Second, to implement the National

EDUCATION RECOMMENDATIONS

- Give students a stake in high performance by making school records count for both colleges and employers.
- Develop content and performance standards for students.
- Develop assessments that measure student achievement, not ability or test-taking skills.
- Give schools the flexibility, expertise, and resources needed to achieve the National Education Goals.
- Hold teachers and schools accountable for performance.



Education Goals, we must develop content and performance standards for what students should know and be able to do in order to be prepared for democratic citizenship, higher education, and productive employment. We do not need lofty but vague goals for student outcomes. Rather we need actual curriculum frameworks that will guide the work of schools and communicate, to parents and the public, what schools and students are supposed to be accomplishing. High standards that apply to all districts and schools, rich and poor and those in between, are an essential strategy for achieving educational excellence and thus strengthening American competitiveness. They are also a means for reinventing our pursuit of equal educational opportunity.

Such standards could be either national (but not federal) or state-by-state. The federal government should help fund their development and encourage states to adopt them. Math standards already exist. Efforts are underway to develop standards for the arts, civics, English, foreign languages, history and science. A special council of the National Education Goals Panel or a compact of states could coordinate the development of standards, review the products and certify those that meet the quality test.

Third, educators and technical experts must develop assessments (tests) that are based on the new standards for academic content and student performance. Such assessments should move away from

National Education Goals

The idea of using National Education Goals to drive improvements in educational performance originated at a meeting of the nation's Governors in Charlottesville in September 1989. In March 1990, the President and Governors announced six Education Goals for the year 2000 and created an Education Goals Panel to develop indicators for measuring progress and issue an annual report card on the nation's progress in meeting the goals.

1. All children in America will start school ready to learn.
2. The high school graduation rate will increase to at least 90 percent.
3. American students will leave grades four, eight, and twelve having demonstrated competency in challenging subject matter including English, mathematics, science, history, and geography. Every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy.
4. US students will be first in the world in science and mathematics achievement.
5. Every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.
6. Every school in America will be free of drugs and violence and will offer a disciplined environment conducive to learning.

exclusive reliance on multiple-choice items and toward more authentic methods of assessing students' knowledge and skills. Assessments should measure students' mastery of the curriculum, not innate ability or test-taking skills, and students should be able to prepare for them.

The National Assessment of Educational Progress—also known as “The Nation's Report Card,” which tests a nationally representative sample of students in various subjects—should be strengthened as a monitor of educational performance. In addition, although

federal tests are not desirable, the federal government could fund the development of model assessments based on the national standards whose development it is already funding. States could then choose to adopt and build on these assessments, just as they can choose the nationally developed standards. The key is to link the standards and assessments as closely as possible.

Fourth, we must ensure that schools have the flexibility, expertise, and resources to achieve the National Education Goals. Flexibility means removing or restructuring the countless

federal, state and local rules and regulations that govern virtually every minute of the school day. Health, safety, and civil rights requirements continue to be necessary, but professionals at the school site must be given substantial autonomy to determine how best to deploy their resources and design programs to enable their students to meet new and higher standards.

Flexibility must be accompanied by the expertise to make it effective. Staff development must be significantly expanded and improved to ensure that teachers have the content knowledge and pedagogical skills to teach to new standards. Similarly, instead of advancing teachers along the salary schedule on the basis of an accumulation of post-graduate course credits that may or may not be related to making them more expert teachers, school boards and unions should negotiate a pay-for-knowledge system that rewards teachers for acquiring knowledge and skills necessary to teach to the new standards. The federal government should help ensure an adequate supply of highly qualified new teachers by focusing its funding of teacher preparation institutions on getting these institutions to prepare teachers to teach to new standards. States should revamp their teacher licensing requirements according to the same principle.

The current interest in private school choice is a clear reflection of the public's disgust with bureaucratic gridlock and "business as usual" in our schools. That

message of the school choice movement must be heard. But our Subcouncil found no evidence that private school choice would improve either achievement or equity in education, or that competition between public and private schools would whip public education into shape.

Fifth, schools and districts as a whole must be held accountable for the progress their students make in achieving high standards. We need less frequent but far better testing; states can test a sample of students at different grade levels to determine progress, and hold districts and schools accountable. Districts or schools that need help should get it, and improvement should be expected by the next assessment period. Districts and schools that make progress should be rewarded. Districts that fail to benefit from additional help should be held accountable through measures such as transfer or removal of officials and staff, reorganization or even closing of schools (and reopening them with new staff and programs).

In addition to developing the capacity of schools, we must develop the capacity of youngsters—particularly poor children—to meet new standards by overcoming out-of-school barriers to learning. The appalling level, and rate of increase, of childhood poverty in this nation is first and foremost a moral issue. But it is also a competitiveness issue. Children from impoverished and poorly educated families do not achieve as well as children from more advantaged and educated families. We cannot hope to

ensure our future competitiveness without significant attention to the one out of every four American children who currently live in poverty.

This problem is so severe that the Council proposes to establish a new Subcouncil to address these broader social issues over the next year. In the meanwhile, it is clear that federal support must be expanded to provide prenatal care and nutrition programs for women, infants, and children; health care for children, including immunizations; quality Head Start programs for all eligible three and four-year olds; and full funding of Chapter 1, the nation's main program for assisting school districts with large concentrations of poor children; Chapter 1 must also be brought into line with the higher standards agenda we advocate for the broader education system. Our Subcouncil did not fully examine the issue of how education dollars are spent, but it was persuaded by the evidence that districts with high concentrations of poor and special-needs children will need additional resources—including federal help—to improve the conditions of those schools and raise the achievement of their students.

Sixth, none of these steps will succeed if students do not assume responsibility for their own learning. Working hard and achieving in school must "count" for students, whether they go to college or enter the labor force immediately. We must therefore give students a stake in high performance through the following steps:

- External assessments, phased in over a 10 to 12 year period, should be given to high school students, with the results serving as a major factor in their qualifying for college and for better jobs at higher wages.
- Colleges and universities should raise their admissions standards, over a similar 10 to 12 year period, to reinforce the shift to higher standards in elementary and high schools.
- The federal and state governments should condition their assistance to higher education on evidence that colleges and universities are raising their admission standards, and they should offer more favorable financial aid terms to students who meet high standards.
- No student who meets high standards should be denied the opportunity for higher education due to financial reasons.
- Employers should be encouraged to review school records—including course grades, conduct, and teacher recommendations—in choosing among job applicants. A new uniform transcript, jointly designed by employers and schools, should be developed.

Such sweeping reform of the American educational system as outlined here will obviously take time. Indeed, the payoff from investment in education will take considerable time. Even if we could reform America's schools overnight, the full benefits would be achieved only over two decades—when children born today

graduate from high school. Partial gains will of course come sooner.

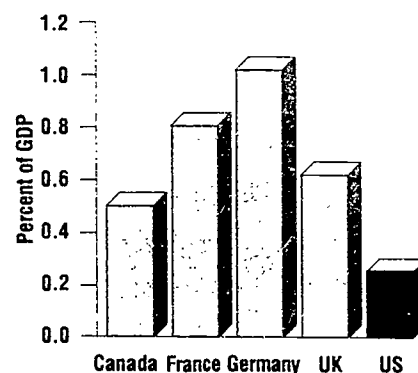
But the national proclivity to seek short-term results has determined outcomes here even more than in other policy areas. Now that we recognize the long-term nature of the overall competitiveness problem and the cardinal role of education reform in correcting it, we must instead treat such reform as a matter of the highest urgency. Our Council believes that such fundamental changes are central to any effective strategy for restoring American competitiveness in the world economy.

Training

Training is the second crucial dimension of human capital. Virtually all of our competitors spend four to five times as much as the United States on training, as a share of GDP, in both the private and public sectors (Figure 4). We spend seven times as much on each college-educated youngster as on each non-college youth entering the workforce. Two-thirds of corporate training dollars spent in the United States go to management; front-line workers get only eight cents of each training dollar provided by industry.

The United States has no coherent program for worker training. Workers, youth and firms face a confusing array of public training programs, riddled with duplication and overlap. No central "intake" center helps potential trainees

Figure 4
Public Expenditures on Training, 1990-91



SOURCE: Organization for Economic Cooperation and Development

seek information on jobs skills. Inadequate attention is devoted to connecting public delivery systems with private sector needs; virtually none is directed at evaluating results. The ongoing training needs of the broader workforce are left largely untouched both by workers themselves and by the firms they work for.

The most striking waste of our national resources lies in the tortuous road we force high school graduates to travel to make their initial entry into the workforce. Other nations gain a 5 to 10 year head start by absorbing young people into the labor market with extensive apprenticeship or on-the-job training programs, and by building their skills and experience to meet work requirements. In that same period, young American workers are moving from low-skill job to low-skill job, with periods of unemployment in between.

High Performance Workplaces: Saturn

As an example of many American firms that have introduced high performance workplaces, Saturn offers a compelling story of transformation in a tough, competitive market. In 1991, Saturn placed first in cars sold per dealer and beat out Honda Civic and Toyota Corolla in polls of buyer satisfaction. A year later, Saturn was identified by *Business Week* as the highest quality American car. Success in the marketplace followed a revamping of Saturn's entire production process after making customer satisfaction a top priority. Saturn also relies heavily on employees to achieve high performance results, using a power-sharing approach to labor-management relations between the United Auto Workers (UAW) and General Motors (GM).

Under Saturn's power-sharing arrangement, the union's primary role has shifted from bargaining over wages and benefits to acting as a full partner in running the company. For example, under "consensus guidelines" written into the "enterprise" contract, either labor or management may block a potential decision but it must provide an alternative. The aim is to encourage creative, mutual problem-solving.

Representatives from both union and management sit on the Strategic Action Council, Saturn's top management group. Joint labor-management teams decide on marketing strategies and budgeting, select advertising agencies, and set sticker prices. Power-sharing guides the production process too. Each Saturn car is assembled by flexible, multi-skilled work teams which autonomously operate a work station. These units of 6 to 15 employees set production schedules, budget expenses, plan for quality goals, oversee hiring, and assign work schedules and vacation time. Team members also rotate job functions.

All of these changes mean that Saturn depends on workers with substantial skills and versatility. Workers are required to spend at least 92 hours in training per year, about five percent of total work time. To substantiate its commitment to training, the company makes the last five percent of an employee's wages contingent on meeting the training goals.

The government provides no help when they need it most.

We pay a steep price for the failure to better integrate school and work. Youth unemployment levels are reaching crisis proportions in minority communities: one in five American youths, and nearly one in three minority youths, are jobless. We are producing a substantial cohort of

workers with poor basic skills, little understanding of what work demands, and limited grasp of how to find a good job or get good training.

We also pay a high price by neglecting the retraining of workers laid off from declining firms or industries. In the five years from 1987 to 1992, 5.6 million American workers with three or more

years of seniority permanently lost their jobs. By January 1992, more than a third were still looking for work or had dropped out of the labor force entirely.

It is not enough simply to equip our workers with minimum skill levels, however, or to smooth their entry into the same kinds of jobs that have existed in the past. Experience both in the United States and around the world demonstrates clearly that a competitive nation requires much more from its workforce. Our national goal should be creation of "high performance workplaces"—in which workers have a substantial role in designing work procedures and methods, controlling much of the firm's equipment, and making continual improvements that boost productivity.

The payoff for both companies and workers is high. One survey found that increasing training from zero to 100 hours over a two-year period raised productivity by 13 to 15 percent. Trained workers earn 10 to 30 percent more than their untrained colleagues. Every company that has won the prestigious Malcolm Baldrige Award for superior efficiency has had programs to enhance worker participation in building high performance workplaces.

A number of major American firms are world class but, by some estimates, only five percent of our nation's businesses have replaced traditional production with high performance systems. We still break tasks into their smallest, most repetitive components and

use status and bureaucracy to separate workers from management, or human resources departments from engineering. We reserve creativity and decision-making for specialists and managers. We replace workers with machines. We tend to emphasize cost over quality in addressing consumer demand.

The world's high performing firms, including many in the United States itself, achieve impressive levels of productivity and quality by breaking down the walls of tradition—investing in people as well as machines, opening up decision-making, rewarding and encouraging constant improvement. The world's most competitive nations gain economic power by enhancing and rewarding workforce performance—through coherent systems to promote lifelong learning, world class standards to encourage mastery, strong programs to ease the transition from school to work, and vital partnerships between public and private sectors and between management and labor. We have far too few of these.

Our Training Subcouncil made recommendations in four major dimensions associated with training. One is continuous worker retraining, or "lifetime learning," which has become necessary for workers to upgrade their skills as the demands of their jobs inevitably increase in today's rapidly shifting, internationally exposed economy. A second is the school-to-work transition. Third is retraining for adults dislocated by technological or other change in the economy. Fourth is the

streamlining and improvement of current worker training programs.

First and foremost, promotion of lifetime learning is crucial to transforming the American workplace into a high performance system. American companies already devote substantial dollars to workforce development: about \$30 billion annually for formal training and perhaps as much as \$180 billion annually for informal, on-the-job training. Averaged across the nation, US firms spend slightly more than one percent of payroll on formal worker training.

However, most of this investment is concentrated among a handful of firms—one-half of one percent of all employers spend 90 percent of the formal training dollars. The key requirement is to induce more companies to devote considerably expanded resources to continual skills development. All firms need to participate, partly to obviate the concerns of those who already do that workers they train will go elsewhere.

There are three alternative techniques which could foster increased training. One would be a requirement that each firm with more than 50 employees be required to invest 1.5 percent of payroll in training (for all employees, not just top managers as in many current cases). Such a requirement would represent a training guarantee, under which the firms either conduct the training themselves or contribute the equivalent to a national training fund ("play or pay").

A second option is a new program of federal grants—aimed mainly at smaller

firms, including consortia of small businesses, and matched by state contributions—financed from general revenues or a small payroll tax. A third, suggested by our Manufacturing Subcouncil (which strongly supports the policy goal), is a training tax credit to help induce firms to provide such programs for their workers.

Whichever approach is used should incorporate joint labor-management committees to design and monitor training and work reorganization activities. Equitable access to training resources is essential. The emphasis should be on transferable skills rather than skills specific to a firm, piece of equipment, or vendor.

In addition, individuals need to undertake continuous retraining on their own. To encourage them, the current tax deduction for job-related educational expenses should be broadened to cover training that improves employment skills, but which may go beyond the current line of work. We should also make permanent the existing tax exclusion for employer-paid training.

Second, we can and must do a better job of making the transition from school to work less bumpy for our youths. A particularly attractive model is the German apprenticeship program: 20 percent of German students who qualify for college enter this program instead, and German companies contribute about 3.5 percent of payroll to national training accounts which back a wide range of employment and training institutions (including the apprenticeship program).

