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CONFERENCE ON U.S. COMPETITIVENESS:

Can the United States Remain Competitive?

COMMITTEE ON FINANCE
UNITED STATES SENATE

RUSSELL B. LONG, *Chairman*

The Proceedings of the Conference on U.S. Competitiveness, Held April 25–26, 1980, and Cosponsored by the New York Stock Exchange, Harvard University, and the

SUBCOMMITTEE ON INTERNATIONAL TRADE

ABRAHAM RIBICOFF, *Chairman*

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PREFACE

On April 25 and 26, 1980, 150 business, labor, academic, and political leaders met at Harvard University in a conference on United States economic competitiveness. The conference was generated by the perception that the United States faces an urgent problem: Our economy is undergoing a declining rate of productivity and losing its competitive edge. The question before the conference, co-sponsored by the New York Stock Exchange, the Subcommittee on International Trade of the U.S. Senate Committee on Finance, and Harvard University, was: Can the U.S. reverse this decline? The answer of the conference was direct: We can and must improve our performance substantially, and the problem must be at the top of the national agenda.

The alternative is continuing high levels of inflation, a lower standard of living, and the impairment of American security and leadership of the West. The challenge will require our best efforts throughout the 1980's, but with the united efforts of business, labor, and government, and the support of the American people, it can be done.

Being competitive and productive is a basic characteristic of U.S. economic history. We have prided ourselves on being a growing, innovative nation making better products and offering improved services for tomorrow. But although we still have the largest economy in the world and one of the highest standards of living, we are slipping rapidly.

During the past decade the United States has had the lowest rate of productivity increase of all major industrialized nations. This productivity growth rate has been at a virtual standstill since 1973. It has recently been less than one-fifth that of Japan, West Germany, and France. Last year we moved from several years of stagnant productivity to a net decline.

Our trade position has weakened considerably, with deficits appearing even in manufactured goods. Our share of global exports has steadily been reduced and is now one-third of what it was two decades ago. The dollar has slid in value against our major trading partners, but this has not reversed our deficit trade balance or aided our balance of payments.

At the heart of our balance of trade problems is our continuing dependence on foreign nations for oil. We import more than half of our petroleum. For the time being, we have no choice but to rely on OPEC nations for much of our energy. That is a high-risk situation, particularly when the oil comes from volatile oil producing countries in the Middle East. Ironically, the United States has abundant supplies of coal, an alternative to petroleum, but, thus far, we have not been able to make the most of this great, largely untapped resource.

In industry, as in energy, much work remains to be done. Our plants and factories are becoming obsolete. We are years behind Japan

and West Germany in modernization programs. Key American industries such as electronics, steel and automobiles have not kept pace with foreign manufacturers. Our savings, investment and capital formation rates are all too low. U.S. companies are finding the investment climate more attractive abroad.

We are not investing enough money in research and development. A decade ago, when American astronauts were walking on the moon, the United States was pre-eminent in high technology. No one was our rival. But that has changed. Today American technical know-how is not the envy of the world. More and more nations challenge us in every technological pursuit. Our regulatory system has become overly burdensome and impedes economic efficiency and productivity.

It was against this background that the conference participants assembled in April of this year. The conference began with a series of keynote presentations introduced by Dean Rosovsky of Harvard University. Dean Rosovsky's remarks are found on pages 6 and 7 of this document, and the keynote presentations are also included (pp. 16–90). Mr. William M. Batten, Chairman of the New York Stock Exchange, presented the luncheon address, which is reproduced at pages 8–11. The conference then divided into six panels, which reviewed the following areas: International trade; research and development; government/business relations and regulations; taxation and investment incentives; government/business relations generally; and productivity, employment and the standard of living. The abstracts of background papers prepared for the seminars and the summaries of the seminars [1] are found at pages 91–109. As co-chairman, I gave a morning address on the final day which summed up the proceedings and suggested areas where the conference had arrived at a consensus. See remarks at pages 12–15. The full conference issued a consensus statement, which is reproduced on pages 1–3.

The conference was convinced that the long-term solution to our economic crisis cannot be based on a piecemeal series of uncoordinated half-steps. A national action strategy must be agreed upon through a business/labor/government consensus. In this we cannot just imitate any other nation: The solution must be American.

But the conference recognized that bold comprehensive solutions to these problems will not work unless the nation as a whole is aware of the urgency of the problem. We as Americans must look to tomorrow, to save and invest, and renew our technologies in a world of constant change. Our partners among the industrialized world have been doing that better than we. An America ready to accept the challenge of staying productive and competitive is on the road to recovery.

The conference commissioned Garth Associates to poll the American people as to their awareness of our economic problems and their view of the solutions. The poll results indicate that a firm foundation for national action exists. The American people overwhelmingly believe the economy is headed in the wrong direction and that the relative decline of our productivity and competitive position in the world will take years to correct. They believe this economic decline is just as important as the deterioration of our military position worldwide in

[1] Complete background papers, as well as expanded summaries of the seminars, are available on a fee basis upon request to: Conference on U.S. Competitiveness, Harvard University, Room 308, 1737 Cambridge Street, Cambridge, Mass. 02138.

reducing our influence. They believe it results from insufficient leadership in all our major institutions—government, business and labor all share the blame. Furthermore, the results show this is a major national political issue affecting people's attitude toward their leaders. This is a broad consensus that a national plan is required to mobilize our resources and make ourselves more productive and competitive.

This Committee print contains some of the basic documents associated with the April conference. It is hoped that they will advance the consideration of the critical issues discussed which face the United States over the next several years.

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CONFERENCE CONSENSUS

Conference on U.S. Competitiveness, Consensus Statement

STRENGTHENING AMERICAN COMPETIVENESS

The United States faces an urgent problem: our economy is losing its competitive edge. Why is it crucial for the U.S. to remain competitive in world markets? It is crucial in order to provide jobs in expanding industries, to offset inflationary pressures, to sell U.S. products in international markets, and to remain a strong and secure nation in a period of international instability. Our competitive stagnation threatens both our economic health and our national security.

A group of business, academic, political, and labor leaders recently met at Harvard University to consider the question: Can the United States remain competitive? The answer is that remaining competitive is so essential to our social fabric and international security that we absolutely must regain economic vitality. The challenge will require our best efforts throughout the 1980's, but we can do it.

Being competitive and productive is a basic characteristic of U.S. economic history. We have prided ourselves on being a growing, innovative nation making better products and offering improved services for tomorrow. The cold facts are that during the past decade the United States has had the lowest rate of productivity increase of all major industrialized nations. Last year we moved from several years of stagnant productivity to a net decline. All Americans have a stake in turning this economy around.

The conference was sponsored by Dr. Henry Rosovsky, Dean of the Harvard Faculty of Arts and Sciences, Mr. William M. Batten, Chairman of the New York Stock Exchange, and Senator Abraham Ribicoff, Chairman of the Senate Subcommittee on International Trade. David Garth Associates produced a national poll for the conference which showed that the American people are aware of a fundamental crisis in our economy and are ready to support drastic measures to reverse it. Moreover, a strong majority will consider the issue a major determinant of their votes in November.

The question in its most basic form is whether we as Americans are willing to look to tomorrow, to save and invest, and renew our technologies in a world of constant change. Our partners among the industrialized world have been doing that better than we. A "comfortable" and stagnant United States will continue to lose markets, suffer higher unemployment and forego one of the most effective antidotes to inflation. We must confront the reality that we are not Number 1 in economic performance and will suffer continued decline unless we undertake very basic changes in our attitude and policies. An America ready to accept the challenge of staying competitive is on the road to recovery.

In this political year, we call upon the Democratic and Republican Parties, and upon the candidates for the Presidency and for the House and Senate to address the issue of U.S. competitiveness. As a nation we must consider it a priority question, and we must present avenues to recovery. We need to debate the options; to ignore them is to accept a weakness we cannot tolerate.

The following are specific recommendations for restoring competitiveness to our economy:

1. A more competitive United States economy must be a national goal accorded high priority both in the 1980 elections and for the rest of this decade. Without a productive economy our concept of what the United States is and should be will be substantially diminished. The American people must resolve to work together and compete effectively in international markets.

2. Twenty million Americans are expected to enter the work force during the next ten years. A healthy economy and creation of additional employment depends upon concerted efforts and incentives to increase productivity in our economy.

3. Changes in tax policy, including accelerated depreciation, to provide encouragement to capital formation, innovation, research and development, and new production in the United States are essential both to control inflation and to encourage growth. Capital formation, an essential element in creating jobs, will require simultaneous increases of savings and investment.

4. Research and development are essential for future technology. R & D efforts have lagged in this country during recent years and must be directed more to long term progress and less to short term gains. Research and development should be expanded and recognized as investment in tomorrow's jobs and next year's products and services.

5. International trade must be a major, not marginal focus of domestic and foreign policy. The United States will need to reduce imported energy and expand exports aggressively to offset potentially substantial current account deficits in the 1980's.

6. There is a significant difference between effective U.S. antitrust laws at home to protect domestic competition, and the ability of the United States as a nation to win markets abroad. In international competition U.S. firms should be allowed to work together to enable them to be competitive in world markets.

7. Regulation should not be allowed to stifle our competitiveness. Regulation must balance protective benefits against potentially adverse effects on competitiveness. Necessary regulations should be achieved at minimum cost and at reduced burden to industry and the public who ultimately pay the cost of government regulation.

8. Assessment of these and other recommendations should be part of a fundamental recognition that business, labor, and government, and in fact all Americans need to work together for our Nation to remain competitive. Bipartisan cooperation, consideration of the need for consensus, and firm resolution not to accept a decaying economy and a secondary role for the United States are necessary to revitalize a competitive nation.

In summary, a strong domestic economy is essential to provide productive jobs for all Americans, to provide necessary social programs,

to enhance our national security and America's position in world affairs.

As a result, the need to strengthen America is the number one priority for all of us.

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John M. Albertine, Executive Director, Joint Economic Committee, United States Congress.
Graham Allison, Jr., Dean, Faculty of Public Administration, John F. Kennedy School of Government, Harvard University.
Robert Amory, III, Conference Coordinator, Harvard University.
Thomas Amory, Chairman, William H. Clark, Associates.
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William F. Ballhaus, President, Beckman Instrument, Inc.
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REMARKS OF THE CONFERENCE CO-CHAIRMEN

INTRODUCTORY REMARKS FOR THE CONFERENCE ON U.S. COMPETITIVENESS

(By Henry Rosovsky*)

It is an honor to welcome so many leaders from business, government, labor, and the media to Harvard University so that we may jointly reflect on some basic problems confronting our nation. As most of you know, this Conference is made possible by the cooperation of the Senate Subcommittee on International Trade, chaired by Senator Abe Ribcoff, and the New York Stock Exchange, whose chairman is William M. Batten. Within Harvard, three faculties—the Business School, the Kennedy School of Government, and Arts and Sciences—have shared the planning responsibilities. Professors Fouraker and Dunlop, and Deans McArthur and Allison have all played a significant role in shaping this conference.

People from different walks of life are assembled here to ask a question that some will consider atonishing and others frightening: Can the United States remain competitive? That this question even has to be asked certainly is regrettable; that it is being asked is a hopeful sign. Becoming less competitive may be the symptom of a serious national disease. If recognized, analyzed, and understood, one can perhaps suggest some remedies.

Just for a moment, look back at the world one century ago—really not such a very long time in historical terms. In the 1880's, Great Britain was, by a considerable margin, the leading industrial power in the world. The Industrial Revolution was born in Britain during the second half of the 18th century, and one hundred years later the British Empire was at its zenith.

In the 1880's very few people realized that Britain's economic decline had already begun—that for a great variety of reasons, Britain would not remain competitive. The principal challengers were the United States and a recently united Germany. Russia also was becoming a factor in the world economy, although that development was effectively halted by the Communist Revolution. Japan had just opened herself to international contact after nearly 200 years of virtually total isolation. No one—except perhaps some Japanese—believed that Japan would ever be a major economic power, least of all the leading industrial power of the world: for that is what Japan is today.

Why this bit of history? Because I wish to stress a number of points.

1. Between the start of the Industrial Revolution in the 18th century and today, approximately twenty countries have experienced modern

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* Dean, faculty of arts and sciences, and the Walter S. Barker Professor of Economics, Harvard University.

economic growth. New countries are joining the parade all the time, and the early industrializers—primarily Britain, France, and the United States—are continually facing new challengers. At present the most rapidly growing area of the world is in northeast Asia, and it may be elsewhere in the future. The point is simple: remaining on top or in contention is not a static process.

2. It takes a long time to become aware of decline. Although most economic historians agree that Britain's climacteric occurred about one hundred years ago, this fact did not really become a matter of public concern until after World War I, and forty years of relative decline may have been an insurmountable obstacle.

3. Although a great many reasons have been given for Britain's economic decline, in my opinion the principal factors were internal and human, and therefore avoidable: British entrepreneurship had become flabby; growth and industries and new technology were not pursued with sufficient vigor; technical education and science were lagging; the government-business relationship was not one of mutual support.

When we look at our own country today in the perspective of history, the danger signals seem obvious. Productivity growth is slow; quality frequently is low; capital formation is inadequate; all too often the lastest technology is not in use; in many parts of the world our export markets are deteriorating; and the communications gap between business, government, and the public is vast. These are the issues that have brought us together: government, business, labor, and the academy. We have not met, I think to discuss partisan positions or to praise and blame anybody. We are seeking understanding and guidelines for a national consensus. This meeting may be only a small beginning, but I hope that it will have larger consequences.

THE UNITED STATES IN A COMPETITIVE WORLD: AMERICANS ARE CONCERNED

(By William M. Batten*)

We are all here today because of our concern over our nation's economic competitiveness—and, indeed, its economic future. All of us in this room are aware of the disappointing performance of our economy in the last decade. We know productivity is down, our ability to compete has deteriorated, and inflation is higher than it has been in more than a century.

Our keynote speakers this morning ably described the challenge facing us. In many ways that challenge is unprecedented, just as it is unprecedented for a U.S. Senate subcommittee, Harvard University, and the New York Stock Exchange to join together to sponsor this conference.

So there is an aura of concern here today, in this room of opinion leaders, as there should be.

But is there concern outside this room? Do people beyond this center of learning care? Is there a widespread understanding of the economic problems facing us? If there isn't, it won't matter what we agree upon here, for our conclusions will be little more than a footnote for historians of the 21st century.

To get answers to those questions, we commissioned a survey from Garth Associates, a firm with expertise in the political process and also expertise in polling. We though that solid evidence of the public attitude toward our economic competitiveness was the missing factor in the expanding debate on the issue, and also the key factor.

The in-depth poll, with 103 questions asking for opinions on our economy, plumbed the causes of its problems and possible solutions. The survey in particular sought opinions on how the U.S. economy could be made more competitive internationally.

Just over one thousand people in all 50 states were called by telephone—by random digit dialing so that even people with unlisted numbers were reached. To get the 1,000 respondents, Garth Associates made about 9,000 calls. The respondents were on the telephone for about 25 minutes each giving their opinions, sometimes answering the same question worded several different ways. The margin of error, I have been told, is plus or minus 3 per cent.

Those who answered comprise a good cross-section of the populace in age, race, education, income, sex, political affiliation, and occupation.

I want to summarize briefly the survey results and discuss their implications for us here and for our counterparts across the nation. A more complete summary will be made available later this afternoon to everybody here, and the data from which the summaries were prepared will be available upon request.

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* Chairman, New York Stock Exchange, Inc.

I think the survey results are dramatic, intriguing, provocative and surprising.

The most surprising result, and possibly the most important one as well, is that Americans have a far greater understanding of the underlying problems of our economy than our elected officials and opinion leaders give them credit for.

One of the great strengths of democracy is that the judgment of the people is right more often than it is wrong. And that certainly seems to be the case here.

The people know we are in a crisis. They know our economic problems will be difficult to solve and are likely to persist for a while. They know the causes of our problems are not simply OPEC actions or the cost of energy but are more fundamental. They know that as consumers they have not been primarily the cause of our economic problems. They know our productivity is low—and has been declining. And they know that our economic problems have contributed to our nation's other problems at home and abroad.

The people are discerning enough, for instance, to know that the U.S. computer and electronics industries remain competitive while the steel and automobile industries have declined in competitiveness.

When asked to name the industrialized nation with the best-performing economy, a solid plurality picks Japan. Only 15 percent choose the United States. The American people have a better grasp of basic economics than has been thought.

And the public is far more united than has been thought. The majorities behind most of these conclusions are not only large but also consistent through all categories of respondents. Nearly identical responses come from people of every region, education level, occupation, race, sex, income level, and so on. The American people are united in their understanding that our economy has gone awry.

A full 90 percent, for instance, believe our economy is heading in the wrong direction. And 78 percent believe that the President and Congress have failed to understand and control the problem. Those are enormous majorities, so large as to approach a national consensus. That is truly an astounding understanding of the theme of this conference.

And the public sees the problem as a serious one. Two-thirds of the respondents think the economy is in a real crisis rather than just going through minor problems. Of that two-thirds, well over half believe the crisis will last longer than three years.

The depth of public feeling on this issue should not be underestimated. A staggering 87 percent of our respondents agree that drastic steps to strengthen our economy are needed, or U.S. power will continue to erode. And 83 percent agree that we need a national plan to mobilize our resources and make American business more competitive with the rest of the world.

That consensus could make itself heard at the polls in November. A total of 49 percent say a candidate's position on our economic decline would be very important to them, while only 9 percent say it would not be important. People who should know tell me that politicians willingly take a position on an issue when as little as 20 percent of the electorate believes it is very important and when the ratio of favorable to unfavorable responses is heavily on the favorable side. The 49 percent who believe this issue is very important and the 36 percent who believe

it is important to some degree—a total of 85 percent—make U.S. competitiveness an extremely potent political issue.

There is an almost unanimous view on the part of the public, then, that there is a problem and that it is important.

But that doesn't mean the American people have confidence in any of our economy's major sectors—government, business, and labor—to solve our economic problems. In fact, there are large majorities for blaming our problems on all three sectors.

Government seems to be the most unpopular of all.

Almost four out of five people feel that government regulations and red tape have got out of hand. About the same number think government interference in the economy has caused prices to increase. More than twice as many people blame government as any other culprit for our economic problems. While 44 percent blame government, only 10 percent blame business, 17 percent blame OPEC and 19 percent blame consumers.

That unpopularity is likely to be reflected at election time. Sixty-six percent say they would be more likely to vote for a candidate who favors reducing government interference in business.

But business, too, is unpopular. An impressive 78 percent say corporations have acted irresponsibly with regard to profits, and more than two-thirds say large corporations have too much power. A majority sees poor management by large corporations as a major problem, and a narrow majority opposes less regulations of business if the result were less consumer protection.

Although the public is leery of corporate power, it strongly favors the strengthening of business to restore American power and influence abroad. Eighty-four percent would be more likely to vote for a candidate who wants such a policy for our country. And 51 percent would be more willing to back a candidate who favors more tax incentives for business.

Unions share the public's indictment. More than two-thirds of the populace think unions have acted irresponsibly in taking more than they deserve—and even 62 percent of union members agree with that statement. A majority of the public would be more likely to vote for a political candidate who favors reducing union power.

So there is a consensus when the public is asked to assess blame. That consensus dissolves when specifics are discussed. While 59 percent believe higher tariffs would make our economy more efficient and competitive, for example, a plurality of 49 percent recognizes that higher tariffs would not help in the long run.

The implications of some possible actions also trouble the public. As I said, a narrow majority opposes less government regulation if the result is less consumer protection. Likewise, the respondents split down the middle when asked if they would support more incentives for business if one result were higher profits.

I think the lessons of this survey are clear.

The decline in our economic competitiveness is a national issue and one that should be of concern to everyone.

Our nation's opinion leaders, the public is saying, will have to turn more of their attention to our economic problems. We have to expand the debate beyond a few academic journals and the editorial pages of a few newspapers.

The public is waiting for leadership on this issue, an issue that it feels is vital.

But that leadership cannot come from just one sector.

Many of us have been talking about our declining competitiveness for some time. Corporations devote sections of their annual reports and countless management speeches to this problem. Congress has hosted innumerable hearings. Unions, too, have devoted some of their energies and advertising to spreading their views on U.S. competitiveness. And academia is rife with studies and proposals.

But, as our survey shows, there is no sector of society that the public believes fully. In fact, the poll underlines a widespread questioning of the ability of any of the groups represented here today to face and solve the problems by themselves.

The American people simply don't trust individual groups or sectors on this issue.

As a result, the dialogue on our economic problems has to be directed toward building a national consensus. The future of our country is at stake, after all.

But a consensus can't be forced upon us by any one sector. All of us have to work together to build a consensus. Government, business, labor, academia, consumer groups—all have to join in a coalition to decide on what we should do and then to make sure that it gets done.

The public is clearly in favor of our cooperating in this endeavor. While 60 percent in our survey choose government as the economic force that could do the most to turn around our economy, 79 percent agree that the President and Congress need to cooperate more with business in this effort. Only 18 percent say they think the President and Congress could change our economic course alone.

This conference is an excellent first step in that direction. As with all good conferences, the most important things that happen here will happen in our interaction with one another, not only during sessions, but also between sessions and after hours. The formal presentations are to start us thinking, to provoke us. But if a consensus is to happen, it will happen as we meet one another and find that we agree on more than we thought we would.

Future forums where government, labor, business, academia and the media converge will also provide breeding grounds for the consensus we need.

We must begin to work together, people from every economic sector, every region and every political background, to deal with the hard questions of how to re-establish and maintain our economic leadership.

Americans seem to understand the issues and tradeoffs involved, but they want leadership in developing a coordinated course of action that they can support. That is the present challenge American leaders face.

If our principal economic participants can get together to take collective action and provide leadership, we can stop our economic slide in the shortest amount of time and with the least amount of pain. If we cannot unify, both the time frame and the pain will be greater. That would be a terrible mistake.

Now, at this conference, there is an excellent chance for us to build on an existing national consensus as a basis for developing action alternatives for our nation to pursue.

If we can do it, we can be assured of one thing: the public is waiting to back us up.

I thank you.

REMARKS BY HON. ABE RIBICOFF*

INTRODUCTION

This conference poses a crucial question, and the answer is yes, the United States can remain competitive.

I am impressed with the enthusiasm of this group. There is among us a conviction that the United States is in a watershed period which will fundamentally affect our future. Many people here have been concerned about U.S. competitiveness for years. The issue is now more widely seen as serious and requiring concerted action. It is this sense among us of eagerness and impatience for action that I find encouraging. It is indeed time to turn this country around. We can certainly restore a competitive edge to America if we are honest about the depth of our problem and resolute in our determination to get moving.

In facing the question of productivity and competitiveness, it is painful for Americans to realize that we are not "Number One" in current performance. Economic progress, growth, and the better technology once synonymous with "American know-how" are part of our self-image as a nation. To realize the truth and to pull a person or corporation out of a rut, the first step is to take account of the problem. The United States needs such an honest assessment. The Joint Economic Committee report is an excellent starting point for such candor. I am sure that there are others. They must be widely circulated and understood. The fact is that the United States, while still a productive nation on an absolute scale, is rapidly losing its lead. Our OECD partners are rapidly closing the gap and have been doing so for a decade. Some of them will beat us before this decade is finished if they and we continue at present rates. That message ought to knock the complacency out of anyone still content with U.S. economic security.

After the scope of the problem is realized, some perspective might be healthy. The United States has a good position from which to compete. Our domestic resources include a strong industrial and agricultural base, a variety of domestic energy resources, an educated and skilled manpower base, and the largest national market in the world. Moreover, we have a political system capable of responding to new challenges. A nation which has sustained two world wars and a major depression in this country yet led the international postwar recovery is not without resilience and spunk. The American people may have frustrations, but we are certainly capable of fighting hard when we get tracked onto a good, serious battle.

I occasionally hear productivity being discussed in terms of ideology or cast in a liberal or conservative perspective. My perspective, frankly,

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is simply practical. When a ship steams along in good order it can carry all sorts of cargo and work many ports. But when there is trouble in the engine room, taking care of the power system becomes the first priority. The question is whether our economy will be strong enough to thrive, to compete, to adjust to new realities, and to provide for both the common defense and the social benefit of the Nation. This is a national problem facing all of us, parties and political philosophies notwithstanding. We all face the practical matter of revitalizing the engine which drives our economy.

THE INTERNATIONAL DIMENSION

We all bring to the problem of competitiveness our own perspective and special concern. I am especially worried by the international economic situation and the state of U.S. leadership. The future is less encouraging than we had hoped. The United States and the other industrialized nations will have high rates of inflation for several years. Inflation destroys social fabric and makes insecure, desperate competitors out of both individuals and nations. We will have higher energy prices sapping our strength. We will face slower rates of growth and slackened demand, thereby denying to all the OECD partners the benefits of external economic strength and growing markets. The third world nations will find their hopes for growth and their escape from poverty and energy costs resisted by a slow-moving and defensive set of industrialized nations. Those institutions such as the International Monetary Fund and the World Bank which have until now acted with the confidence that the United States and others provided both strength and encouragement will need renewed inspiration. In sum, there are serious problems deeply imbedded in the international economic system.

This projection is grim. In the modern world "ecopolitics" and now "petropolitics" share equal status with geopolitics in the affairs of nations. A safe and prosperous world demands the effective leadership of the United States with a strong economy, a healthy currency within a sound monetary system, and a fair and functional relationship among trading nations. In this interdependent world our economies are tied and they depend on each other. Right now the world's tariffs have never been lower and the Tokyo Round of trade negotiations has recently brought into play a new set of rules of the road to reduce nontariff barriers. The IMF has proved its ability to cushion severe balance of payments strains and to apply both relief and commonsense to nations in need. And the World Bank and regional and bilateral aid programs have directed increased flows of capital to productive enterprises in the third world. These systems are sound, but they face enormous challenges. The size of world debt is alarming, and some countries are at the point of near bankruptcy. The constant threat of protectionism, the increasing costs and decreasing certainty of supply of oil, and the prospect of more regional instability are enough to sober any optimist.

A weak United States in such a world is bad news for everyone. All of this while our economy is stagnant, inflation runs on, and our competitive position worsens. Our experiences in the electronics industry, in television and shipbuilding, in cameras and automobiles, may not be lessons learned but rather forewarnings. It is time that we looked down

the road at the business machine industries, at computers and aircraft and other advanced technology, and decided what shape we want to be in five or ten years from now. As a nation we lack that long term perspective. Such goals must be understood, translated into policy, and then defended against all the short-term compromises which weaken any plan not vigorously protected.

We cannot allow ourselves to ignore the decline in our international economic strength which is as threatening as military action to a safe United States and a healthy Western World.

THE NATIONAL AGENDA

The question of U.S. competitiveness must be seen as a national political issue, not as just a businessman's complaint or an economist's projection. We have in plenary session documented the seriousness of the challenge. We have learned from Mil Batten that the Garth Associates poll finds the U.S. public not just ready but eager for real action. Later this morning we will learn what the panels have concluded about the ramifications of our productivity lag. The job facing us is to rally a nation back to economic strength. The message this group at Harvard should send forth is that the U.S. competitive position is a national issue during this election year.

Whoever is President for the next four years owes the nation a plan for productivity in America. The Democratic Party and the Republican Party must have in their platforms effective recommendations for improving productivity. Any candidate for Congress or the Senate must pay as much attention to a competitive program as to inflation and defense and energy. I am sure from our work so far that we will have some concrete recommendations from this bipartisan group for future action. An issue of this magnitude does not lend itself to a unified remedy at this early stage. But there can be a unity of purpose bringing together the differing perspectives represented here. From our discussions it is obvious that among the actions required will be these:

First a national awareness that productivity is a priority and that efforts to improve it require broad national support;

Incentives, in the general sense of the term, should be available to redirect our attention to U.S. competitiveness;

Tax provisions to encourage both capital formation and innovation are necessary;

The effort to re-examine Government regulation with a fresh perspective must be continued. Where regulation is needed it must be achieved at minimum cost and lessened administrative burden;

Research and development, once a prime concern in U.S. industry, needs more support and should be considered an investment in tomorrow's production;

Special industries, especially those in technologically advanced products, may require particular attention to be sure that the United States retains its leadership;

Our anti-trust laws may require adjustment to allow U.S. corporations to compete effectively abroad as other nations do, permitting certain practices we would normally discourage at home in terms of combined corporate marketing strategies.

All of these factors and perhaps others should be part of a comprehensive package. It would be wrong to delay action until a consensus is reached on a complete productivity program. Such a consensus will take time and will require a thorough airing of different perspectives from business, labor, and all the affected parts of our society. I am sure from my experience on the Finance Committee that economists will continue to offer differing projections and analyses throughout the debate; economists never seem to agree with one another. We can start with preliminary steps which are recommended by commonsense, and we can use some pilot programs.

I believe that this conference has an opportunity. We can send forth a message that the United States must restore a competitive edge to its economy. We must do so to fight inflation, to create jobs, to lift our rate of growth, and to sustain both our national position and the strength of the international economic system. It is essential that the United States look at this serious challenge with a national perspective which will require a concerted effort from all Americans. I believe that the American people will welcome a call to action and the opportunity to work for a better tomorrow.

Let the message from Harvard in April of 1980 be that a group of leaders from the private sector and labor, from the Senate and the House, and from the academic world and the media, agree that our nation has an unmet priority. We ask the question whether the United States can remain competitive. A statement from us will serve as a catalyst during this political year. This challenge must be on the national agenda. The future of our country depends on our being equal to the task to remain competitive. And I am confident that the United States will meet that challenge.

KEYNOTE PRESENTATIONS

THE CHALLENGE FROM JAPAN

(By Ezra F. Vogel*)

As an academic observing developments in East Asia for the past two decades, I have gradually come to a disturbing conclusion: The United States is in the process of being surpassed by Japan as a modern industrial power, and this creates serious consequences America is not confronting.

Many Americans are aware of the success of individual Japanese products. Japanese textiles, produced with cheap labor, were already inundating the United States in the 1950's. Since then, Japan's labor costs have risen until they are on a par with ours, but Japanese companies have raised productivity and expanded their ability to produce quality products at competitive prices. Even after World War II, the Swiss continued to dominate the international watch market, but last year the Swiss produced about 50,000,000 watches while Japanese companies produced about 60,000,000. Cameras before World War II were dominated by the Germans; they have been replaced by the Japanese. Americans after World War II enjoyed a substantial lead in radios, but we are now eclipsed by the Japanese. American television was the world leader in the 1960s, but as you know, this is now dominated by the Japanese. Japanese steel plants have a capacity roughly the same as the United States or almost as much as the entire European Economic Community, but their capacity is the most modern and sophisticated in the world as we are belatedly acknowledging by using Japanese standards as the base measure for determining the trigger price. In motorcycles, the dominant four companies in the American market (Honda, Yamaha, Suzuki, and Kawasaki) are all Japanese. The United States reigned over the automobile industry, but last year Japan produced about 10 million cars, about the same as the United States, over 10 times the cars it produced 20 years ago. One measure of the competitiveness of cars made in Japan as opposed to those made in the United States is sales for export; the United States exported a few tens of thousands while Japan exported almost 5 million, perhaps 100 times as many. In shipbuilding, by the late 1970's before Europe evoked barriers, Japan was producing shipping tonnage equivalent to that of all of Europe and the United States combined, in shipbuilding facilities unrivaled elsewhere.

Japanese ablitities are not limited to a narrow range of products. In pianos, hardly a traditional Japanese instrument, in bicycles, tennis and ski equipment, snow mobiles, pottery, glass, machine tools, Japan

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is a strong competitor. In calculators, office copying machines, Japanese advances are impressive. In industrial robots, which provide users with mass production-like efficiency for smaller orders, Japan is perhaps the world's leader. In semiconductors, they already pose a threat to the American industry. In computers and telecommunication, Japanese companies are making advances, both in internal and international market share. With the new jet airplanes now being produced with the cooperation of Mitsubishi, Ishikawajimaharima, and Kawasaki Japan promises to be an effective competitor in airplane production in the 1980's. In their capacity to produce integrated construction projects abroad, they are unexcelled. In nuclear facilities, space rocketry, coal liquification, Japanese research is advancing rapidly.

Japanese success is not limited to the industrial sphere. In transport equipment, the *shinkansen* bullet train, which already linked Kyoto and Tokyo 15 years ago, is faster than any train the United States is considering, and track is now being extended from the southern island of Kyushu over a thousand miles to the northernmost point in the main island of Honshu. Plans, though currently stalled, are underway to build a train from the center of Tokyo to the Narita Airport, to run at a speed of about 300 miles per hour. Knowledgeable Japanese friends observing the construction of our subway line here in Cambrdige, Mass., have expressed surprise at our outmoded construction equipment.

It would be difficult to claim that Japan's internal market distribution system is among the world's more efficient, although it could be argued that it effectively provides customers with convenience, good service, and a pleasant atmosphere. But in international trade, each of the six largest Japanese general trading companies has a worldwide scope of activities and an information network unrivaled by any foreign firm. As you know, Mitsubishi International is America's largest general trading firm. Roughly half of the trade across the Pacific passes through the hands of these six trading companies, to say nothing of other large Japanese trading firms. The breadth of their networks enables them to put together business arrangements impossible for smaller companies. American companies which would try to compete confront problems of uncertainties over antitrust laws.

In banking, by 1978, of the world's largest 30 banks, 4 were American and 1 Japanese; of the top 300, 58 were American, 61 Japanese. Although Japanese lending is concentrated in its internal market, the formidable assets accumulated by Japanese banks will make Japanese financial institutions strong competitors in the 1980's as Japanese companies and investment continue expanding throughout the world.

When one looks at the aggregate picture, Japanese successes are just as striking. In 1952 when the Allied Occupation ended, Japan had almost recovered its prewar level of production, with a gross national product then roughly one-third that of England or one-third that of France. Twenty-five years later its GNP was roughly the same as England's and France's combined, or about half that of the United States. Since the United States has roughly double the population of Japan, the per capita output is roughly the same.

In the international marketplace, the chronic American trade deficits and continuing Japanese trade surpluses suggest that Japanese competitive superiority cannot be explained entirely by Japanese trade

barriers which have reduced rapidly since the late 1960's. The Japanese market is not easy for outsiders to enter, and Japanese businessmen and government officials at times still add to the difficulties of foreign businessmen. But if one aggregated all the artificial restraints on entry of foreign goods into the American market—the restraints on entry of textiles, shoes, TV sets, automobiles, steel, and even agricultural products; the size of military procurement closed to foreign producers; and the varying state rules slowing down entry of various foreign goods—it is at least open to question whether complete opening of the American and Japanese markets would alter the bilateral trade balance in America's favor.

In 1978, Japan had a worldwide industrial trade surplus of $76 billion dollars. The United States, which had enjoyed an industrial trade surplus in the years previously, dropped in 1978 to an industrial trade deficit of $5 billion. Using the average yen-dollar exchange rate for 1978, the value of Japanese industrial output was then about two-thirds of that of the United States, or about one and one-half times our industrial output per capita. Because of the costs of oil imports, Japanese trade surpluses have been vastly reduced in 1979, but long-range trends are in Japan's favor.

In trying to predict future trends, one should note that Japan's 1978 absolute investment in new plant and equipment was approximately the same as in the United States, or about twice America's investment per capita. This is perhaps not surprising considering that the Japanese personal saving rate, which had been averaging about 20 percent per year has been running higher the past several years while the American saving rate which had been running at about 6 percent per year, has fallen to less than 4 percent. If Japanese and American growth rates continue, Japan will soon be investing more in absolute terms in modern plant and equipment than the United States. The proportion of GNP going into R. & D. has been falling in the United States but rising rapidly in Japan. While the U.S. still spends more for basic R. & D., Japanese R. & D. is concentrated in areas likely to have a high payoff in industrial competitiveness.

Japan has many advantages over the United States. It has a disciplined work force with fewer unpredictable work stoppages. A higher proportion of Japanese than American workers are unionized, but Japanese workers are more convinced that their companies will endeavor to look out for their interests. They know that the life style of high officials is not too different from their own and that high officials will also sacrifice when the company encounters difficulties. The Japanese labor force is better educated. On comparative international tests sponsored by UNESCO, Japanese children greatly surpass American children in junior high school and high school level tests in science and mathematics. As we move to higher levels of information technology, this superiority will make a difference. Unemployment compensation in Japan is less, and the differentials between low-level wages and unemployment benefits is sufficiently great that low-paid workers are anxious to retain their jobs.

Japan has highly trained able government officials who specialize in analyzing and encouraging the development of competitive industries. A much higher proportion of Japanese newspaper and television reporters are not only fluent in foreign languages, but familiar with

international economic issues, and they play an important role in raising public understanding of foreign developments useful for emulation. Japanese businessmen and government officials are, on the average, better informed than their American counterparts of world developments and more concerned about producing goods that will be competitive in world markets in the long run.

Government policy encourages industries that can be competitive in the future and reduces aid and protectionist measures for mature industries. Government leaders' commitment to business success and their ability to work with business leaders provides a more secure environment for investment. Because there is relatively full employment and more commitment of companies to look after workers, political pressures from declining sectors are less intense. The existence of a coherent well-thought-through industrial policy also serves as a counterweight to interests which run counter to those of the nation as a whole.

Japan is vulnerable because it imports such a high proportion of resources required to meet its energy needs, but the United States now imports more petroleum than Japan and the Japanese have been more successful in developing public support for long-range national plans for conservation and diversification of sources. In short, I see no reason to disagree with estimates of economists who predict that over the next several years Japanese growth rates are likely to be two or three times those of the United States and that in industrial production, the differences will be even more striking.

Japan is merely the cutting edge of the spread of industrial know-how to other countries. In East Asia, South Korea, Taiwan, Hong Kong, and Singapore are already acquiring industrial capacity in many areas, and China will begin to expand its export capacities in years ahead. If America retains a healthy economy, using our comparative advantage we can absorb many of their exports, encourage their development, and retain their friendship. If we resort to protectionism, we lose their good will and our ability to remain competitive.

My purpose today is not to add to the gloom that already pervades America. But as a specialist observing Asian developments, I feel responsible for calling attention to the fact that our problems are deeper and more long term than is generally realized. Last-minute response to these difficulties can only lead to unwise short-term measures. In the meantime, the continued deterioration of American companies' market shares will reduce our nation's tax base and further cleavages between the taxed and those who would spend more for human services or military preparedness. It is tempting to say, as many British have said, that we should now concentrate on the quality of life, but that is somewhat like the individual American citizen who buys a home for retirement only to find his assets eaten up by inflation. The British have learned too late that neglecting basic economic competitiveness leads to declining standards of living, reduced public services, and a deterioration of the social fabric, to say nothing of the reduced role for the British in world affairs and increased difficulties for the British citizen traveling abroad. After observing Japanese successes, I see no reason to believe that our efforts to deal with the problem by a bit of

trade promotion, modest anti-inflation restraints, and a few tax incentives would be adequate to the challenge.

Nor is my purpose today simply to register alarm that on some measure or another, the United States is behind Japan. In a complex world it is natural and desirable for Japan or some other country to be ahead on any number of measures. America did not profit from England's decline, and Japan will not profit from America's decline. It is in the interests of Japan and other allies to have a healthy foresighted American partner.

But unless we put our house in order, our problems aggregated together could not only lead to a lower standard of living but to a divided America as each group clings desperately to its share of the pie. The quality of our national life will become more backward-looking and protectionist, bringing an end to qualities in which we take pride: Our optimism, openness, and generosity.

It is not my purpose to suggest that we imitate Japan. We must find our own ways to respond to the challenge. Many people here today have a much better understanding of our own country than I, and I look forward to learning your views in our discussions. I do not, however, see how we can respond effectively to the challenge without much greater public awareness of the seriousness of the problem. We cannot continue to rely on anti-trust laws and political pressure from the losers to determine our nation's industrial policy. We must find ways both to reduce the cost and intervention of government but at the same time to increase its planning and coordinating capacities. Government and only government can make certain strategic decisions, but to make these decisions wisely requires drawing on the competence which only businessmen and labor bring. A new mission for trade unions is essential; with lingering adversary relations we all lose. These are issues which at best will require many years to correct, but certain trends may be irreversible if we do not act quickly, and this election year may provide a good opportunity to begin.

GERMAN COMPETITIVENESS

(By Guido Goldman*)

In many respects the recent experience of Germany resembles that of Japan. Both lost the war, endured an Allied occupation, and had to begin to rebuild their economies from a relatively low level. German conditions at the postwar outset may have been even more adverse. The country had been extensively bombed, it was divided, and it was at once confronted by a massive population transfer as refugees poured into the Western zone.

This January, in its economic report to parliament, the federal government forecast its predictions for German economic performance this year. GNP was projected to exceed 1.2 trillion marks with an increase of 2.5 percent for the year. Unemployment was expected to remain between 3 and 3.5 percent. And consumer prices would rise by just 4.5 percent. What an enviable performance one might conclude. How did the FRG achieve the ability or capacity to do so well where we seem to have done so poorly? What is the origin and the explanation for German competitiveness?

The historical experience of the German people in this century is an important factor explaining postwar developments. The recurrent instability of the recent past has placed a special value on political order and stability. The memory of just how badly democracy fared in the Weimar Republic (and what that led to) has created a greater willingness to accept compromise this time round. Consensus, rather than confrontation, has typified the internal political (and economic) life of the FRG.

The political spectrum is narrower than elsewhere in Eruope (or even Japan). Antisystem radical parties and movements have remained extremely weak. Any substantial communist appeal would have to contend with the antipathy directed toward Soviet actions in East Germany and the repugnant conditions of life there.

These political factors have important implications for economic life in the FRG. The quest for stability and consensus is reinforced by several significant recent experiences. One is the profoundly corrosive effects which the inflation of 1922–23 had on middle class savings (and values) in the Weimar Republic. That the value of the currency at the time, the Reichsmark, could be reduced virtually to zero has left such a deep scar on the collective memory of the German people as to create a much greater awareness of the dangers of inflation. A second experience was the totality of the defeat and destruction wrought by the Second World War. Not only did this create an enormous domestic demand for goods and services; it also meant that the satisfaction of material needs ranked first as compared to other pursuits. The primacy of economic ends, especially in a country in

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which politics had been so tarnished by the Hitler experience, gained a broad legitimacy that goes far in explaining the "economic miracle" of German postwar recovery.

Several specific features of the German situation in the immediate postwar period contributed substantially to its economic success. Germany (as Japan) was left with no overseas commitments, no painful and costly colonial entanglements from which to disengage. Its initial defense burden was virtually nonexistent. The propensity to accept a major role for government in the economy seemed natural given the needs of postwar reconstruction (and the sundering of the private sector). But decontrol and deregulation found wide acceptance as well because the FRG emerged from four years of stringent allied occupation with far too many restrictions for which there was little domestic demand since they had been imposed from outside.

In addition, two phenomena of the postwar years were of key economic significance. One was the steady flow of a very special labor supply in the form of the 14 million German refugees who streamed to West Germany until the building of the Berlin wall in 1961. This potential burden proved to be an extraordinary asset. For here were willing workers, masses of them, who, in their flight to freedom placed relatively low demands on their initial conditions of work. And many of them brought not only high motivation, but special skills and training.

Secondly, the establishment—beginning with the Coal and Steel Commission—of a trading bloc in Western Europe that was to become the Common Market created an enormous secondary demand for German goods and made foreign trade as a whole, but exports in particular, an absolutely central feature of German economic life from a very early stage of the postwar recovery. This meant that as economic activity resumed it had a fundamental trading orientation right from the start. Without the Common Market it would be difficult to explain the pace of German economic recovery.

A great deal of what has been described so far is, or was, unique to the German situation. While it may help to explain German performance, it is not relevant to choices or options available to the United States. But there are several features in the German experience which may contain some useful lessons because they are not so exclusively the product of German history or of the postwar context. Instead they are the result of a number of deliberate and well-designed initiatives or practices which have served well to enhance German economic purposes. The three on which I would like to focus here are: the role of government, that of labor, and the behavior of the private sector.

The role of government in Germany has been effectively conceived and implemented for the furtherance of economic goals. The institutions of government, especially the way in which federalism works in the FRG, make possible both firm leadership from above and effective responsiveness to pressures and demands from below. It encourages consensus within political parties and among them. All three present-day parliamentary parties have, for example, at one time or another been in partnership with each of the other. State coalitions do not always mirror those at the federal level. When a party is in opposition in Bonn, it will be entangled in government policies because of

the way in which the bicameral parliamentary system operates. And there are dozens of bodies—commissions and agencies of all sorts—that bring together representatives of state governments to address specific national needs with a common, supra-party single voice.

State and federal governments in Germany are active economic participants. The federal government alone owns and operates some $25 billion worth of assets, ranging from the railroads to the largest oil company (Veba), the largest automobile producer (Volkswagen), and many other firms. About one out of every ten workers is employed by public enterprise. And this is not limited to the federal government. State governments, too, may invest in commercial ventures. For example, Hamburg, Bremen, and Bavaria share ownership with private sources in the two major aerospace companies in the FRG. Basically, Germany has achieved a kind of mixed economy with extensive state involvement in what remains essentially a free enterprise system.

Government is highly responsive to the needs of the private sector. All kinds of subsidies abound in the FRG. Some are designed to promote industrial innovation. Here the role of the Federal Ministry of Research and Technology (a post that does not exist in the U.S. Cabinet) has become increasingly important. That Ministry, with a swelling budget, has recently supported important projects centered around microelectronics and silicon chips. It has funded programs on the gasification of coal and currently proposes to provide major support (in the amount of 240 million DM) for the modernization of steel producing equipment at Hoesch.

Other subsidies have helped prevent the collapse of key companies or lagging sectors. Large subsidies have been directed to the coal, iron, and shipbuilding industries. Perhaps best known was the rescue of Krupp by government assistance some years ago. Such aid in Germany (in contrast to American practice) tends to involve more stringent government efforts to impose conditions and seek the rationalization of the subsidized industry. Here, too, the interplay between the private and public sectors is much more extensive than in the United States.

Cooperation between these two sectors is also enhanced by a variety of consultative arrangements. One is the so-called "concerted action" which brings together union leaders, managers, government officials and representatives of other economic groups on a regular basis. Even where there is substantial opposition among these interests, there is also continuing contact among them. This is facilitated by the fact that interest group representatives play an important role in German political parties and are represented in the federal and state parliaments. The interaction between senior government officials and business (and union) leaders is extensive as well. In Germany there is simply a mite tighter grid encompassing private and public economic activity than in the United States. And the high quality of the civil service plays a particularly strategic and constructive role in facilitating a high level of economic performance.

The federal government pays careful attention to the accuracy of its economic forecasts. Law requires that intermediate range, 5-year projections, be articulated (and revised) annually. The Ministry of Economics (which is separate from the Finance Ministry) sees its role

in part to create a more stable framework for long-term stable planning by German companies. The staunchly independent and highly competent federal reserve bank (*Bundesbank*) creates a separate forecasting mechanism, which is carefully insulated from partisan considerations.

The result of this kind of government role has been salutary for economic performance. Thrift, often characterized as a particularly German virtue, has been encouraged. The rate of savings is more than three times that of the United States. This habit has helped to curb inflation, which, in turn, tends to reward savings because the deferred purchasing power of those savings does not rapidly erode. While the United States experienced a continuing increase of consumer debt throughout 1979, German savings expanded creating the base for a further 10 percent rise in capital spending. Here there are some real lessons for us to learn.

The FRG has benefitted by the fact that the Deutschmark—at least until recently—has not served as a reserve currency. This has permitted the Bundesbank to keep a far tighter control on capital markets and money supply.

Perhaps nowhere has the effectiveness of German economic policy been more pronounced than in grappling with the problems of its energy supplies during the past few difficult years. Germany imports all of its oil, which, in turn, represents slightly more than half of its primary energy consumption. Government strategy after the 1974 price increases was to slow the rate of the growth of the domestic economy, maintain a strong balance of payments and encourage a strengthening of the mark, which meant that an export-led current account surplus would create sufficient demand for German products to prevent a serious recession. A strong mark would reduce import costs to restrain inflation. But this required an intensification of effort to sell German products abroad. The federal government organized selling campaigns, especially to the Arab OPEC countries. In the mid-seventies it was not unusual to find the Minister of Economics (now head of the Dresdner Bank) selecting a dozen industrial leaders to join him on a marketing mission to Saudi Arabia or Iran. And apparently it succeeded. Despite the dramatic increase in the price of oil, the FRG actually achieved a favorable balance of trade with the Arab OPEC countries!

Meanwhile, the German government has vigorously promoted the search for alternative sources of supply. Here its options are more restricted than our own because of the weak domestic energy resources that are available. Germany developed one of the most modern and sophisticated nuclear reactor programs (which is now stalled in domestic installation because of environmental opposition). Its reactors are seen to be so good that they sell abroad (where sales are permitted) at prices substantially higher than competing American products. Gasification of coal has been strongly subsidized in the two major government-owned energy companies, Veba and Ruhrkohle. Efforts to develop natural gas imports from the Soviet Union and to secure liquified natural gas imports from Algeria have been the result of vigorous government initiatives. And oil has been stockpiled in sufficient quantities to sustain 110 days of consumption.

These are expensive measures. Their full effect was discounted in the recent past by the enormous upward valuation of the mark. This phenomenon has now, most likely, run its course. The mounting burden of oil and gas imports will take a greater toll in the years to come. The cost of oil imports spurted from 30 billion marks in 1978 to 45 billion in 1979 and may rise a further 50 percent this year. Oil imports would then absorb 4.5 percent of GNP compared to 2.5 percent just two years ago.

This cost will require a further intensification of the export drive in the years ahead. The experience of the past decade has been remarkable. German exports have increased since 1970 at an annual rate of 11 percent, soaring from 125 billion marks in 1970 to 315 billion last year. In part this was the result of astute government policies and initiatives. The government has been instrumental in providing or insuring credits for foreign purchases of German goods. It has opened the door for major sales to eastern Europe, the Soviet Union and now China. When Iran collapsed, the federal government was quick to establish a foothold in Iraq. Without the strong and effective support of government resources it is unlikely that German exports would so successfully have withstood the price effects of the strengthening mark.

But trade for Germany is emphatically a two-way street. Imports, too, have been growing rapidly. The German economy is basically an added-value manufacturing system. To prosper it must import vast quantities of raw materials. Despite the strength of the mark and the fact that oil prices are dollar denominated, raw material and energy costs increased by 21 percent in 1979. For a major chemical company such as Hoechst, that represented an additional cost of a half billion marks in just one year! It has been projected that American chemical raw material and production costs may now be as much as 30 percent below those of Germany.

Any serious erosion of German capacity to export competitively could have serious consequences for its domestic economic equilibrium given its soaring energy import bill. Last year for the first time since the recession of 1966, German balance of payments on current account did slip into the red by about 9 billion marks. That deficit is now projected to exceed 20 billion marks for 1980. Given its vast accumulated reserves, a year or two of deficit can be easily absorbed. But were this a harbinger of things to come, then German government initiatives would have to be further intensified to restore a positive balance, and it is a governmental system that is both sensitive to, and well designed for, playing that sort of role.

The second significant factor accounting for German competitiveness has been labor. First, as mentioned above, during the 1950's there was a large, motivated reservoir of surplus labor which both helps explain the prodigious growth of those years and the relatively harmonious labor relations that characterized them. Organized labor approached the tasks of postwar recovery with a profound sense of partnership and participation, rather than confrontation. This is partially the result of its historical experience. During the twenties the labor unions fought for a recognition and legitimacy that was never broadly accepted. Under Hitler they suffered the dictates of a totalitarian war machine.

All was different in the Federal Republic. Here the role of the unions is affirmed in the constitution. The trade unions are basically unified and have gained overwhelming recognition. Three members of Helmut Schmidt's cabinet, including the Finance Minister, Hans Matthöfer, are union leaders. Indeed, it is possible that Matthöfer might succeed Schmidt as leader of his party. Trade union leaders are members of the government-sponsored "concerted action" mentioned before.

Labor bargaining is quite different in Germany from the experience elsewhere. There unions bargain for basic wages and fringe benefits across the board for entire industrial sectors, often on a national, or at least a state, level. And where strikes have threatened, the role of government agencies, especially in arbitrating disputes, has been significant. The part played by government in labor affairs has to be substantial in Germany because government is the single largest employer.

The propensity to strike has not been great. This has several explanations. First, and most important, wages have increased enormously. Of course, the point of departure in the late forties was absurdly low. But nonetheless there has been a fourfold increase in purchasing power per capita in the FRG since then and that kind of improvement diminishes dissatisfactions. From 1950 to the recession of 1966 real wages grew by 140 percent while the work week decreased by 10 percent and the record since the midsixties is about the same.

Much of the growth in wages is due to increases in labor productivity, which has been growing by more than 3 percent annually in the last few years. This, in turn, is the result of the far higher per capita investments in R. & D. and new plant equipment in the FRG than here in the United States. But there may be imminent limits to the German experience. In the chemical industry, wage costs in Germany now exceed those in America by 30 percent. In the highly competitive motor vehicle industry, German manufacturers in 1978 paid DM 24.4 per man-hour compared to 21.5 in the United States (and only 16.3 in Japan). It could be that German labor costs may price German goods out of foreign markets in years to come and that situation could feed back into the domestic arena with a much more contentious outcome for labor negotiations.

However, those negotiations do not rest with wages alone. German unions have placed great emphasis on the way in which labor is organized in the plant and in the firm. The role of workers councils in factories and codetermination (or Mitbestimmung) in the boardroom are seen as important gains for the labor movement that help explain the relative harmony of labor relations in the FRG.

Much as the state is a partner of private enterprise in German business, so, too, are the trade unions. One of the giant banks (the *Bank für Gemeinwirtschaft*) is union-owned. So is the largest building firm (*Neue Heimat*) in Germany. This kind of partnership helps explain the unions increased willingness to accept new technology and to acknowledge the need for industrial innovation. German labor seems to comprehend (far better than our own) the need to rationalize because it has grown strong with an ongoing awareness of the need to remain competitive.

If German labor has been cooperative, it has also reaped impressive gains. The average monthly industrial wage in Germany today stands at about 2,400 DM. Unemployment has remained well below the 5

percent threshold, and that under conditions in which millions of foreign workers have joined the labor force. These guest workers who tend to be a kind of labor underclass have been more easily expendable because they are not full-fledged members of the national labor constituency. Thus, when jobs become eliminated some, at least, of these foreigners can be sent back home. To date these workers have been relatively docile in placing demands upon the system. That is beginning to change and may pose problems (and costs) for Germany.

In many respects, Germany has become a social welfare society. Today about one third of its GNP is directed towards social costs, which now total over DM 400 billion annually and which are presently rising by 6.3 percent per annum. If the guest workers are to place increased demands for full participation as beneficiaries of the social welfare system, the costs could escalate at a precarious pace. This indicates problems down the road, especially in view of the negative birth rate, which will place disproportionately heavy burdens on a reduced supply of wage-earners in the not-so-distant future.

If labor has been the second important component in German economic prosperity, the contributions of the private sector have been the third. The management and organization of German finance and industry have played an absolutely essential role in fostering German economic growth. Here there are several distinctive factors. First, is the close fusion between banking and industry. In the FRG there is no separation of deposit and investment banking functions. Nor are banks limited—as they are in the United States—in their geographic spread. While some are regionally concentrated, all the large banks are national, countrywide institutions. Given German thrift and prosperity, the major banks have had very substantial capital at their disposal. And they have used this capital both to finance industry and to acquire very significant industrial holdings. The Deutsche Bank, for example, owns more than 25 percent of Daimler Benz. Its directors sit on the boards of countless industrial firms.

This close relationship has important implications. German industrial companies are not dependent upon equity markets for the raising of capital. The provision of massive funds by private banks permit more long-term, stable planning for firms, who are not as adversely affected by the collapse of stock prices as are their American counterparts. Moreover, the closeness of industry to the major banking institutions makes unfriendly takeovers less likely and less rewarding. Germany has been spared the creation of wide-ranging, internally inefficient conglomerates. Instead, banks and companies work together to rationalize where desirable and to salvage where necessary. A bankrupty such as Rolls Royce would not occur in the FRG. When the giant AEG-Telefunken Company teetered on the brink of illiquidity, the banks, who were already important shareholders, stepped in to supply a billion marks of credit—and some stringent demands for reorganization.

Concentration is another central feature of the German system. The chemical, electro-technical and automotive industries are dominated by monolithic giants who have become important multinational players. Here the interplay between size and commanding export roles has been of strategic value. All three sectors export more than 40 percent of their production. Their size has permitted extensive foreign

market penetration and permitted effective competition with American firms. The Volkswagen experience may be the best known. Not only are its exports formidable, but it has established assembly plants in Argentina, Brazil, Mexico, Egypt, and the United States and may even place one in South Korea (right under Japanese noses). Indeed, Volkswagen today has displaced American Motors as the fourth largest U.S. domestic car producer. In chemicals Bayer now has garnered 1 percent of the U.S. domestic market. In 1978 its U.S. subsidiaries had a combined turnover in excess of DM 4 billion (which approached its total sales in Germany).

The link between size and foreign sales is innovation. German thrift, concentrated banking deposits, retained earnings and government subsidies have permitted the allocation of substantial resources for R. & D. German companies have increased their R. & D. outlays from 0.5 percent of domestic output in 1964 to 1.5 percent in 1977. Today that figure probably exceeds 2 percent, whereas for the United States it is less than 1 percent. Well supplied with capital, German firms are less concerned with rate of return than with the quality of the product. Siemens since 1975 has raised sales from products that are less than 5 years old from 39 percent to 48 percent. The Mercedes-Benz has replaced the Cadillac or the Rolls as the symbol of quality, workmanship and status. Germany has produced goods that work and that are wanted and has done so with sufficient prowess so as to sell them effectively even when they are no longer price competitive.

But it has also invested heavily in new plant. Here spending increased by 14 percent in 1979. This is not just the result of innovative will and capital reserves. It also reflects labor's acceptance of the necessity of modernization even where it may spell job redundancy. This enlightened outlook on the part of labor reflects the fact that its leaders are often placed in relationships with business leaders from which the longer term needs of the economy can be better assayed. Organized interest groups play a very important role in Germany. There is a great deal of behind-the-scenes bargaining and accommodation. The state, labor and the business leadership coalesce in ways that have fed effective, economic collaboration. Interelite relations have helped cement this process. And the result can be measured in performance figures, be it in growth, stability, curbing of inflation, or export sales.

What can we, as Americans, learn from all this? There are lessons in the German case. They are to be found in a much stronger sense of the need to become and remain competitive given the less favorable circumstances of the country as a whole. That sense and the rational effort to rebuild a society that had wrought such destruction on itself have created a balanced mix of private and public initiatives and institutions that have permitted a fundamentally weaker economy to become a prodigious world leader. If the German example exemplifies anything it is that will and proper organization can attain remarkable achievements. Perhaps it is time that we begin to do the same ourselves.

THE COMPETITIVE POSITIONS OF FRANCE, ITALY, AND THE UNITED KINGDOM, AND THE RESPONSE OF THE 1970's

(By Bruce R. Scott*)

Our discussion of Germany, Japan, and the rapidly growing "New Japans" in Southeast Asia has been one of identifying and explaining very successful economic performance. Exports have played a key role in each of these success stories—each has been able to achieve a high or rapidly rising market share in the world trade of manufactured goods. This export performance has put the pressure not only on American companies and American workers but on other industrialized countries as well. I should like briefly to discuss the competitive positions of France, Italy and the United Kingdom in the face of this challenge, and then outline how they are responding to it. Before looking at specific countries, however, I should like to review very briefly the global setting in which they compete and then to suggest a framework for evaluating that competition.

World trade has grown rapidly since World War II—and for much of this period it has grown about twice as rapidly as domestic economic activity. Three trends have shaped this marketplace: (1) declining trade barriers; (2) the worldwide spread of technology via licenses, and (3) the worldwide spread of multinational manufacturing and trading organizations. The result is global competition in more and more industries where all major competitors have access to comparable technologies and roughly the same markets. As a multinational firm surveys this situation it must ask itself, "Where in the world do we build our next plant?" Countries compete with one another to attract new plant sites as least as much as they compete in promoting exports from existing plants.

Evaluation of international competition requires that we focus on the *exposed* sectors of the economy, those sectors that are exposed to international trade in contrast to those which are sheltered or purely domestic in character. The exposed sectors include steel, television, and automobiles, while the sheltered sectors include services such as public utilities and grocery chains.

Evaluation of a nation's exposed industries should begin much like the evaluation of an individual firm in a competitive environment. Two of the key measures of strength and performance are market share and profitability. As with a company, it is not one measure or the other that counts but the combination.