The results are stunning: two-thirds of the German workforce have completed an extensive apprenticeship program compared with three-tenths of one percent in the United States.

Our Training Subcouncil recommends continued experimentation with different types of school-to-work transition programs: apprenticeship programs, compacts (as in Boston) where employers guarantee jobs to students who do well in school, cooperative education where seniors work part-time in areas connected to their training specialty, and career academies where students develop skills around a specific field (see box on next page). Several elements are essential whatever technique is followed: provision of mentoring and jobs by local employers, integration of academic and vocational learning, protection against exploitation of student-workers, and the provision of broadly recognized certificates of occupational skill mastery that will be readily accepted by employers.

The federal government, despite its historically limited role in the school-to-work area, should initiate several steps to launch such an effort. It should finance pilot programs of public-private cooperation. It should create a national youth service corps, as proposed by President Clinton (and earlier by Senators Wofford and Boren). It should earmark a portion of public works funds for youth apprenticeship programs. Most importantly, as with education, it should insist that agreed skill standards provide

the foundation for all these efforts.

Third, the United States needs a comprehensive program to ease the adjustment process for all workers dislocated by technological change, defense conversion, increased international trade flows and other sources of structural change. Such a program should combine various aspects of existing programs. As in the current Economic Dislocation Worker Adjustment Assistance (EDWAA) program, all workers in need would be eligible for benefits. The level of benefits should go beyond those currently provided under EDWAA, and be more similar to those currently provided under the Trade Adjustment Assistance (TAA) program. The complete set of benefits would include job search assistance, skills assessment, counseling, referral services, adequate income support (covering at least 50 percent of lost wages), payments for retraining programs, and extended income and benefit (including health care) payments through the training period.

Such a program would double the amount of resources devoted to worker adjustment, from approximately \$750 million to about \$1.5 billion annually. There are various means to fund this increase, from either general revenues or a dedicated trust. Regardless of the mechanism chosen, this program is a modest attempt to offset the huge financial and personal losses which workers experience when they lose their jobs. It is also an investment in encouraging labor market flexibility, further

TRAINING RECOMMENDATIONS

- Encourage firms to increase training—through grants, tax credits, or payroll requirements.
- Improve the school-to-work transition through a national youth service corps, skill standards, and youth apprenticeship programs.
- Ease the adjustment burden on dislocated workers.
- Provide one-stop shopping for training needs.



contributing to overall productivity in the economy.

Finally, we need to coordinate various worker training programs at the local, state, and national levels in order to better serve our training needs. The United States needs to create a comprehensive network of local labor market boards to provide one-stop shopping for students, employees and firms on the full range of their needs: skills assessment, career counselling, job placement, recruitment, and referral assistance. Local labor market boards should evaluate and certify providers of training services, and promote the formation of training consortia by companies and unions. They should report to new state coordinating councils (as already set up in New Jersey and Oregon), which should be required by the federal government as a condition for disbursement of its training, education and economic development funds.

The United States is the only industrial nation without a formal system for developing and disseminating skill standards. Such standards should be designed for each key industry by representatives of business, labor and educational institutions. A new National Workforce Development Board should be created to standardize the myriad of current retraining programs. Within one year, the Board should submit specific recommendations for eliminating duplication among the 125 federal employment and training programs currently spread across 14 federal agencies.

School-to-Work Transition Programs

Examples of successful school-to-work transition programs already exist in the United States. Models include:

- **Maine's Apprenticeship Program.** Maine's pilot program offers students a joint employer-school "certificate of mastery." Students begin Maine's program in the 9th grade with general career exploration activities; in the 10th grade they must pass a basic skills test to apply for entry to the apprenticeship program. Once accepted, 11th and 12th graders spend 20 weeks at school and 30 weeks working for an employer. Finally, in their 13th year, apprentices work with their employers for 34 weeks and take 16 weeks of training at a technical college to earn a one-year post-secondary degree.
- **The Boston Compact.** In 1982, Boston's public schools signed a "compact" with the city's businesses, universities, labor unions and the Mayor's office. The schools promised improved academic achievement and work preparation in exchange for increased opportunities for employment and higher education for city youth. The Compact is seen by many as one important factor in the lower-than-national-average youth unemployment rate in Boston throughout the 1980s and the virtual elimination of black-white differences in youth unemployment rates in the city. Eligibility for jobs and financial aid are tied to staying in school and getting good recommendations from teachers.
- **Cooperative Education.** The Dauphin County Technical School in Harrisburg, Pennsylvania is a typical co-op program that links a student's high school program with work experience in a closely related field. Employers provide a part-time job to a high school senior in the student's vocational area. Two full-time co-op teachers work with employers to develop the new job slots, determine the skills the employers will teach students, and include tasks that will add complexity to the largely entry-level jobs. Participation is limited to 12th graders with a C average and no Fs or incompletes in 11th grade. About half the seniors participate.
- **Career Academies.** California Partnership Academies were created in the early 1980s by the Sequoia Union High School District. Each academy is organized around a specific occupation or industry theme (e.g. health, electronics, graphic arts). Beginning in 10th grade, students develop individualized academic and occupational goals and work in the industry during the summer. Employers also donate time as mentors and provide equipment to the school. The academies are highly regarded both as dropout prevention and as college preparatory programs. About two-thirds of academy graduates in California, for example, have continued on to post-secondary education.

Promoting Industry

Equally important to a competitive economy is a clear and rational approach to managing business and industry. This includes a sharp improvement in our ability to develop and, most important, to *apply* new technologies. It also means careful attention to the ways in which corporations are governed by internal and external decision-makers, and the relationships between corporations and the financial markets on which they depend for capital. A competitive economy must also look beyond its borders to international markets for its products. Trade policy is an important ingredient in the competitive vantage point of American businesses.



Technology

For most of the past 50 years, technology has been an unquestioned American strength. US industry was the leader in virtually all key areas of civilian technology. The United States science and technology enterprise **still has** many outstanding strengths, including unparalleled research universities, an open and entrepreneurial climate that attracts the best minds and ideas from around the

world, technically advanced national laboratories, and strong corporate research labs.

Nevertheless, in many leading edge areas of technology, US leadership has declined or been lost. Studies indicate that the United States still leads in overall manufacturing productivity by some measures but that we fall behind in machinery, electrical equipment, transport equipment and ground transport—technology intensive sectors that are essential for trade, national security, and economic growth. Moreover, R&D in general is underfunded. In 1990, for example, the nation as a whole invested only 1.9 percent of GDP on non-defense R&D as compared with 3 percent in Japan and 2.7 percent in Germany.

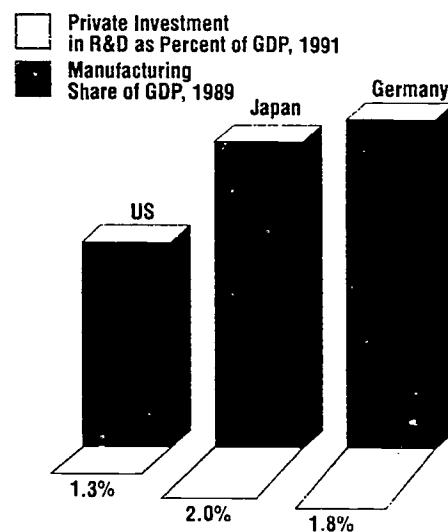
A major problem facing American competitiveness is the lag of American firms in converting technological advances into a competitive advantage in the marketplace—the “commercialization” of technology. We continue to lead the world (albeit by a shrinking amount) in new inventions. Firms in other countries, however, seem to do better at converting new ideas—including American ideas—into the third, sixth and tenth iteration of the product that captures markets. Our smaller firms are often unable to grow successfully beyond the new venture stage, and our larger firms often seem unable to sustain the continual flow of improvements in process and product that is necessary to meet ever-more

vigorous foreign competition. Unfortunately it remains largely correct that “Americans are good starters while the Japanese (and others) are better finishers.” Flat panel displays and robotics are two prime examples of this pattern. Furthermore, with five of the top ten recipients of US patents in 1991 being Japanese firms, we cannot be assured of our lead in invention for the future.

Our Subcouncil on Critical Technologies concluded that US companies, universities, and the federal government have undervalued the importance of making continual improvements to products and processes, and of manufacturing in general. As noted in our First Annual Report, federal technology policy has contributed to the problem by focusing primarily on esoteric defense technologies and on scientific break-throughs rather than on areas that will provide the greatest economic benefits and commercial follow-throughs.

To improve and accelerate the commercialization of US technology, both industry and government must substantially increase the resources devoted to R&D, on process technologies in manufacturing. US manufacturing industries currently invest about \$76 billion annually in privately-funded R&D, a little over 1 percent of GDP. Japanese and German industry invest closer to 2 percent of their GDP (Figure 5). The difference shows up clearly in the relative roles of manufacturing industries in the three countries’

Figure 5
Private Investment in R&D and the Role of Manufacturing



SOURCE: National Science Foundation. Science and Engineering Indicators, 1991

economies: manufacturing's share of GDP in 1989 in the United States was 19.3 percent, but far greater in Germany (31.1%) and Japan (28.9%).

There must also be a renewed effort to disseminate technological “best practices” throughout industry. With proper reforms, government funding and technical resources can provide incentives and leverage private sector investment, requiring little if any net increase in government spending.

The Council endorses a number of technology proposals developed by our Manufacturing Subcouncil and our Subcouncil on Critical Technologies. First, private sector R&D should be stimulated and expanded by implementation of a new innovation and commercialization tax credit (ICTC):

- R&D on process improvements (in addition to R&D which occurs before the "first article of production") should clearly be eligible for the credit. This will support continual improvements in process as well as product technology.
- The credit should be made permanent to provide a solid basis for long-term corporate planning.
- The credit should apply to incremental expenditures, as recommended by our Subcouncil on Critical Technology. Our Manufacturing Subcouncil prefers that the credit apply to *all* research and development spending at a much lower rate.
- An additional 25 percent credit should be allowed for industry-sponsored university research, in light of the wide benefits of such research and the desirability of linking university research to industry needs. Most university research is now government funded.
- To help overcome corporate reluctance to test traditional antitrust tenets, an additional 10 percent credit could be allowed for the first two years of new R&D consortia registered under the Cooperative Research Act of 1984, such as SEMATECH or the Advanced Battery Consortium.

Second, the government should reorient its own R&D spending from purely military to civilian and dual-use R&D. At the height of the Cold War,

almost two-thirds of all government R&D went for narrow military purposes. That ratio has already declined to less than 60 percent and should fall to 50 percent in the coming years. As major defense systems are delayed or cancelled, the reductions in development and testing budgets—a range of perhaps \$4 to 8 billion—should be applied to civilian and dual-use R&D. Defense research and exploratory development should be kept strong but the new R&D budget should also emphasize generic technologies including new materials, biotechnology, computers and especially manufacturing processes. The White House Office of Science and Technology Policy (OSTP) should ensure that the efforts of all the agencies—civilian and defense—are better coordinated and better integrated with those of the private sector, as has been done for high-performance computing and communications.

Third, some of these funds should be used to expand federal support for cooperative projects in areas of strong industry-government mutual interest such as manufacturing processes, improving energy efficiency, developing environmentally benign products, improving the national information infrastructure, and technologies for improved health care and education. Specific steps include:

- Encouraging the Defense Advanced Research Projects Agency (DARPA) and the military services to actively promote dual use technologies.

TECHNOLOGY RECOMMENDATIONS

- **Enact a new Innovation and Commercialization Tax Credit.**
- **Redirect government spending to civilian and dual-use R&D.**
- **Expand federal support for cooperative projects with private industry.**



Evidence of potential commercial utility should be a plus, not a minus, in evaluating projects that are otherwise significant for national security needs.

- Expanding the Advanced Technology Program in the Department of Commerce to an annual program level of about \$750 million.
- Allocating 10 to 20 percent of the resources of the multi-program labs operated by the Department of Energy, of the NASA labs, and of selected Defense Department labs to jointly planned and jointly funded industry-government R&D on the basis of model Cooperative Research and Development Agreements (CRADAs) with private firms. Lab directors should be able to enter into these partnerships without long delays and micromanagement from their agencies.
- Modifying federal procurement rules to make the federal government a better consumer of leading edge technologies.
- Authorizing on a pilot basis DARPA, the Department of Commerce, the National Institutes of Health and perhaps others, such as the National Science Foundation's Engineering Research Centers, to participate directly in the commercialization of technologies they have supported, through equity participation or loans, increasing both their incentive to foster business successes and their funding for future efforts.

- Requesting the Department of Commerce to explore ways to facilitate filing for foreign patents by American

universities, perhaps involving a revision of the overhead rules.

Cooperative Government-Industry Technology Programs

A number of cooperative government-industry R&D programs were started in the 1980s, aimed at developing generic industrial technologies and building cooperation across industry, academia, and government. Key characteristics of such programs are industry participation in project planning, funding, evaluation, and personnel exchanges.

- **The Advanced Technology Program.** A key missing piece in the commercialization of technology is the R&D that falls between basic research (often federally-funded) and specific product development (usually industry-funded). This stage is known as precompetitive or generic R&D and is the focus of the Advanced Technology Program (ATP) within the Department of Commerce. ATP was established in 1988 to support private sector development of promising generic technologies. Project proposals are submitted by private sector businesses and joint ventures, and awards are made competitively based on an external expert review of their technical merit and business potential.
- **SEMATECH.** SEMATECH is an industry-government funded, industry-led R&D consortium created in 1987 to recapture US leadership in semiconductor manufacturing technology. Member companies set the research agenda and contribute at least half of the \$200 million in annual funding and approximately 60 percent of the technical personnel. A recent General Accounting Office review found that SEMATECH's technical progress is on schedule and that SEMATECH has led to improved cooperation among semiconductor makers and between semiconductor makers and their suppliers. Most observers credit SEMATECH with helping the US semiconductor industry and the semiconductor equipment industry regain global market share.
- **Engineering Research Centers.** The National Science Foundation established its first Engineering Research Centers in 1985 to foster an interdisciplinary, team oriented approach to engineering and to speed the conversion of advances in fundamental research in universities into competitive products and processes in the marketplace. There are currently 18 centers at major US universities in such critical technology fields as bioprocessing and biomedical engineering; optoelectronics, microelectronics and communications; and manufacturing and design. The centers are jointly funded by government and industry and are evaluated in part on their contribution to competitiveness and degree of interaction with industry.

Corporate Governance and Financial Markets

Our corporations can productively deploy their human and physical capital, and commercialize their technologies only if they are managed efficiently. Hence the Council decided that one of the initial priorities of its work would be the impact of the financial markets on management decisions and the processes by which our corporations are governed.