If we apply these measures for France, Italy and the United Kingdom, we have a picture of deterioration in the 1970s, especially for Italy and the United Kingdom. To maintain or slightly advance market share, they have had to make drastic reductions in the exchange rates of their currencies, whereas Germany has maintained market

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share despite a rapid rise in the value of the mark. France, however, has begun to develop an industrial strategy and is responding to its problems in a far more effective way than is the United States.

Italy's problems are due in considerable measure to excessive wage increases garnered by powerful unions in the period of 1970–1975 and to union refusal to tolerate layoffs. Beginning roughly in 1970 the major Italian unions were able to agree to limit their rivalries and turn their powers against management to secure higher wages. They succeeded—"too much" as some now realize. When recession came in 1975–1976 the unions refused to tolerate layoffs, striking and bankrupting some firms which tried to reduce employment in line with declining sales. For the bulk of Italian industry this meant excess employment, declining profits or in many cases losses, heavy borrowing to finance these losses, and rising interest costs. By 1977 many companies were up to their necks in debt, investment dropped, and new job creation declined.

Government's response—broadly speaking—has been to make loans to help keep the companies afloat. State banks have even been authorized to convert some loans into stock in order to reduce the interest load on Italian firms. The unions, on the other hand, have responded more courageously. They have allowed layoffs—even large-scale layoffs—in recognition of the fact that excessive wage increases and excess employment were destroying the profitability of Italian firms and hence their power to invest and create jobs. (The Communists' reasoning in this regard is not unlike that of a Wall Street banker.) In return, they have asked for management commitments to invest and create new jobs. Likewise, they have made it clear that the layoffs should be done quietly and diplomatically and not as an abrupt reassertion of management rights.

Italy has had some 38 governments in the 35 years since the war. In these circumstances, management and the unions are trying to accommodate one another in the absence of a governmental strategy. Given the continuing standoff between the Christian Democrats and the Communists, there is little likelihood of a more coherent or effective response in Italy.

If we turn to Britain, the picture is even dimmer. British performance since World War II has been consistently poor, and 35 years of poor performance has attracted a great deal of attention and a good many explanations. Some of the major causes include the thoroughly badly managed companies and powerful, irresponsible unions. In addition, large sterling balances were held abroad as the result of World War II. Like our present eurodollar balances, these sterling balances threatened to cause sterling to be dumped whenever Britain ran a large current account deficit. Postwar efforts to speed up growth led to big increases in imports and current account deficits. Britain cut its growth rate rather than devalue and keep going. The famous "Stop and Go" policy meant that Britain never experienced the rapid growth or high rate of investment of France and Italy.

Despite this low growth Britain pioneered in the welfare state. Government took on new responsibilities and needed an ever-increasing bureaucracy to administer them. Government grew much faster than the market sector of the economy, and the government budget rose from 42 percent of GNP in 1960 to almost 60 percent in 1975. The

financing of these programs tells a revealing story. They were financed in part by taxes on the rich, of course, and partly by high taxes on the middle class and workers' payrolls. But union labor was able to raise its real wages after taxes by about 2 percent per year—the same rate as GNP—up until the crunch in 1975. In other words, union labor was not willing to forego pay increases to help finance the social programs voted by labor governments. Wages rose, unit labor costs rose, and British companies were unable to recoup these rising costs through raising prices. Profits as a percentage of value added declined steadily until 1975, when they dropped dramatically.

The Conservative government compounded the problem in the early 1970s by trying to cope with rising unemployment by expanding the public sector. More public jobs meant the private sector had still more of a tax burden to carry, and the exposed manufacturing firms faced still more of a squeeze relative to foreign competitors.

The new Conservative government has responded with a program designed to (1) reduce the power of the unions, (2) reduce the scope and cost of the public services, (3) reduce or eliminate the subsidies to the state-owned enterprises, and (4) shift the tax system—to raise more by taxes on consumption and less on wages. These changes will help make the United Kingdom more attractive for work, saving and investment. However, government faces a dilemma. On the one hand their reforms will put great pressure on the social consensus in the United Kingdom; on the other, it is not clear that they will go far enough to make a significant impact on the United Kingdom economy, particularly in a five-year electoral time frame.

Britain's decline has gone on so long, and its competitive position has eroded so badly, that the new program will need to be sustained and no doubt augmented for perhaps a decade to have much hope of turning things around. Britain's social overhead costs will have to come down and the tax system shifted to include increased consumption taxes, so that social costs can be supported by taxes rather than the printing press. The measures thus far enacted are designed to reduce the government's share of GNP, but only marginally. The tax changes have cut the maximum rate on personal incomes to 60 percent, a big improvement, but still high when you note this rate applies to incomes above 12500 pounds sterling.

The unions are sure to challenge Mrs. Thatcher's strategy time and time again. Presumably the Labor Party, too, will do so. The key question is whether the government can be bold enough to make a major impact on Britain's problems and thus have something to show when the time comes for the next election.

In the meantime, Britain is hardly a competitive threat. It is more like Massachusetts or New York City—an area which has mismanaged its economy and driven business investment away through high cost social programs. Cutting them back to more affordable levels would seem a requisite to the sharply increased investment which is needed. Mrs. Thatcher's programs are a beginning, but only a beginning, compared to the spending cuts and program reductions that are needed.

The French government embarked on a very basic change in strategy in April 1978. The change was prompted by the surprise defeat of the Left in the March elections and by government's sense that the split between the Socialists and Communists would leave the Left in

a weak position for at least five years and more likely a decade. In this context the government of Barre and Giscard d'Estaing sees itself as having an opportunity to take a long-term view, since it has the political strength to absorb possible adverse short-term consequences.

Why the need for a radical change in policy? As we noted at the outset, France has enjoyed very rapid growth since World War II, a growth rate almost equal to Germany's. It has enjoyed a rising level of investment—to 21.4 percent of GNP in 1978 compared to 21.6 percent in Germany. Productivity has risen steadily as well. And this performance was achieved in the increasingly competitive environment of the EEC where internal tariffs declined and disappeared during the 1960s.

French success in the 1960s and early 1970s was partly real, partly illusory. It was not based on building solidly competitive enterprises in manufacturing or an efficient agriculture; rather the strategy was one of continually inflating domestic demand to promote employment and of periodically devaluing the franc to bring French costs into line. Rising government expenditure was accompanied by continuous deficits financed by continuous credit creation. France devalued in 1948, 1949, 1957, 1958, 1969 and then floated in 1973, with the "effective rate" moving down against the dollar from 1975 to 1977.

This program of inflating demand was accompanied by price controls, credit rationing, and industrial planning. All three forms of controls hurt French development of competitive enterprise. Price controls were particularly effective on public enterprises, leading them to charge too little, to borrow more to finance their growth, and to contribute to the need for credit rationing. In the credit rationing process the Treasury borrowing received top priority, state enterprises came second, private firms came last. The result was that five major state enterprises accounted for almost 40 percent of industrial capital formation in France in the 1960s: the railroad, the Paris-Metro, the electricity company, the coal company, and Renault. Of the five, only Renault was exposed to foreign competition. France incurred high budget deficits and invested heavily in sheltered domestic sectors, leaving the exposed sectors in the lowest priority categories for access to funds.

These distortions were abetted by a system of indicative industrial planning. This system began in 1946 when it was essential to ration such basic materials as steel, coal, electricity, and transport. Demand exceeded supply, and France lacked foreign exchange to buy the needed supplies abroad. The planning concepts were those of rationing, the matching of supply and demand in physical units—tons or kilowatt hours. The choices were to make or do without. This conception of planning was carried forward into the 1960s, despite the fact that supply had caught up with demand and the EEC treaty required open frontiers. In the new circumstances the choice of French firms was make or buy, including buy abroad. Rational planning for an industry or company with these options required the estimation of costs, prices and potential return on investment, as for a business. Yet the government planners never shifted from planning in physical units to planning in terms of return on investment. As a result, French indicative planning was supportive of overinvestment in those same

domestic industries where the technocrats wanted to keep building ultramodern plants to meet demand for underpriced services.

With this system France developed a negative trade balance with all of its industrialized trade partners, and the trade balance in most major items—except the automobile—deteriorated. The other seemingly strong area was in turnkey plants, but these were particularly strong in Eastern Europe and in less developed countries—largely as the result of government-to-government sales supported by subsidized state loans. Three decades of underinvestment in the exposed sectors left French industry ill-equipped for international competition. In these circumstances, industrial planning was abandoned—tentatively in 1970, completely in 1978.

In addition, the strategy of inflate and devalue has been abandoned in response to the rise in oil prices and the fact that oil is quoted in dollars. A declining franc means still higher oil prices, more inflation, more devaluation and a vicious circle.

The new strategy, beginning in April 1978, focuses first and foremost on a stable franc. Long-term stabilization of the franc requires a balanced current account, which in turn depends on the competitive performance of French companies. Likewise it depends on restraining the growth of money supply to reduce domestic inflation. Employment is now seen as the result of competitive performance, not the justification for inflating domestic demand.

The new strategy includes the abolition of price controls, credit rationing and industrial planning. The Prime Minister favors market discipline over administrative allocations, and he has appointed economic liberals to head both the Ministry of Finance and the Planning Commission. In addition he has made it clear that he will not be deterred by rising unemployment, even though unemployment has passed 6 percent in a country which averaged less than 2 percent for over 20 years.

The steel industry probably offers the most striking contrast between the new strategy and the old. In 1975 the industry suffered a 30 percent drop in sales and almost a 50 percent drop in prices. While it took perhaps six months for management to realize that this was a basic long-term problem and not just a cyclical slump, they were prevented from correcting the problem once they realized just how serious it was. One of the major steel groups, for instance, realized that they needed to lay off at least 20,000 employees if they were to bring their labor force in line with output. In spite of this—and facing losses of about $300 million per year due to overstaffing—they asked government permission to lay off only a few hundred employees and even this was rejected. Instead they were advised to boost their investments, boost production and sell abroad. The state banks were told to finance the investments.

Following the 1978 elections this policy was reversed. With government support this one steel company is in the process of laying off 24,000 employees. Government has appropriated 5 bn F. to finance early retirement of some steelworkers and retraining of the remainder. All but the most efficient plants will be closed—despite the fact that one was occupied by a "workers' soviet" for about a year. The top managers were forced to resign, banks and shareholders to take write-downs, and the head of the steel association resigned. The key actors—

except the top politicians responsible for some $600 million in unnecessary losses have paid a price. The new, scaled-down industry is one where output per worker should about equal the best European and American levels, and where management will once again be subject to the discipline of the market.

Barre's program is one of austerity. Investment must rise to bring French firms to more competitive levels. Profits must rise to justify the investment. And real wages must stop rising to make way for increased profits. Real purchasing power grew almost 5 percent per year for 25 years in France. Barre's plan is to reduce the growth in purchasing power to zero until French firms are strong enough to afford more. With the help of tight wage controls on the state firms, the rise in purchasing power was in fact reduced to zero in 1979.

Barre has supplemented the economic program with frequent "lectures" on economic reality. French television carries these lectures "live." And the new realities plus the lectures of the Prime Minister have led to a new sense of realism among Frenchmen. Strikes are at a low ebb in spite of the austerity.

What is the prognosis for the future? And what, if anything, can we learn that might be applied to our present circumstances?

One part of the prognosis must be optimistic. The French have identified some of the basic problems—such as poor industrial performance, aided and abetted by a government strategy of inflating demand and devaluing the franc. They have built public awareness of the diagnosis and laid the groundwork for public support for the remedy. They have also formulated a strategy which focuses on these problems and which aims to increase government self-discipline and to stimulate private investment through higher profits. In this the French have adopted almost exactly the same recipe as Ludwig Erhard chose for Germany in 1948.

On the other hand the French government is imposing a cost on the unemployed and risking a backlash from organized labor. Quite a number of observers would add that the government has not done what it might to reduce the risk. While making it clear to labor that its purchasing power will not rise, it has not made a significant move to open other avenues of progress for French labor. There is substantial sentiment, even among French employers, that progress could be speeded in job enrichment and in worker participation in decision making and governance of the firm without adding to costs or reducing productivity. The employers' association is against such initiatives: so, it seems, is the government.

The question for the French government is how long they can sustain an austerity program where real profits rise and real wages do not. A tentative answer is that with a much more realistic set of public attitudes, aided by lectures from the Prime Minister, they may be able to sustain such a program for several years, perhaps even longer. But will that be long enough?

The French strategy was set in motion in 1978 and 1979 when oil prices were about $15 a barrel. Under those conditions unofficial forecasts anticipated unemployment going above 9 percent, perhaps as high as 11 percent, and lasting several years. No provision was made for oil at $30 per barrel. But $30 oil means the austerity program will have to be extended—the import bill will rise and foreign markets

except for OPEC will be harder to penetrate. It may well take four or five years more or even longer to establish a competitive economy under these circumstances. Will French labor be prepared for another five years of austerity?

Even this level of energy costs is, however, hardly a basis for sound plannin . Events in the Middle East suggest the possibility of further political upheavals, additional production cutbacks, and further price increases for oil—despite the adequacy of present supplies. The impact of $40 or $50 oil should be taken into account. Higher real prices for oil will further stretch out the need for austerity.

How long can austerity be stretched out for the benefit of profits and investment and productivity when these gains accrue in the first instance to property owners rather than employees? Is it prudent policy in the 1980s to appear to favor those who own shares while doing so little for those who invest their lives working for a firm?

Capitalism is not winning many converts anywhere these days. Does it make sense to continue with such a narrow brand of capitalism in the 1980s? Can we really expect employees to tighten their belts in order to boost shareholder profits and to receive little or nothing "new" in return? I suggest that this is a question which needs to be rethought in Italy, the United Kingdom, and France. I think it also merits reexamination in the United States.

Japan and Germany have important advantages in this area. Their system of corporate governance has more balanced representation of employee and shareholder interests. Management makes a greater commitment both for security of employment and for due process in recognizing the rights of membership. In return employees have a much stronger commitment to the firm—to productivity, product quality and ultimate economic performance. While the Japanese and German systems have their differences, they share important strengths in recognizing the rights of membership as well as those of ownership. And these strengths will be particularly important as all industrialized countries face the prospect of much slower growth and more or less austerity in the 1980s.

I would like to suggest that there are four lessons in this European experience which are applicable to the United States.

First, we should beware of artificial growth based on the inflation of domestic demand. Necessarily the foreign trade account suffers. To keep this artificial prosperity going requires more inflation and repeated devaluation. Milton Friedman has likened this economic strategy to alcoholism because, like alcoholism, it feels good in its early years. The United States started down this road in 1965 and has been able to get away with it longer than others because we print not just our own currency but the world's reserve currency at the same time.

Second, beware of any formulas of rapid or painless cures. As with alcoholism, the cure is long and painful. Also as with alcoholism, the cure does not even begin until you recognize and admit you are an alcoholic. The French have now done this, and the Prime Minister has taken the lead in noting that the cure will be long and painful as measured by a very high unemployment rate. The cure will not be achieved until French companies can maintain an export balance and do so at a profit. To achieve that France must undergo a period of aus-

terity, where productivity rises much more rapidly than real incomes until France can once again have its way in world trade.

There are no quick fixes and plainless cures. The inflationary abuse began in 1965 and we are trying to cure 15 years of it. We need to begin by admitting what we have done for those 15 years and acknowledge how painful the cure may be. As in France, we might be surprised at how well the public receives a straight diagnosis for a change.

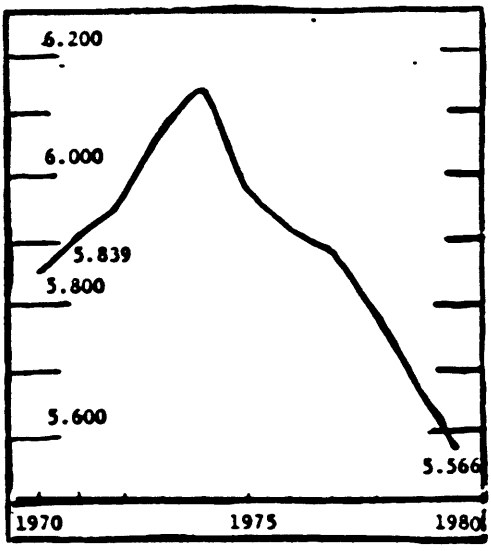
Third, we need to recognize that we have become a high cost place to locate a plant and that unless we address this issue we, like all of the Europeans, are likely to see a continuing stagnation of manufacturing unemployment. New plants will be built in lower cost areas such as Korea, Taiwan, Hong Kong and Singapore. In a world of free trade and equal technology the older industrialized countries have all become high cost places to manufacture. We need to address the question of wages and fringes in key industries such as autos and steel in particular.

Finally, we should recognize that one of the reasons Germany and Japan have had a relatively strong performance record is that they have less antagonistic labor-management relations than those of Italy, France, the United Kingdom or the United States. If we are to ask for austerity from employees—as we surely need to—can we really do this in the adversary framework? To me it does not seem realistic. Our problems are so serious that we will need cooperation to solve them.

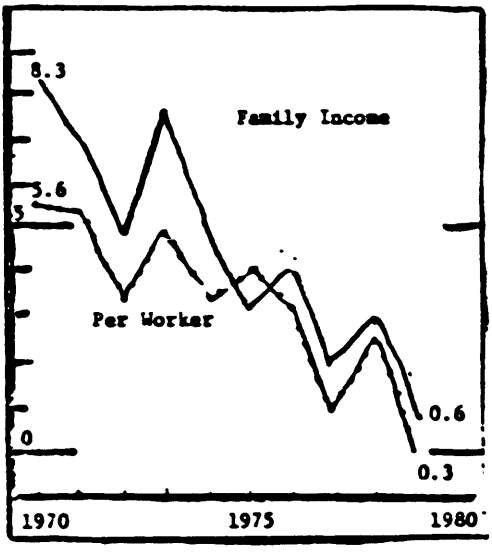
Exhibit 1

France

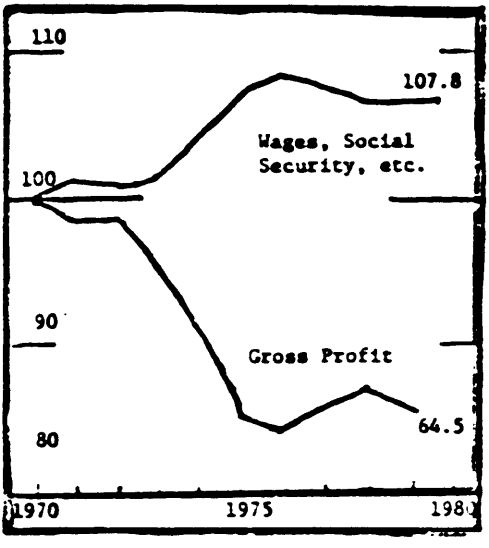
INDUSTRIAL EMPLOYMENT (MILLIONS)



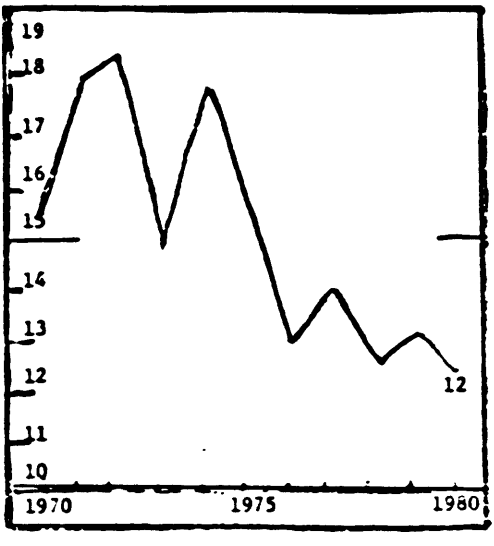
NET REAL WAGES (PERCENT CHANGE)



SHARE OF VALUE ADDED
(INDEX: 1970=100)



MONEY SUPPLY (PERCENT CHANGE)



Estimates

Source: L'Expansion, January 1980, p. 45.

EXHIBIT 1 FRANCE—Continued

BALANCE OF TRADE IN INDUSTRIAL PRODUCTS

[Customs valuations in billions of current francs]

	1970	1971	1972	1973	1974	1975	1976
EEC	−4.2	−2.9	−2.3	−2.3	−4.2	−3.6	−18.2
Other OECD	−2.6	−1.2	+.3	−1.6	−2.6	−3.8	−11.7
Socialist	1.1	1.0	.9	1.3	1.6	4.7	5.1
OPEC	−5.0	−6.4	−7.9	−9.7	−34.8	−20.7	−30.8
Other developing	4.1	5.4	4.7	4.8	5.6	15.2	12.6

Source: Direction De La Prevision as reproduced in "La Grande Menace Industrielle," Christian Stoffaes, Paris, Calmann-Levy, 1977.

EXHIBIT 2

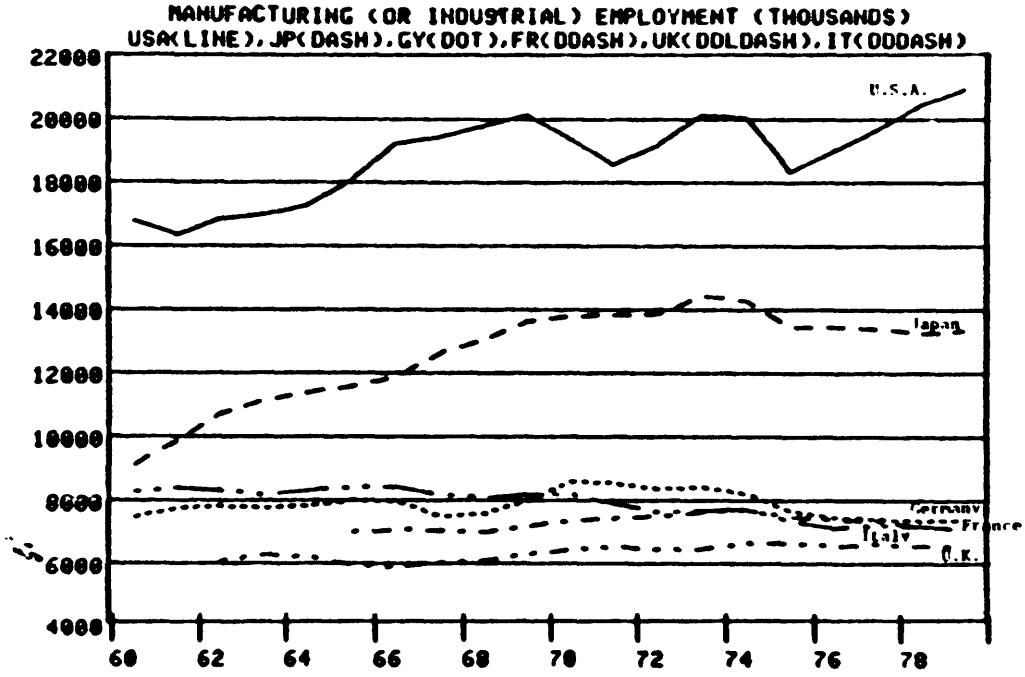
SHARES OF WORLD EXPORTS [1] OF MANUFACTURES

	France	W. Germany	Italy	U.K.	U.S.A.	Japan
1970	9.1	19.8	7.1	10.4	21.3	8.9
1975	10.2	20.1	7.3	8.9	19.2	11.4
1976	9.8	20.8	7.2	8.5	18.8	12.0
1977	9.9	20.9	7.7	9.2	17.3	12.6
1978	9.9	20.7	7.9	9'4	17.0	12.5

[1] World exports are defined as the sum of the exports of 15 major industrial countries.

Source: U.S. Department of Commerce, "International Economic Indicators," March 1980, table 34.

Exhibit 3

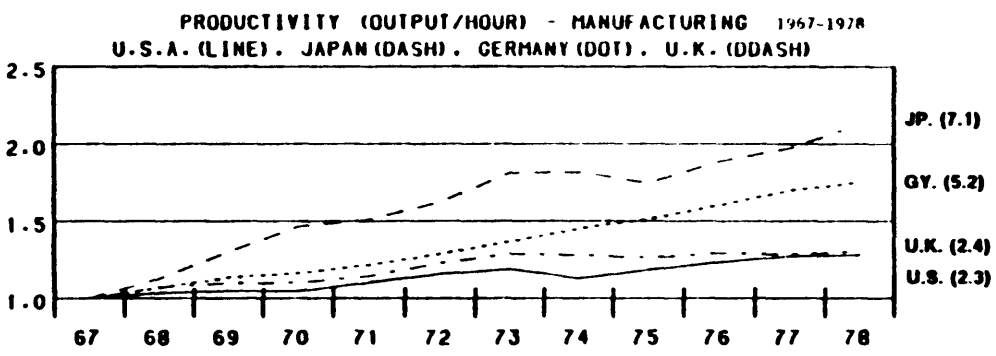


1970-1977

France	0.0%	Japan	-0.4%
W. Germany	-2.3	Korea	11.8
Italy	0.8	Singapore	9.8
U.K.	-1.8		
U.S.A.	0.2		

Source: OECD data, courtesy of Data Resources Corporation.

Exhibit 4



Source: OECD data, courtesy of Data Resources Corporation.

EXHIBIT 5

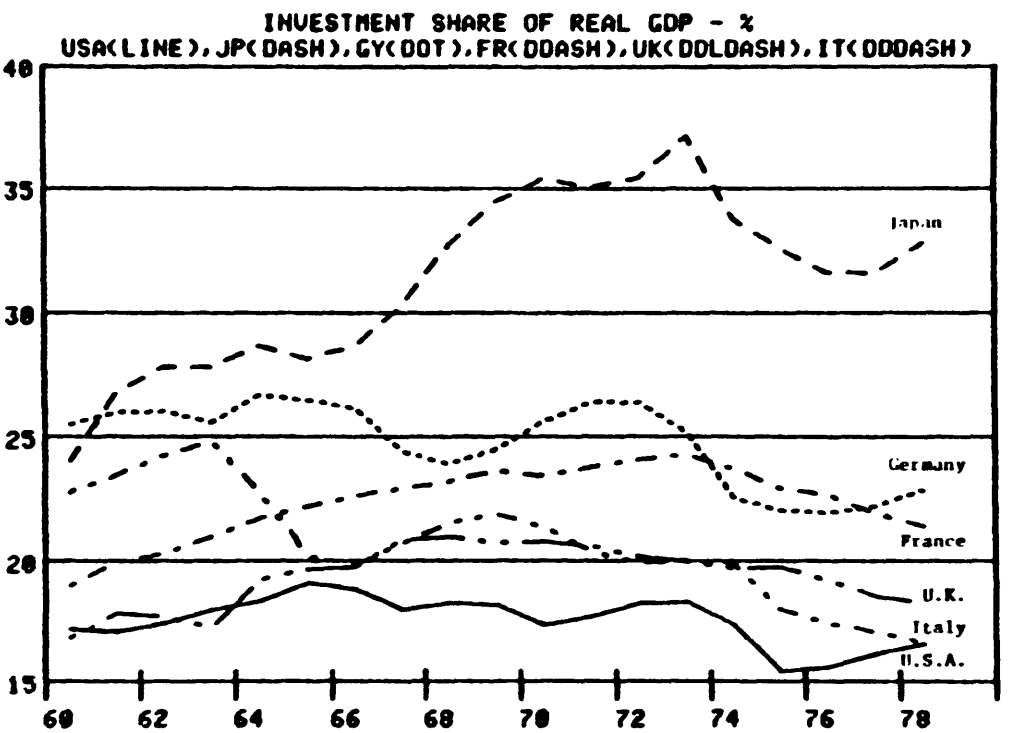
OPERATING SURPLUS AND COMPENSATION OF EMPLOYEES AS SHARES OF FACTOR INCOME IN MANUFACTURING

	France [1]	W. Germany	Italy [2]	U.K.	U.S.A.	Japan	Hong Kong	Korea	Singapore
Compensation of employees: [3]									
1960		66.7	66.0		78.5				
1970		75.2	70.0	81.4	82.9	50.2		56.8	
1976		80.5	75.0	93.5	80.0	67.5		55.6	
Operating surplus: [4]									
1960		33.3	34.0		21.5				
1970		24.8	30.0	18.5	17.1	49.8		43.2	
1976		19.5	25.0	6.5	20.0	32.5		44.4	

[1] For France, see exhibit 1.
[2] For Italy the years are 1960, 1970, and 1974.
[3] Compensation of employees includes wages and salaries, employers' contributions to Social Security, private pension plans and similar schemes.
[4] Operating surplus is defined as the excess of value added over the sum of domestic compensations of employees, indirect taxes minus subsidies, and consumption of fixed capital.

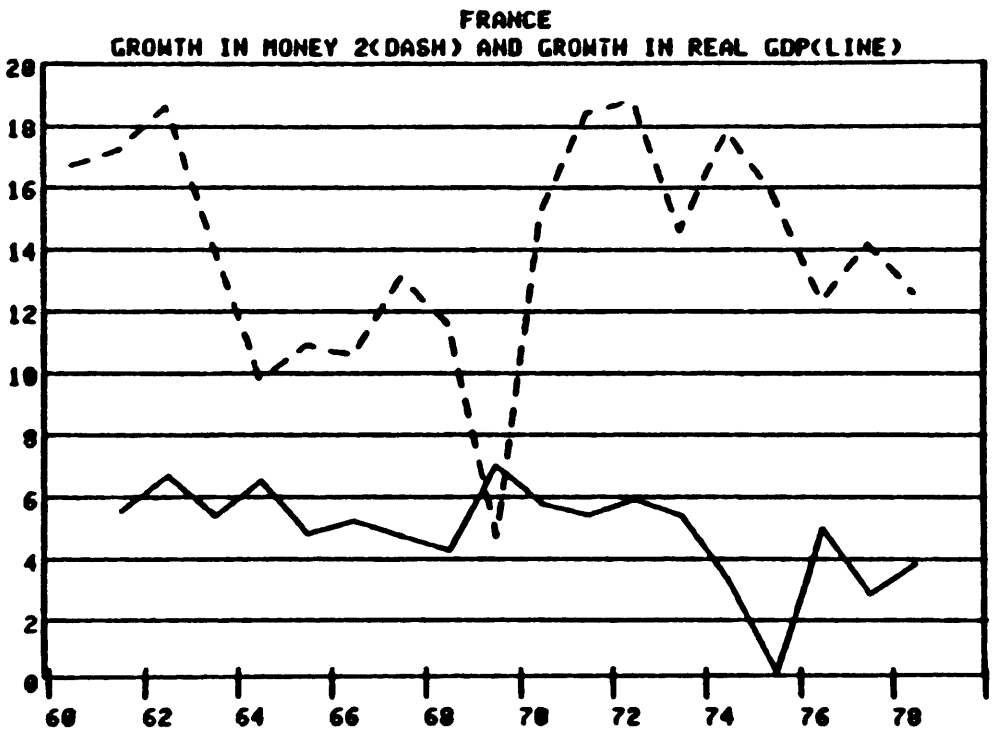
Source: For Italy, Organization for Economic Cooperation and Development, "OECD Economic Outlook," July 1976, p. 142; for other countries, United Nations, "National Accounts Statistics," 1978, vol. I, Country Tables, table 5.

Exhibit 6



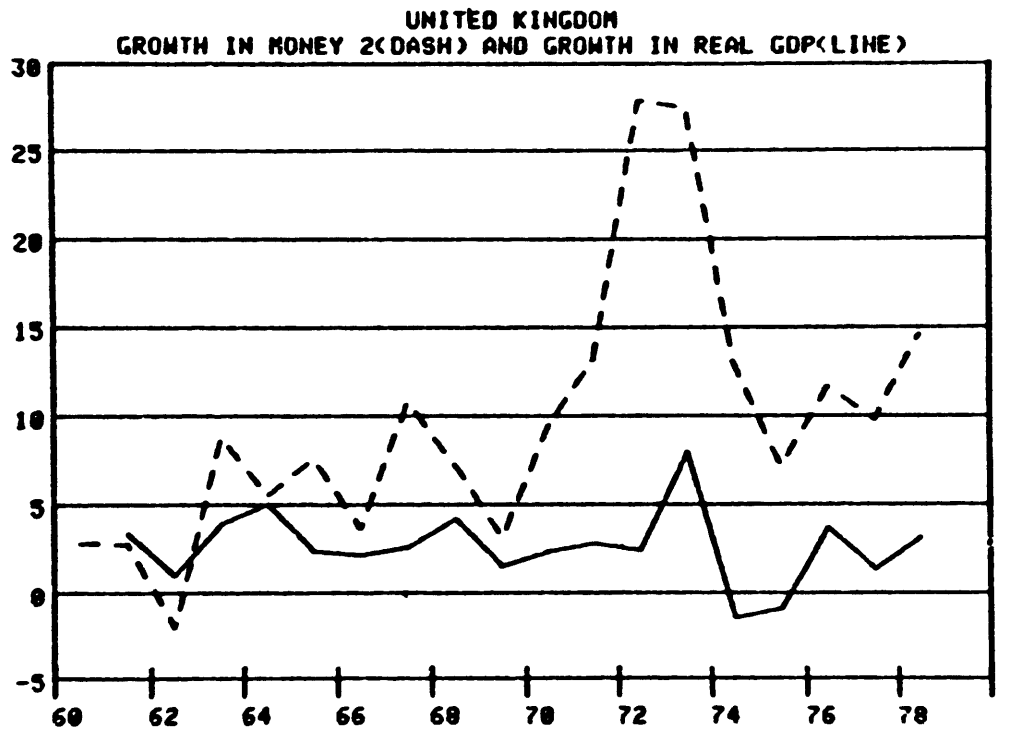
Source: OECD data, courtesy of Data Resources Corporation.

Exhibit 7A



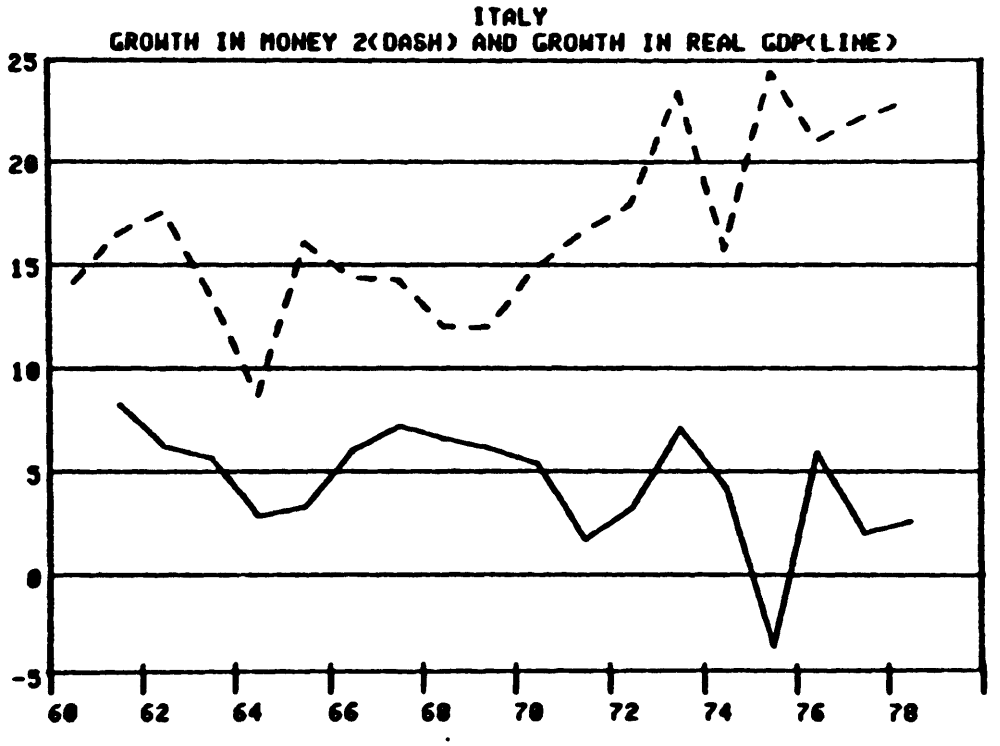
Source: OECD data, courtesy of Data Resources Corporation.

Exhibit 7B



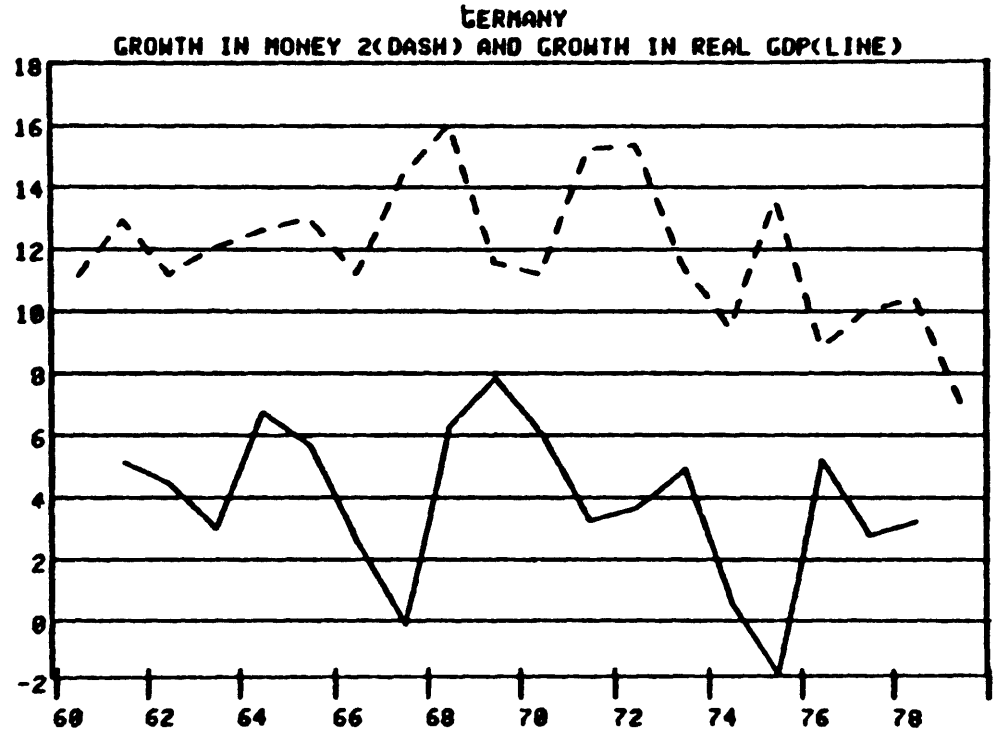
Source: OECD data, courtesy of Data Resources Corporation.

Exhibit 7C



Source: OECD data, courtesy of Data Resources Corporation.

Exhibit 7D

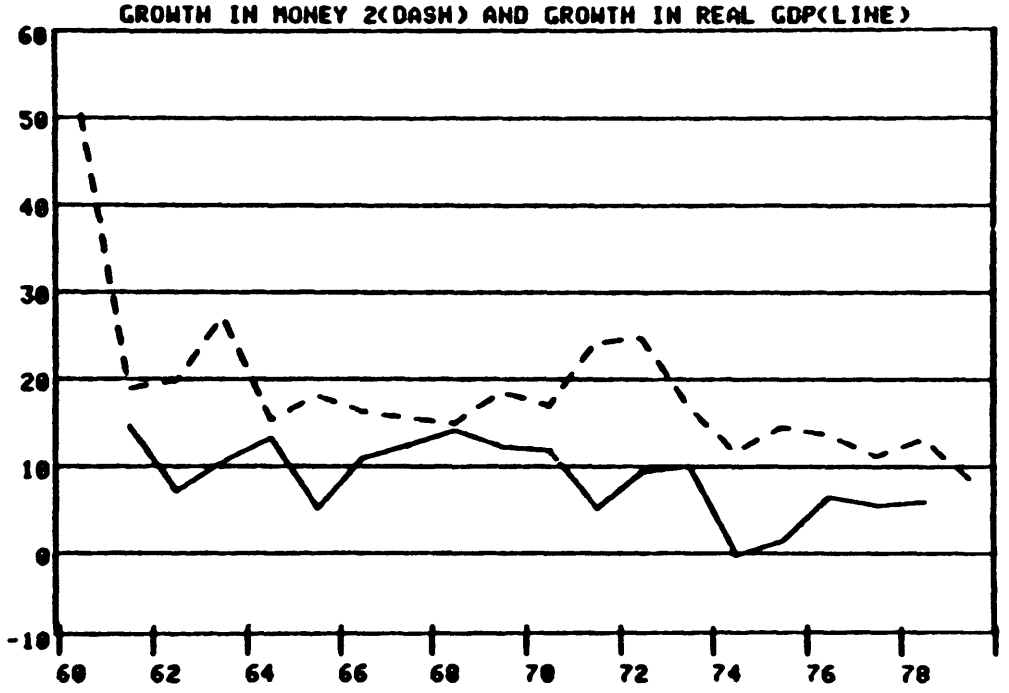


Source: OECD data, courtesy of Data Resources Corporation.

Exhibit 7E

JAPAN

GROWTH IN MONEY 2(DASH) AND GROWTH IN REAL GDP(LINE)

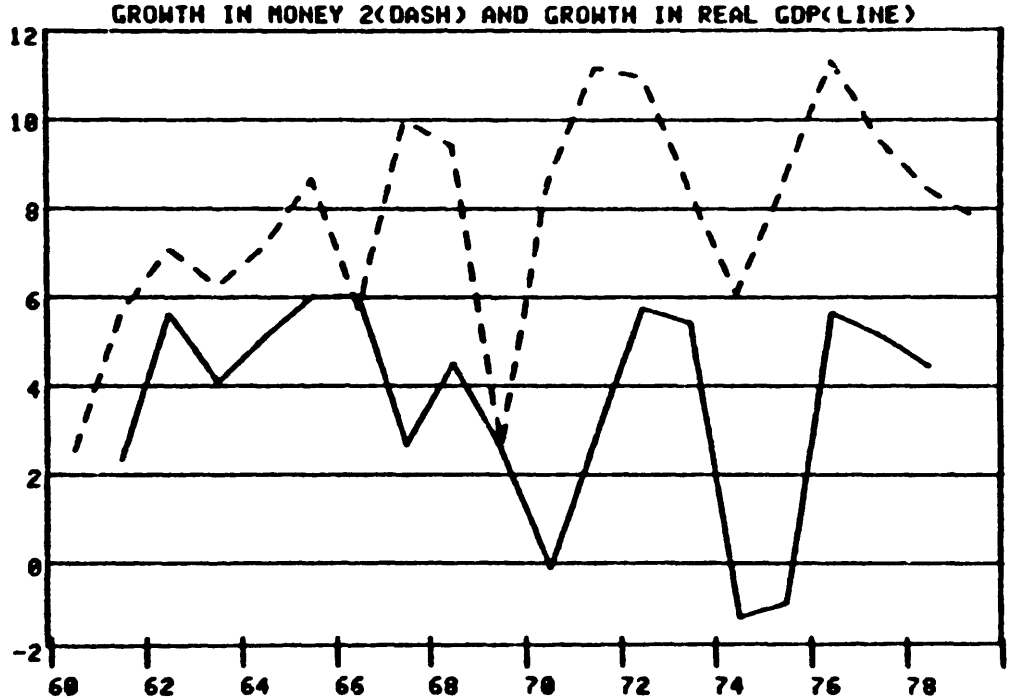


Source: OECD data, courtesy of Data Resources Corporation.

Exhibit 7F

UNITED STATES

GROWTH IN MONEY 2(DASH) AND GROWTH IN REAL GDP(LINE)



Source: OECD data, courtesy of Data Resources Corporation.

AMERICA'S COMPETITIVE POSITION

(By L. R. Klein*)

There is a widespread perception that the United States is slipping in the competitive economic world. This perception could be correct, but it requires careful documentation. If it is, in fact, the case, how far have we slipped? Is the deterioration of our competitive position trend or cyclical? How can this perception be changed in the future? These are the issues to be posed and briefly considered in this presentation.

It is important in this entire discussion to distinguish between level and change. As a matter of fact, the United States does continue to occupy the position of the highest level of living anywhere in the world, among the major nations. From time to time, popular announcements are made that Sweden, Switzerland, Germany or some other western nation has surpassed the United States in the provision of real output per person. The exceedingly careful investigations of relative purchasing power among nations by Irving Kravis, Alan Heston, and Robert Summers show that the United States remained at the top as late as 1975. Only Kuwait, in very special circumstances, matched or exceeded the U.S. figure in the tabulations for more than 100 countries by Kravis, Heston, and Summers.[1]

It is possible that the United States has been overtaken in the last few years, since the latest up-date of the careful calculation, but conversions of published national account figures to a common currency unit at prevailing exchange rates are not sufficiently careful calculations to be used in the present context.

But to be at the top is not enough. There is a great deal of evidence that the relative position of many other countries is improving. The United States could well be in the position of falling below the top. As early as 1956, Sir Donald MacDougall wrote an article with the intriguing title, "Does Productivity Rise Faster in the United States?", Review of Economics and Statistics, 38 (May, 1956), 155–76. He put the question mark at the end for good reason. Real output per worker and the related magnitude, real output per person, have been growing at a declining rate in the United States, both in terms of our past history and relative to some other countries. This is where the focus of the present paper lies.

How does the deterioration of the position of the United States manifest itself? The fact that this country does not dominate the various councils of governments now, as it once did, is probably due in part to the fact that we do not have the overwhelming economic power that we once had. In 1948, the immediate postwar line-up of nations left the United States on top, without any doubts. The reasons for this

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[1] Irving Kravis, Alan Heston, and Robert Summers. "Real GDP Per Capita For More Than One Hundred Countries," Economic Journal, 88 (June, 1978), 215–42.

are easy to understand. We had the resources, the GNP, the productive machine, the financial assets. In the world characterized by the "dollar shortage", the United States was supreme in an economic sense. Sweden and Switzerland, by virtue of their non-combatant status during the War, were comparatively well off but not really a challenge to the United States at that time.

We did not hold that position, and, now, three decades later, we find the position of the United States being challenged to the point at which many thinking individuals are asking whether we can survive—not as a nation, but as an economic leader.

There are many dimensions to the relative economic assessment of the United States in the community of nations, between that period of supremacy (1948) and today (1980). In this paper, I shall explore some of those dimensions:

Weakness of the dollar.
Emergence of trade and payments deficits.
Becoming energy dependent.
Decline of productivity growth rate.
Lack of control over inflation.

The dollar.—The era of "dollar shortage" eventually became an era of "dollar glut". Some economists were writing treatises on the new feature of the economic landscape, called "dollar shortage", just at the time when the situation was changing into the "dollar glut". This remark is intended as a reminder that the present is not usually forever in economics. Just as there was a swing from shortage to glut, there will probably be a reverse swing towards shortage again.

Nevertheless, the exchange value of the dollar symbolizes economic strength or weakness, and the decline in willingness of the people throughout the world for holding dollars relative to other currencies is indicative of economic weakness. The dollar fluctuates; it may be picking up strength again in a cyclical sense, but it does not occupy the position or status that it had in the late 1940's and early 1950's.

The dollar was so strong and so stable that it could serve as the main reserve currency of the world trading and capital market system. It is still a reserve currency, but other reserves are also being used now or planned for the near future. With the erosion of the Bretton Woods system of fixed rates, the position of the dollar will reflect several aspects of U.S. economic strength or weakness.

Trade/payments balance.—Closely associated with the decline in exchange value of the dollar is the shift from a surplus to a deficit position in the U.S. trade and payments accounts. We formerly ran a large merchandise surplus. This enabled us to pay for world economic programs and for investment abroad. Our export competitiveness declined and our imports simultaneously grew, both at such alarmingly fast paces that by 1971, we shifted from being an export surplus to being an import surplus nation. The burgeoning deficit on current account contributed greatly to the decline in the exchange value of the dollar.

The United States is still the largest single trading country in the world, but this position is rapidly being challenged, and we may be overtaken by Germany in the near future. Trade, however, is becoming increasingly important (in magnitude) and strategic for the U.S.

economy, and it is certain that our future economic policies will have to be directed more towards trade than ever before.

The movement towards import surplus is not uniform in every trade category. The United States remains supreme as a net agricultural exporter, while it has lost ground in energy products and manufactures.

Energy.—The position of the dollar and the trade/payments balance are not independent of one another. Similarly, the degree of energy dependence of the United States has a great deal to do with the preceding two issues. A very important factor in our deficit position and in dollar weakness is our heavy reliance on oil imports for meeting our energy requirements, and the escalating price of oil intensifies the problem. We are a major energy producer and have varied sources (gas, oil, coal, nuclear, hydro, and some not yet exploited); therefore, we do have the strength to manage in an emergency, but normal operation of our economy with growing dependence, in percentage terms, on oil imports leaves us in a weak position. Relative to the past, we are weaker, but we are relatively stronger than some of our allies, as far as energy dependence is concerned (Germany and Japan, e.g.). With respect to energy dependence, we definitely have a problem, yet it is not a hopeless problem, and there are good reasons to believe that this aspect of our relative economic position can be improved in the long run.

Productivity.—The long run slowdown of U.S. productivity growth is a matter of great concern. To many specialists in productivity measurement, the decline remains a puzzle. It could be demographic change, economic regulation, poor capital formation, changed social values, poor economic management, or any of a number of factors.

The plethora of factors accounting for the productivity decline could be a favorable aspect of the situation, for it could mean that policies can be implemented on a variety of fronts to turn the situation around. Also, some adverse factors may change for the better in a natural way. Demographic shifts in labor force composition could provide a favorable swing in that relatively fewer youths should be entering the labor force during the next few years, and the major jump in quick absorption of women workers may be behind us. These two groups, where increases have recently been large, are presently acquiring skills by experience and should contribute to better productivity growth in the future.

Inflation.—A weak dollar and declining productivity have been responsible for part of the upsurge of inflation. To these causes, we might add a rolling series of shocks (Vietnam, food, fuel, commodity speculation), fiscal policy, monetary policy, trade policy and other sources of inflationary pressure.

In the end, we are viewed with suspicion in the world economic community because we have let inflation get out of control and escalate to almost 20 percent in the last year or two.

Inflation is essentially an unstable economic condition and a strong country needs to be a symbol of stability in order to command economic respect in the world. The record of the 1950's and 1960's is quite good with respect to inflation in the United States. After the initial adjustment, following World War II, we had a high degree

of price stability, apart from the influence of the Korean War, until the latter half of the 1960's when the Vietnam War marked the start of an upward thrust of prices. Although the 1960's were favorable, in retrospect, the situation changed significantly after 1965.

As in the case of productivity, and of course the problems are clearly related, we have a variety of factors making for inflation and should direct economic policy on a broad variety of fronts to bring down inflation. Inflation, however, was long in building up to its present feverish pitch and will take some time in being wound down. But in the long run, productivity must rise if inflation is to be fundamentally reduced.

All these factors, listed and briefly elaborated, contribute to the present poor state of U.S. competitiveness. In the next section, I shall tabulate some quantitative aspects of these factors.

SOME BACKGROUND FACTS

In the accompanying table, some statistics on export price indexes (unit values) and inflation (change in consumer price indexes) are presented for the United States, for all industrial countries together (IMF classification), and Germany and Japan separately.

As for the export price index, the U.S. index changes right in line with the total industrial country average. By 1977, we reached the world average position and were under in 1978. It would seem that we are fully competitive, but certainly not decidedly ahead of the pack.

TABLE 1.—COMPARATIVE PRICE MOVEMENTS AND TRADE SHARES, 1954–78

	1975:100 Export unit value				Consumer prices (percent change)				World trade (billions)	
	Industrial countries	United States	Japan	Germany	Industrial countries	United States	Japan	Germany	Industrial countries	United States
1953	43	43	61	37	0.6	0.8	6.6	−1.9	$48.1	$15.8
1954	42	43	59	37	.9	.4	6.5	.2	49.8	15.1
1955	43	43	55	37	.5	−.2	−1.0	1.7	54.6	15.6
1956	44	45	57	38	2.1	1.4	.....	2.5	62.4	19.1
1957	46	46	59	39	3.0	3.6	3.2	2.0	68.1	20.9
1958	45	46	57	39	3.4	2.7	−.3	2.2	65.0	17.9
1959	44	46	57	39	1.2	.9	.9	1.1	69.0	17.6
1960	45	46	57	40	1.8	1.5	3.7	1.4	78.8	20.6
1961	45	47	54	41	1.8	1.1	5.4	2.4	83.2	21.0
1962	45	47	51	42	2.5	1.1	6.6	2.9	87.5	21.7

1963.....	45	47	49	43	2.6	1.2	7.8	3.0	95.4	23.4
1964.....	46	47	49	43	2.2	1.2	3.7	2.2	108.1	26.6
1965.....	47	49	48	44	2.8	1.7	6.7	3.3	118.6	27.5
1966.....	48	50	48	45	3.4	3.1	4.9	3.5	130.9	30.4
1967.....	48	51	50	45	2.9	2.6	4.1	1.6	138.0	31.6
1968.....	48	52	50	44	3.9	4.2	5.3	1.7	156.1	34.6
1969.....	49	54	52	46	4.8	5.4	5.3	1.8	179.7	38.0
1970.....	52	57	55	51	5.6	5.9	7.6	3.3	208.1	43.2
1971.....	55	59	57	55	5.1	4.3	6.2	5.4	233.3	44.1
1972.....	60	60	64	61	4.5	3.3	4.4	5.5	276.3	49.8
1973.....	72	70	78	75	7.5	6.3	11.8	6.9	376.5	71.3
1974.....	89	89	100	89	13.1	10.9	24.3	7.0	503.6	98.5
1975.....	100	100	100	100	10.8	9.2	11.9	5.9	537.3	107.6
1976.....	100	104	98	100	7.8	5.8	9.3	4.5	597.5	115.0
1977.....	109	109	112	110	7.8	6.5	8.1	3.9	677.1	120.2
1978.....	123	115	134	129	6.8	7.5	3.8	2.8	861.2	143.7

Consider our two strongest and fearsome competitors, however, Germany and Japan. Before 1972, the United States was strongly dominated by Germany. The latter index generally lies below the corresponding U.S. index. After 1970, the two countries' series lie very close to each other. Sometimes the U.S. index is lower, sometimes the German index is lower.

In the early period, the Japanese unit value lies well above that of the United States. After the start of the income doubling period (early 1960's) there is a take-off by Japan into a period of sustained high growth led by export expansion. In this period, it appears that exports are favored by highly competitive (low) Japanese prices. There are exceptional years of changed relationship, but on the whole the Japanese price is more favorable in both level and degree of change. This is a dollar-denominated index. Therefore, differences in exchange rates are implicitly taken into account.

Next, let us consider the inflation rate, measured by the rate of change in the consumer price deflator. This is not a dollar index; therefore, it is presented as a percentage change value, with each country measured in its own currency unit. On the whole, the United States looks good relative to the series for the industrial countries' aggregate.

The U.S. rate of change is below the industrial world average in all but six of the tabulated years. The record is quite different in comparison with Germany. The U.S. inflation rate exceeds the German rate on 14 annual occasions and since the large price explosion in 1974, the U.S. rate has exceeded the German rate in every year. In the case of Japan, our comparative record has been less clear. On only six yearly occasions has the U.S. inflation rate exceeded the Japanese rate. At the present time, however, we are doing rather poorly in a competitive sense.

Our price performance has not been appreciably more or less inflationary than in the industrial countries as a whole, but our closest competitors sometimes outperform us on the inflation front, and this is particularly true in 1979–1980.

Nevertheless, we are losing ground comparatively in international commerce. We have always been the largest trader among individual countries, but this position is being seriously challenged by Germany and Japan—now France, too. In 1953, our export total of $15.8 billion was larger than that of any other country. The United Kingdom total was less than one-half that of the United States. The United Kingdom has lost ground by a large amount. Their share of industrial countries' exports fell from 15.5 percent in 1953 to 8.6 percent in 1977. Germany's rose from 9.1 percent in 1953 to 17.4 percent in 1977. At the same time, the Japanese share rose from 2.7 percent to 12 percent in 1977. While these shifts were taking place, the U.S. share dropped from 32.8 percent to 17.8 percent. But the U.S. total of exports exceeded the level for any other single country. This situation could change in a year or two. International trade has not yet been seriously considered as a predominant force in shaping the performance of the U.S. economy, even though we are the largest trading nation in the world. It is, however, getting much closer scrutiny and must be maintained on a favorable basis in order to protect the value of the dollar. This, in turn, has important consequences for world energy pricing and our own rate of inflation.

Total trade tells only part of the story. While we are, in fact, losing our total grip in world trade, we have strongly contrasting areas of strength and weakness. The declining share of exports is undoubtedly concentrated in manufactured products. That is where Germany and Japan have been outstanding performers in displacing our position. But we retain superiority in quite another field, namely agriculture. Not only do we produce a steady export volume, in excess of other individual countries, but we are able to come to the aid of other countries when there are world supply shortfalls. The United States maintains a strongly favorable export balance in agricultural products, amounting to some $16 billion in fiscal year 1979, and this favorable performance is expected to improve in the future ($20 billion in fiscal year 1980). Efficiency, productivity, pricing and total supply are all maintained on world competitive scale in the United States. In many respects, agricultural exports are the U.S. secret weapon in international trade. This part of our competitive problem area is under control. The real gains have to be made in manufacturing.

The fuel and energy sectors of the economy present a striking contrast to the agricultural sector. Apart from most coal and other energy exports, amounting to about $5 to $6 billion annually, this sector is dominated by imports, now approaching $100 billion per year. Agriculture generates a tidy export surplus, while energy accounts for an enormous import surplus. Some of the unfavorable trade balance is recouped by earnings (an "invisible" export) of multinational oil and other energy companies. But the import burden is heavy. Before 1973, the fuel share of total merchandise imports was under 10 percent, each year. During 1973, the ratio was 11.8 percent, but from 1974 onwards, the share has risen to figures well above 25 percent. It is now in excess of 30 percent and still growing.

The productivity slow down in the United States is both historical and international (across countries). The final prices charged in international trade have important productivity components. Here, too, as in the case of prices, the record is mixed.

Table 2 shows productivity growth for some leading countries, both overall and in manufacturing. In the top panel, real GDP per civilian worker is tabulated. That shows a marked slowdown in productivity growth, not only in the United States, but also in nearly every competing country. Germany appears to have declined less than in other countries, but the United States is not so very different, in pattern, from the others. Japan has a high rate of productivity growth, but has come down far from the very high rates of the fast growth period of the 1950's and 60's.

TABLE 2.—PRODUCTIVITY GROWTH RATES (PERCENT) IN INDUSTRIAL COUNTRIES

	1950–73	1960–73	1973–76	1973–77
Real GDP per employed civilian:				
United States	2.1	2.1	−0.1	0.3
Canada	2.6	2.4	.4	.5
Japan	7.8	8.8	2.3	2.7
France	4.6	4.6	2.7	2.9
West Germany	5.0	4.4	3.3	3.3
Italy	5.3	5.8	.8	−.2
United Kingdom	2.5	2.6	.4	.4
Output per hour in manufacturing:				
United States	2.7	3.2	1.2	1.5
Canada	4.2	4.6	1.3	2.1
Japan	9.7	10.0	1.4	2.4
Belgium	NA	7.0	6.7	6.6
Denmark	5.2	7.0	6.2	5.2
France	5.3	5.7	4.7	4.8
West Germany	5.8	5.5	6.0	5.5
Italy	6.6	7.2	3.0	2.4
Netherlands	6.2	7.4	5.4	4.9
Sweden	5.3	6.7	.9	.5
United Kingdom	3.1	3.9	.6	−.2

The manufacturing rates in the lower panel show a similar pattern, but France and the Benelux countries seem to have fared somewhat better than the United States. Edward Denison, in trying to fathom the productivity puzzle for the United States is not willing to attribute the decline to lack of international competitiveness.[2]

Our ability to compete in foreign markets depends not only on domestic inflation and productivity, but also on the exchange rate of the dollar against many other currencies. Our strongest competitors include the other summit nations—Canada, United Kingdom, France, Italy, Germany, and Japan—and Mexico. The latter is included because our trade is large with Mexico.

The exchange rate for each country can be expressed in \$/¢ per unit of foreign currency, i.e., one pound sterling equals \$2.25, or one D-mark equals 56.3¢, etc. A weighted average index of these seven exchange rates against the dollar can be used to indicate overall background information. This index fell during the 1960's (\$ strength), recovered some after the Smithsonian conference on fixing new parities for currency exchange (\$ weakness) and has had its ups and downs since the start of the 1970's, related to a large extent to developments in world oil markets. Right after the 1974–75 recession, the dollar appreciated on balance, but from 1977 fell drastically for some time, recovering only late in 1979. The present situation is relatively strong and the dollar may appreciate some more.

[2] Edward F. Denison, "Explanations of Declining Productivity Growth," Survey of Current Business, 59 (August, 1979), Part II, 1–24.

When the dollar fell, OPEC purchasing power declined, and this built up pressure for future price rises for oil. Also, it caused mistrust for dealings in our currency by oil exporting countries. At the same time, the currency depreciation made imports more expensive and contributed to inflation.