Our Subcouncil on Corporate Governance and Financial Markets concluded that many American corporations are becoming competitive in global markets but that far too many are still underperforming. Therefore, the Subcouncil applauded the major changes now transpiring in the relationships among management, boards of directors, and shareholders in a number of key companies. It believes that the continuation of this process will resolve many of the remaining governance problems and that no major new legislative initiatives are needed in this area. Nevertheless, the Subcouncil and the full Council recommend a series of governance initiatives that should be taken by boards of directors to increase their ability to monitor the performance of the CEO, the corporation, and the functioning of the board itself.

In particular, there is a need to develop a whole new approach to defining the "value" of a corporation and to measuring long-term corporate performance.

Companies should prepare periodic analyses of their long-term financial, strategic and organizational results in relation to goals established by management and the board. The analyses should include non-financial measures of long-term prospects which place greater emphasis on intangibles such as worker training, quality of product, research and development, and strategic positioning—items which do not fall neatly into the bottom line in the traditional securities industry price/earnings multiple valuation.

It is essential that these analyses be discussed with, and assessed by, boards and major shareholders. A "new view" of the corporation can only be achieved through the active involvement of boards of directors and shareholders to vigilantly monitor its direction. If employee development is given status—along with return to shareholders—as a measure of performance, potential management-employee antagonisms can be minimized. As workers increase their ownership through pension plans and employee stock option plans (ESOPs), they (and community representatives) become increasingly valuable as patient "relationship investors" with a long-term interest in the health of the company. The Council has decided to pursue these issues further by creating a new Subcouncil on Capital Allocation.

The Subcouncil rejected the conventional view that "short-termism" and excess trading in the financial markets are at the root of our corporate competitiveness problems. Rather those may be red herrings used as a scapegoats to avoid

RECOMMENDATIONS ON CORPORATE GOVERNANCE AND FINANCIAL MARKETS

- **Boards of directors and institutional investors must provide more active, ongoing monitoring of corporate performance.**
- **Companies should prepare periodic analyses, of non-financial measures of their long-term performance prospects.**

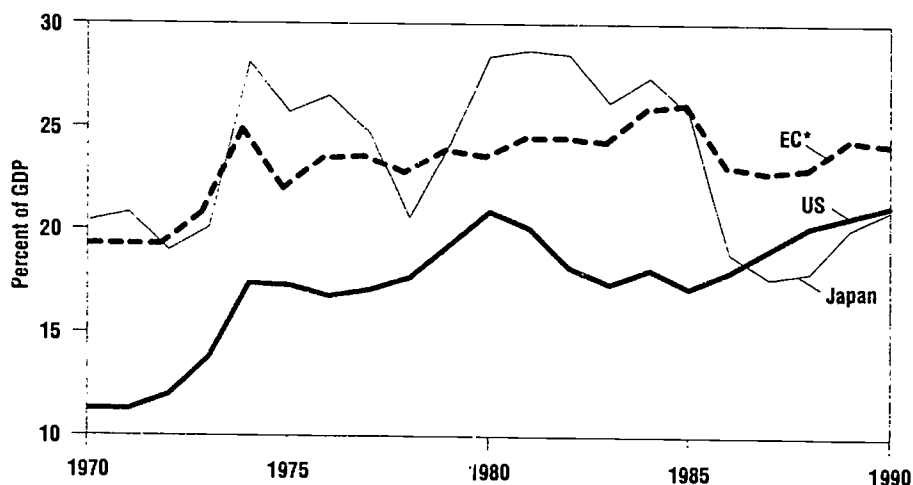
focusing on the true issue—poor managerial performance. The Subcouncil thus opposed proposals for transaction taxes or other efforts to “throw sand in the gears” of the financial markets. It concluded that improved corporate performance cannot be legislated but must be a matter of more active monitoring and oversight both on the part of boards of directors and institutional investors—well before the corporation’s problems become fully manifest and plants are forced to close.

Trade Policy

The ultimate test of America’s competitiveness is the standard of living of its population, not the trade balance. Nevertheless, trade is an increasingly important component of our competitiveness. Exports and imports of goods and services now equal one quarter of our entire GDP. That ratio has doubled over the past twenty years and is now as high as in Japan (Figure 6).

During the second half of the 1980s, export expansion became a driving force for the US economy and the major source of growth for manufacturing jobs. Given the difficulty of achieving rapid correction of the domestic structural problems highlighted throughout this report, the United States will probably rely heavily on renewed trade improvement over the next few years for economic growth and job creation.

Figure 6
Trade as a Share of GDP



* Estimated excluding intra-EC trade
SOURCE: Organization For Economic Cooperation and Development

Moreover, export-related jobs pay 17 percent more than the average US wage. Export-intensive industries employ more skilled workers and do more R&D than import-intensive industries.

At the same time, our persistent trade deficit is one of the most visible symbols of the economic challenges faced by America. Despite major gains in the second half of the 1980s, the US trade record of the last decade is dismal. The persistent deficit—which forces the United States to borrow abroad and build up the nation’s foreign debt—is expanding rapidly again. A rising trade deficit also intensifies pressures to restrict imports thus further undermining American competitiveness.

Another source of bad news is the composition of the trade deficit. US manufacturing continues to face major competitive challenges from abroad. In

the last decade, our exports of manufactured goods doubled but our imports almost tripled. The US export share remained stable in high-technology manufactures but lost ground in medium- and low-technology manufactures.

An effective trade policy is thus essential to any competitiveness strategy for the United States. American firms must have access to worldwide markets—which are three times as large as the US market in the aggregate, and even more important in some key sectors—to maximize the value of their sales, their economies of scope and scale, and hence their productivity. Exports diversify companies’ market base, protecting them against national cyclical developments and currency volatility. Global participation helps firms improve their

performance by exposing them to broader and more intense competition.

To maximize the impact on American trade performance of the policy changes recommended throughout this report, a cultural change is needed in American business thinking. Only 10 percent of US businesses are regular exporters. A new national "export mentality" must arise, tapping the vast potential of small and medium-sized businesses while encouraging current exporters to become even stronger in international markets.

Our Trade Subcouncil recommends, and the full Council endorses, six major initiatives to achieve the needed results. The first two focus on global growth and maintaining a competitive exchange rate for the dollar, the cardinal determinants of US trade performance in the short run. American exports can grow only if our foreign markets are expanding and if the dollar is priced at a level that permits our firms to compete successfully.

We recommend that the new Administration place high priority on developing a global growth strategy with our G-7 partners, especially Japan and Germany. Japan is running a record trade surplus, and it continues to rise. Germany is entering a recession, and the rest of Europe is being dragged down as well. But policies are available to rectify the situation: additional fiscal stimulus in Japan, where domestic demand is flat and the budget is in sizable surplus, and fiscal tightening in Germany which would promote lower interest rates in Germany itself and

throughout Europe. The United States, after launching a domestic program along the lines recommended in this report, should seek G-7 agreement on such a global package. Success in this effort would provide the foundation for much closer cooperation to maintain world growth on a continuing basis—with great benefits for all countries, including the United States.

The second requirement is maintenance of equilibrium exchange rates. The soaring dollar priced even the most competitive American products out of world markets in the mid-1980s. The United States should therefore seek agreement in the G-7 to build on the reference ranges maintained during 1987-88. Such a system is essential to assure American exporters that the dollar will remain at competitive levels as called for in the Omnibus Trade and Competitiveness Act of 1988. This in turn is necessary to foster the needed export mentality in American industry, and to energize American firms to invest—and create jobs—domestically to meet demand abroad.

Third, the United States must push hard—through multilateral, regional and bilateral negotiations—to open foreign markets to American products. It is essential to bring the Uruguay Round to a successful conclusion. Subsequent global negotiations should address issues that remain unresolved, particularly those relating to foreign investment, the interplay among national competition policies, and the

TRADE POLICY RECOMMENDATIONS

- Develop a global growth strategy with our G-7 partners, especially Japan and Germany.
- Seek agreement in the G-7 to restore reference ranges.
- Negotiate opening of foreign markets to American products.
- Sharply increase the quality and quantity of US export credits.
- Consolidate and double US export promotion efforts.
- Reduce or eliminate export disincentives that block billions of dollars of foreign sales by American companies.

linkages between trade and the environment.

The regional NAFTA negotiations have gone further than the GATT in achieving agreement on such issues as intellectual property rights, investment, and government procurement. In order to realize the full benefits of any NAFTA agreement, as President Clinton has already suggested, provision will have to be made for environmental protection, labor adjustment, and enhanced worker rights. Bilateral talks are especially important with Japan, and the Structural Impediments Initiative should be revised and reinvigorated, particularly with respect to antitrust and other competition policies. Section 301 of the trade law, which has been used effectively to pursue liberalization of foreign markets in the past, should be deployed in the future for that same purpose.

Fourth, we recommend a sharp increase in the quality and quantity of US export credit programs. Governmental export finance is crucial in determining the outcome of many major contracts, especially in the more advanced developing countries—which are now the world's fastest growing markets. The annual program level of the Export-Import Bank should be increased to \$20 billion (with an implied subsidy of \$1.2 billion). In addition, a major increase in commercial bank financing should be encouraged through Export-Import Bank guarantees for "bundles" of export credits to smaller businesses.

Export Promotion and Export Financing

Over 50 percent of US exports are accounted for by only 100 companies. Studies have found an enormous potential for exports among "infrequent exporters," such as the 50,000 US companies that make fewer than 12 overseas shipments per year.

Unfortunately, existing government export promotion programs are an inefficient, bureaucratic maze confusing to exporters and government officials alike. Ten federal agencies operate over 150 export promotion programs; no clear strategy or set of national priorities guides the funding of the programs. US export promotion programs are also underfunded and understaffed. A recent General Accounting Office (GAO) report found that in 1990 the United States spent \$0.59 for every \$1000 of exports in non-agricultural export promotion, while France spent \$1.99, Italy \$1.71, and the United Kingdom spent \$1.62.

An important step towards resolving problems in US export promotion was the 1992 legislation making statutory the federal Trade Promotion Coordinating Committee with a mandate to establish a comprehensive strategy for export promotion. This is a step in the right direction, but further commitment is needed to integrate export enhancement into an overall national competitiveness strategy.

Export financing can also play an important role in enhancing the competitiveness of US products and in attracting US firms to exporting. Export financing provides competitive financing, loan guarantees, or insurance to help US businesses close export deals, allowing US exporters to compete with foreign exports financed by foreign official export credit agencies.

However, US export credit programs too are woefully inadequate compared with those of our major competitors. The export credit programs of the Export-Import Bank of the United States (Eximbank)—the primary federal agency providing export credits—and other providers of export credits, support only 3 percent of total US exports.

Any significant increase in exports will also require substantially more commercial bank involvement in export financing. Smaller exporters, in particular, find it difficult to obtain export financing from commercial banks. Many American banks have withdrawn from the field, leaving only some 45 to 50 banks still actively engaged in export lending. One innovative solution to this problem, recently pioneered by First Interstate Bank of California and Eximbank, provides low-interest loans to small importers of American products, thereby benefitting small and mid-sized US exporters. Under this program, known as bundling, a US bank makes a substantial loan—guaranteed by Eximbank—to a foreign bank, which then makes smaller loans to foreign importers purchasing US goods. The package is then securitized and sold to investors.

Fifth, US export promotion efforts should be sharply increased, focused and improved. Working within the framework of the new National Economic Council, the Trade Promotion Coordinating Committee should establish a coherent strategy and clear priorities among the 150 current export promotion programs scattered across ten different agencies. A single budget function for export support, including export finance, should be created both within the Executive Branch (by the Office of Management and Budget) and for all relevant legislation (by the Congress). Funding for export promotion, currently

one-fourth to one-third that of our major European competitors, should be doubled over the next five years.

Sixth, a major effort is needed to eliminate, or at least sharply limit, our own export disincentives that block billions of dollars of foreign sales by American companies. All unilateral US export controls should be sharply limited since only multilateral controls can be effective against a target country. The current national security and foreign policy controls should be fused into a single entity (and authorized by a single law).

“A new national ‘export mentality’ must arise, tapping the vast potential of small and medium-sized businesses while encouraging current exporters to become even stronger in international markets.”

BEST COPY AVAILABLE

Investing In Physical Capital

The investments in human capital and technology already recommended will increase the payoff from new investments in physical capital. So will the suggested improvements in corporate governance and trade policy. All these measures can, over time, significantly enhance the productivity of the American economy.

Nevertheless, achieving the basic goal of doubling national productivity with growth rates of 3 to 3½ percent will require an increase of at least 4 to 6 percentage points in the share of GDP devoted to physical investment. With current GDP running at about \$6 trillion annually, the required increase in public and private investment will be \$250 to 350 billion (in 1992 dollars) per year by 2000.

Private Investment

The performance of American industry is determined over time by the cumulative level of investment in productive assets, by the allocation of that investment among diverse opportunities, and by the effectiveness with which that investment is put to work. In recent decades the



levels, patterns, and utilization of investment in American industry have been inadequate.

Of particular concern is the nation's investment in the manufacturing sector. The United States devalues manufacturing. Our companies pay their manufacturing engineers far less than their development and research engineers, scientists, lawyers, accountants and other key personnel. Our universities do very little training for manufacturing. We lag behind industrialized countries in the numbers of science and engineering degrees awarded (Figure 7). The status of those involved in manufacturing is considered second-class in many respects. Revaluing the role of manufacturing is an essential part of our investment strategy. For example, the National Science Foundation should fund 20 to 30 new programs that would

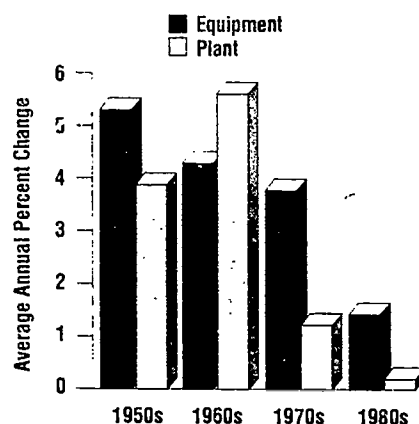
link engineering and management schools to train manufacturing managers.

Manufacturing accounts for less than 20 percent of GDP and employment but its qualitative impact on the economy is much greater. It is a crucial user and supplier of the services sector. Its workers enjoy higher-than-average wages. It generates the lion's share of the nation's R&D. Its performance is decisive for our trade balance.

However, the annual rate of growth of industrial investment in plant and equipment in the United States declined steadily from the 1950s through the 1980s (Figure 8). The proportion of our GDP devoted to private business investment in plant and equipment has lagged behind that of Japan and other G-7 countries for at least two decades. During the latter half of the 1980s, this investment gap widened substantially, especially in comparison with Japan. Private investment in R&D is also inadequate (see previous section on technology).