The initial impact was to worsen the trade deficit and weaken the dollar further, but, eventually, the so-called J-curve effect reversed direction and built up a trade surplus through competitive pricing. As the exchange rate falls ($ per local currency unit), dollar prices fall and look more attractive, not to mention the potential attractiveness to investors who are always looking for a good value. As things have worked out, the United States has begun to export on a larger scale and contribute to maintaining external payments balances.

Since the dollar serves as a reserve currency, we have a responsibility to try to keep its exchange value steady, on average. The slight appreciation now occurring should not upset that aspect of the world system but should help the United States to fine tune its competitive edge.

TABLE 3.—*Weighted average exchange rate*

(7 countries—1972: 100)

1960	94.7	1970	91.1
1961	93.1	1971	94.0
1962	91.0	1972	100.0
1963	90.5	1973	105.6
1964	90.5	1974	103.6
1965	90.5	1975	102.3
1966	90.5	1976	100.4
1967	90.3	1977	100.9
1968	89.2	1978	100.4
1969	89.3	1979	110.6

Another look at the summit nations is through wage rates. These are hard to standardize, but recent movements across the seven summit nations do reveal that the United States is not suffering a loss of competitiveness as a result of wage inflation. Looking at the growth rate of manufacturing wages since 1970, we do not find the United States to have had an excessive growth in this sector.

TABLE 4.—*Manufacturing wages*

(Average annual growth rate—1970–end year 1969)

	Percent
France	5.8
United States	7.8
West Germany	9.7
Canada	10.4
Japan	14.0
United Kingdom	16.1
Italy	20.1

Wages interact with productivity, prices, employment, labor force, and similar magnitudes in determining the inflation rates. France has a strong record since 1970, but we would not say that France is especially competitive. Japan, where strong competition is expected, has a relatively high wage figure.

In terms of unit labor costs, 1967–77, accounting for productivity change, the United States has the best record (lowest growth) among all summit nations in manufacturing.

AREAS FOR IMPROVEMENT

The facts show that productivity and the overall competitive position have deteriorated in this country, both historically and internationally, yet the position may have been overstated. It does not appear the inflation and productivity have been very much worse in the United States than in the rest of the world at large. The loss in competitive power has been quite selective. There is no doubt, however, that the export share of the United States has fallen, while others have risen. On a large scale, it is unfavorable performance vis-a-vis Germany and Japan that is most worrisome. If there has been a similar decline in relation to some other countries that are closely linked to Germany (Benelux, Austria, Switzerland), that is not so serious, and there are other countries in Europe where the competitive story is different. These cases offset some of the smaller cases that are tied to Germany.

We still see IBM computers prominently in use throughout the world. Many other high technology producers find that they can, in fact, compete effectively in present markets, and expect to continue to do so for some years to come.

And the poor performance against Germany and Japan is not necessarily forever. It is worthwhile reminding ourselves that the Japanese bilateral surplus with us has fallen in 1979 and is expected to do so again this year. Overall, the Japanese and German surpluses have changed very quickly into deficits. Both countries are having difficult times in paying for a large, increasing fuel bill (imported) without sending their current accounts into substantial deficit. Dollar weakness is undoubtedly not going to last indefinitely. Already, a strong short run recovery is underway. In recent weeks the dollar has moved up from about 230 Y/dollar to about 250 Y/dollar. At the same time, the dollar has moved up against the D-mark—just to give reassurances of continued restrictive policies.

What are some policy strategies that may be pursued, to improve the situation by holding our share of world trade, maintaining the exchange value of the dollar, and by improving productivity? It is obvious that overall productivity would be enhanced if we concentrated on developing those lines of activity where productivity growth is already on the high side for this country.

The high technology lines where we already excel should be stimulated even further. But much of the exercise is associated with "picking the winners" i.e., identifying those sectors, processes, or industries where growth is expected to be strong. For example, it is felt that nonmanufacturing economic activity will grow relative to the rest of the economy during the next decade. Among those non-manufacturing sectors are some, especially in sectors related to electronics (software, e.g.) where we should invest more in the interest of accelerating productivity, recovery, and growth. Those sectors or industries will naturally seek out their own interests in the world, but they can be given an environment that makes it favorable for them to do so and can be given support, information, or guidance, or subsidy, where appropriate.

It was pointed out in a previous section that agriculture does very well for the U.S. balance of payments. Agriculture is a sector where this country has great natural advantage, both in productivity and net

export potential. It is also an area where public policy has been unusually active, often focussing on price supports, farm income, and other domestic matters. More attention should be paid to encouragement of agriculture to produce and export even more. All-out efforts promoted in U.S. agriculture, in contrast to restraint, can provide great help to the trade accounts and the overall competitive position of this country.

As for industry at large, or other sectors besides the high technology sectors where we are already doing well, the best policy seems to be one of encouraging capital formation, both for modernization and for expansion. Capital formation should be broadly conceived, to cover human as well as fixed capital. The issue is one of changing American priorities so that we become less of a high consumption-low savings-low investment economy and move towards the direction of higher savings and capital formation, as percentages of total production.

If the investment percentage can be raised by one or two points, we can expect to see another half point or so added to our growth rate and a similar improvement in the growth of the productivity ratio. This result could be encouraged by stimulative use of the investment tax credit and speeding up of depreciation guidelines.

Additional measures consist of public support for basic research, for R & D, and for venture capital. Since 1968, when public expenditures were significantly cut back, research institutions have fared poorly, and the budget for 1981 fiscal year restores some of the vigor to this activity for the first time, on a large scale, in many years. It takes some time for pay-offs to be realized from this kind of policy, but we are now on a favorable track, and the issue is to maintain this policy direction.

Export shares have slipped in the United States partly because of the absence of competitive position and partly because of the absence of any significant federal support. Policies to enhance productivity can improve the competitive position, but it appears that much more aggressive trade policy can contribute additional support for U.S. exports. In this respect, Japan is the prototype. The intertwining of government and private sector activities—in personnel, in information, in negotiation—have probably done much to bring up the Japanese export share over the past two or three decades. If we would promote exports through favorable tax provisions, useful information systems, and stabilizing international negotiations we could go far in promoting the overall level of exports. Such efforts have frequently been mounted in government departments but have never been fully carried through or made effective enough to make a lasting contribution. The time has come for a renewed effort in earnest.

THE EMERGENCE OF NEW COMPETITION

Emphasis has been placed in this discussion on America's competitive position against the OECD countries of Western Europe, Japan, and Oceania. But a challenge will be coming from another quarter, namely from the newly industrialized countries of the third world—the NIC's. There is much more competition to come, but incursions into our own markets for shoes, textiles, TV sets, and steel have already

prompted protectionist measures in these selected lines of trading activity.

In the Pacific Basin, the main competition is felt from South Korea, Taiwan, Hong Kong, and Singapore. To a large extent, these countries are specializing, and doing well at it, in lines that were first developed in Japan. The Pacific "New Japans" have become competitive. Further developments in steel, shipbuilding, construction, and other heavier lines can be expected. These countries have a long way to go before they price themselves out of the world industrial market. High wages and declining productivity in Japan and some Western countries have made it possible for these Pacific Basin countries to enter world trade markets on a large scale, and they remain highly competitive in the U.S. market.

Latin America (Brazil, Mexico and Venezuela, to mention only a few) is ready to export on a large scale in competition with the United States. Brazil has already done this effectively.

The OPEC countries, in general, have the potential for adding to the pressures that will come from the third world in the form of manufactured exports. Petrochemicals, with related products, refined petroleum products, fertilizers, and some other basic materials can flow in large quantities from oil exporting countries (OPEC and others) by mid-decade. This makes it all the more imperative for the United States to tool-up and be prepared for competition from this new source, on top of competition that we are already getting from OECD countries.

THE U.S. CORPORATION WITHIN THE COMPETITIVE ENVIRONMENT

(By Mark Shepherd, Jr.*)

U.S. SHARE OF WORLD EXPORTS DECLINES

During the past two decades, the United States has endured a series of economic and political shocks that have disrupted the post-war period of stable economic expansion at home, and eroded our prestige abroad.

One of the most visible symptoms of this decline has been the steady decrease in the U.S. share of major world markets (Figure 1). Since 1960, our proportion of free world exports has dropped from 18.2 percent to only 12.1 percent in 1979. In the same period, Germany's share has increased from 10.1 percent to 11.5 percent and Japan's share has almost doubled, rising from 3.6 percent to 6.9 percent.

* Chairman and Chief Executive Officer, Texas Instruments Inc.

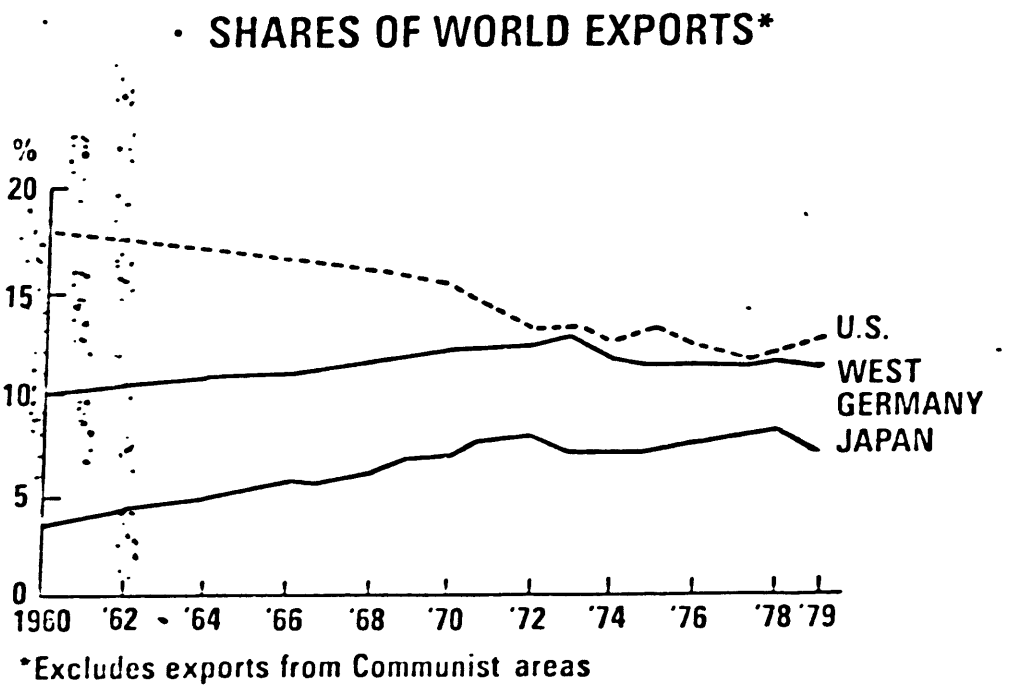

FIGURE 1

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Despite the fact that U.S. absolute unit labor costs are the lowest among major industrialized countries, we have not been able to take advantage of it.[1] Losses in the U.S. share of exports have not been limited to one or two items, but frequently have been across the board.

During the 1970s, for example, our share of Japan's major import markets dropped in several important categories, despite a 64-percent appreciation of the yen against the dollar.[2]

Simultaneously, U.S. imports have risen dramatically, reflecting the postwar economic resurgence of other industrial countries, the rise of the advanced developing nations and OPEC.[3]

U.S. CHALLENGE: SOLVE OWN PROBLEMS

As U.S. trade deficits have grown, we have searched for convenient scapegoats. Japan, which in the post-war years rapidly has become our most formidable competitor, seems an ideal target.

But we cannot expect Japan or Germany or any other country to give up fairly gained advantages. Our challenge is to learn how to compete more effectively by solving our own problems and developing our own advantages.

STEPS TO INCREASE U.S. COMPETITIVENESS

To meet this challenge, the United States should take several important steps:

Control inflation,
Reinvigorate productivity and investment, and
Encourage exports.

STEPS TO CONTROL INFLATION

To lower the rate of inflation without serious disruptions of employment and output requires a gradual unwinding of the wage-price spiral. The recession we are entering may temporarily push inflation down to 10 percent, but this is not a very ambitious goal. A deep recession could force inflation lower, but the costs would be severe.[4] And even then, the basic causes of inflation would remain untouched. But we could improve the odds of returning to a stable 2-percent inflation rate by the end of the century through a broad-based approach using the frequently recommended but as yet untried remedies at our disposal (Figure 2).

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[1] See note 1 in Appendix.
[2] See note 2 in Appendix.
[3] See note 3 in Appendix.
[4] See note 4 in appendix.

TO CONTROL INFLATION

- Limit Government Spending
- Reduce Growth of Money Supply
- Curtail Government Regulation
- Tilt Tax Policy to Encourage Investment
- Emphasize Importance of Productivity Gains

FIGURE 2

The first step is to lower government expenditures, at all levels. The growth of spending by the federal government should be held below that of GNP, to reduce gradually its share of GNP to 20 percent or less from its projected 22.5 percent in fiscal 1981.[1]

Monetary growth should be reduced gradually to a rate sufficient to accommodate the potential real growth of the economy.

Government regulation should be overhauled. Both the language and the interpretation of regulatory legislation must lead to "direct and predictable" consequences, and the power of regulators curtailed either through more specific legislative language or Congressional veto. Such control could also be achieved through adoption of a regulatory budget[2] that would compel legislators to recognize that a dollar spent in pursuit of one objective is a dollar withdrawn from satisfying another objective.

Congress must correct the tilt in tax policies that encourage consumption and discourage investment. Interest paid is tax deductible, interest earned is taxed and usually at the highest applicable marginal rate. Studies for basic tax reform should include lower tax rates for savings-related income, the elimination of double taxation of dividends, still lower tax rates on capital gains, higher investment tax credits, accelerated depreciation of equipment and facilities and the introduction of tax credits for R&D spending and exports. Consideration should be given to a consumption tax, which would serve both as a correction to the tax policy tilt and as an offset to tax revenues lost through reform.[3]

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[1] See note 5 in Appendix.
[2] See note 6 in Appendix.
[3] See note 7 in Appendix.

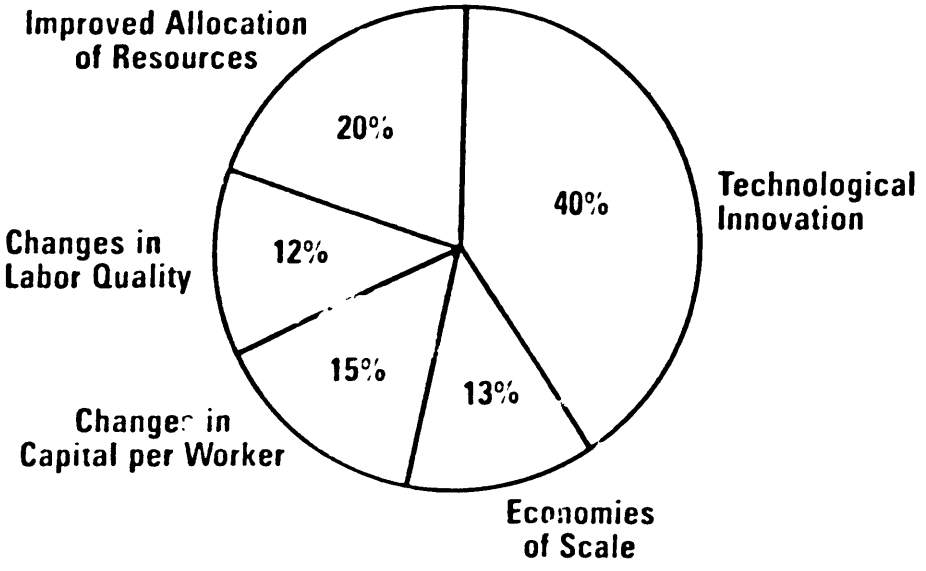
Finally, we should strive continuously to make the public, industry and government at all levels aware that productivity gains are absolutely essential to our efforts to reduce inflationary pressures at home, as well as to remain competitive in the world marketplace.

R&D BEST INVESTMENT FOR PRODUCTIVITY

Gains in productivity follow increases in capital investment. However, in order to obtain step-function increases in productivity, the accumulation of capital in the form of facilities and equipment should be accompanied by more research and development to increase the effectiveness of capital investment, generating more efficient manufacturing processes and creating new products.

According to findings by John Kendrick of George Washington University, about 40 percent of productivity increases in the U.S. during the past 50 years can be attributed to advances in technological innovation driven by R&D spending (Figure 3). By contrast, only 15 percent is attributable to conventional capital usage.[1]

SOURCES OF PRODUCTIVITY GROWTH IN THE U.S.* (1929-1978)



*Adapted from John Kendrick's analysis.

FIGURE 3

[1] See note 8 in Appendix.

This does not diminish the importance of capital outlays. They create the new capacity essential to a growing economy, and it is through new equipment and facilities that more advanced technology is injected into the production and distribution streams of the economy.

Kendrick's studies do imply, however, that the impact on productivity of a dollar spent for R&D can be several times greater than that of a dollar invested in conventional fixed capital. Yet, as a nation, we have been decreasing the portion of our GNP invested in R&D.[1]

NEED GREATER INVESTMENT TAX CREDIT

The reversal of this trend is essential to our international competitive position. But to do so requires some adjustment. For example, lower debt-equity ratios in the United States vs. Japan require a higher after-tax profit margin to meet U.S. stockholder's expectations.[2] Conversely, Japanese firms, with higher debt-equity ratios and less concern for current profits are better positioned to emphasize long-term R&D projects. The key to offsetting this advantage is a U.S. R&D tax credit more liberal than Japan's.[3]

Texas Instruments recently sponsored a study to design a tax mix intended to spur productivity growth while reducing inflation. The study, prepared by DRI, concluded that the investment tax credit should be increased to about 25 percent, from the current 10 percent rate, and that a 20-percent tax credit on industrial R&D expenditures should be enacted.[4]

A 25 percent investment tax credit with current depreciation methods is preferred over the 10–5–3 capital recovery plan because it is more favorable in both cash flow and profits after tax.[5]

The R&D tax credit, in turn, would give U.S. manufacturing firms the needed leverage to raise R&D expenditures above their current level of 1.5 percent of sales, at the cost of only a small deterioration in after-tax profit margins.[6] It should be noted, however, that this potential expansion of R&D could be constrained by a relative shortage of technical graduates in the coming decade.

As a result of both policies, the annual rate of productivity growth would rise to 1.5 percent in the mid-1980s and 2 percent in the 1990s (Figure 4). This is 1.5 percentage points above the current trend of 0.5 percent per year. Real GNP growth would rise to 3.3 percent, which is 1.2 percentage points above trend, and the rate of inflation would be cut to 7.4 percent in the 1980s and 5.1 percent in the 1990s.

There undoubtedly are broader mixes of tax measures that will produce similar, or even superior, results and these studies should be undertaken even though they may require more computing power than has so far been applied to econometric models.

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[1] See note 9 in Appendix.
[2] See note 10 in Appendix.
[3] See note 11 in Appendix.
[4] See note 12 in Appendix.
[5] See note 13 in Appendix.
[6] See note 14 in Appendix.

ECONOMIC IMPACT OF NEW TAX POLICIES
(Average Annual Percentage Change)

	1980-83	1984-87	1990s
PRODUCTIVITY GROWTH	1.2%	1.5%	2.0%
REAL GNP GROWTH	2.9%	3.3%	3.3%
INFLATION RATE	8.2%	7.4%	5.2%

Note: The above results are obtained through the combination of 1) a 25 percent investment tax credit; 2) a 20 percent R&D tax credit; and 3) a $10B reduction in non-defense government spending for goods and services. The percentage changes are calculated by assuming baseline values for the variables equal to their estimated trends for 1973-1980 (productivity growth: 0.5% per year, real GNP growth: 2.1% per year, and implicit GNP deflator: 8.1% per year).

FIGURE 4

Economic models are not infallible. But models do provide a valuable framework for evaluating existing trends and can be used as guides for actions *now* to move in a desired direction in the future.

ENCOURAGE EXPORTS

Reducing inflation and spurring productivity will improve our ability to compete overseas but we also need to encourage exports. Our elected policy makers should (Figure 5):

Eliminate the disincentives to export,[1]

Change our control efforts to focus on critical technologies rather than on products, which will permit us to protect our national security without strangling exports,[2]

And stress the development of a national export orientation similar to that in other export oriented nations.

[1] See note 15 in appendix.

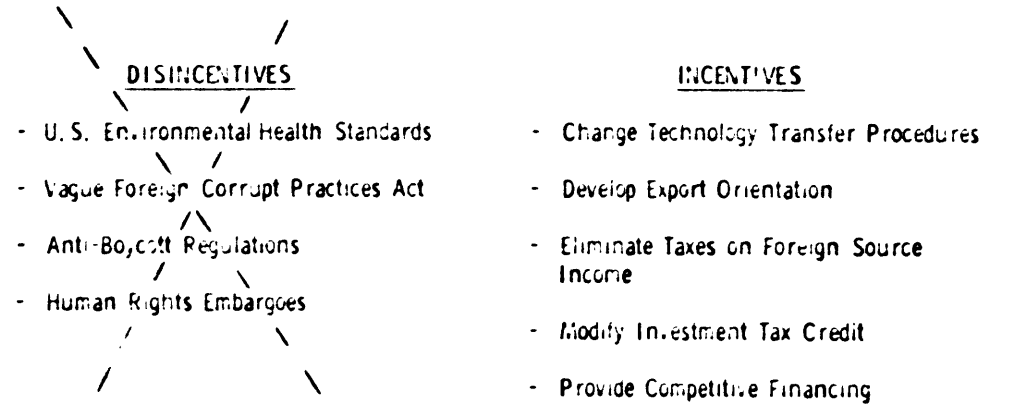

FIGURE 5

Because our market is so large, U.S. businesses do not feel compelled to export, and those that do, often do not have the same commitment to quality as their competitors. But we need to jar our economy into the national need to export. We must put money in the pockets of exporters *now* in response to good performance.

The simplest approach could be to eliminate taxation on the 50 percent of export income classified as foreign source income.[1]

A more subtle approach would be to modify the investment tax credit to permit additional credits for investment in qualified assets for firms that increase their exports. The impact of this change would be to stimulate investment and exports—both highly beneficial to the U.S. economy.[2]

The U.S. financing of foreign purchases of our goods and services should be revised to compete more fully with those of other nations. As the number of potential suppliers for a given product increases, the availability of attractive financing will become more important as a factor in the final sale.[3]

Some of these proposals will be challenged under the General Agreement on Tariffs and Trade (GATT), or the Multilateral Trade Negotiations (MTN) agreements.

These incentives are not substantially different from incentives provided by our major trading partners, particularly if we refuse to accept the strained distinction between the rebate of value-added and other consumption taxes on exports, versus the reduction of income taxes on exports.[4]

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[1] See note 16 in appendix.
[2] See note 17 in appendix.
[3] See note 18 in appendix
[4] See note 19 in appendix.

The Federal Government can bring about a better business climate and provide a framework conducive to a free market economy. But it still will be up to the private sector to take advantage of that environment to improve its performance.

The electronics industry provides one example of an extremely competitive market where the U.S. retains worldwide leadership. Its growth can be traced directly to technological innovation originating in the semiconductor industry and driving three distinct, yet interrelated factors. They are:

Cost reductions,
Increased circuit sophistication, and
Improvements in reliability.

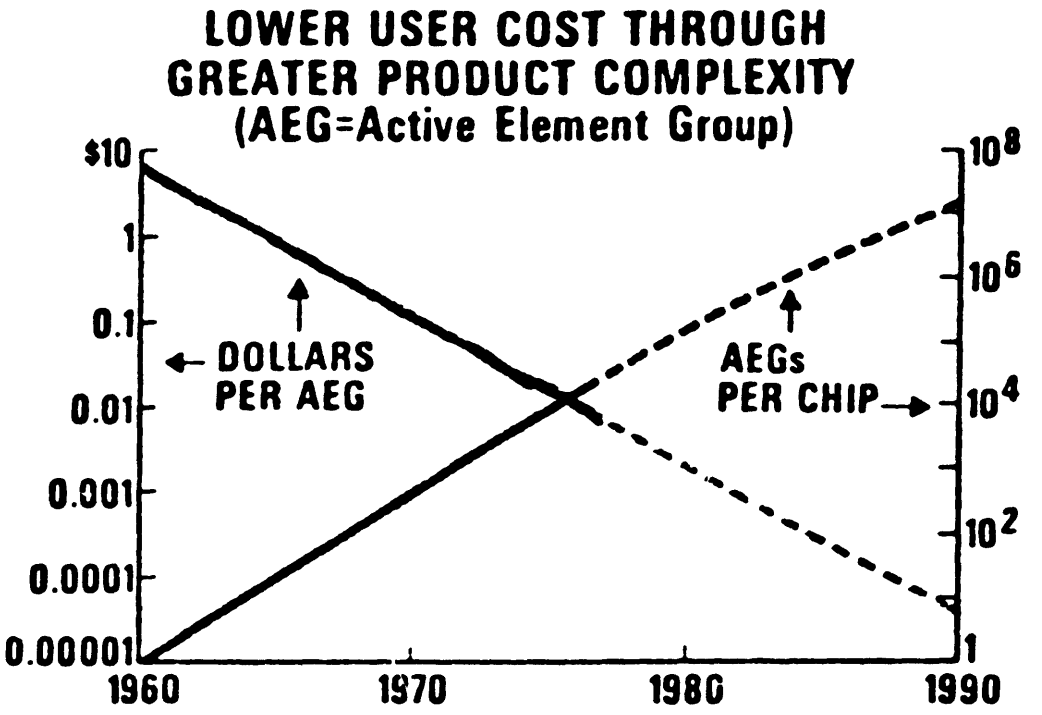


FIGURE 6

LEARNING CURVE LOWERS COST PER AEG

The curves in Figure 6 plot trends in greater product complexity and cost reductions per active element group, or AEG, a unit of measure used to compare the complexity of dissimilar devices that perform similar functions. One AEG roughly equals one transistor with the associated passive components, or one logic gate or memory bit in an integrated circuit.

The manufacturing costs of an AEG have been reduced by 35 percent each time volume has doubled, so that the function performed by a $7 transistor in 1960 can be performed for less than one cent today.

The reason for the decline in the average cost of an active element group is the ability to construct more and more of them on a single chip of silicon. Since 1960, there has been an increase of about four orders-of-magnitude in AEGs per chip for state-of-the-art integrated circuits.

At the beginning of the 1960s, small-scale integration (SSI) was characterized by a maximum of 12 transistors on a single silicon chip. We since have moved into the era of large-scale integration (LSI). And we are now on the verge of very-large-scale integration (VLSI), with 100,000 or more AEGs placed on that same small chip.

SEMICONDUCTOR DEVICE COMPLEXITY GROWS

Some four-inch silicon wafers contain approximately 600 chips. Each chip is a complete microcomputer, containing more than 8000 bits of memory and 6000 transistors. It should be noted that one AEG can be placed on the cut end of one strand of human hair.

CIRCUIT RELIABILITY IMPROVES

As we have lowered the cost and reduced the size of an AEG, we simultaneously have improved its ruggedness and reliability. In 1961, the failure rate of bipolar integrated circuits was between 7 percent and 20 percent per 1000 hours (Figure 7). Last year we attained a failure rate of .0012 percent.[1] To appreciate what this means, a television set containing 100 of these devices would operate 24 hours a day for 100 years before a circuit failure occurred.[2]

FAILURE RATE OF TI'S BIPOLAR INTEGRATED CIRCUITS
(at 55 C per 1000 Hours)

1961	1972	1975	1979
7-20%	0.01-0.06%	0.0075%	0.0012%

FIGURE 7

TI CORPORATE PHILOSOPHY

Technology alone cannot guarantee the success of an industry or a company. Technology must be managed correctly to become an innovation. At TI, we have attempted to do this by developing understandable and well communicated management philosophies and strategies.

No company can long survive, let alone prosper, if it has not formulated some view of its role in the business community and society at large. Texas Instruments exists to create, make and market useful products and services to satisfy the needs of our customers throughout

[1] See note 20 in appendix.
[2] See note 21 in appendix.

the world. Our ability to meet those demands is determined by our innovative skills and measured by our profit. But that profit is not an inherent right. We are permitted to operate by the societies we serve and any profit we do make is our incentive as well as our reward for doing our job well. Society will pass judgment on our value. If we do not meet genuine needs we will not make a profit and we will cease to exist.

TI'S BUSINESS OBJECTIVES

Having established a basic philosophy, management must develop a "Corporate Objective." It must define what is right and what is wrong for the corporation and insist on holding to that definition, even when no applicable law exists.

Beyond an ethical framework, the Corporate Objective must define the corporation's goals, such as the types of businesses it wishes to operate, their location, profit and growth objectives, and the direction of its expansion—internal, by merger or by joint venture. When these objectives have been agreed upon, adequate planning and control systems must be wrapped around them.

At TI, we have tried to encourage such an orientation through our Objectives, Strategies and Tactics (OET) management system. The OST System may be visualized as a pyramid (Figure 8). The capstone is the long-range *Corporate Objective*, supported by nine business objectives and 62 strategies.

Strategies define the innovations that are necessary to support the objective and tend to be intermediate range. *Tactics*, in the form of Tactical Action Programs (TAPs), set forth quantitative goals in detail and are used to justify present resource allocations. TAPs have relatively short lifetimes, typically from one to two years.

TI's OST SYSTEM

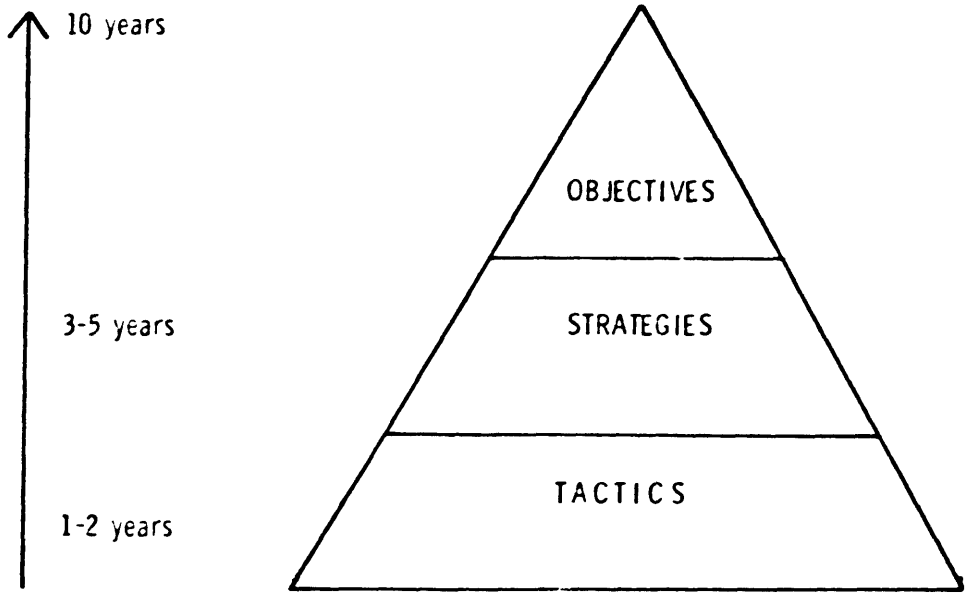


FIGURE 8

By clearly separating "strategic" expense from "operating" expense, the OST system allows us to prepare for tomorrow by focusing on our long-term goals.

TI'S INTERLOCKING STRATEGIES

TI's growth is based on product innovation followsd by productivity increases, generated by moving from point A to point B in Figure 9. Market share is increased by the more aggressive pricing policies that result from more efficient use of people and assets. One of the keys to the growth strategy is our Design-to-Cost program. By making cost a primary design specification, and reductions in that cost a major goal, one can create demands for constant cost-reducing innovations in the product and the manufacturing process, which in turn, fuels greater growth.

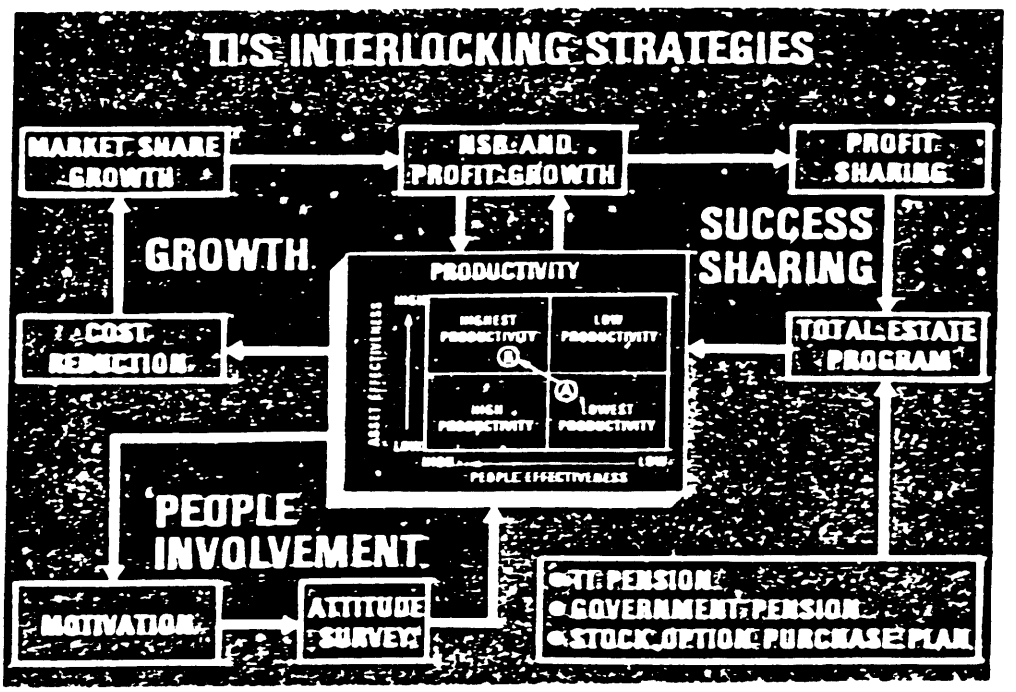


FIGURE 9

The second of the interlocking programs is People Involvement. TI's company-wide People Effectiveness Program is based on involving TIers to the greatest possible extent in the planning and controlling, and not just the doing, of their work. This is backed up by recognition, training, and regular attitude surveys.

Success Sharing is the final link in the Interlocking Strategies chain, and this involves providing each employee with the opportunity to earn a "piece of the action." TI's Success Sharing Program ties productivity improvements, plus growth in net sales billed and profit, to Profit Sharing and, in turn, to the total estate programs for individual TIers. These financial incentives create the environment in which persons are motivated to participate in the achievement of their organization's goal through the pursuit of their own.

HOW TI IMPROVES PRODUCTIVITY

At TI, we pursue productivity improvements through:
People Involvement,
Automation,
Product design,[1] and
Distributed computing.

TEAM IMPROVEMENT IS PRODUCTIVITY AID

One of our more effective approaches is our Team Improvement Program. TI employees meet frequently in teams to discuss and implement more productive ways of doing their jobs. Each team may develop several different tools and techniques for improving productivity, and when these are added to the thousands of other seemingly mundane improvements made by other teams they can make an enormous contribution to overall productivity.

As an everyday example: At the TI facility in Kuala Lumpur, Malaysia, a people involvement team re-examined the method for producing plastic integrated circuits. Defective ICs were coming off their productions lines at a rate close to 0.2 percent, leading to the rejection of a great many completed circuits. In the second quarter, the team members set an error rate goal of 0.01 percent, to be attained within a year.

All the operators of the production equipment were responsible for testing and diagnosing the circuits in their line, while additional quality control procedures were assigned to selected persons. Nine months later, they were ahead of schedule and well on their way to the target they had set for themselves.

This achievement illustrates what we have seen repeated so often when team improvement efforts get started. Team members will set what they feel are challenging but realistic goals, and when a program gets rolling, they find that they are exceeding their goals. This is something that is unlikely to happen if the goals are set *for* the team rather than *by* the team. Giving people the opportunity to tap their own resources is what we mean when we talk about improving people effectiveness.

ROBOT INCREASES PRODUCTIVITY

As we have lowered the cost of memory and logic, we have made possible the automation of ever more complicated application. We are just beginning to realize that this era of "computational plenty" is pushing us closer to the threshold of implementing elementary portions of human thought processes with hardware and software systems.

For example, in the Visual-Aided Manufacturing program at Texas Instruments we have increased productivity manyfold in the testing of calculators, using a computer-controlled robot. A TI minicomputer operates four arms, each of which fills four slots containing independent test heads. Once a calculator is in its slot, the minicomputer activates probes that perform complete functional tests by pushing the calculator's buttons and "reading" its display to check for accuracy in the calculator read-out. It is the intelligence kernel mentioned above

[1] This definition includes both design-to-cost and redesign as technology allows.

that will make Visual-Aided Manufacturing, along with other electronic applications, a major contributor to increased efficiency in the not-too-distant future.

DESIGN INCREASES PRODUCTIVITY

Productivity also can be increased by improving the technology employed within the product itself through R&D.

An example of this is provided by our handheld calculators. The TI–2500 produced in 1974 contained a total of 119 parts, of which 82 were electronic. By 1976, the TI–1200, which succeeded the TI–2500, had a total of 22 parts, of which only two were electronic. The Model TI–1030, introduced in 1978, further reduced the total parts count to 15. Over this same time period, the suggested retail price of the calculator was reduced from $69.95 to $17.

FINGERTIP COMPUTER POWER

The semiconductor developments we have discussed have made possible distributed computing, which means putting computer power at every employee's fingertips.

Texas Instruments has the beginnings of an international information-sharing system, which currently has more than 140 network-connected distributed computers.

To give us a rough measure of the penetration of computers into TI's operations, we count each personal programmable calculator as one module, each computer terminal as one module, and each minicomputer as one module of computing power. At present, if we add the 12,000 programmable calculators to about 8,300 terminals and 8,000 minicomputers in use within TI, we average 1.4 modules of distributed computing power per *exempt* employee. Overall, we average one module for every three employees, many of whom are not directly involved in the manufacturing of our products.

This has been a significant factor in TI's productivity performance, indicating that services, as well as manufacturing enterprises, can improve their efficiency dramatically through the use of electronics.

CORPORATE OVERHEAD PERCENTAGE REDUCED

For example, the curve in Figure 10 demonstrates that, since 1966 we have been able to reduce general and administration (G&A) expense as a percentage of net sales billed (NSB), along an 86 percent slope. That is, in nonproduct-related operations closely resembling those of service industries, each time we have doubled our cumulative NSB since 1966, we have achieved a 14 percent decrease in corporate overhead costs as a percentage of NSB.

These productivity gains parallel the increasing penetration of electronic equipment within corporate operations. Similar improvements can be made in all types of service industries, from grocery stores to moving companies.

The popular view is that because services are "people-oriented," not "product-oriented," they never can be efficient, that their nature is such we are doomed to its consequence: A perpetual drag on productivity growth, with little prospect for improvement.

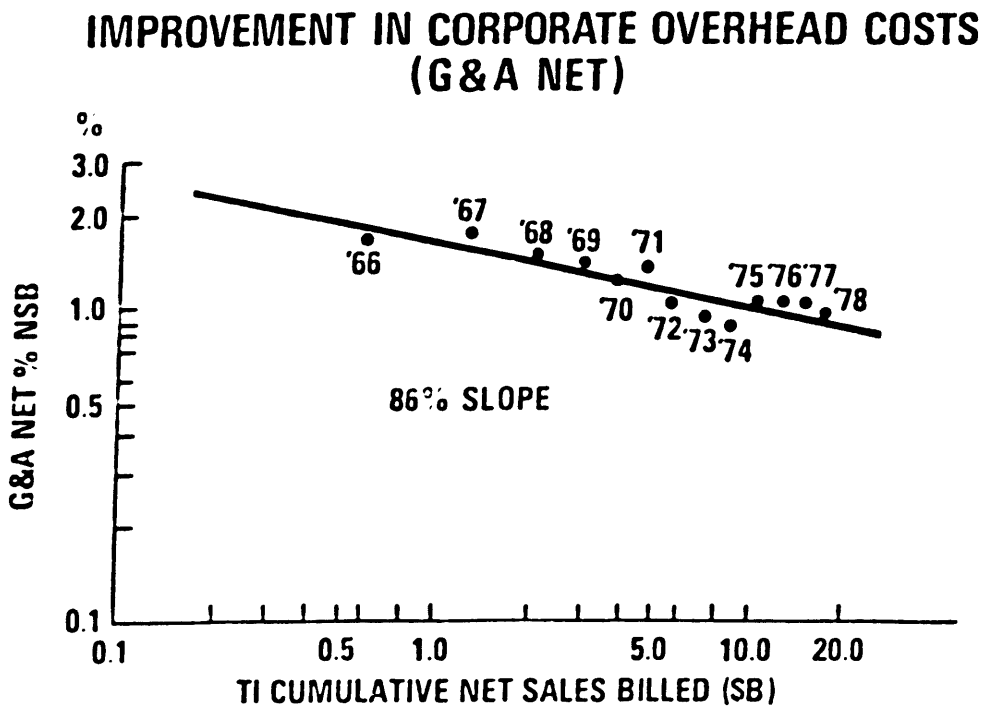


FIGURE 10

But, as in manufacturing, innovation is the key to increased productivity, and for many service companies, electronic systems will be the answer.

CONCLUSION: ESTABLISH NATIONAL OBJECTIVES

As a nation, we cannot hope to "muddle through" our present problems as we have sometimes done in the past. The U.S. must develop a set of coherent and attainable national objectives that will stand for at least a decade, perhaps a generation. The dilemma is how to accomplish this without falling into the trap of national planning.

One way could be through the establishment of a Board for National Objectives, with status similar to that of the Fed, but with no independent power of implementation. The members of the board, whose tenures would extend beyond normal political terms, would include ex-Presidents, ex-Congressmen, ex-Cabinet Members and representatives from business, labor and the general public. Its charter would be to formulate, for the consideration of the President, Congress and the public, a set of national objectives by initiating public debate and generating a national consensus.

To encourage the development of a long-range viewpoint among our political leaders, the terms of Congressmen and the President should be lengthened, with the Chief Executive limited to one term. Longer terms of service and higher salaries would attract better people, and diminish the demands of re-election campaigning on the time of public servants.

An intensive educational thrust will be necessary if we hope to reverse present trends successfully. Emphasis must be placed on technical and vocational skills and retraining for those whose capabilities

are being overtaken by rapid technological change. In addition, knowledge concerning the free enterprise system and the many key issues to be resolved is at such a level that the public is simply not equipped to make the difficult choices.

The people in this country have the ability to understand the key issues, the guts to make hard, intelligent decisions, and the power to implement them through the ballot box. But, they must have the facts underlying these issues, and some options to consider, before they can do so.

Certainly the times are changing; but a strong undercurrent of the old, unchanging American values is still with us:

There is no lack of spirit, of goodness, of patriotism;

The work ethic has not been abandoned, although leadership is in short supply;

And above all, the high value placed upon freedom, at home as well as abroad, remains unaltered.

These underlying values always have been and still are the foundations of American society. But, we need another ingredient: a governmental framework that does not smother the American dream.

The ability to deliver on the promise of prosperity must be maintained, for the bottom line is that real economic growth is the glue holding us together. If economic growth slows precipitously—the glue begins to dissolve, and so does our society.

APPENDIX

[NOTE 1]

TABLE I.—RELATIVE LEVELS OF ABSOLUTE HOURLY COMPENSATION IN MANUFACTURING

[U.S. value=100]

	United States	Germany	France	United Kingdom	Italy	Japan
1970.....	100.0	46.8	41.8	33.5	42.4	22.6
1971.....	100.0	52.3	44.0	36.8	46.6	25.2
1972.....	100.0	60.5	50.8	40.1	53.7	31.5
1973.....	100.0	77.2	61.9	40.7	63.6	40.0
1974.....	100.0	83.0	62.3	44.1	64.4	44.4
1975.....	100.0	88.1	74.9	48.6	74.0	45.7
1976.....	100.0	85.2	71.0	42.7	64.3	45.7
1977.....	100.0	93.3	72.8	41.8	66.2	50.4
1978.....	100.0	107.0	82.7	48.8	72.4	62.8

TABLE II.—RELATIVE LEVELS OF ABSOLUTE PRODUCTIVITY IN MANUFACTURING

[U.S. value=100]

	United States	Germany	France	United Kingdom	Italy	Japan
1970	100.0	48.0	51.6	29.8	32.5	35.8
1971	100.0	50.3	51.0	31.6	32.1	34.4
1972	100.0	54.9	57.1	33.7	34.8	39.7
1973	100.0	65.9	69.5	33.1	40.0	50.7
1974	100.0	72.6	75.7	34.3	48.9	53.5
1975	100.0	70.6	70.6	33.3	43.2	44.1
1976	100.0	69.3	67.7	29.8	41.4	45.5
1977	100.0	74.4	66.6	31.2	42.1	48.9
1978	100.0	83.2	73.4	35.3	44.9	61.3

TABLE III.—RELATIVE LEVELS OF ABSOLUTE UNIT LABOR COSTS IN MANUFACTURING

[U.S. value=100]

	United States	Germany	France	United Kingdom	Italy	Japan
1970	100.0	97.5	80.9	112.4	130.4	63.0
1971	100.0	103.9	86.2	116.3	145.5	73.4
1972	100.0	110.2	88.9	119.0	154.0	79.3
1973	100.0	117.1	89.0	123.1	159.1	79.0
1974	100.0	114.5	82.3	128.5	131.7	82.9
1975	100.0	124.8	106.0	145.8	171.1	103.7
1976	100.0	123.0	105.0	143.3	155.3	100.4
1977	100.0	125.4	109.4	133.9	157.3	103.0
1978	100.0	128.6	112.7	138.1	161.2	102.6

Derivation of Absolute Unit Labor Costs

Comparative absolute unit labor costs for the manufacturing sectors of the six major industrialized nations were derived by the Economic Analysis department of Texas Instruments. A prerequisite series, absolute hourly compensation, was developed for each country by combining the absolute U.S. dollar compensation level in 1970 with subsequent annual rates of change in the country's index of hourly compensation in U.S. dollars (Table I). For ease of comparison, all annual country values were expressed as percentages of the U.S. value in the same year.

The absolute labor productivity series was developed utilizing a more extended methodology (Table II). A base was established by calculating each of the six major nation's percentage share of their combined manufacturing output in 1970, expressed in U.S. dollars at average period exchange rates. Ratios representing relative levels of absolute productivity were then calculated by dividing the

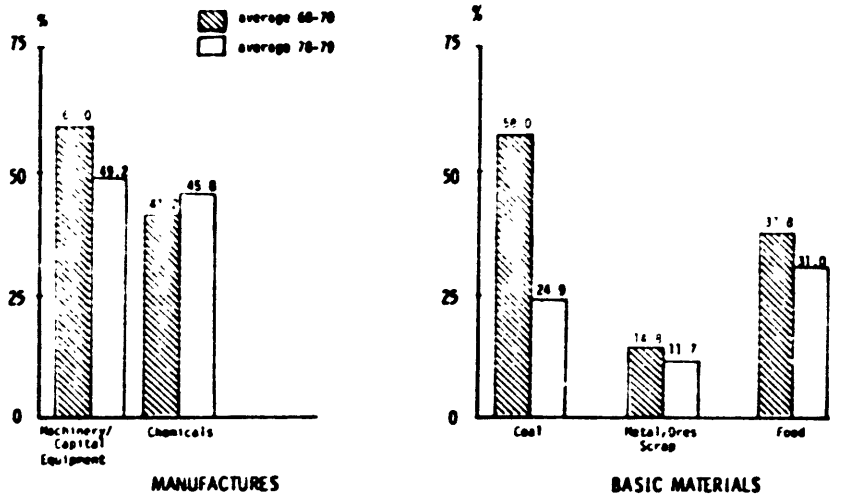
output shares by comparable 1970 relative shares of combined manufacturing employment, each adjusted for variations in average hours worked per week. The number of weeks worked per year was assumed to be the same for all countries.

Values for 1971 were developed by multiplying the 1970 derived values of absolute productivity by: (1) the ratio of the 1971 index of manufacturing output per man-hour to that of 1970, (2) the ratio of the 1970 period average exchange rate to that of 1971, and (3) the ratio of the 1971 index of wholesale prices, manufactured goods, to that of 1970, for a given foreign country, divided by the comparable ratio for the U.S. The exchange rate adjustment is an attempt to reduce the overstatement or understatement of dollar output values that can be attributed to inflation differentials. Values for all subsequent years were developed with an iterative process using the same procedure. Again, for ease of comparison, all annual country values were expressed as percentages of the U.S. value in the same year.

Finally, absolute unit labor costs (Table III) were derived by dividing the elements of absolute hourly compensation (Table I), by the comparable elements of absolute productivity (Table II).

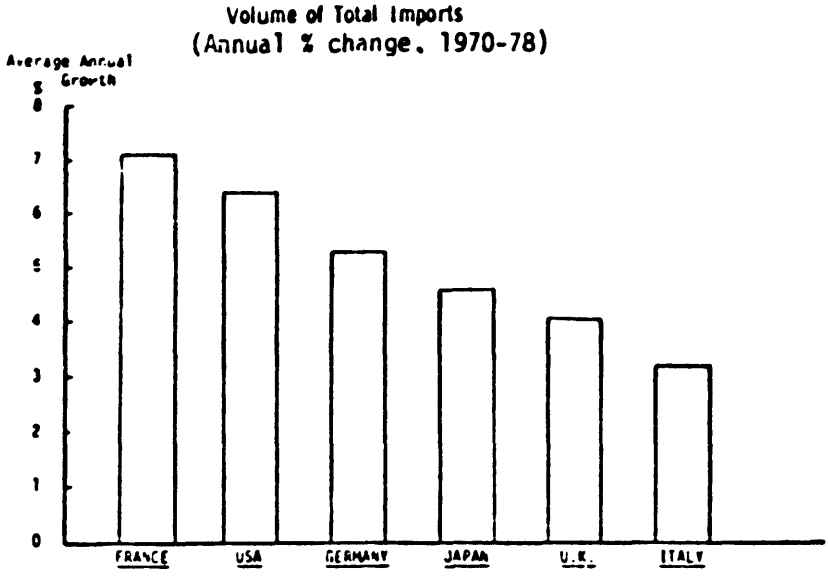
NOTE 2

U.S. SHARE OF SELECTED JAPANESE IMPORT MARKETS



Source: U.S. Department of Commerce and the Japanese Trade Organization (JETRO)

NOTE 3



Source. INTERNATIONAL ECONOMIC INDICATORS, U.S. DEPARTMENT OF COMMERCE

U.S. IMPORTS BY ORIGIN

[In billions of dollars]

	1970	1972	1974	1976	1978
Industrial countries.....	28,868	40,202	60,084	66,297	96,701
Oil exporters....	1,657	2,707	16,116	26,618	32,350
Other LDC's.....	9,441	12,498	26,161	30,251	43,983

Source: "Direction of Trade Yearbook," 1979. International Monetary Fund.

[NOTE 4]

SUMMARY OF A STUDY BY DATA RESOURCES, INC., ON THE COSTS OF QUICK INFLATION REDUCTION

The slowdown in the economy required to eliminate a good portion of the U.S. inflation on a sustained basis would be extremely large. Indeed, the values of policy instruments necessary to bring such a reduction of inflation simply are not feasible.

In the simulations with the optimal control procedures, reductions in *real* government expenditures ranging from $45 to $90 billion dollars late this year and in 1981 would be required to bring the rate of inflation down by 2.5 percentage points in 1985 compared to DRI's current forecast. The tremendous reduction in government expenditures would bring unemployment rates of 13 to 15 percent, if applied. This kind of policy is simply not feasible in the current U.S. economy and therefore one must conclude that the inflation reduction desired could not be achieved through investment tax credits and reduced government spending in the time span analyzed. The major reason is an 8 to 9 percent core

inflation rate, primarily wage rises in excess of productivity still in the U.S. economy during 1985.

[Source: Allen Sinai, DRI.]

[NOTE 5]

The 22.5 percent figure includes budget plus off-budget entities.

[Source: "1981 Budget Revisions," Office of Management and Budget, Washington, D.C.]

[NOTE 6]

REGULATORY BUDGET

The current regulatory process fails to recognize that the goals of regulatory programs must be balanced rationally with other national objectives. During the past year, the Joint Economic Committee held hearings to examine how enactment of a regulatory budget could improve the regulatory process and cut unnecessary regulatory costs. As envisioned, the regulatory budget would require Congress to set absolute limits, for a given time period, on the increase in expenditures by the private sector (or by governmental units) required to bring products or procedures into compliance with federal regulations.

[Source: Adapted from "Plugging in the Supply Side," Joint Economic Report, 1980, Congress of the U.S., Senate Report No. 96-618.]

[NOTE 7]

A CONSUMPTION TAX

A consumption-based tax frequently discussed for adoption in the United States is the consumption-VAT (Value-Added-Tax). A consumption type VAT, used by the Common Market countries, allows tax paid on capital assets to be deducted at the time of purchase against VAT otherwise payable. Renewed interest has been shown in the VAT as a way to reduce rapidly increasing social security taxes, encourage savings and capital formation by reducing corporate and individual income taxes, and improve the U.S. foreign trade position.

Under the Tax Restructuring Act of 1979, proposed by Chairman Al Ullman of the House Ways and Means Committe (H.R. 5665), a 10% VAT would be instituted yielding an estimated $130 billion in 1981 to offset proposed reductions in personal, corporate, and social insurance taxes. The Ullman bill would levy lower VAT rates on food, housing and health care, and would completely exempt exports, charitable or nonprofit activities, mass transit, and interest, from taxation.

In the continuing debate on this proposal, consideration should be given to a coupling of VAT (or other such consumption taxes) with limitations on government spending, to allay concerns that the introduction of a new tax into the Federal tax system would ultimately result in a heavier burden of taxes.

[NOTE 8]

SOURCES OF PRODUCTIVITY GROWTH

The following breakdown is based on an adaptation of John Kendrick's analyses of the sources of U.S. productivity growth from 1929 to 1978:

SOURCES OF PRODUCTIVITY GROWTH, 1929–78

	Percentage point contribution	Percent of total
1. Changes in labor quality (includes age-sex composition, education and training, health, changes in quality of land, and actual/potential labor efficiency and not elsewhere classified) [1]	0.30	12
2. Changes in capital per worker (capital/labor substitution) [1]	.37	15
3. Improved allocation of resources (includes intensity of demand) [1]	.52	20
4. Economies of scale	.34	13
5. Technological innovation (advances in knowledge) [1]	1.01	40
6. Net government impact	0	0
Annual growth rate of productivity (Real product per unit of labor) [1]	2.54	100

[1] John Kendrick's terminology.

[Source: "Productivity Trends and the Recent Slowdown: Historical Perspective, Causal Factors, and Policy Options," by John W. Kendrick, in "Contemporary Economic Problems, 1979." American Enterprise Institute.]

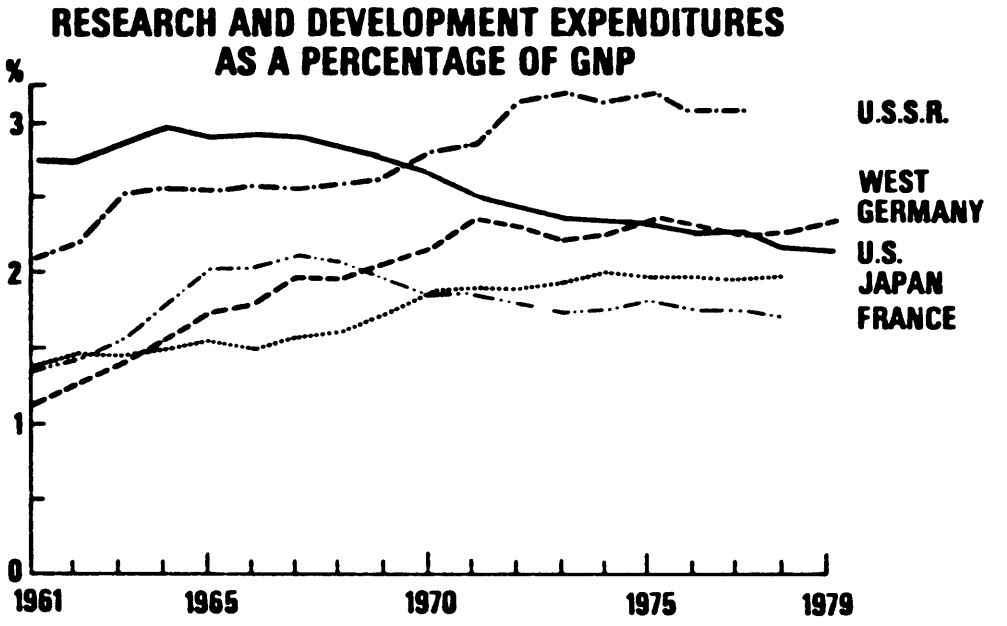
Similar conclusions emphasizing the dominant role of technological innovation in spurring productivity gains have also been reached by Professor R. M. Solow at the Massachusetts Institute of Technology, as well as by Edward F. Denison at the U.S. Department of Commerce.**

[NOTE 9]

U.S. TOTAL VS. INDUSTRIAL R. & D.

(A) Total R&D includes all basic research conducted in universities, nonprofit institutions, and government labs plus all industrial R&D.

** "Investment and Technical Progress," R. M. Solow, in K. J. Arrow, S. Karlin, and P. Suppes, eds., "Mathematical Methods in the Social Sciences, 1959," pp. 89–104, Stanford University Press, Stanford, 1960; also Economics, Paul A. Samuelson, (Ninth Edition), p. 748, McGraw-Hill Book Co. Edward Denison's work appears in "Accounting for United States Economic Growth: 1929–69." Brookings Institution, Washington, 1974, and "Accounting for Slower Economic Growth: The United States in the 1970s," Brookings Institution, Washington, 1979.



(B) Industrial R&D includes only private industry R&D and federally-financed industrial R&D.

TABLE I.—U.S. INDUSTRIAL R. & D. AS A PERCENT OF GNP

	Federally financed	Privately financed	Total industrial
1960	1.2	0.9	2.1
1965	1.1	.9	2.1
1970	.8	1.0	1.8
1971	.7	1.0	1.7
1972	.7	1.0	1.7
1973	.6	1.0	1.6
1974	.6	1.0	1.6
1975	.6	1.0	1.6
1976	.5	1.0	1.6
1977	.5	1.0	1.6
1978	.6	1.0	1.6
1979	.5	1.0	1.6

Source: National Science Foundation.

(C) The definition of R&D corresponds to the following Financial Accounting Standards Board definition:

Research is planned search or critical investigation aimed at discovery of new knowledge with the hope that such knowledge will be useful in developing a new product or service (hereinafter "product") or a *new process* or technique (hereinafter "process") or in bringing about a *significant improvement* to an existing product or process.

> Development is the *translation of research findings* or *other knowledge into a plan or design for a new product or process or for a significant improvement to an existing product or process* whether intended for sale or use. It includes the conceptual formulation, design, and testing of *product alternatives, construction of prototypes,* and *operation of pilot plants.* It does not include routine or periodic alterations to existing products, production lines, manufacturing processes, and other on-going operations even though those alterations may represent improvements and it *does not include market research* or market testing activities. (FASB; October, 1974)

Although the expensing or capitalizing of R&D expenditures may have been controversial, TI always charged its internally funded R&D costs to expense as incurred, and this is now a standard requirement for all industry under Financial Accounting Standard Board Rules. Under this definition, the R&D expenditures made by Texas Instruments were $134 million in 1979, up from $111 million in the prior year.

[NOTE 10]

DIFFERENCES IN PROFIT MARGINS: UNITED STATES VERSUS JAPAN (AVERAGE PROFIT MARGINS IN MANUFACTURING, 1974–79)

[Percent of net sales]

	Profits before taxes	Profits after taxes
United States	8.6	5.3
Japan	1.8	.9

Source: Quarterly Financial Report (U.S. Federal Trade Commission), Yamaichi Research Institute.

[NOTE 11]

DIFFERENCE IN R. & D. TAX CREDIT POLICIES: U.S. VS. JAPAN

The U.S. has no R. & D. tax credit policy. Japan has an R. & D. tax credit equal to 20 percent of the increase in R. & D. expenditures in the taxable year over those of the previous year. The credit may not exceed 10 percent of the total tax owed.

[Source: Data Resources, Inc.]

[NOTE 12]

SUMMARY OF POLICY MIX STUDY BY DATA RESOURCES, INC.

(Sponsored by Texas Instruments, Inc., February 1980)

Data Resources, Inc., (DRI) conducted a study for Texas Instruments to specify a policy mix which could get U.S. productivity growth rates back to 2 percent by the 1990s. The following three-pronged approach could produce the desired results:[1]

1. The investment tax credit would be increased to about 25 percent, from the current 10 percent rate.
2. A 20 percent tax credit on industrial R. & D. expenditures would be enacted.
3. To round out the package, non-defense government spending for goods and services (excluding transfer payments) could be reduced to a level $10 billion per year lower than currently projected, a reduction of around 20 percent.