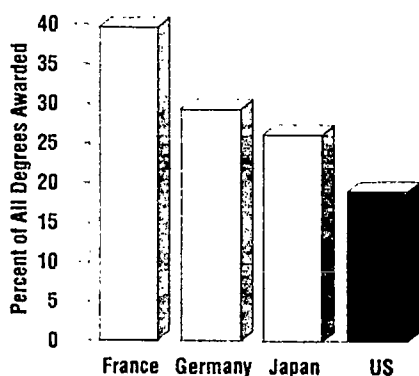
Effective use of investment capital is as important as levels of investment. The vanguard of American industry is undergoing a revolution in the way it does business, and this revolution offers the possibility of enormous productivity and performance gains with relatively modest increases in tangible investment. A number of American firms have already adopted "global best practices"—including the high-performance workplace and better labor-management relations—and hence have retained their

Figure 8
Real Growth in US Industrial Investment



SOURCE: Charles Steindel. *U.S. Investment Trends*. American Council for Capital Formation, March 1991

Figure 7
Science and Engineering Degrees Awarded, 1988



SOURCE: Organization for Economic Cooperation and Development

worldwide leadership. Many more must do so, however, if the nation as a whole is to regain its competitive position.

Medium and small firms, in particular, must acquire and implement the most productive technologies and manufacturing processes. They face special problems in identifying, validating and implementing best practices with respect to using technology, adopting better labor-management practices, and working out effective customer-supplier relationships. Their problems need special attention as part of any overall strategy. A "teaching factory" or manufacturing extension center that can offer help with state-of-the-art manufacturing equipment and systems should be located within a day's round-trip automobile travel from the majority of US manufacturing establishments.

A number of changes in government

policy can make a major contribution to achieving these goals. One of the most crucial determinants of private investments is the cost of capital, a major (though not the sole) element in determining corporate hurdle rates—the rate of return a company must project to be willing to undertake a given investment. Government can make a major contribution to reducing the cost of capital by eliminating its budget deficit; according to some models, real long-term interest rates would fall by two to three percentage points under such circumstances. Investment would increase sharply,

creating a large number of new jobs as well as improving the nation's competitive position.

Another key element in determining corporate hurdle rates is risk. Research suggests that private investment in the United States has become much riskier than in some of our major competitors, notably Japan and Germany, because of the greater instability of our economy as seen in the greater variance in our growth rate, inflation rate and exchange rate. We thus recommend that American economic policy be stabilized in the future on the basis of the new approaches

PRIVATE INVESTMENT RECOMMENDATIONS

- Institute a permanent Equipment Tax Credit.
- Authorize industry consortia for joint production.
- Allow more rapid depreciation allowances.
- Modify tax regulations to remove incentives to invest abroad.

Manufacturing Extension Centers

Firms learn about new production practices from various sources, including customers and suppliers, competitors, overseas visits, and vendors of equipment and training programs. No single trendy approach — be it "lean production" or "total quality" will suffice as a permanent solution to competitiveness. But help in implementing new management techniques and new technologies can be crucial for small and medium businesses with limited in-house resources.

In recent years, states and local interests, encouraged and sometimes aided by the federal government, have "extended" technical and business assistance to small firms to help them upgrade both their technologies and their management practices. These activities have been based loosely on the long and successful experience with agricultural extension in this country. Often such services function as brokers of information, making referrals to other experts, and complementing private and other public vendors of services, technical information, and products.

At the federal level, most prominent are seven Manufacturing Technology Centers sponsored and partially funded by the Department of Commerce. One of them, for example, the Cleveland Advanced Manufacturing Program (CAMP) has been in operation since 1984 and has worked directly with over 1000 regional manufacturers. CAMP offers on-site analysis by an engineer who assesses the firm's needs, decides what resources CAMP can offer, and assembles a team of engineers to work with the company on specific improvements. Typical assignments include improving delivery times, redesigning equipment to make it more efficient, cutting costs by reducing waste and pollution, and computerizing inventories.

History of the Investment Tax Credit

YEAR/QUARTER	CHANGE IN INVESTMENT TAX CREDIT
1962:Q1 to 1966:Q3	7 percent instituted effective January 1962
1966:Q4 to 1967:Q1	Suspended/effective October 1966
1967:Q2 to 1969:Q1	7 percent reinstated/effective March 1967
1969:Q2 to 1971:Q1	Eliminated/effective April 1969
1971:Q2 to 1974:Q4	7 percent reinstated/effective April 1971
1975:Q1 to 1985:Q4	Increased to 10 percent effective January 1975
1986:Q1 to 1992:Q2	Eliminated for property placed in service after December 31, 1985

Source: US Department of Commerce and Council for Capital Formation

recommended in this report.

There are six specific policy measures that should be adopted to promote new investment, especially in manufacturing.

First, we need an incremental and permanent Equipment Tax Credit (ETC). By limiting its coverage to equipment, and excluding plant and real estate investment, the credit can generate much higher payoff per dollar of tax expenditure. (Investment in research and commercialization is also important and has high payoff; it should be stimulated directly by the permanent ICTC proposed in the technology section, all of whose recommendations are complementary to those outlined here.)

There is considerable evidence that the additional investment generated by an ETC would offset its initial revenue costs within a very short period. The rate of the credit could be set at a higher level for its first year or two in an effort to provide both an early stimulus to the

economy and a boost to the long-term investment process which is so crucial to meeting our overall competitiveness goals. The ETC should not be covered by the Alternative Minimum Tax because such inclusion would sharply truncate its impact in generating new investment. (Our Manufacturing Subcouncil recommends that the ETC apply to all equipment investment, rather than incremental investment, but at a much lower rate.)

Second, the government should authorize industry consortia for joint production as well as research. There may be some industries, such as semiconductors and machine tools, where the relatively small size of American firms places them at a significant disadvantage against their foreign competitors. Antitrust policy should now view the global market as the relevant yardstick against which to judge industry concentration in relevant cases, and there may be industries populated

by numerous foreign firms where competition would be enhanced by permitting consolidated efforts by companies in this country.

Third, the tax code should be modified to permit firms to depreciate manufacturing process equipment, newly installed after the adoption of this policy, at a rate such that the "tax life" of the equipment would equal its "competitive life." In a rapidly changing manufacturing world, the time over which firms are permitted to depreciate manufacturing process equipment (usually five years) for tax purposes is often considerably longer than the competitive life of that equipment. It is not unusual for production equipment in fast-moving industries to be financially obsolete within two or three years. The result is that firms have to carry the costs of equipment they are no longer using, thus burdening the profitability of newer production systems they subsequently installed.

Fourth, Treasury regulations that require the apportionment of interest expenses between domestic and overseas operations for US firms operating in global markets should be modified. Current US regulations require the apportionment of essentially all of a US corporation's interest expenses against income from domestic and foreign operations in proportion to the value of its assets at home and abroad. No recognition is given to the interest expenses incurred by foreign affiliates in this procedure. Moreover, since interest

costs apportioned to overseas income are not typically recognized as costs of doing business by foreign host governments, they are lost to the firm as deductible costs in all jurisdictions. This significantly raises the return that must be earned on domestic investments, (the "user's cost of capital"), thus creating an incentive for US-based multinationals to make new manufacturing investments outside our boundaries. It also puts the domestic operations of these companies at a substantial tax and cost disadvantage relative to US-based subsidiaries of foreign competitors.

Fifth, Treasury Regulation 861.8 on the allocation of R&D expenses against foreign-source income should be rescinded, as recommended by President Clinton in his State of the Union message. Treasury Regulation 861.8 has the effect of creating an additional incentive for firms to move R&D offshore by enabling them to achieve more favorable overall tax treatment by doing so. The Council believes that it is to the benefit of the United States for firms to do their R&D here and so concludes that this regulation should be permanently rescinded, and all R&D performed in the United States should be attributed to US-source income.

Finally, the Administration should reconsider its proposal to put technology income received from abroad in a separate "basket-of-income" for foreign tax credit purposes. The net result of this proposal would be to reduce after-tax income derived from foreign use of

US technology, and thereby undercut incentives to carry on R&D activity in the United States.

Public Infrastructure

America thrives on the efficient movement of people, goods, and information, and stagnates without it. From the colonial King's Highway to the Wilderness Trail, from the building of the railroads to rural electrification, to the spread of the telephone and construction of the interstate highway system—innovation and advancement in transportation and communications infrastructure have brought prosperity and progress to our nation.

Over the last 25 years, however, there has been a massive under-investment in US infrastructure (Figure 9). Federal outlays on infrastructure in 1990 were half the level of 1980. Germany invests four times as much in this sector as we do. There is, of course, no absolutely "right" amount of infrastructure investment and economists differ on the magnitude of the effect of infrastructure investment on economic growth. But there is a widespread consensus that infrastructure investment and economic growth are intertwined, and that well-selected public investments in infrastructure can play an important role in furthering economic growth.

Americans are well aware of the effects of infrastructure disinvestment. They experience it daily in the form of

INFRASTRUCTURE RECOMMENDATIONS

- **Develop an intermodal strategy keyed to exports.**
- **Reform the nation's air traffic control system.**
- **Improve efficiency and aggressively maintain surface transportation.**
- **Create a bipartisan National Infrastructure Commission to remove the "pork barrel" approach to infrastructure.**
- **Establish a capital budget for the federal government.**
- **Unify the federal role in telecommunications policy and end the current regulatory gridlock.**

congested highways, broken water mains, air traffic delays, and reduced bus and rail service. The Department of Transportation reports that half of all roads were rated "poor" or "low/fair" in 1989. The nation's 21 primary airports experienced more than 20,000 hours of flight delays in 1990. Congestion on our highways alone has been estimated to cost \$100 billion per year, not counting pollution and wear and tear on vehicles. Congestion, deterioration, missing links, and obsolescence are real and costly impediments to our productivity and trade competitiveness.

For too long we have ignored the economic impact of deferred infrastructure investments or made them with no strategic plan in mind. Every \$1 billion spent on infrastructure creates thousands of new jobs—providing an attractive short-term payoff as well as a

major boost to long-term competitiveness. But the best short-term plan is a concerted beginning on a coherent long-term effort. That long-term effort should include well-selected projects with high positive rates of return.

Fortunately, the returns to infrastructure investment are extraordinarily high. A recent Congressional Budget Office study found yields of 30 to 40 percent on investments to maintain the highway system, and yields of 10 to 20 percent to expand the system in congested areas. Infrastructure investments also create market opportunities for American firms in some of the cutting-edge technologies of the future—including communications, the environment, and transportation—and can thus carry multiple benefits for American competitiveness. A major step-up in infrastructure investment can play an integral role in

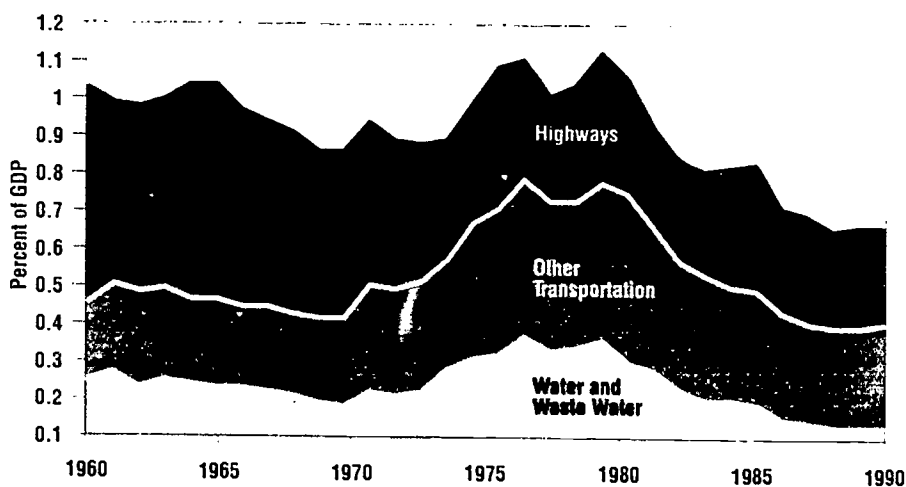
our strategy of getting "more bang from the buck" in deploying American resources.

Congress took an important step forward in strengthening our transportation system as a foundation of American competitiveness when it passed the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). But more remains to be done. Our Subcouncil on Public Infrastructure identified several components of the nation's transportation system that require particular attention.

First, all levels of government must approach the national transportation system from a strategic perspective of competitiveness. Numerous gaps now exist in intermodal linkages, particularly in rail links to highways and ports and in ground access to airports. Inadequacies exist in major facilities in the system, particularly ports. The Department of Transportation must develop an effective intermodal strategy, keyed in particular to our export efforts. The strategy should identify trade flows through major corridors and key intermodal linkages, designate ports of national and regional significance, establish revolving funds for improvements, and examine the adequacy of plans for airport access improvements.

In aviation, our Subcouncil found overwhelming consensus that the nation's air traffic control system needs basic reform if aviation's positive contribution to trade and tourism is to be sustained. A variety of models have been put forward; what is needed is a

Figure 9
Federal Investment in Infrastructure



SOURCE Congressional Budget Office

process—with the close involvement of the Federal Aviation Administration—to evaluate and adopt the appropriate organizational reforms.

Emerging transportation technologies—including intelligent vehicle and highway systems, high speed rail, and magnetic levitation trains—hold exciting potential for solving current transportation problems and opening new doors to efficient transport. Our Subcouncil recommends starting with full funding of such technologies at levels authorized in ISTEA. Substantial gains in efficiency could also ensue if the federal government would help states and localities in the wider deployment of off-the-shelf transportation technologies such as ramp metering and traffic signalization.

Given its importance, surface transportation received the most attention from our Subcouncil. The nation's interstate system is virtually complete and, by and large, America's days of building whole new systems of roads are over. Attention must turn now toward an aggressive program to update, maintain, and manage our existing system.

As a first principle, the Subcouncil emphasizes efficiency. We need to get the most out of our infrastructure tax dollars. US highways are designed to last 20 years; European roads last 40 or 50 years. Higher standards of road design and use of life-cycle costing will produce savings in the long run.

Efficiency will also be served if more preventive maintenance activities are

Roads and Bridges

Congestion and physical deterioration are the two central problems of our surface transportation infrastructure. The US Department of Transportation noted in its 1991 Conditions and Performance report:

"By all system performance measures of highway congestion and delay, performance is declining. Congestion now affects more areas, more often, for longer periods, and with more impacts on highway users and the economy than at any time in the Nation's history. . . . Almost 70 percent of daily peak-hour travel on the urban Interstate System in 1989 occurred under congested or highly congested (near stop-and-go) conditions. This represents an increase of almost 30 percent since 1983."

Highway congestion annually causes an estimated 8 billion hours of lost work and economic production and wastes over 3 billion gallons of gasoline. One study estimated that congestion costs from delay, extra fuel consumption, and higher insurance premiums on major freeways and arterial roads in 39 large metropolitan areas totaled over \$41 billion in 1987.