[1] The optimal control model used for the study has the capacity to solve for no more than three policy instruments simultaneously, over a seven-year interval. The number of testable policy instruments is inversely related to the length of the time period under consideration.

The economic impact of these policies can be quantified over the 1980 to 1987 period using DRI's optimal control model of the U.S. economy. DRI also provided qualitative extensions of the simulation results for the 1990s.

Effects

In the first decade, the rate of productivity growth would rise from the 0.5 percent rate of the late 1970s up to a 1.5 percent rate by the end of the 1980s as a result of these policies. And by the 1990s, productivity advances of 2 percent per year would be achieved.

In the early 1980s, real GNP would grow at nearly 3 percent per year, and by the 1990s real GNP growth of 3.3 percent annually could be expected.

The inflation rate (as measured by the GNP deflator) would be cut to about 7.5 percent in the 1980s and 5 percent in the 1990s.

The ratio of business investment to GNP would rise from 10.1 percent to about 12 percent, a gain of nearly 2 percentage points.

The two tax credit measures boost productivity sufficiently so that a reduction in non-defense government spending of roughly 20 percent can also be accommodated, with the attendant favorable implications for the deficit and for inflation.

Implications for inflation policy

The simulation highlights some of the difficulties we face in the fight against inflation. As a result of these tax measures alone, the study suggests that we cannot realistically expect to get inflation below 5 percent by the end of the century even with productivity gains of 2 percent annually. But the prospect of a 5 percent rise in prices every year is unacceptable. At that rate, over a fifteen period the value of a dollar would be more than slashed in half.

An option implied by the simulation is to give up some of the gains in real GNP growth generated by the policy measures in order to dampen the pressure on prices from rising aggregate demand. This potential trade-off means that an additional cut from the expected 5 percent rate of inflation might be possible if a real GNP growth rate of less than 3.3 percent were to be maintained.

ECONOMIC EFFECTS OF POLICY MIX

	Annual average rate of growth						
	Baseline (no policy action)	After policy mix is enacted			Policy effects, annual change to baseline		
	1973–80	1980–83	1984–87	1990's	1980–83	1984–87	1990's
Productivity growth	0.5	1.2	1.5	2.0	0.7	1.0	1.5
Real GNP growth	2.1	2.9	3.3	3.3	.8	1.2	1.2
Inflation rate (GNP deflator)	8.1	8.2	7.4	5.1	.1	−.7	−3.0
Ratio of business investment to GNP	10.1	11.9	11.8	12.0	1.8	1.7	1.9

[NOTE 13]

DEPRECIATION AND INVESTMENT TAX CREDIT

BUSINESS IMPACT

The following quantifies the equipment depreciation, profit, and cash flow impact of an ongoing growing business at various combinations of tax depreciation method, growth, and Investment Tax Credit (ITC). For simplicity, manufacturing equipment and the ITC flow through method were used.

Assumptions.—20 percent growth rate Net Sales Billed (NSB) for history and forecast; capital expenditures equal 5 percent NSB plus 20 percent Δ NSB; all investment tax credit taken in year earned; all other costs except depreciation equal 82.1 percent NSB; no consideration for cost of money;

cash flow includes only profit, depreciation, capital expenditures, and deferred taxes; same depreciation for public reporting used in all cases.

Case I.—10 percent ITC, 7 year DDB/SYD (Double Declining Balance/Sum of Year Digits in Year 3) Depreciation.

Case II.—10 percent ITC, Capital Cost Recovery (10–5–3).

Case III.—25 percent ITC, 7 Year DDB/SYD Depreciation.

Case IV.—Same as Case I except Growth Rate increases to 30 percent/year for Year 3 and Beyond.

Case V.—Same as Case II except Growth Rate increases to 30 percent/year for Year 3 and Beyond.

[In percent]

Summary	I	II	III	IV [1]	V [1]
Growth/year	20.0	20.0	20.0	20–30.0	20–30.0
Depreciation, percent NSB	6.1	6.1	6.1	6.4	6.4
PBT, percent NSB	11.8	11.8	11.8	11.5	11.5
ITC rate	10.0	10.0	25.0	10.0	10.0
Percent NSB	.9	.9	2.3	1.1	1.1
PAT, percent NSB	7.5	7.5	8.9	7.5	7.5
Cash flow, percent NSB	5.1	5.3	6.5	3.8	4.1

[1] Data for year 7; steady State at 30 percent growth.

Conclusions

The proposed Capital Cost Recovery depreciation method (10–5–3) (Case II) generates a slightly more favorable cash flow than the current 7 Year DDB/SYD depreciation method (Case I). However, 25 percent ITC with current depreciation method (Case III) is more favorable in both cash flow and PAT than the Capital Cost Recovery method (Case II).

CASE I.—10-PERCENT INVESTMENT TAX CREDIT (7 YEAR DDB/SYD DEPRECIATION)

	Year						
	1	2	3	4	5	6	7
NSB	100.0	120.0	144.0	172.8	207.4	248.8	298.6
Costs	82.1	98.5	118.2	141.9	170.3	204.3	245.2
Depreciation	6.1	7.3	8.8	10.5	12.6	15.2	18.2
Percent NSB	6.1	6.1	6.1	6.1	6.1	6.1	6.1
PBT	11.8	14.2	17.0	20.4	24.5	29.4	35.2
Percent NSB	11.8	11.8	11.8	11.8	11.8	11.8	11.8
Tax	5.2	6.2	7.5	9.0	10.8	12.9	15.5
ITC	.9	1.1	1.3	1.6	1.9	2.2	2.7
PAT	7.5	9.0	10.8	13.0	15.6	18.7	22.4
Percent NSB	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Cash flow	5.1	6.1	7.4	8.8	10.6	12.7	15.3
Percent NSB	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Cum cash flow	5.1	11.2	18.6	27.4	38.0	50.7	66.0

CASE II.[1]—10-PERCENT INVESTMENT TAX CREDIT (CAPITAL COST RECOVERY (10-5-3) DEPRECIATION)

	Year						
	1	2	3	4	5	6	7
Cash flow	5.3	6.4	7.7	9.2	11.0	13.2	15.9
Percent NSB	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Cum cash flow	5.3	11.7	19.4	28.7	49.7	52.9	68.8

CASE III.—25-PERCENT INVESTMENT TAX CREDIT (7-YEAR DDB/SYD DEPRECIATION)

NSB	100.0	120.0	144.0	172.8	207.4	248.8	298.6
Costs	82.1	98.5	118.2	141.9	170.3	204.3	245.2
Depreciation	6.1	7.3	8.8	10.5	12.6	15.2	18.2
Percent NSB	6.1	6.1	6.1	6.1	6.1	6.1	6.1
PBT	11.8	14.2	17.0	20.4	24.5	29.4	35.2
Percent NSB	11.8	11.8	11.8	11.8	11.8	11.8	11.8
Tax	5.2	6.2	7.5	9.0	10.8	12.9	15.5
ITC	2.3	2.7	3.3	3.9	4.7	5.6	6.7
PAT	8.9	10.6	12.8	15.3	18.4	22.0	26.5
Percent NSB	8.9	8.9	8.9	8.9	8.9	8.9	8.9
Cash flow	6.5	7.8	9.3	11.2	13.4	16.1	19.3
Percent NSB	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Cum cash flow	6.5	14.3	23.6	34.8	48.2	64.3	83.6

CASE IV.—10-PERCENT INVESTMENT TAX CREDIT (7-YEAR DDB/SYD DEPRECIATION) (GROWTH RATE IS 30 PERCENT FOR YEAR 3 AND BEYOND)

NSB	100.0	120.0	156.0	202.8	263.6	342.7	445.5
Costs	82.1	98.5	128.1	166.5	216.4	281.4	365.8
Depreciation	6.1	7.6	9.9	12.9	16.8	22.0	28.6
Percent NSB	6.1	6.4	6.4	6.4	6.4	6.4	6.4
PBT	11.8	13.8	18.0	23.4	30.4	39.3	51.1
Percent NSB	11.8	11.5	11.5	11.5	11.5	11.5	11.5
Tax	5.2	6.1	7.9	10.3	13.4	17.3	22.5
ITC	.9	1.3	1.7	2.2	2.9	3.8	4.9
PAT	7.5	9.0	11.8	15.3	19.9	25.8	33.6
Percent NSB	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Cash flow	5.1	4.6	6.0	7.7	10.1	13.1	17.0
Percent NSB	5.1	3.8	3.8	3.8	3.8	3.8	3.8
Cum cash flow	5.1	9.7	15.7	23.4	33.5	46.6	63.6

CASE V.[2]—10-PERCENT INVESTMENT TAX CREDIT (CAPITAL RECOVERY COST (10-5-3) DEPRECIATION) (GROWTH RATE IS 30 PERCENT FOR YEAR 3 AND BEYOND)

Cash flow	5.4	4.8	6.2	8.2	10.7	14.0	18.1
Percent NSB	5.4	4.0	4.0	4.0	4.1	4.1	4.1
Cum cash flow	5.4	10.2	16.4	24.6	35.3	49.3	67.4

[1] Only difference from Case I is cash flow because of different depreciation method for tax purposes.
[2] Only difference from Case IV is cash flow because of different depreciation method for tax purposes.

[NOTE 14]

LEVERAGE OF A 20 PERCENT R. & D. TAX CREDIT ON R. & D. EXPENDITURES AND PROFITABILITY

Japanese firms have much less stringent profit margin requirements than do U.S. firms, and are therefore more likely to place relatively more emphasis on long-term R&D projects. The analysis below illustrates the leverage of an R&D tax credit that could provide the United States a large delta in research expenditures for only a small deterioration in the profit margin requirement. The private industrial R&D expenditures in this hypothetical example are set at the U.S. manufacturing industry's comparable 1978 level of 1.5 percent of sales.

	Without credit		With credit	
	Millions	Percent	Millions	Percent
Net sales billed	$1,000	100.0	$1,000	100.0
Gross profit margin	250	25.0	250	25.0
Period expense	125	12.5	125	12.5
Operating profit	125	12.5	125	12.5
Less R. & D	15	[1]1.5	30	[1]3.0
Profits before taxes	110	11.0	95	9.5
Less tax (50 percent)	55	5.5	47.5	4.75
Plus tax credit	0	0	6.0	.60
Profits after taxes (PAT)	55	[1]5.5	53.5	[1]5.35

[1] A 20-percent tax credit would allow this hypothetical firm to double R. & D. expenditures from 1.5 percent to 3 percent of sales with only a 0.15 percentage point deterioration in PAT. The assumption of the availability of engineering and scientific personnel is implicit in this analysis.

[NOTE 15]

According to the "Washington International Business Report," exporters often point to the following disincentives as having the most significant impact on exports:

Antitrust legislation;
Restraints on arms sales;
Environmental standards;[2]
Export controls related to foreign policy objectives;
Export controls on strategic material;
Foreign boycott regulation;
Hazardous substances controls;
Health and pharmaceutical standards;
Human rights standards;
Improper payments;
Restrictions on transfer of nuclear technology; and
Restrictions on exports to South Africa.

[2] In the case of environmental, health and safety regulations, this refers *only* to: 1) the application of U.S. regulations on goods destined for export markets already having their own health and environmental legislation, and/or 2) when the dissemination of U.S. data on the possible detrimental impact of a particular commodity or good on the welfare of the recipient would provide sufficient warning and enable considered judgement on its desirability.

[NOTE 16]

EXPORT EXEMPTION PROPOSAL

The proposal to exempt from federal taxation 50 percent of export income classified as foreign source income would have the following effect, on a national basis:[3] Assume 10 percent profits before taxes on 1979 merchandise exports, then $182.4 billion times 10 percent times 50 percent equals $9.12 billion.

Therefore, profit after tax savings equals $9.12 billion times 46 percent equals $4.20 billion. (The ultimate tax savings would be reduced by savings currently obtained through the DISC.)

[NOTE 17]

PROPOSAL TO MODIFY THE INVESTMENT TAX CREDIT

The investment tax credit (ITC) could be modified to provide an incentive for increasing exports. Under this proposal, any U.S. business which increased exports for the current year above the average for the three preceding years would be eligible for an increase in the investment tax credit rate. Each increase in exports of 5 percent over the base period average export sales would entitle a business to 1 percentage point additional ITC up to a maximum of five additional points.

If a firm's exports declined in the current year plus one to a level *below* the three year average for the current year, current year minus one and current year minus two, the firm would not benefit from the export tax credit, and the applicable ITC would be 10 percent.

The export tax credit would not alter the definition or amount of assets on which the ITC could be taken.

The credit is described by the following formula:

$$\left[\frac{\text{Current Year Export Net Sales Billed (NSB)}}{\text{Average Export NSB in Base Period}^4}\right] - 1.0 \div .05 = \text{Increase in ITC Percentage Point}$$

The ITC increase is limited to 10 percent of the delta of Export NSB over the base period.

Example:

If the proposal had been applied on a national basis to *1979* U.S. merchandise exports, a maximum of $5.7 billion in additional ITC would have been generated:

$$\left[\frac{\text{Current Exports: \$182.4 billion}}{\text{Base Period Average: \$125.9 billion}}\right] - 1.0 \div .05 = 9.0 \text{ Percentage Point}$$

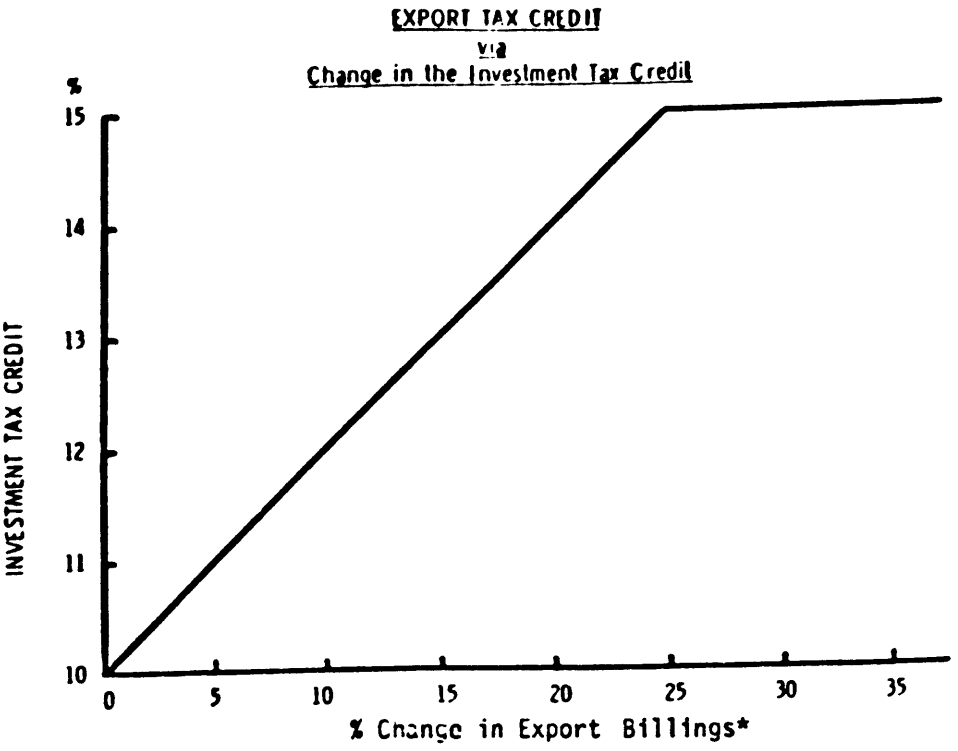
Investment qualified for ITC	$162.2 billion[5]
	×.05
Yields	$8.1 billion

Additional ITC (absolute maximum) equal $5.7 billion since the increase in the dollar-level of the credit is limited to 10 percent of the export NSB delta for 1979 over the base period.

[3] This 50% of foreign source income is still included in foreign tax credit limitation computation even though untaxed by the U.S.

[4] Base period is three year period immediately preceding current year.

[5] Producers' durable equipment.



The investment tax credit is restricted to no more than 10% of the change in export billings.

*The change is measured over an average 3-year base period.

[NOTE 18]

EXPORT FINANCING

In 1977, Japan supported 42 percent of its exports with government-backed financing; the United Kingdom, 34 percent; and France, 30 percent. The United States supported only 7 percent of its exports with government-backed financing. The problem is, not only must the Ex-Im Bank meet the foreign competitions but unlike them, it must be self-sustaining.

(A) The bank's programs include:

1. Direct credits and financial guarantees for major capital goods exports;
2. Medium-term guarantees and discount loans to U.S. commercial banks and Cooperative Financing Facility loans to foreign financial institutions to finance capital goods exports;
3. Insurance against political and commercial risk for exporters.

(B) Financing support by our major competitors, besides being at a higher level, included programs such as:

1. Insurance against exchange rate fluctuations (Japan, Germany, France, Italy);
2. Inflation indemnity insurance (U.K., France);
3. Performance bond insurance covering losses on whole manufacturing plants (Japan);
4. Combinations of foreign aid and export credit programs.

(C) Not only is the FY 1980 funding level ($4.1 billion) for Ex-Im Bank's programs limited to an estimated one-third of the demand, but legislative foot-dragging may mean the Bank will run out of funds by June 1, 1980. In addition, the Ex-Im Bank is constantly hampered by political restrictions, such as the Jackson-Vanik Amendment on the emigration policies of the USSR.

Ex-Im Bank officials are now attempting to receive enough funding to (1) stay in business and (2) cover their $14 billion in preliminary commitments to exporters. If they do not get those funds, it could have serious implications for the U.S. aircraft industry, one of the few bright spots in the export picture at present.

[NOTE 19]

FOREIGN GOVERNMENT EXPORT PROGRAMS

In hearings on U.S. export policy conducted by the Subcommittee on International Finance, foreign government support for exports, directly and indirectly, was cited "as the biggest obstacle to expanded U.S. exports." Chief among them:

1. *Industrial Policies*, notably in Japan, France, Italy, Taiwan, Hong Kong and South Korea channel government resources into "target" export industries. Regional development schemes also encourage export-oriented industries to relocate or expand in depressed areas, and thereby have a secondary impact on overall export totals.

2. *Research and development* in Japan and Europe is often directed towards industries with export potential.

3. *Lack of anti-trust legislation* in many countries allows them to form large and efficient trading companies to promote exports while simultaneously blocking easy access to the indigenous market.

4. *Less-stringent environmental and safety standards* overseas permit lower development costs and encourage more efficient export licensing procedures.

5. *Remission of indirect taxes* on exports is another device often used by major U.S. competitors, and low rates of taxation on foreign-source income permit foreign corporations to set-up foreign subsidiaries and pay little or no direct taxes on their exports to them. The U.S. does not permit such differential tax treatment.

6. *Financing of exports* is the most important non-tax incentive to exports. Most countries provide some form of official export financing, and the French, Japanese and British use supplemental non-tax incentives as well. Small exporting firms in Germany, Japan, Italy and France receive even more attractive financing incentives.

7. *Financing of pre-feasibility studies* is an effective varient of many export financing programs, which allows exporting firms to receive government help in product and project evaluation for export.

8. *Cheaper export shipping* is a big advantage to competitor's exports. Shipping costs for U.S. exports average 32% *higher* than those for our imports. Shipping costs to LDCs, average 100% more than our competitors, and Japan has a 300% freight advantage over the U.S. in shipments to third countries. U.S. government shipments frequently "crowd out" private sector freight on U.S. flag carriers, as well.

9. *Export promotion*, such as trade shows, is less important in the U.S. than in Japan, the U.K., Italy and France, but our effort is more vigorous than those of Canada and Germany.

[NOTE 20]

EVALUATION OF CIRCUIT RELIABILITY

The evaluation of the reliability performance of a given semiconducter device is a time-consuming and expensive proposition. Comparing reliability data with that of other devices, particularly if they are not tested simultaneously under the same conditions, compounds the problem. When tests are run by competitors, often in different countries and from different production lines, the chances of statistical error is magnified as well. Nevertheless, reliability performance is an important characteristic of any semiconductor device and plays a key role in determining its future utilization.

To evaluate new products or new processes, approximately fifty million device hours at 55° C operating conditions should be accumulated. This requires accelerated testing at 125° C or maximum device conditions, to obtain the results within a reasonable period of time.

For example, for a statistically sound data base, three samples of forty units, each taken from different periods of manufacture from an assigned assembly site, should be selected. These samples are then subjected to one thousand hours at 125° C operating life or maximum operating conditions, generating 60.5 million device hours. Assuming one failure to experienced, a failure rate of 0.002 percent/1K hours would result. This is typical of failures being quoted in today's market. From design to completion of reliability testing, four to five months are required.

In comparison, more mature products, such as low power schottky, have been tested in sufficient quantities to achieve 3.31 billion device hours over a three year period. The reliability failure rate for this technology is 0.001 percent/1K hours. In short, the most valid reliability figures can only be obtained for devices with a fairly long operating history under field conditions, rather than utilizing testing procedures with numerous potential incongruities.

[NOTE 21]

CIRCUIT RELIABILITY

The example of the television set refers *only* to the integrated circuits within the chassis; this *does not* preclude the failure of other components, such as the picture tube, which would prevent the functioning of the television.

AMERICA'S CHALLENGE

(By Hon. Lloyd M. Bentsen [1])

It was a distinguished alumnus of this university who suggested long ago that "in skating over thin ice, our safety is in our speed." As I prepare to conclude three hours of morning oratory and deliver the last lecture before lunch, let me assure you that I sense the thinness of the ice and fully appreciate the requirement for speed.

In a very fundamental sense, and in a relatively short period of time, the United States has moved from a tradition of essential self-sufficiency into an era of interdependence. Our adjustment to date has been neither very easy nor very successful.

We absorb nearly half of all world production and a substantial portion of all world exports, but we find ourselves increasingly unable to market successfully our products abroad. We are no longer paying our way in international trade. With productivity on the decline in America, we are in real danger of becoming uncompetitive in major world markets and, worst of all, uncompetitive at home. Some of the statistics are by now familiar to many of you.

Over the past two decades our share of global exports has decreased by one third. In recent years our imports have been growing twice as fast as our exports.

In 1971, we had our first trade deficit in 50 years. Over the past three years our accumulated deficits have totalled over $85 billion and there is little reason to assume that we are about to stem this hemorrhage of dollars abroad.

Take a vital market like East Asia: The fastest-growing economic region in the world . . . our second largest export market, an area where imports are growing by 20 percent a year. Last year 22 percent of all U.S. exports went to East Asia, and two millions jobs in this country are directly or indirectly dependent on that trade.

In 1960, we controlled 41 percent of all developed-country exports to East Asia; the Japanese had 13 percent of the market. Last year we were down to 34 percent and the Japanese were up to 33 percent.

Those facts and figures illustrate the extent to which America is becoming uncompetitive in the tough and increasingly important world of international trade.

This country must either strengthen its ability to meet the terms of trade worldwide or accept the consequences of failure to compete: chronic, massive balance of trade deficits . . . constant pressure on the dollar . . . higher rates of domestic inflation . . . a diminished ability to pay for imported energy, and—eventually—the status of a second class world economic power.

Earlier this year, I visited East Asia with a delegation from the Joint Economic Committee to assess U.S. competitiveness in the region. I returned from that trip with three prominent impressions about America's challenge:

[1] United States Senator; Chairman, U.S. Senate Joint Economic Committee.

First: Declining rates of productivity in this country are at the very heart of our declining ability to compete effectively in the international marketplace.

Second: We must act to remove many existing disincentives to American exports while insuring that our industries are not victimized by unfair trade practices.

Third: Part of our problem with competitiveness and productivity resides not in public policy, but right here at this seminar . . . in the corporate boardroom . . . in the way American business is managing its affairs.

Today, American management is among the best educated and most professional in the world. But they often operate with goals imposed by the financial community that are counter-productive to the long term interest of American competitiveness.

The measure of achievement and the goals to be reached are as short term as a politician's next election. Bonuses, salaries and promotions are too often dependent of this year's increase of profits over last year.

The senior corporate manager today has struggled up the ladder for decades. He finally reaches the top and knows it's often only a few short years until compulsory retirement. He wants the record to look good while he is on the job; he has a vested interest in the short term success of his company, the time frame by which he will be judged.

Today, financial measurements are biased against the long term. Managers are reluctant to devote scarce resources to research and development on new products that will pay off during the tenure of their successors.

When you want to make this year's annual report look as good as possible, why engage in market entry pricing in East Asia? Why accept losses for two or three years to build volume and brand recognition?

I can assure you that our competition in the world of trade is more than ready to make market investments that may not pay off for a decade; they are willing to spend years positioning themselves to conquer global markets.

With certain notable exceptions like IBM, Boeing, and Texas Instruments, that sort of long range planning, that sort of coherent global marketing strategy for the future is sadly lacking in this country. And until the American business community and the American labor movement look beyond the short term, until we develop a greater appreciation of the importance and opportunities in trade, America will have trouble competing no matter what we do in the realm of public policy.

An effective American response to the challenge of competition in trade will require an ongoing, active effort by both the public and private sectors of our economy.

I don't think it is fair to take the American businessman, tie one hand behind his back, and then send him out into the cut-throat, highly competitive world of trade. I don't think it makes any sense to make our businessmen pay taxes that no other major trading nation levies on its nationals abroad . . . to offer him financing at rates higher than the competition . . . to deny him access to funds for predesign and feasibility studies . . . to discourage the formation of effective American trading companies with access to the resources of our banking

community . . . and to saddle American business with rules, regulations, and codes of conduct unique in the international trading community.

In short, I think we have an obligation to even out the rules of the game. But even if we can awaken the business community to export awareness and global market strategies, even if we can eliminate the self-imposed restraints on our exports, America will still suffer in the competition for world trade until we come to grips with the problem of declining productivity in this country.

We have learned the painful lesson that when productivity declines while prices and wages go up, the inevitable result is inflation. In terms of trade, declining productivity means higher unit costs and higher prices for American goods. The economy with lagging rates of productivity increase eventually becomes uncompetitive . . . an also-ran in the race for economic opportunity.

Throughout our history America has always been the most innovative and productive economy in the world. We still are, but not by much. We are rapidly losing our competitive edge. We have the lowest rates of productivity increase of any industrial democracy.

Productivity growth has been on a steady decline in this country for more than a decade. While our trading partners are becoming more efficient and innovative, we are asking the American worker to do tomorrow's job with yesterday's tools.

Last year productivity in America actually declined by 2 percent while it increased by 4.7 percent in Japan and by over 6 percent in South Korea. Project current trends into the future and Canada will surpass us in productivity this year . . . France in 1984 . . . Germany the next year . . . and Japan in 1991. And that, in a nutshell, is America's challenge. How do we put the brake on inflation, restore stability, and remain competitive without throwing our economy into a major recession?

We begin with a balanced budget—and there is every reason to believe we can balance it in 1981. We begin by holding the lid on government expenditures . . . by continuing to pursue stable fiscal and monetary policy.

With that sort of discipline we can make substantial progress on inflation . . . we can bring it down from the current 18 percent rate to core inflation, which will still probably be at an unacceptable double digit level. A balanced budget, even when combined with fiscal discipline, will not by itself cure inflation or the basic economic problems of this nation.

There is no simple, painless answer to inflation. There is no quick fix, and anyone who suggests there is just doesn't understand the problem. It requires a comprehensive approach over a period of years.

As part of that comprehensive approach we've got to enact tax cuts oriented toward the supply side of the economy. Tax cuts that will provide incentives for the sort of savings and investment that will yield a more modern and efficient American economy with increasing rates of productivity growth.

Our challenge today is to beat inflation by providing the incentives that will enable American business to produce more goods and services at lower prices; and the key to that process is greater productivity in the economy.

I want to emphasize that I am not talking about incentives to buy machines to replace workers. That's not what happens. Industries where productivity is increasing most rapidly are the same industries in which employment is rising fastest. They are the strongest, most competitive sectors of our economy.

Increased productivity is a bonus for labor. it is good for business and the consumer, and it is vital if America is to remain competitive. It is an issue we can work on together.

It now seems almost certain that we will have a permanent tax cut in 1981. Last month the Senate adopted my amendment stating that at least one half of any future tax cuts should by channeled toward efforts to increase productivity in our economy.

I think it is important to acknowledge that we have some very complex and dangerous economic problems in this country. But let's balance the book and recognize that we also have vast economic assets and potential. Our problems would be the solutions for most nations in the world. When you look at America you're looking at the largest market in the world . . . at a nation that still produces half the energy it consumes . . . at a nation that can feed half the world.

So let's remember that we have the resources to do the job. And our economic strategy is finally beginning to move in the right direction: The direction of a balanced budget . . . less spending by government and more by the private sector . . . long overdue incentives for the supply side of our economy . . . less costly government regulation . . . tax cuts designed to increase productivity and enable us to combat the root causes of inflation in America.

Our public policy is on track—on the track the Joint Economic Committee has been recommending for the past two years. But it will take more than changes in public policy to restore American competitiveness. It will also take a change in attitudes by American business and labor: a new willingness to adopt a global outlook . . . to forsake traditional adversary relationships and search out long-term national goals that will serve our vital interests.

I'm encouraged to see leading figures of the American business, labor, and the academic world meeting here at Harvard to explore ideas with Members of Congress. All of us, I am sure, could have found other things to do on a spring weekend. But all of us recognize the urgency of our problems and the importance of working together to resolve them.

It will take time, discipline, and a measure of sacrifice, but with this type of dialog, with the new directions in public policy and private sector attitudes that are beginning to take hold, we can build a more competitive . . . more efficient . . . and more innovative America. And as we succeed I believe we will see a new confidence and vitally emerge in this country. We will see the return of stability and real growth in our economy. We will use this country's vast resources and potential to build the sort of America that can compete—that can look with confidence to the challenges of the eighties.

ABSTRACTS OF BACKGROUND PAPERS PREPARED FOR CONFERENCE SEMINARS[1]

SEMINAR NO. 1 ABSTRACT—INTERNATIONAL TRADE

(Seminar Chairman Bruce K. MacLaury; paper prepared by Robert Lawrence)

U.S. PERFORMANCE IN INTERNATIONAL TRADE

Correct trade policy should aim not for a particular numerical value in a trade balance, but for a set of sustainable international trade and capital flows compatible with domestic goals relating to growth, employment, inflation, and the distribution of income. Nonetheless, the fact is that in the 1970's for the first time in the twentieth century the United States recorded a trade deficit. Although the American dollar has declined rapidly in value since 1971 with the floating of exchange rates, the American trade balance has grown significantly worse since that time, in part because of high American inflation.