The deterioration of road conditions appears to have stabilized in recent years although a large backlog of poor roads exists. Congestion and deterioration are interlinked; roads deteriorate faster as the volume of traffic on them increases. Many roads today are being pushed beyond the capacity for which they were designed in terms of both the volume and technology of modern vehicles. Particular attention needs to be paid to bridges that are structurally deficient (i.e., they are unable to handle the normal vehicle loads or speeds). Since 1984 the number of structurally deficient bridges on arterials and collectors has increased by 25 percent; 25,000 interstate bridges will reach the end of their design lives in the 1990s.

made eligible for federal funding under ISTEA. In turn, we need to sharply increase the incentives to state and local officials to stress maintenance. Requiring public reports on the status of maintenance activities is one approach; another is to have bonds and grants carry "covenants" that lay out a schedule of maintenance.

Techniques that focus on the efficient use of our transportation system can also reduce congestion. The aim is to decrease vehicle miles traveled per

person rather than building new roads and capacity. Methods include establishing HOV (high-occupancy vehicle) lanes during commuting hours; reducing or eliminating auto and parking subsidies; offering more frequent "paratransit" service using minibuses, taxis, and vans to enhance the attractiveness of public transport; and implementing congestion pricing wherever feasible.

Such techniques will offer us a way out of the conflicts between environ-

mental and transportation goals that have stymied many communities in the last decade. Our Subcouncil recommends offering incentives to states to implement such congestion reduction methods aggressively, factoring state performance in this area into state allocation formulas.

Our Public Infrastructure Subcouncil recommends a two-step program for expanding transportation investment, which the Council endorses:

- Immediate full funding of the spending levels authorized in 1991 by ISTEA, an increase of about \$4 billion over FY 1993.
- Over and above ISTEA's authorized levels, raising the current level of infrastructure spending by up to \$12.5 billion to keep US roads, bridges, and transit in good working order and to keep America moving safely and reliably. This level would include \$1 billion for intermodal improvements; \$1 billion for bridges; \$1.5 billion to stop endlessly deferring maintenance on our public transit systems; and \$9 billion for necessary capacity expansions and pavement repairs on the National Highway System. The NHS is a system of 155,000 miles of high-traffic roads (including the interstate), to be designated under ISTEA, that forms the basis for the federal-aid program.

The Subcouncil also recommends a

Intermodal Connections

All aspects of the nation's transportation system affect our ability to engage effectively in international trade, as well as to move goods and services efficiently within the US economy. Fast, reliable, and inexpensive transportation reduces costs and delays, and can provide a competitive edge. For transportation to meet the goals of competitiveness, not only must each mode of transport work well, but the different modes must be connected in such a way as to provide a seamless network of working parts.

ISTEA, the landmark \$155 billion federal transportation legislation, encouraged an intermodal approach as a means of making the United States more internationally competitive. Nevertheless, problems continue to exist in the physical linkages across our modes of transport as well as in our basic infrastructure related to trade and commerce.

- **Road/rail links:** Problems include congestion, lack of adequate maintenance, bridge and ramp design problems, lack of adequate rail gateways, gaps in rail and highway links to seaports and airports, and inadequate rail routes to serve US/Mexico/Canada trade.
- **Ports:** Full participation in international commerce requires expensive harbor dredging of channels and berths to expand our major ports in order to accommodate large and efficient ocean vessels. On the land side, double-stack access to ports is often constrained by clearance obstacles along key rail routes: congested roads and inadequate rail linkages to marine terminals cause delays and raise costs.
- **Airports:** Congestion is a problem, particularly in terms of ground access to airports, in over half the major airports in the country.

An excellent example of improving intermodal connection is the Virginia Inland Port in Front Royal, Virginia. Located 220 miles from the seagoing port of Norfolk, this facility sharply improves intermodal connections between rail and truck transportation, saving costs and time for shippers, motor carriers, and steamship lines.

In operation since 1989, the facility handles over 16,500 containers which are off-loaded from trucks to daily rail runs along Norfolk & Southern's main track lines, directly into the port of Norfolk. The facility increases access to port facilities of goods from midwestern states, reduces waiting time for truck operators, and eliminates truck traffic in urban areas. For incoming cargo, the inland port provides access to industrial northeast markets without an extra port call or transfer of cargo via barge.

series of procedural steps to ensure the efficiency of new (and all continuing) infrastructure spending. First, consolida-

tion is needed in the Congress where three or four committees maintain jurisdiction over transportation matters in

each house; the Subcouncil recommends reorganization of the transportation and public works functions under a single committee to incorporate systematic consideration of intermodal and competitiveness concerns.

Second, the federal government's pork barrel approach to infrastructure—which has bred so much cynicism about infrastructure spending in this country—must be turned around. The Subcouncil recommends creation of a bipartisan National Infrastructure Commission to evaluate proposals for earmarking federal funds for demonstration projects, modeled after the Base Closing Commission.

Perhaps most importantly, the federal government should establish a capital budget. Every state government has one. Most foreign governments do. It is essential to rationalize the government's investment process by distinguishing clearly between current and capital expenditures. The latter should be accounted for, and could be financed, on a long-term rather than current basis. Infrastructure investment would of course be included in such a capital budget.

Nevertheless, it is crucial that such investment, like all new spending programs, be financed responsibly. We

believe that infrastructure investment, building on the tradition of the Highway Trust Fund, should be financed directly by earmarking the proceeds from any increase in the national gasoline tax.

Our Subcouncil also took a preliminary look at telecommunications infrastructure. This is an area where decisive action by US policymakers is critical in the short term if the nation is to take advantage of dynamic opportunities and advances in technology such as HDTV, fiber optics, and personal communication services.

The federal government's role in this area is different from traditional transportation infrastructure. The government is not being asked, nor should it offer, to pay for new telecommunications infrastructure. Instead, the federal government has two responsibilities: first, to replace the current melange of conflicting government opinions with a single, authoritative federal policy voice; and second, to define new "rules of the game" as swiftly and soundly as possible so as to end the current regulatory gridlock, promote equitable treatment of companies, and safeguard the public's access to reasonably-priced telecommunications services.

“For too long we have ignored the economic impact of deferred infrastructure investments or made them with no strategic plan in mind.”

The Bottom Line

The increases in investment required to double national productivity growth can be financed in only two ways: by increasing domestic saving in the United States or by borrowing from abroad. However, the United States has already borrowed \$1 trillion from the rest of the world over the past decade, making it the world's largest debtor nation. Almost one half of all American investment in the 1980s was financed by foreigners—who will therefore reap much of the payoff from those investments. The Council rejects the view that America's future growth should be financed by other countries. We rather believe that the current account deficit, which continues to run at about \$60 billion annually, should be eliminated, ending the continual build-up of foreign debt.

Hence the national saving rate will need to rise by 5 to 7 percentage points of GDP: 4 to 6 percent to finance the requisite rise in domestic investment and another 1 percent to compensate for elimination of the net capital inflow from abroad. Our target is thus to increase national saving by about \$40 to 50 billion per year (at current prices) over



the eight-year transition period. Net national saving in the United States dropped below 2 percent of GDP in 1991—the lowest rate in the postwar period. We have been below 4 percent of GDP for the last seven years, in contrast to saving rates of 8 percent of GDP from the end of World War II to 1980. Successful achievement of the proposed target would bring American saving back up to our national level of the 1960s, and almost up to the current level in Europe.

There are major advantages to such an increase in domestic saving. The most tangible is likely to be a sharp decline in interest rates, particularly long-term real rates. These rates were recently running at 4 to 5 percent—a nominal rate of 7 to 8 percent compared with inflation of about 3 percent. This is extremely high by historical standards, especially after four years of sluggish economic growth. The proposed increase in national saving could cut these rates in half. This would sharply reduce the cost of capital to American business, one of the major impediments to competitiveness identified by our Manufacturing Subcouncil. Lower interest rates would also spur a pick-up of growth in the short run, perhaps well before the increase in saving actually took effect because of the anticipatory tendencies of the financial markets.

Private Saving

There are two ways to increase national saving: by raising private (household or corporate) saving and by reducing public dissaving (the budget deficit of the federal government). Our Capital Formation Subcouncil examined a number of proposals, and previous policy initiatives, to promote private saving. Some would aim to stimulate such saving directly: Individual Retirement Accounts (IRA), cuts in the capital gains tax, elimination of taxation of interest and dividend earnings (à la Japan's recent *maruyu* system), and mandatory pension plans for all American workers. Some would seek to raise private saving by changing the incentive structure of our existing tax system to discourage consumption: a general consumption tax (which would exempt all saving from taxation), taxes on specific components of consumption (especially energy, tobacco, and alcohol), or a value-added or national sales tax. Other anticonsumption options include limiting interest deductions for individuals (notably on housing) and/or corporations (notably on their borrowings).

The Subcouncil concluded that most of the proposals that aimed to increase private saving directly were unlikely to produce any net increase in national saving. Some of the devices, such as liberalized IRAs, lead mainly to switches in the form of private saving rather than to any significant net increase. Moreover, all of them reduce government revenues

and are likely to cut public saving as much or more than they add to private saving. It must be noted that private saving dropped sharply in the 1980s despite the institution in the early part of the decade of a number of such "incentives."

The Subcouncil did consider one idea that might be promising: mandatory pension plans funded jointly by employers and employees. The idea is to require pension plans for all employees, including the half of the labor force which now carries no such plans—and generates little or no saving. There would be no favorable tax treatment for these plans so no offsetting loss of government revenues would result. Institution of such plans would thus *ipso facto* increase private and overall national saving. Even though many members were attracted by the idea of expanding pension coverage, others were concerned about the costs this would levy on employers. The Council thus decided not to propose the idea at this time.

One other idea was considered by our Capital Formation Subcouncil that might merit further development: a moral suasion campaign led by the President to persuade Americans to save more. Few Americans know how much they save, relying wholly on Social Security and (in some cases) their company pension plans. In fact, relatively few Americans save anything at all outside these channels. The government could develop saving norms for different income groups, to imple-

ment the national saving goal recommended in this report and inform every citizen of the implications for his or her personal situation. The Social Security Administration now provides all participants with full information on their contribution and prospective benefits but only upon request; it could do so annually on its own initiative as a basis for providing every adult, or at least those who seek it, a recommendation for the level of additional saving needed to meet normal retirement and other objectives.

In addition, the Treasury Department could look into other ways to increase the propensity to save. For example, special programs could be crafted to inculcate the habit of saving in young people. It is interesting to note that the "Saving Stamp" program in schools was abolished in the early 1970s at about the same time that the national saving rate began to fall. The federal government could also work with the banking industry to assure that no-cost savings accounts for small savers are available.

An indirect way in which policy can promote private saving is to discourage private consumption, primarily by increasing the taxation of consumer goods and services. A dollar decline in consumption, at any given level of income, automatically becomes a dollar increase in saving. Hence the Council, in its First Report, indicated that any future increases in tax policy, enacted to cut the federal budget deficit and thus

public dissaving, should simultaneously seek to tilt private incentives in favor of saving and away from consumption. We now turn to the budget program in which such tax changes must play a part.

Public Saving: The Budget Deficit

Given the lack of reliable policy tools to directly increase private saving by any substantial amount, it is essential to considerably alter the fiscal position of the federal government in order to raise national saving by 5 to 7 percent of GDP by the end of the decade. The budget deficit (even including the surplus in the Social Security Trust Fund) has eaten up over two-thirds of all private saving through the 1980s, leaving few domestic resources available to fund private investment. A full elimination of the deficit over the eight-year transition period has been proposed to provide enough resources to fund our full competitiveness program. An even more comfortable outcome, from the standpoint of assuring the needed improvement in national competitiveness, would be to convert the deficit into a surplus of as much as 2 percent of GDP by 2000. Any deficit reduction program must of course be consistent with our goal of reducing unemployment over the relevant time period.

The Council's recommendations for improving American competitiveness

“Our target is to increase national saving by about \$40-50 billion per year over the eight-year transition period...”

will require *additional* expenditures, including tax expenditures, in several areas: incentives for private investment, public infrastructure, education and training, research and development. We estimate that these costs will total about 1 percent of GDP. Achievement of our overall target for budget correction will thus require additional correction of that amount, bringing the gross total of required budget deficit cuts to about 6 to 8 percent of GDP over the next eight years.

It might be prudent to target the higher end of this range in light of the historic tendency of the deficit to come in higher than expected, the inevitable slippage in implementation of any program, and the critical importance of raising national saving and investment as part of any comprehensive competitiveness strategy. Current declining long-term interest rates, resulting from the credibility given to the President's deficit reduction program, will provide a strong economic stimulant. But this credibility could be easily eroded if the program falls short of its goal or if large spending programs are not tightly controlled.

Moreover, there are significant benefits to budget correction that range beyond providing resources for a more competitive economy and reducing long-term interest rates. On fairness grounds, each generation should pay for its own spending rather than pass on those costs to future generations, in the form of huge interest payments on the

national debt. Restoration of budget balance would permit fiscal policy once again to be used to counter cyclical slowdowns in the economy. The inability to use fiscal policy has clearly prolonged the recent slowdown.

On the other hand, it is extremely difficult to foresee the course of the economy over a period as long as eight years. This will be especially true in an era of fundamental transformation such as we are advocating. Moreover, it must be recognized that the initial impact of reducing the budget deficit could be to dampen growth—which is no remedy for America's competitiveness problem. We do not advocate budget correction for its own sake but rather because we believe it is essential to provide the resources needed to fund an expansion of investment. That investment, in turn, is central to achieving our fundamental goals of sharply increasing national productivity growth and achieving a rate of economic expansion that will create high-wage jobs.

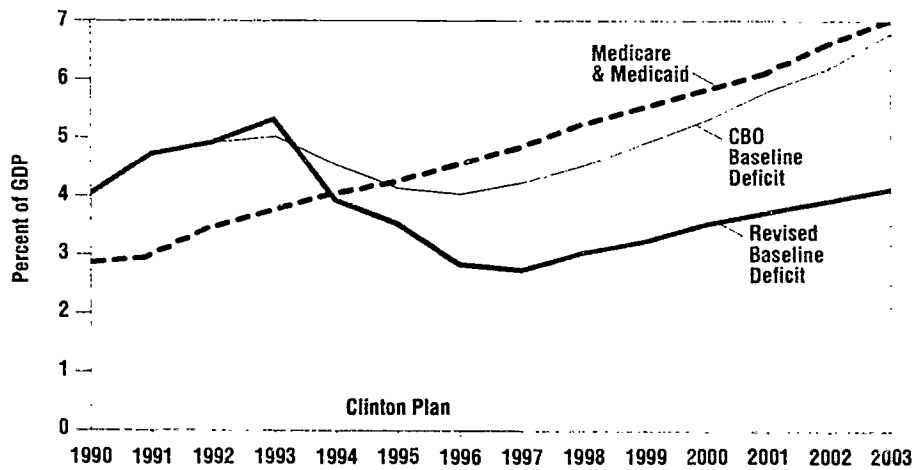
It must also be recognized that the benefits that offset the dampening effect of budget correction will depend not only on full implementation of the pro-competitiveness (and hence pro-growth) measures proposed in this report, but also on market reactions, international events, and other developments that lie beyond the reach of policy and anyone's ability to forecast. In addition, favorable developments could occur that would reduce the magnitude of needed budget adjustment:

- Productivity growth based on existing investment could rise as a result of the corporate restructuring of the late 1980s and aggressive use of improved corporate governance procedures; encouraging preliminary data for 1992 (productivity growth of 2.7 percent or more) suggest this may already be occurring.
- New policy actions, including those emanating from our own proposals, could generate even more "bang for the buck" than we anticipate and thus reduce the increased *level* of investment (and hence saving) needed to achieve our basic targets.
- Private saving could rise autonomously, as it fell autonomously in the 1980s, reducing the needed reduction in public dissaving via budget correction.

In light of all these uncertainties, we have decided to split our budget recommendation into four parts. First, we list a wide variety of options for cutting the deficit as developed by our Capital Formation Subcouncil. This menu should provide a useful guide for the Administration, the Congress, and all others who want to assess the range of possibilities.

Second, we support the basic thrust of the program proposed by President Clinton as a good start toward dealing with the problem. If fully implemented, that program would cut the deficit from over 5 percent of GDP to about 2½ percent of GDP over the next four years

Figure 10
The Budget Deficit and Health Care Costs



SOURCE: Congressional Budget Office and the Office of Management and Budget

(Figure 10). It would increase national saving by almost 3 percent of GDP by 1997. It would provide a good foundation for achieving the sharp increase in investment that is needed to achieve our fundamental goals.

The third element is the conduct of an intensive "mid-course review" of the entire situation as the initial four-year period comes to an end. The budget picture will of course remain under constant surveillance, including by the Competitiveness Policy Council. But we recommend a particularly intensive review in two or three years that would assess the evolution of the key variables to that point: productivity and economic growth themselves, changes in the levels of national investment and saving (both public and private), progress in implementing a comprehensive competitiveness strategy as proposed here, and its payoff in speeding

growth by enhancing the returns to national investment in both human and physical capital. Firm decisions for the remainder of the decade would be based on the outcome of this reassessment of the results to date and the future outlook at that time.

Fourth, our best present guess is that further deficit reduction will be needed. The need may arise to replicate in the second half of our eight-year period the proposed outcome for the initial four years—by further reducing the deficit that will remain even upon successful execution of the program proposed by President Clinton for 1993–97. Given all the uncertainties, we have decided not to make detailed proposals for that second phase of the effort at this time. Nevertheless, we will suggest several illustrative possibilities in an effort both to help the evolution of thinking that may be necessary to deal with the rest of

the problem later and because of the inevitable implications for immediate budget action of any potential second-stage effort.

Our Capital Formation Subcouncil developed a list of options both for cutting government expenditures and raising new revenues. The Subcouncil did not make specific programmatic recommendations to the Council, however, and we spent a good deal of time addressing the issue ourselves. Additional possibilities for cutting the deficit emerged during those discussions.

The largest items identified in our process as potential contributors to a budget correction package include: further defense spending cuts, changes in the Social Security retirement age, limits on COLAs for non-means tested pension programs, Medicare reforms, further cuts in discretionary spending programs, and reductions in farm aid. Additional revenue could come from new taxes on cigarettes and alcohol, a value-added tax, limits on itemized deductions, further raising marginal income tax rates, reducing or eliminating the home mortgage interest deduction, further increases in energy taxes (a gas tax or carbon tax), limiting the employer health exclusion, and further taxing Social Security benefits and Medicare insurance value. The totals involved could far exceed the cuts required to raise national saving even by the maximum amounts that would be needed to achieve our investment and

productivity targets.

Some of President Clinton's proposals appear on this list, and the Council believes that the first step toward raising the national saving rate should be early adoption of his program. No member of the Council agrees with every specific element of the President's proposals. Some Council members believe that the overall program should be considerably larger. Some would prefer that a larger share of the reduction in the deficit derive from cuts in government expenditures. Others expressed doubt that such reductions could be achieved without causing serious short-run dislocations throughout the economy. We unanimously agree on the need for new revenue, in the context of a spending cut program, to achieve these goals but there are differences of opinion on what size and form those revenue measures should take.

Given our mandate, we are particularly concerned that the specific elements of the program—along with its overall contribution to raising the national saving rate—work toward improving the nation's competitive position. We are therefore gratified that the main components of the "short-term stimulus" part of the President's program—the investment tax credit and acceleration of public infrastructure investments—are fully consistent with the recommendations for long-term competitive improvement presented in the previous sections of this report (though we believe that the investment

tax credit should be made permanent in order to increase the share of investment in the economy on a lasting basis). We particularly applaud the inclusion of a new energy tax in the package because it will encourage more efficient—and therefore more productive—use of energy by American consumers and businesses. An energy tax also provides additional incentives for private saving by discouraging consumption: several Council members strongly prefer a considerably larger magnitude for that component of the program. Any such program would have to include significant offsets to help low-income groups, such as energy assistance and earned income tax credits.

In the aggregate, however, we applaud the President's effort to begin putting the country's fiscal house in order. The Council knows, from its own experience, the difficulties of crafting a budget program that is both effective in correcting the deficit and fair in distributing the resulting costs throughout society. Our group was able to reach full consensus on the First Report that we delivered to the President and Congress in March 1992. We achieved unanimity on all of the recommendations contained in the previous sections of this report, which constitute by far the largest part of our effort, despite the existence of sharp differences of view at the outset of our debates on a number of topics. We were striving to develop similar agreement on our budget proposals but were, in all

candor, finding it difficult to reconcile strongly divergent views of some of our members on both the size and shape of the package.

When President Clinton delivered his proposals on February 17, we therefore decided to put our personal differences aside, in the interest of forging a national consensus on this crucial issue, and to register our support for the basic thrust of his program. We suspect that modifications will be made in specific components thereof and, as indicated, some Council members would support some of those changes. The Council concludes unanimously, however, that a substantial attack on the deficit is absolutely crucial to a lasting restoration of American competitiveness and that the President's proposals constitute a major initial step in that direction.

If the "mid-course review" that we advocate for 1995–96 reaches a conclusion that additional budget action is needed beyond 1997, more difficult actions will probably be required. At that point, sizable expenditure cuts in domestic programs could probably be achieved only by addressing the non-means-tested entitlement programs, notably health care. On health care reform, the Council has made no independent estimate of budget impact. We simply assume that reform, including its revenue component, will by FY 1997 trim costs below the rapidly expanding baseline figure of the Congressional Budget Office by enough to

finance coverage of the population currently without health insurance. Thus we assume no net impact on the budget during our first four-year period from the impending changes in the health care program. Beyond FY 1997, net savings might become possible and would have to be considered in any further budget efforts.

On the revenue side, one future possibility, of course, would be to further increase the specific tax rates (at the same time cutting spending) included in whatever program emerges from the current debate for the coming four-year period. For example, each additional cent per gallon in a gasoline tax would raise an extra \$1 billion of revenue. Extending the increases in marginal income tax rates for individuals not currently included in the President's plan would raise about \$20 billion per percentage point.

Another possibility, which we noted in our First Report and would restate here as a possibility to be seriously considered, is an across-the-board consumption tax or a value-added tax (VAT). Either would have the dual advantage of potentially raising substantial amounts of revenue while simultaneously tilting the nation's incentives toward saving and away from consumption.

Definitive judgments on these steps, or others that would extend the process of cutting the budget deficit, should await the results of the initial phase of the effort and an evaluation of the situation in two or three years. The urgent step now is to begin the process with a sizable, fair, and effective package such as that proposed by the President. American competitiveness cannot be restored without a firm commitment to budget correction.

“If we have the vision, the will and the heart to make the changes we must, we can still enter the 21st century with possibilities our parents could not even have imagined, and enter it having secured the American dream for ourselves and future generations.”

**— President Clinton
Address to Joint
Session of Congress
February 17, 1993**

The Future Work of the Competitiveness Policy Council

This is the Second Report of the Competitiveness Policy Council. The Congress intended the Council to be an ongoing operation. Some of our own members were initially skeptical about the value of the Council. All now feel strongly, however, that the quadripartite (business-labor-government-public interest) and bipartisan features of the Council enable it to play a uniquely constructive role in helping to shape both the national debate and policy alternatives in the wide array of competitiveness issues. Former Secretary of Commerce Barbara Franklin, who represented the Bush Administration on the Council in 1992, concluded from her experience with the group that “the Council represents a remarkable opportunity for sustained high-level bipartisan deliberation on the Nation’s most pressing economic questions.”

We have spent considerable time considering the future role of the Council and how it can contribute most effectively to American competitiveness. We envisage a three-part program of work for the Council in 1993. **First**, on the basis of the detailed proposals made in **this report**, we intend to actively participate actively in the **national**



debate on specific competitiveness issues as they come before the Administration, the Congress and the nation.

The legislation establishing the Council, the Omnibus Trade and Competitiveness Act of 1988, directs us to "provide policy recommendations to the Congress, the President, and the federal departments and agencies regarding specific issues concerning competitiveness strategies." In our initial deliberations in 1991, we concluded that we should not comment on specific issues until we had studied the whole question thoroughly and developed our own proposals for reform. With eighteen months of work and the release of this set of recommendations, we now feel prepared to play the role of "competitiveness ombudsmen" assigned to us by Congress.

Second, we intend to monitor closely—and actively campaign for—implementation of the proposals made in this report and in our First Report. In each of our future reports, we will present our analysis of the progress made during the previous year in putting into practice both our own ideas on competitiveness and those emanating from other quarters, including the government and private groups such as the Council on Competitiveness.

During 1992, for example, no action has been taken on the proposal in our First Report for immediate implementation of the Competitiveness Impact Statements called for in the Omnibus Trade and Competitiveness Act of 1988.

That Act requires the President and agency heads to include a statement on the impact of relevant legislative proposals "on the international trade and public interest of the United States" and the ability of US firms to compete in foreign and domestic markets. No such statements have been submitted, however, and the Congress has not insisted on them. We note the failure to do so and reiterate our proposal.

A second suggestion in our First Report has been more successful. We concluded that the present governmental structure of the United States "was not designed to help this country compete in a global economy" and recommended designation of an agency to begin assessing the likely course of key American industries, to provide a baseline against which to judge specific competitiveness problems in the future. We are pleased that the International Trade Commission (ITC) has now created an Office of Competitiveness to institute such analyses. The Council and the ITC have been working closely together in developing this idea and we look forward to continue to cooperate with them in the future.

In addition, the conclusions in our First Report that the government is not presently organized to promote American competitiveness was primarily responsible for a decision by the Carnegie Endowment for International Peace and the Institute for International Economics in mid-1992 to create the Commission on Government Renewal to

recommend changes in organizing the Executive Branch. The Commission delivered its report, *Harnessing Process to Purpose*, to then President-elect Clinton on November 4 and publicly released the report a week later. The new Administration has adopted the "three council system" recommended by the Commission, including a National Economic Council that could coordinate and help direct the comprehensive competitiveness strategy that we are advocating.

To help our Council monitor and promote implementation of our recommendations, we will maintain the eight Subcouncils that have played such a crucial role in our program over the past year. The Subcouncils will not need to meet as frequently in 1993 but will play a role in helping us track responses to their proposals and related developments.

Third, we will create five new Subcouncils to address key additional competitiveness issues during 1993. On the basis of their work, the Council hopes to make recommendations in these areas in its Third Report in early 1994. The new Subcouncils will address:

- Creating High-Performance Workplaces
- Capital Allocation
- Health Care
- Social Problems
- Tort Reform

1. *Creating high-performance workplaces.* It is clear from all of our work to date, particularly in the Manu-

facturing and Training Subcouncils, that the creation of "high performance workplaces" is central to improving American competitiveness. Doing so requires intense and innovative collaboration between labor and management.

2. Capital allocation. New research, particularly as conducted at the Harvard Business School under the sponsorship of the private sector Council on Competitiveness, has raised fundamental questions about the efficiency of America's system of capital allocation in supporting the competitiveness of our economy.

3. Health care. In its First Report, the Council identified health care costs as one of the six most important competitiveness issues facing the United States. We decided not to create a Subcouncil on the problem during 1992, however, because plans for addressing it were still at an early stage and were being developed in a number of forums. That work is now being done and it is clear that health care reform will now be at the top of the national agenda until a new program can be devised and implemented. The Council believes that it is critical to be sure that any new program, because of its enormous impact on the economy, take fully into account its effect on the country's overall competitiveness. Hence we have created a Subcouncil to assess that aspect of the question.

4. Social problems. Throughout our work over the past year, especially on the top priority issue of human capital, we confronted the fact that America's

social ills—drugs, crime, family breakdown and the like—have a pervasive impact on our ability to compete. These issues are not usually addressed by economists or in the competitiveness context. Yet they critically affect the country's capabilities. We have therefore decided to create a Subcouncil on the topic.

5. Tort reform. It is widely argued that excessive resort to the courts is levying several hundred billion dollars of "unproductive costs" on the economy annually. This includes a significant portion of the nation's medical costs. The Council has been criticized for failing to address this issue in its initial work program. One reason we did not is that it was being actively pursued at the time by the President's Council on Competitiveness in the Bush Administration. That Council no longer exists, however, and tort reform clearly offers important possibilities for reducing business and personal costs.

A number of other issues have been suggested for consideration by the Council. All have important implications for American competitiveness and we plan to keep them under review. We have resolved throughout our work, however, to prioritize the many elements of the competitiveness problem and devote attention to those which appear most important. We nevertheless list the other issues that have been cited to us most frequently, as an indication of national concern over them and in the hope that others may choose to address them in their own work:

1. Services productivity. Services account for about 75 percent of GDP and most of the sector has lagged badly in improving its productivity. However, it is difficult to address the problem generally because "services" cover such a wide range of different industries including airlines, banking, computer software, railroads, tourism, trucking and the like. We are already addressing some of the most important components of the sector, notably education and health care.

2. Banking reform. The health of the American financial system is important for the economy's overall competitiveness. Our legal and institutional framework is nevertheless a carryover from the 1930s and comprehensive banking reform failed in 1992. Our Subcommittee on Capital Allocation will consider parts of this topic.

3. Energy policy. Americans consume about twice as much energy per capita as Europeans and Japanese. We now depend on foreign sources for more than half of our energy consumption. That ratio is expected to climb sharply over the coming decade. Oil imports already account for about half the total trade deficit. (We have introduced the issue by including increased energy taxation as part of the budget package suggested in this report.)

4. Antitrust policy. Some believe that both present antitrust legislation, much of which dates from a century ago, and its present implementation dampen the competitiveness of American industry in

a global economy. Our Trade Subcouncil addressed several aspects of the issue and recommended a comprehensive analysis by the full Council.

5. Regulatory reform. Beyond tort reform, it is widely asserted that other forms of governmental regulation—concerning the workplace, the environment and other central elements of the economy—are generating hundreds of billions of dollars of “unproductive costs.” After declining in the middle 1980s, these costs apparently began to rise again in the last few years. As with “services productivity,” however, a major problem in addressing the issue is the vast number—and widely different nature—of the components of the issue. We have already looked at some of them, such as export controls and other trade regulations, and will be considering a number of others in our Subcouncils on tort reform, health care, high performance workplaces, and capital allocation.

Conclusion

The United States continues to face a major competitiveness problem despite the recently more favorable economic and productivity news. The new Administration and Congress have a historic opportunity to deal with it. This report offers a comprehensive strategy for doing so.

Our strategy would address each major component of America’s competitiveness problem. It would sharply increase national investment in our

people, who lie at the root of our competence as a nation. It would sharply increase investment in our physical capital, both through higher private investment and through restoration of the public infrastructure. It would devote a much greater effort to developing and, particularly, to commercializing technology. It proposes a more effective trade policy to support the restoration of our competitive strength.

The Council’s program calls for a sharp alteration in America’s national priorities: from consumption and borrowing to investment and saving, in both the private and public sectors. It seeks to promote a shift in the allocation of investment, from some of the less productive avenues of the 1980s to sectors that are central to our long-term competitiveness. It recommends a program to pay for these shifts responsibly, particularly by beginning the difficult but crucial process of restoring fiscal stability to the government itself. Only by making the needed investments now, and by generating the resources to do so responsibly, can the United States look forward to a bright economic future.

Our bipartisan, quadripartite Council urges early adoption of the program presented in this report. We believe that the American people are not only ready for such a program but in fact are insisting on it. Political leaders have everything to gain from instituting the effort and much to lose if they shrink from doing so.

We know from past history that the United States can meet the challenge if it

galvanizes itself to do so. We know from some of the encouraging developments in recent years that the underlying strengths of this country remain intact. We also know, however, that we are competing with countries that are moving ahead rapidly in today’s highly interdependent world economy. The urgency of launching the reform process is greater than ever.

The Council is greatly encouraged that the new Administration is moving in many of the directions advocated a year ago in our First Report and in far greater specificity in this report. We deeply appreciate the strongly positive reaction to our First Report in the Congress, and its constant encouragement of our work. We believe that our effort to reach out to the business, labor and other communities in the course of our effort has been exceedingly fruitful, and fully justifies the judgment of the Congress to create our Council as a unique quadripartite body.

We hope that this report will help advance both public understanding of America’s competitiveness problem and promote the adoption of a comprehensive policy strategy to correct it. We believe there is a good prospect that, with such understanding and effort, the United States can become a fully competitive nation again by 2000—the end of the decade, the end of the century, and the end of two Presidential terms. Our fundamental goal is to restore American competitiveness for the twenty-first century and we look forward to working closely with the new Administration and the Congress to that end.

March 5, 1993

Dr. C. Fred Bergsten
Chairman
Competitiveness Council
11 Dupont Circle, N. W.
Washington, D. C. 20036

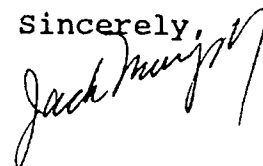
Dear Fred:

I have previously indicated to you that I have serious problems with the "Public Saving: The Budget Deficit" section of the Second Annual Report of the Competitiveness Policy Council.

These serious differences are not over the very real need for deficit and debt reduction -- we all agree on this. The differences are over the fact that the plan proposed by the Administration will cause the national debt to increase by another trillion dollars over the next four years, with essentially no meaningful reduction in government expenditures. The plan, as proposed, essentially reduces the rate at which the national debt increases by raising taxes significantly. The problem is government spending, not taxes.

I am very disappointed that the Competitiveness Policy Council chose to spend so much of its resources on formulating multiple techniques to raise taxes, which are counter-competitive, rather than tackle the difficult task of identifying spending programs that should be significantly reduced or eliminated. Delaying these spending cuts another two to four years is not in the best interest of the nation and its people.

Sincerely,



John J. Murphy

About Our Members

RAND V. ARASKOG has been Chairman, President and Chief Executive Officer of the ITT Corporation since 1980. He is also chairman of the Supervisory Board of Alcatel N.V, ITT's joint venture with Alcatel Alsthom of France, the world's largest telecommunications manufacturing company. Mr. Araskog is a director of several corporations, the New York Stock Exchange, and the Federal Reserve Bank of New York. He is a member of the Business Roundtable and author of *The ITT Wars*. He spent five years at the Department of Defense during the late 1950s.

JOHN J. BARRY is the International President of the International Brotherhood of Electrical Workers, a position he has held since 1986. He started as an apprentice in the electrical construction industry in 1942 and has held numerous elected positions in organized labor since 1962. He is a Vice President and Executive Council member of the AFL-CIO. He serves on many boards including the U.S. Council for Energy Awareness and the American Productivity Center.

C. FRED BERGSTEN, Chairman of the Council, is Director of the Institute for International Economics, which he founded in 1981. He was Assistant

Secretary of the Treasury for International Affairs from 1977-1981 and served on the senior staff of the National Security Council from 1969-1971. Dr. Bergsten is the author of 19 books on a wide range of international economic issues, most recently *America in the World Economy: A Strategy for the 1990s*.

WILLIAM GRAVES is the Secretary of State of Kansas. He was first elected in 1986 and is now serving his second term. He is a member of the board of the National Association of Secretaries of State and of Leadership Kansas. He is also a member of the American Council of Young Political Leaders and has served as an election observer in Taiwan. Mr. Graves is active in numerous civic organizations including the Kansas Chamber of Commerce and Industry.

JOHN J. MURPHY has been Chairman, President and Chief Executive Officer of Dresser Industries, Inc. since 1983. He serves on the boards of PepsiCo, NationsBank Corporation, and Kerr-McGee Corporation. Mr. Murphy is also Chairman of the Board of Trustees of St. Bonaventure University, and U.S. Chairman of the Trade and Economic Council. He serves on the Board of Trustees of Southern Methodist University and the Board of Directors of

the U.S. Chamber of Commerce and the U.S.-China Business Council.

EDWARD V. REGAN is the New York State Comptroller. He was first elected to this position in 1978 and is now serving his fourth term. Among his many duties is the trusteeship of New York State's pension funds, whose assets now total over \$50 billion. He was a member of the President's Commission on Industrial Competitiveness in 1983-85. Mr. Regan teaches at the Stern Graduate School of Business (NYU) and writes and lectures frequently on municipal finance, pensions, and corporate governance issues.

BRUCE R. SCOTT is the Paul W. Cherington Professor of Business Administration at the Harvard Business School, where he has taught since 1962. Mr. Scott teaches a course in comparative economic strategies of countries and has co-authored a study of industrial policy in France, an analysis of the Venezuelan economy, and more recently a study of the prospects for transition in South Africa. He is co-author (with George Lodge) of *U.S. Competitiveness in the World Economy*.

ALBERT SHANKER is President of the American Federation of Teachers, a post he has been elected to since 1974. He has taught in the New York City public schools and at the graduate level. He is a vice president and Executive Council member of the AFL-CIO. Mr. Shanker serves on numerous boards including the National Academy of Education and the National Council on Education Standards and Testing. His weekly column, "Where We Stand," has appeared regularly for over 21 years.

ALEXANDER B. TROWBRIDGE is President of Trowbridge Partners, Inc. which he founded in 1990 following ten years as president of the National Association of Manufacturers. He has held a number of positions in the public and private sectors including U.S. Secretary of Commerce from 1967-68, President of the Conference Board, and Vice Chairman of Allied Chemical Corp. He serves on ten corporate boards and is a charter trustee of Phillips Academy in Andover, Massachusetts.

EDWARD O. VETTER is President of Edward O. Vetter & Associates. He previously held a number of positions at Texas Instruments including Executive Vice President and Chief Financial Officer. Since retiring from Texas Instruments Mr. Vetter has served as Undersecretary of Commerce from

1976-77, Energy Adviser to the Governor of Texas from 1979-83, and Chairman of the Texas Department of Commerce from 1987-91. He is a director of the AMR Corp., advisor to several venture funds, and a trustee of The Massachusetts Institute of Technology.

LYNN R. WILLIAMS is the International President of the United Steelworkers of America, a position he has held since 1983. He is a Vice President and Executive Council Member both of the AFL-CIO and of its Industrial Union Department. Mr. Williams is a member of numerous organizations including the Collective Bargaining Forum, the National Committee for Full Employment, the Committee for National Health Insurance, the National Planning Association, the National Institute for Dispute Resolution and the Economic Policy Institute.

Capital Formation Subcouncil

Chairman

Peter G. Peterson
Chairman, The Blackstone Group

Neil Howe, *Staff Director*

Membership

Barry P. Bosworth
Senior Fellow, Brookings Institution

Charles A. Corry
Chairman and CEO, USX Corporation

Benjamin Friedman
William Joseph Maier Professor of Political Economy, Harvard University

James Galbraith
Professor, University of Texas at Austin

Joseph T. Gorman
Chairman, President and CEO, TRW, Inc.

William Gray
President and CEO, United Negro College Fund

George Hatsopoulos
President, Thermo Electron Corp.

Yolanda Henderson
Economist, Federal Reserve Bank of Boston

David G. Mathiasen
Special Assistant to the Assistant Comptroller General, General Accounting Office

Robert S. McIntyre
Director, Citizens for Tax Justice

Paul H. O'Neill
Chairman and CEO, Alcoa

Van Doorn Ooms
Senior Vice President and Director of Research, Committee for Economic Development

Rudy Oswald
Director, Economic Research Department, AFL-CIO

Robert Pollin
Professor, University of California, Riverside

James M. Poterba
Professor, MIT

Edward V. Regan
Comptroller, State of New York

Barry Rogstad
President, American Business Conference

Warren B. Rudman
US Senate

Raymond C. Scheppach
Executive Director, National Governors' Association

John B. Shoven
Director, Center for Economic Policy Research, Stanford University

C. Eugene Steurele
Senior Fellow, The Urban Institute

Lawrence H. Summers
Vice President and Chief Economist, The World Bank

Margo Thorning
Chief Economist, American Council on Capital Formation

Brian Turner
Vice President, Industrial Union Department, AFL-CIO

John White
Vice President, Integrated Systems, Eastman Kodak Company

Corporate Governance Subcouncil

Chairman

Edward V. Regan
Comptroller, State of New York

Carolyn Brancato, *Staff Director*

Membership

Bruce Atwater
Chairman and CEO, General Mills, Inc.

Lewis W. Bernard
*Advisory Director,
Morgan Stanley & Co., Inc.*

W. Gordon Binns, Jr.
*President, General Motors Investment
Management Corporation*

Joseph Blasi
*Professor, Institute of Management &
Labor Relations, Rutgers University*

Richard C. Breeden
*Chairman, Securities and Exchange
Commission*

Tullio Cedraschi
*President and CEO,
CN Investment Division*

Jonathan Charkham
*Advisor to the Governors,
Bank of England*

James L. Cochrane
*Chief Economist and Senior Vice
President, New York Stock Exchange*

William H. Donaldson
*Chairman and CEO,
New York Stock Exchange, Inc.*

Betty K. Krikorian
*Attorney & Associate Director,
Morin Center for Banking Law Studies,
Boston University School of Law*

Martin Lipton
Attorney, Wachtell, Lipton, Rosen & Katz

Patricia Lipton
*Executive Director, Wisconsin Investment
Board*

Philip Lochner
Senior Vice President, Time Warner, Inc.

Jay M. Lorsch
Professor, Harvard Business School

Claudine B. Malone
*President, Financial & Management
Consultants, Inc.*

Ira Millstein
Attorney, Weil, Gotsbal & Manges

John Neff
*Senior Vice President,
Wellington Management Company*

Donald S. Perkins
Former Chairman, Jewel Industries

John Pound
*Professor and Director, Corporate Voting
Research Project, John F. Kennedy School
of Government, Harvard University*

Bruce Scott
Professor, Harvard Business School

Jack Sheinkman
*President, Amalgamated Clothing and
Textile Workers Union*

Christopher Steffen
*Chief Financial Officer,
Honeywell, Inc.*

Kathy Utgoff
Economist, Groom & Nordberg

Harold M. Williams
*President and CEO,
The J. Paul Getty Foundation*

Lynn R. Williams
*International President,
United Steelworkers of America*

Nancy Williams
*Deputy Executive Director and General
Counsel, Public Employees Retirement
Association of Colorado*

Critical Technologies Subcouncil

Chairman

Erich Bloch

Distinguished Fellow, Council on Competitiveness

David Cheney, *Staff Director*

Membership

Eleanor Baum

Dean, Albert Nerken School of Engineering, Cooper Union

Frederick M. Bernthal

Deputy Director, National Science Foundation

Sherwood L. Boehlert

US House of Representatives

Michael G. Borrus

Co-director, Berkeley Roundtable on International Economics

Rick Boucher

US House of Representatives

Lewis M. Branscomb

Professor, Harvard University

Daniel Burton

Executive Vice President, Council on Competitiveness

Dennis Chamot

Executive Assistant to the President, Department of Professional Employees, AFL-CIO

John Deutch

Professor, MIT

John W. Diggs

Deputy Director for Extramural Research, Department of Health and Human Services

Craig Fields

President and CEO, MCC

Edward B. Fort

Chancellor, North Carolina Agricultural and Technical State University

John S. Foster

Consultant, TRW, Inc., and Chairman, Defense Science Board

William Happer

Director, Office of Energy Research, US Department of Energy

Joseph S. Hezir

Principal, EOP Group, and former Deputy Assistant Director, Energy and Science Division, OMB

Richard K. Lester

Director, Industrial Performance Center, MIT

John W. Lyons

Director, National Institute for Standards and Technology

Daniel P. McCurdy

Manager, Technology Policy, IBM

Joseph G. Morone

Professor, Rensselaer Polytechnic Institute, School of Management

Al Narath

President, Sandia National Laboratories

Richard R. Nelson

Professor, Columbia University

William D. Phillips

Former Associate Director of Industrial Technology, Office of Science & Technology Policy

Lois Rice

Guest Scholar, Brookings Institution

Nathan Rosenberg

Director of Program for Technology & Economic Growth, Stanford University

Howard D. Samuel

President, Industrial Union Department, AFL-CIO

Hubert J.P. Schoemaker

President and CEO, Centocor, Inc.

Charles Shanley

Director of Technology Planning, Motorola Inc.

Richard H. van Atta

Research Staff Member, Institute for Defense Analyses

Robert M. White

Under Secretary for Technology, US Department of Commerce

Eugene Wong

Associate Director of Industrial Technology, Office of Science & Technology Policy

Education Subcouncil

Chairman

Albert Shanker

President, American Federation of Teachers

Bella Rosenberg, *Staff Director*

Membership

Paul E. Barton

*Director, Policy Information Center,
Educational Testing Service*

John Bishop

*Professor, Cornell University School of
Labor and Industrial Relations*

Alan K. Campbell

Visiting Executive Professor, Wharton School

Linda Chavez

Senior Fellow, Manhattan Institute

Constance Clayton

*Superintendent of Schools, Philadelphia
School District*

Chester E. Finn, Jr.

*Professor of Education and Public Policy (on
leave), Vanderbilt University, and Founding
Partner, The Edison Project*

William D. Ford

US House of Representatives

Keith Geiger

President, National Education Association

Joseph T. Gorman

Chairman, President and CEO, TRW Inc.

Steven Gunderson

US House of Representatives

Sylvia Ann Hewlett

Author

Joe A. Howell

President, Central Methodist College

Ira Magaziner

President, SJS, Inc.

Lydia Marshall

*Senior Vice President, Marketing Division,
Student Loan Marketing Association*

Richard P. Mills

*Commissioner, Department of Education,
State of Vermont*

Diane Ravitch

*Assistant Secretary for Education Research and
Improvement, US Department of Education*

Isabel V. Sawhill

*Senior Fellow, The Urban Institute and
Columbia University*

Kurt Schmoke

Mayor, City of Baltimore, Maryland

Dorothy Shields

Director, Department of Education, AFL-CIO

Paul Simon

US Senate

Marshall S. Smith

Dean, School of Education, Stanford University

Harold W. Stevenson

*Center for Human Growth & Development,
University of Michigan*

Susan Traiman

*Program Director, Education Program,
National Governors' Association*

Harrison B. Wilson

President, Norfolk State University

Alan L. Wurtzel

Chairman, Circuit City Stores, Inc.

Manufacturing Subcouncil

Chairman

Ruben F. Mettler

Former Chairman and CEO, TRW Inc.

Christopher T. Hill, *Staff Director*

Membership

R. Darryl Banks

Director, Program on Technology and the Environment, World Resources Institute

Jeff Bingaman

US Senate

H. Kent Bowen

Professor, Harvard Business School

W. Dale Compton

Lillian M. Gilbreth Distinguished Professor of Industrial Engineering, Purdue University

Malcolm R. Currie

Chairman and CEO, emeritus Hughes Aircraft Company

George David

President and COO, United Technologies Corporation

Don H. Davis, Jr.

President, Allen-Bradley Company

Donald F. Ephlin

Vice President, United Auto Workers, retired

Martin Feldstein

President and CEO, National Bureau of Economic Research

Richard F. Gaertner

Director, Center for Advanced Technology Development, Iowa State University

Nancy L. Johnson

US House of Representatives

George J. Kourpias

International President, International Association of Machinists and Aerospace Workers

Karl J. Krapek

Chairman and CEO, Carrier Corporation

John J. LaFalce

US House of Representatives

Carl Levin

US Senate

Trent Lott

US Senate

Walter E. Massey

Director, National Science Foundation

Jeffrey L. Mayer

Director, Office of Policy Analysis, US Department of Commerce

Lee L. Morgan

Chairman and CEO, Caterpillar Inc., retired

Thomas J. Murrin

Dean, Business and Administration, Duquesne University

Ian M. Ross

President Emeritus, AT&T Bell Laboratories

William V. Roth, Jr.

US Senate

Claudine Schneider

Senior Vice President, Energia Global International

Robert J. Schultz

Vice Chairman, General Motors Corporation

Laura D'Andrea Tyson

Director, Institute of International Studies, University of California, Berkeley

Robert M. White

Under Secretary for Technology, US Department of Commerce

Daniel Yankelovich

Chairman, DYG, Inc.

John L. Zabriskie

Senior Vice President, Merck & Co., Inc.

Public Infrastructure Subcouncil

Chairman

Gerald L. Baliles

*Partner, Hunton & Williams
and former Governor of Virginia*

Gilah Langner, *Staff Director*

Membership

David Alan Aschauer
*Elmer W. Campbell Professor of
Economics, Bates College*

Kay Braaten
*Commissioner, Richland County,
State of North Dakota*

Conrad Burns
US Senate

Sarah Campbell
Consultant

Patrick Choate
*Managing Director,
Manufacturing Policy Project*

William F. Clinger, Jr.
US House of Representatives

Nancy Rutledge Connery
Consultant

Mortimer L. Downey
*Executive Director and CEO,
Metropolitan Transportation
Authority, State of New York*

Thomas M. Downs
*Commissioner, Department of
Transportation, State of New Jersey*

Barbara Dyer
*Senior Research Associate, National
Academy of Public Administration*

Jeff Faux
President, Economic Policy Institute

Emil H. Frankel
*Commissioner, Department of
Transportation, State of Connecticut*

Frank Hanley
*General President, International
Union of Operating Engineers*

Charles R. Hulten
Professor, University of Maryland

Herbert Kelleher
CEO, Southwest Airlines Company

Thomas D. Larson
*Administrator,
Federal Highway Administration*

David A. Levy
*Director,
The Levy Institute Forecasting Center*

Lillian C. Liburdi
*Director, Port Department, The Port
Authority of New York & New Jersey*

Ray Mabus
Former Governor, Mississippi

Dee Maki
*National President,
Association of Flight Attendants*

Richard P. Nathan
Provost, Rockefeller College

Carol O'Cleireacain
*Commissioner, New York City
Department of Finance*

Kenneth Olson
*Vice President, Municipal Finance
Department, Goldman, Sachs & Co.*

Clyde V. Prestowitz, Jr.
President, Economic Strategy Institute

Robert A. Roe
US House of Representatives

Felix Rohatyn
*Senior Partner,
Lazard Freres & Company*

T. Peter Ruane
*President and CEO, American Road
and Transportation Builders Assn.*

James R. Thompson
*Partner, Winston & Strawn and
former Governor of Illinois*

Richard H.K. Vietor
Professor, Harvard Business School

Erwin von den Steinen
*President, International Transport
Policy Analysis*

James A. Wilding
*General Manager and CEO,
Metropolitan Washington Airports
Authority*

Robert B. Wood
*Director, Research & Economics,
International Brotherhood of
Electrical Workers*

Trade Policy Subcouncil

Chairman

John J. Murphy

Chairman and CEO, Dresser Industries

Paula Stern, *Staff Director*

Membership

Morton Bahr

*President,
Communications Workers of America*

Dexter F. Baker

Chairman and CEO, Air Products

Theodore H. Black

*Chairman, President and CEO,
Ingersoll-Rand Company*

James Bovard

Consultant

John Danforth

US Senate

Donald V. Fites

Chairman and CEO, Caterpillar Inc.

Sam Gibbons

US House of Representatives

Gary Horlick

Partner, O'Melveny & Myers

Amo Houghton

US House of Representatives

Jerry Jasinowski

*President,
National Association of Manufacturers*

Robert Johnson

*Chairman and CEO, The Johnson
Company*

Julius Katz

Deputy US Trade Representative

George Landegger

Chairman, Parsons & Whittemore

John D. Macomber

*President and Chairman, Export-Import
Bank of the United States*

Robert L. Mallett

*City Administrator, Government of the
District of Columbia*

Irene W. Meister

*Vice President,
American Paper Institute, Inc.*

David Mulford

*Under Secretary for International Affairs,
US Department of the Treasury*

Robert Neimeth

President, Pfizer International

Clyde V. Prestowitz, Jr.

President, Economic Strategy Institute

J. David Richardson

*Professor, Syracuse University, and Visiting
Fellow, Institute for International
Economics*

Jay Rockefeller

US Senate

Howard D. Samuel

*President, Industrial Union Department,
AFL-CIO*

Susan C. Schwab

*Director General of the US and Foreign
Commercial Service, US Department of
Commerce*

Richard P. Simmons

*Chairman, Allegheny Ludlum
Corporation*

Paula Stern

President, The Stern Group

Alexander B. Trowbridge

President, Trowbridge Partners

Lynn R. Williams

President, United Steelworkers of America

Alan Wm. Wolff

Attorney, Dewey Ballantine

Training Subcouncil

Chairman

Lynn R. Williams
President, United Steelworkers of America

Leslie Loble, *Staff Director*

Membership

Dave Barram
Vice President, Corporate Affairs, Apple Computer

Anthony Carnevale
President, American Society for Training and Development

Badi Foster
Vice President, Aetna Life and Casualty

Frank Goldsmith
Professor, Empire State College

Mary Rose Hennessey
Executive Director, Northern Illinois University

Louis Jacobson
Project Director, Westat, Inc.

James M. Jeffords
US Senate

Richard Kazis
Director of Work-Based Learning Programs, Jobs for the Future, Inc.

William K. Kolberg
President and CEO, National Alliance of Business

Malcolm R. Lovell, Jr.
President and CEO, National Planning Association

Ira Magaziner
President, SJS, Inc.

Ray Marshall
Professor, University of Texas

Lenore Miller
International President, Retail, Wholesale and Department Store Union

Larry Mishel
Research Director, Economic Policy Institute

Paul Osterman
Professor, MIT

Arnold Packer
Senior Fellow, Johns Hopkins University

Joan Patterson
Executive Co-director, UAW-Chrysler Training System

A.J. Pearson
Executive Director, International Brotherhood of Electrical Workers

Don Pease
US House of Representatives

Markley Roberts
Assistant Director, Economic Research Department, AFL-CIO

Joel Rogers
Professor, University of Wisconsin, Madison

Ernest J. Savoie
Director, Employment Development Office, Ford Motor Company

Audrey Theis
Assistant Secretary, Maryland Department of Economic Development

James Van Fuden
Administrator, Office of Work-Based Learning, US Department of Labor

Harris Wofford
US Senate

The Competitiveness Policy Council's Mandate

The Competitiveness Policy Council was created by the Omnibus Trade and Competitiveness Act of 1988. It is charged with making recommendations to the President and Congress on how to improve the nation's competitiveness. The Council's objectives, as stated in Public Law 100-418 (Section 5204), are to:

(1) develop recommendations for national strategies and on specific policies intended to enhance the productivity and international competitiveness of United States industries;

(2) provide comments, when appropriate, and through any existing comment procedure, on—

(A) private sector requests for governmental assistance or relief, specifically as to whether the applicant is likely, by receiving the assistance or relief, to become internationally competitive; and

(B) what actions should be taken by the applicant as a condition of such assistance or relief to ensure that the applicant is likely to become internationally competitive;

(3) analyze information concerning current and future United States economic competitiveness useful to decision

making in government and industry;

(4) create a forum where national leaders with experience and background in business, labor, academia, public interest activities, and government shall identify and develop recommendations to address problems affecting the economic competitiveness of the United States;

(5) evaluate Federal policies, regulations, and unclassified international agreements on trade, science, and technology to which the United States is a party with respect to the impact on United States competitiveness;

(6) provide policy recommendations to the Congress, the President, and the Federal departments and agencies regarding specific issues concerning competitiveness strategies;

(7) monitor the changing nature of research, science, and technology in the United States and the changing nature of the United States economy and its capacity—

(A) to provide marketable, high quality goods and services in domestic and international markets; and

(B) to respond to international competition;

(8) identify—

(A) Federal and private sector resources devoted to increased competitiveness; and

(B) State and local government programs devised to enhance competitiveness, including joint ventures between universities and corporations;

(9) establish, when appropriate, sub-councils of public and private leaders to develop recommendations on long-term strategies for sectors of the economy and for specific competitiveness issues;

(10) review policy recommendations developed by the subcouncils and transmit such recommendations to the Federal agencies responsible for the implementation of such recommendations;

(11) prepare, publish, and distribute reports containing the recommendations of the Council; and

(12) publish their analysis and recommendations in the form of an annual report to the President and the Congress which also comments on the overall competitiveness of the American economy.

PRINTED ON  RECYCLED PAPER

ISBN 0-16-041703-1



67

Acknowledgments

The Council expresses its deep appreciation to our Subcouncil Chairmen and Staff Directors: Pete Peterson and Neil Howe (*Capital Formation*), Erich Bloch and David Cheney (*Critical Technologies*), Edward Regan and Carolyn Brancato (*Corporate Governance and Financial Markets*), Albert Shanker and Bella Rosenberg (*Education*), Ruben Mettler and Christopher Hill (*Manufacturing*), Governor Gerald Baliles and Gilah Langner (*Public Infrastructure*), Jack Murphy and Paula Stern (*Trade Policy*), and Lynn Williams and Leslie Loble (*Training*). They were assisted by: Kevin Crum, Penny Gibbs, Ted Jones, Julie Kimmel, Scott Kleinberg, Julia Morgan, Amy Petri and Jonathan Whittle. All these people skillfully shepherded a great deal of work and diverse opinion through to a successful conclusion in a short timeframe.

Valuable input and advice were received throughout the year from numerous individuals. Members of the Council have been assisted by Nicholas

Glakas, Ardon Judd, Jeff Mayer, Bella Rosenberg, Jack Sheehan, and Robert Wood. Helpful guidance was also contributed by Robert Greenstein, Kent Hughes, Ken Jarboe, Ed McGaffigan, Warwick McKibbin, Van Doorn Ooms, Greg Principato, Bill Reinsch, Dorothy Robyn, Robert Reischauer, John White, and Dan Yankelovich.

Most of all, we are grateful to the talented and hard-working Council staff and others for their assistance throughout the year and in particular in producing this report. The Council recognizes the tireless efforts of: Jeannine Atalay, Brian Blackstone, Chris Coleman, Angela Cromartie, Martha Hall, Julie Kimmel, Gilah Langner, Richard Levy, Coleen McGrath, Frances Melvin, Rick Samans and Alda Seubert. Special thanks goes to Steve Charnovitz, the Council's Policy Director.

The report was designed and typeset by Studio Services: the cover was designed by Supon Design Group. Photographs were provided by UNIPHOTO.

C. Fred Bergsten
Chairman

Howard Rosen
Executive Director



COMPETITIVENESS POLICY COUNCIL

11 Dupont Circle, NW
Suite 650
Washington, DC 20036-1207

TEL: (202) 387-9017
FAX: (202) 328-6312