From 1950 to 1977 output per manhour increased at an average annual rate of 2.4 percent in the United States and 5.2 percent in other major industrial countries. The American problem results not simply from continued relative decline of productivity compared to other major countries, but because the price of exports relative to all manufactured goods has declined in many countries like Japan but this is not true for the United States.

Most trade studies use demand models, but more attention needs to be given to supply problems. When a foreign producer penetrates a new market, he is likely to invest substantial resources in familiarizing the market with his product. It will take time to establish a service capability, acquire a reputation, and pry customers loose from their old familiar habits. These efforts would not be reflected in price but they will shift the demand curve. One cannot simply reverse penetration of markets by price adjustments.

If past trends continue, not only trade balances but the U.S. current account could move into substantial deficit in the 1980's. The prospective surpluses in agricultural trade and investment income could be more than offset by the cost of oil imports and manufactured goods. An extrapolation of present U.S. and foreign growth paths implies a continued erosion of the U.S. manufactured goods trade balance. There are many factors which might influence the outcome in either direction; but if present trends continue, it will be essential to find a coordinated program to change both the levels and composition of production and expenditure.

[1] Six seminars were held at the Conference. For each seminar, a background paper was prepared for seminar participants. These abstracts were prepared by the Conference Office, not the authors of the seminar background papers. A copy of each complete background paper is available upon request, on a fee basis, from the Conference on U.S. Competitiveness, Howard University, Room 308, 1737 Cambridge Street, Cambridge, Mass. 02138.

We also need policies to facilitate the movement of resources from activities in which the U.S. is losing comparative advantage. Small amounts of aid to affected industries will not be adequate to reverse the trends, and this suggests the need for more active efforts to aid the adjustment process of American industries losing their comparative advantage.

Seminar No. 2 Abstract—Research and Development

(Seminar Chairman Robert S. Hatfield; paper prepared by Edwin Mansfield)

The competitive position of U.S. technology

Historically, the United States has led the developed nations in technological competence and industrial productivity. Significant U.S. government expenditures for R. & D. and special American talent in coupling R. & D. with management and production contributed to this lead, especially in such research-intensive sectors as aircraft, electronics, and space. In the past two decades, however, indicators such as rate of productivity increase and U.S. percent of major technological innovations compared to selected developed countries suggest a decline in American technological lead, despite continued strength as indicated by high U.S. earnings from sale of technical know-how.

A number of factors are seen as contributing to a weakening of leadership. For example, although U.S. real R. & D. expenditures have remained constant, there has been a decrease in expenditures as a percentage of U.S. GNP. There has been a shift from federal to private industrial R. & D. financing. A significant percentage of government-financed R. & D. performed by private firms is in the defense and space, rather than civilian, sectors. Japan and West Germany, on the other hand, have increased government financing of R. & D. for civilian sectors.

Evidence, admittedly scanty, shows that American industry is devoting a smaller share of R. & D. expenditure to basic research, long-term R. & D. projects and technically ambitious or risky projects. The effect of R. & D. in agriculture has been well studied and it is clear that rates of return on this investment have been high. Studies by Mansfield and his associates on seventeen industrial innovations of average or routine importance indicates that the rate of return from investments has also been high.

Some U.S. observers believe that technology transfers to U.S. firms' foreign subsidiaries and licensing and joint-venture arrangements with foreign entities hasten the development of foreign competition.

Increasingly there are calls for government policies and programs to protect American technological interests. There is support for approaches such as tax credits for R. & D., federal contracts and grants, redrafting of government regulatory policies, and purchasing procedures to stimulate increased investment in civilian technology. There is considerable pressure to regulate the international transfer of civilian technology.

Economists who have studied these problems doubt that a general tax credit for R. & D. would be an efficient method for increasing fed-

eral support for R. & D. in the private sector since it would merely reward firms for doing what they are already doing anyway and invite firms to reclassify expenses as R. & D. More selective support for R. & D. is difficult because economists even with the best cost-benefit analysis have difficulty forecasting the social payoffs from R. & D. and because political pressures from parochial interests may be difficult to avoid. Nonetheless, it is generally agreed that to get the maximum impact from a certain level of federal support, a more selective technique than a general tax credit is desirable.

Seminar No. 3 Abstract—Government-Business Relations and Regulation

(Seminar Chairman Hon. William V. Roth, Jr.; paper prepared by Christopher C. DeMuth)

Domestic regulation and international competitiveness

This paper analyzes the beliefs that (1) the growth of regulation has seriously decreased domestic firms' competitiveness as compared with that of foreign concerns, (2) that major economic competitors have been more successful than the U.S. in reconciling regulatory and economic goals, and (3) that the differences between adversary and consensual approaches to regulation can help explain the relative success of foreign competitors.

In theory, DeMuth argues, regulation should enhance the overall productive capacity of the economy. For example, the regulation of "natural monopolies" such as power and communications industries are designed to make monopoly markets behave as if they were competitive. Product safety requirements can enhance demand by granting the consumer assurance about the lack of risk inherent in some products; workplace safety rules can increase the efficiency of labor markets; environmental controls can substitute for nonexistent markets for air and water.

International competitiveness would ideally be enhanced by such regulation, as the requirements would make U.S. producers more efficient and the regulations themselves would build into U.S. industry provisions that more effectively reflect factor costs than an unregulated market could. In practice, however, the American regulatory system is susceptible to pressures by any number of private groups which can skew the economic impact of regulation in their favor and at the expense of economic efficiency. While this may be inevitable in any political system, some systems are probably less likely to suffer from such distortion. At issue is not regulation itself; rather the question is how some systems manage to regulate in a manner that is more effective in promoting competitiveness and achieving regulatory goals than the U.S. regulatory system.

The chief debate has centered around the regulatory efforts of the 70s in health, safety and environmental protection. However, the statistical data, while only suggestive, do not convict U.S. regulations of decreasing competitiveness with other nations. The United States, for example, has less stringent air quality objectives than a number of major competitors. Nor do the figures show that regulation is the

main cause of a decline in productivity growth. Compliance costs with the new regulations apparently reduced productivity growth somewhat, but these data do not reflect the other uses to which the resources diverted to compliance may have had in the production of such items as clean air and water.

More important than compliance costs, however, is the uncertainty engendered by changes in regulations. Regulation, which is most stringently applied to the newest and most productive industries in America, can inhibit economic growth, capital formation, and hence decrease competitiveness if businessmen feel themselves the victims of an unpredictable process that produces excessive risk for those attempting economic ventures.

Much of the blame for this attitudinal impact of the U.S. regulatory process can be laid to the adversary relationship between regulators and those who must comply with the rules. Recent work has emphasized that other nations arrive at regulations through a process of informal negotiation leading to consensus of all or most of the interested parties. The example of Japan is the most clear-cut case. In America, the consensual approach was the original method used to frame regulations; the institution of the regulatory commission was designed to include in the decision-making body a bipartisan group capable of representing the interests of all the parties affected by regulation. Some return to the methods of consensus has been proposed. The current trend in regulatory decision making, however, still emphasizes the reform trend that began in the late 60s. This style mandates governmental separation from the industrial objects of regulation, and has embodied formal provisions of due process following a litigation model that sets up an adversary relationship between regulators and the industries they oversee.

Much of the conflict over regulation in the last decade has merely reflected the speed of regulatory change and that the current litigious pattern of U.S. regulation will become more effective as U.S. industries learn to live with the new changes. As the dust settles, the uncertainty costs that seem to be the heaviest burden of regulations limiting U.S. firms' competitive ability may decrease dramatically. Ultimately, however, a shift to the consensual approach may be forced by further successes by competitor nations in defeating U.S. industries.

Seminar No. 4 Abstract—Taxation and Investment Incentives

(Seminar Chairman Hon. John C. Danforth; paper prepared by Otto Eckstein)

CHOICES FOR THE 1980S: CORE INFLATION, PRODUCTIVITY, CAPITAL SUPPLY AND DEMAND MANAGEMENT

U.S. economic progress has slowed, growth in productivity has ceased. Does this mean that we must take a back seat to such countries as West Germany and Japan, or are there policies that can help correct the situation? Economics analyses provide suggestions, particularly in the key problem areas of energy and inflation.

Productivity and core inflation

Increases in productivity are one way to offset the inflationary effects of wage increases. The slowing, and then cessation, of productivity growth recently has exacerbated the problem of core inflation that began with the long period of excess demand at the time of the Vietnam war.

Why did productivity slow down?

After 1973, the stagnation of the capital-labor ratio which slows down the changes in methods of production is the largest single cause of the productivity slow-down. If the capital-labor ratio can be made to improve once more, a partial restoration of our traditional productivity performance will be assured.

Baseline prospects for the economy

A Data Resources, Inc. (DRI) model has been used to predict the prospects for the U.S. economy if present policies are little changed but there is a modest tax reform in 1981 reducing personal and corporate taxes. It is not a worst-case model, rather just a trend projection. For 1980–85 it sees GNP growth at 2.7 percent, productivity growth at 1.4 percent, core inflation up as actual inflation (CPI) drops, and long-term interest rates at 10.34 percent—all figures worse than the traditional performance level of the U.S. economy.

Responsibilities and limits of demand management

The same model indicates that to achieve a dramatically lower core inflation rate by 1985 (say a drop to 6 percent) by demand management alone would require near depression conditions, e.g. unemployment over 10 percent for the whole period. That would seriously damage the economy, probably radicalize the electorate, and imperil the capitalist system. Fiscal and monetary policy alone, then, will not solve our problems.

What should we expect from supply-oriented policies?

Consider a 3 percent increase in the effective tax credit and a two year cut in the average tax lifetime of producers' plant and equipment. The DRI model suggests such measures would give a considerable stimulus to investment. By 1985, compared with the baseline case, capital stock would be up 3.1 percent, level of potential GNP up 2 percent, productivity up 2.4 percent, and core inflation improved by 0.8 percent. This is obviously not the entire solution, but it makes a dent.

The energy issue and inflation

Our forecasts assume that the real price of energy will rise by 4 percent annually. For that, U.S. imports must drop. Even so, projected oil bills will represent a rising burden. Since U.S. industry is unlikely to boost exports by a comparable sum, deficits will grow, and will have to be offset by capital movements.

If real energy prices could be kept stable, greater improvement in the core inflation rate would be possible. A combination of anti-inflationary policies (conservative demand management, tax incentives to investment, conservation and supply policies for energy) would produce a more dramatic improvement in the inflation rate.

SEMINAR NO. 5 ABSTRACT—GOVERNMENT-BUSINESS RELATIONS

(Seminar Chairman Hon. Richard Bolling; paper prepared by Richard G. Darman)

THE PROSPECT FOR U.S. COMPETITIVENESS

This paper examines present and potential patterns of U.S. Government-business relations, focusing on their effect on U.S. competitiveness.

Context of the problem

The 1970s saw two phases in government-business relations: first, a phase of aggressive regulatory expansion in environmental, health and safety regulations; second, a recent growing awareness of the regulatory burden and a sensitivity to economic issues. Americans have grown increasingly concerned about declining U.S. competitiveness, the decline of the dollar, under-investment in R and D, and declining productivity. Solutions to these problems, influenced partly by the Japanese example, have centered on a new business-government relationship.

Patterns of government-business relations

Government-business relations have been troubled by the following five major problems:

1. Distrust between government and business has led to an excessively adversarial relationship which tend to discourage serious efforts to solve problems and lead to arbitrary or muddled decision-making.
2. Public policy has been developed with either excessive delay and uncertainty or too rapidly in response to a perceived crisis. Government decisions are difficult to predict reliably and suffer from "hyperlexis"—an excessive complexity of the legal process of U.S. decision-making that amounts to one-person-one-veto policymaking.
3. Public policy development lacks the capacity for strategic coherence. The United States does not have the political or bureaucratic capacity to develop and implement a coherent industrial policy.
4. A tendency toward conservative protection against the discipline of the market. Loans for Chrysler or "trigger prices" for steel are two examples; they sustain inefficient industries and in some cases allocate resources to those who have proven capacities to fail.
5. The growth of bureaucratization of the private sector, in good part a business response to preparing government reports and reducing risks from government regulations. This bureaucratization delays effective business decision-making and leads to risk aversion and private entrepreneurial decline.

These major problems in government-business relations are disturbing because they are systemic and because many U.S. competitors have more collegial government-business relations.

Issues affecting the prospects for change

There is some cause for optimism about favorable changes in the government-business relationship—for example, the more temperate regulatory attitude, recent emphasis on budget-cutting, and proposals for "supply-side" tax cuts. Four important considerations, however, demand a re-examination of this new possibility of government-business detente.

1. Trends toward regulatory reform and fiscal responsibility may result in increased public allocation of private resources.
2. The increasing use of economic leverage as a tool of foreign policy may restrict business freedom.
3. The U.S. adaptation to the "new international economic order" in multilateral international economic negotiations suggest greater supra-state and state management of corporate involvement in international economics.
4. The political responses to dramatic or dramatized failures in the U.S. economic system may expand governmental reach into the private sector.

Seminar No. 6 Abstract—Productivity, Employment and Standard of Living

(Seminar Chairman Hon. James R. Jones; paper prepared by Zvi Griliches)

PRODUCTIVITY: BACKGROUND NOTES

Measuring productivity, usually defined as output per man hour, helps us understand the process of technological change which sets limits on what we can accomplish. Professor Griliches acknowledges both the difficulties in measuring productivity and the limits of our understanding but proceeds to summarize economists' views as to what accounts for the striking decline in American productivity in recent years.

Productivity is affected by changes in capital equipment, materials, the mix of labor skills and output, efficiency, and technological change. In the early post World War II period, American productivity grew at an average annual rate of three percent. About one-third of the growth resulted from increases in investment in physical plant and equipment, about one-third from improvement in labor force quality and shifts in inter-sectoral resource allocation, and the remainder from technological change and advances in knowledge.

Productivity had already begun to decline during 1965–1973, but economists disagree as to how much this can be explained by a less buoyant overall economy in the early 1970's. The sharp decline in productivity that occurred in this period was concentrated in mining, construction, and public utilities and largely outside of the manufacturing sector.

Productivity growth has declined more rapidly since 1973. Among the villains cited by various economists are: the decline in real R & D expenditures, declines in the rate of investment in new capital equipment, the "greening" of the labor force, government regulation, the

rise in energy prices, and inflation. Clearly investment in physical capital which declined sharply in the late 1970's is a major factor explaining about a quarter to a third of the recent slowdown in the growth of labor productivity. This explanation alone is not sufficient, for in 1965–1973 there was rapid growth in physical stock without discernable positive effect on labor productivity. The effects of government regulation are difficult to assess from a macro-economic perspective, but they have clearly contributed to the decline of productivity in mining and apparently in the public utilities sector as well. The decline in R & D expenditures in and of itself probably did not have appreciable effect on the decline in productivity growth. The rise in energy prices and the overall inflation rate have clearly caused serious problems requiring that resources be spent on coping with the immediate difficulties rather than permitting optimal planning and expenditure for plant expansion and modernization.

While the causes of the slowdown in productivity growth in recent years may be shrouded in uncertainty, there is no disagreement among economists that there has been a significant and far-reaching slowdown in the growth of productivity since 1973.

PRODUCTIVITY MEASURES FOR VARIOUS COUNTRIES

	Average annual percentage change in productivity [1]		
	1950–65	1965–73	1973–78
Japan	7.2	9.1	3.1
West Germany	5.2	4.3	3.2
Italy	5.1	5.6	1.3
France	4.7	4.5	2.8
Canada	2.7	2.3	.8
United Kingdom	2.2	3.3	.9
United States	2.4	1.6	.4

[1] Measured by growth in real domestic product per employed person, using own country's price weights.

Source: Bureau of Labor Statistics.

SUMMARIES OF CONFERENCE SEMINARS*

SUMMARY: SEMINAR NO. 1—INTERNATIONAL TRADE

I. *The major points covered during the discussion were:*

A. The pattern of U.S. trade over the last 3 decades has revealed marked trends: That is, growing surpluses for foods, feeds, and beverages, chemicals, capital goods, and services; offset by growing deficits for consumer goods, automotive products, consumer non-durables, and fuels. These trends seem well-established, in many cases reflecting comparative advantages in land and technology, and therefore unlikely to change radically in the 1980's.

B. The participants agreed that given current trends and reasonable projections the 1980's probably will be characterized by continued negative U.S. trade balances and potentially substantial current account deficits.

C. Given prospective OPEC surpluses, it is not reasonable or desirable for the United States to aim for trade surpluses in the next few years. Nevertheless, given the exposure of a reserve currency, the United States must maintain a sustainable balance on current account. To give any assurance on this score, there is an immediate need to undertake policy initiatives to increase U.S. competitiveness, the effect of which will be to strengthen the trade and current account balances.

D. Among the reasons for past and prospective U.S. trade performance were the following:

(1) Relative productivity decline in the United States compared to several major trading countries.

(2) Sustained inflation in the United States.

(3) Enormous increase in the cost of imported fuels.

(4) Achievement by other nations of technological maturity and scales of production that no longer give the United States a natural advantage in world markets.

(5) More favorable governmental incentives to industries in other countries compared to the United States.

(6) A failure to take adequate account of U.S. trade interests in policy decisions.

(7) Significant tariff and non-tariff barriers in some significant markets for U.S. exports in certain sectors where the United States is competitive.

II. *Major policy directions to be pursued are:*

A. The most significant changes to assist U.S. competitiveness in international trade are the changes required to restore health to the domestic economy. These include: Significant improvements in pro-

*Six seminars were held at the Conference. These summaries of the seminars describe the main points covered during the discussions in the seminars and any conclusions reached in the seminars. A copy of an expanded summary for each seminar is available upon request, on a fee basis, from the Conference on U.S. Competitiveness, Harvard University, Room 307, 1737 Cambridge St., Cambridge, Mass. 02138.

ductivity, control of inflation, and significant reduction in imported fuels.

B. Trade interests must be a major concern in the formation of domestic and foreign policy, with recognition that trade can no longer be ignored as marginal to the welfare of the country. The need for a strong trade performance must be taken into account when formulating policies on such matters as tax, antitrust, and other issues now largely viewed from a domestic perspective.

C. A coherent export policy must be articulated which gives aggressive support to expanded exports, including competitive Export-Import Bank financing.

D. There should be greater efforts by government in removing foreign barriers to U.S. exports, with an increased willingness to employ available tools to make continuance of such barriers painful. U.S. business must work with the government in this effort.

E. Vigorous enforcement of laws aimed at recognized unfair trade practices must be continued.

F. Greater attention must be paid to assisting U.S. workers, firms, and communities impacted by imports; merely making transfer payments not linked with adjustment objectives must be avoided. When trade restraining actions are taken, the cost of such actions should be ascertained, and weighed against alternative resource allocation. Such actions should be subject to review and periodic elimination, and linked to adjustment objectives.

III. *In addition to the major points in I., the following additional points were made:*

A. A consideration of the targeting of particular industries or sectors which are believed to be most competitive for increased governmental incentives to development was considered. A majority of the group believed that such targeting had significant problems, and were unwilling to endorse it.

B. There appeared to be agreement that increased emphasis on quality, service, and specialized marketing strategies for foreign markets were necessary in many businesses if they were to become export competitive.

C. Increasing world economic interdependency means that actions taken with respect to improving U.S. competitiveness and strengthening the U.S. trade performance effect the economies and policies of other countries much more directly and immediately than in the past. This must be taken into account in managing our international economic and political relations.

Summary: Seminar No. 2—Research and Development

I. *Major Points Covered During the Discussion:*

Our seminar benefited from a first class and comprehensive background paper prepared by Professor Edwin Mansfield. We also availed ourselves of a recent and penetrating study by the Committee on Economic Development on the stimulation of technological progress. Robert Holland of C.E.D. was a helpful participant in our seminar.

The seminar members agreed with the statement of the Committee for Economic Development that "there is strong evidence that technological progress is perhaps the most important source of future economic vitality and social progress for the United States." Such economic vitality is crucial to our ability to compete in world markets and will determine whether the economic organization of the United States will be able to provide productive jobs to those 20 million Americans who enter the work force in the next ten years. Furthermore, there is a close relationship over the long run between spending on research and development and growth in productivity. As conference speakers noted, productivity growth is a key to curbing inflation. Therefore, the objective of the seminar was to reach a consensus of its academic, government, labor, and business participants on policies to maintain American technological strength and to stimulate research, development and innovation.

The participants were unanimous in their agreement that although the United States continues to lead the world in technological competence there has been a serious downturn, both in historical and comparative terms, in our R & D efforts. Real R & D expenditures as a percentage of GNP have decreased and there has been some shift from long-term, basic research to more short-term, low risk projects. By almost all measures we are losing our technological edge and this will seriously weaken our ability to compete with the other nations of the world. The bottom line is that the goods and services produced by the American people are losing their share of the world market. The discussion was focused on the reasons for the lag in U.S. research and development and recommendations for public policies to correct the situation.

Causes of the lag in research and development.—1. The risk-reward ratio has become less favorable for research and development. Specifically, this decline is the result of:

a. Tax policy that fails to encourage investment and saving,

b. an inflationary economic environment that is not conducive to long-term investment in capital-intensive industries,

c. extensive growth of government regulations which have both drained resources that could have been allocated to research and development and which have also increased the risks involved in the investment in a new product or process,

d. extremely high and growing capital costs of research and development.

e. rising international competition, and

f. the unfair advantage possessed by some overseas competitiors who have access to our markets while theirs are closed to us.

2. U.S. firms and managers tend to be judged on short-term immediate results relative to long-term results; this is less true in major foreign competitor nations.

3. The greater sensitivity on the part of foreign competitors to the opportunities offered by new technology and our apparent inability to adequately scan and adopt foreign R & D.

4. The continued emphasis of U.S. government research and development on defense and space.

5. A patent policy that is less protective than in other countries and inhibits the commerical development of products grown out of government sponsored research.

6. Antitrust policies that discourage joint ventures, and look with disfavor on growth in corporate size so necessary for major development projects.

7. An emphasis by U.S. corporations on product development as opposed to process development which, in many industries, has left us behind foreign producers.

II. *Recommended Federal Government policies to stimulate research and development*:

1. Predictable economic policies which would increase the confidence of the private sector to invest in the future—primarily policies to curb inflation without imposing controls.

2. Tax policy changes to encourage capital formation and provide for more rapid capital recovery including R & D capital; also provide incentives for people to save.

3. Regulatory reform to reduce uncertainty about acceptability of new products; increased emphasis on cost-benefit analysis of regulations to eliminate unnecessary spending of research and development dollars which could be made available for innovation and improved productivity. Consideration should be given to a more general application of the system contained in the Energy Mobilization Board legislation to allow acceleration of specific new technological developments which may conflict with regulateory constraints.

4. The patent system should be changed to provide greater protection and to improve the process for resolution of disputes over patents. Steps should also be taken to amend the law regarding the timing of patent grants in order to respond to situations where there are delays or controversies.

5. Flexible depreciation should be allowed for R & D assets. Capital gains taxes should be reduced and certain long-term, ownership-oriented tax incentives for both small and large firms should be restored. (Mr. Turner disagreed with the capital gains recommendation.)

6. Private industry and government support of basic research in the universities should be increased.

7. American companies, with the encouragement of government, should be more responsive to applying the results of basic research to new products and processes. Far too often foreign companies have seized the opportunity and have benefited from basic research conducted in the United States.

8. A system should be developed to determine if government research and development is appropriate and of maximum value in relation to private sector efforts and social needs. Governmental research and development should be directed primarily toward special needs such as mass transit and sewage treatment. Government involvement in private, applied research is not recommended.

9. Efforts to limit the international transfer of technology, except in situations affecting national security, are impractical and are likely to be counterproductive by reducing the reciprocal flow of new technology. Overseas demand is an added incentive for domestic R & D.

10. In addition to these general proposals, attention should be devoted to particular problem industries and policies should be developed to encourage industry-specific R & D.

Conclusion.—Both the government and the private sector must reorient their thinking to put greater emphasis on the international competitive aspects of industrial operations. For example, companies must consider the world market place in assessing whether their products are modern and cost and quality competitive.

We closed on an optimistic note by taking cognizance of U.S. leadership in many areas—especially in high technology and agriculture. Given a favorable climate in the 1980's, the momentum of the immediate post-war period can be regained.

SUMMARY: SEMINAR NO. 3—GOVERNMENT-BUSINESS RELATIONS AND REGULATIONS

I. *Recommendations.*—A. Elevate achieving strong international competitiveness to equal status with other national goals in formulating, implementing and adjudicating regulations. Foreign policy, environmental and other goals are clearly important, but none can be achieved if the U.S. economy continues to decline relative to its trading partners. There should be a clear legislative mandate for the establishment of international competitiveness as a national goal equal in importance to other national interests.

B. Move towards a collaborative, consensual approach to regulation in which the formulation process takes into account all interests—business, labor, consumer, government, etc.—not just the loudest interests. Retain limited judicial appeal safeguards, but a consensual approach should of itself drastically reduce the necessity for judicial review. There is ample historical precedence for regulation by consensus in the U.S. as well as other countries.

C. Rethink U.S. antitrust, codes of conduct, financing and other laws in light of the fact that the United States now operates in an international market place where even the largest of U.S. firms experiences severe competition from foreign firms.

D. Establish a Hoover-type commission to examine both the regulations themselves and the overall system. Empower the President to implement the commission's recommendations unless vetoed by the Congress.

E. Seriously consider replacing the regulatory system with tax and other incentives to achieve social and other goals.

II. *Conferees agreed.*—A. Regulations serve a wide range of laudible social, political and economic goals, but potentially adverse effects on U.S. international competitiveness have too often been ignored, underplayed or relegated to secondary importance. In the increasingly harsh competitive international environment, the United States can no longer complacently ignore its foreign competition.

B. Although individually many regulations may have little directly adverse effects on competitiveness—and in theory may actually enhance efficiency—in the aggregate the explosion in recent years of regulations in both number and complexity has placed U.S. firms at a severe cost disadvantage. In addition to the sheer weight of complying

with the paperwork attending the proliferation of regulations, firms are often faced with vague and contradictory regulations administered by several uncoordinated government agencies. In fact, the administration of the regulation is often a greater problem than the regulation itself. Furthermore, the rapidity with which regulations have changed in recent years has injected severe uncertainty into corporate planning.

C. There is a strong trend towards an increasingly adversarial and litigious approach to both formulation and implementation of regulations. This approach not only greatly increases costs but discourages firms from undertaking new R&D and marketing ventures at home and abroad. The costs of the adversarial approach are compounded by a tendency to regulate on the basis of "pure science" and "cost-benefit" principles rather than practical, mutually agreed criteria.

D. By contrast, other successful trading nations seem to have a more practical approach to regulating that is firmly based on generally agreed and coherent economic growth and international trade goals. The Japanese, for example, seldom have to resort to expensive litigation to achieve environmental standards that in many cases are more stringent than our own.

SUMMARY: SEMINAR NO. 4—TAXATION AND INVESTMENT INCENTIVES

I. *Major points covered during the discussion:*

A. The necessity of developing a long term, coherent multi-year economic policy which utilizes both supply and demand side approaches was emphasized in the Taxation and Investment seminar. While the participants realized the necessity of demand management, they also realized that demand oriented policies, by themselves, would not insure America's competitiveness in the international market place.

B. Seminar participants agreed that tax policies designed to increase productivity are an essential ingredient in any comprehensive approach to controlling inflation and encouraging economic growth. The development of such tax policies should be a matter of national priority.

C. It was agreed that the federal budget should be balanced in fiscal year 1981. It was also agreed that federal tax reductions should take effect in 1981. The participants felt that a tax cut targeted on the supply side of the economy and effective in 1981 is not inconsistent with a balanced fiscal 1981 bdget.

II. *Major policy directions to be pursued:*

A. The participants in the Taxation and Investment Seminar agreed that it is vital that we, as a nation, commit ourselves to a long term economic policy which utilizes tax incentives to encourage real growth of the economy and job creation. The participants unanimously believed that economic policy should not be developed in an "ad hoc" manner, repeatedly altered to create changing conditions, but that policy should be developed on a multi-year basis.

B. It was agreed that Congress should immediately commence consideration of tax reduction legislation and that such legislation should take effect beginning in 1981.

C. There was a strong consensus that the aggregate amount of tax reduction over the period 1981, 1982, and 1983 should be in the neighborhood of $50 billion to $100 billion. A strong minority of par-

ticipants expressed suport for aggregate tax reductions over the 1981–1983 period of more than $100 billion.

D. There was also a strong consensus for departing from the normal, rule-of-thumb of $2 in individual cuts for every $1 in business cuts. The participants favored a ratio of cuts more favorable to business reductions, in the neighborhood of $1 in individual cuts for every $1 in corporate cuts.

E. It was overwhelmingly agreed that the first priority for the individual portions of tax reductions should be reductions designed to stimulate saving and equity investment. Further reduction of the rate of taxation on capital gains received strong support in this connection.

F. There was near unanimous agreement that the first priority for business cuts should be accelerated depreciation. In this regard, it was unanimously agreed that accelerated depreciation should not be targeted to favor specific industries but should apply generally in order to allow market forces the greatest operating flexibility.

G. A number of other tax reduction proposals were discussed during the seminar. While it was agreed that many such proposals are meritorius, seminar participants believed that emphasis should be directed to accelerated depreciation for business and savings and investment incentives for individuals. Therefore, these proposals, while supported, were viewed as deserving secondary importance, rather than primary attention.

These tax proposals include:

(1) Direct tax incentives to encourage U.S. manufacturers to export. It was agreed that the DISC provisions of the Internal Revenue Code should be reviewed and, if necessary, revised to make them more effective. It was also realized, however, that the rules of GATT must be complied with in devising these incentives.

(2) Reduction of the U.S. tax burden on Americans working abroad, and

(3) Specific tax incentives to encourage venture capital.

Summary: Seminar No. 5—Government-Business Relations

There was unanimous agreement on the following statement: Government, business and labor must work together to make the economic tradeoffs necessary to increase U.S. international competitiveness in the world economy.

I. *Major points of the discussion:*

A. If America is to be successful in meeting the challenge posed by our competitors in international and domestic markets, there is a great need to build a nonpartisan consensus on economic and trade policy.

There are examples in post-war U.S. history where this coalition building produced far reaching and far sighted legislation: The Employment Act of 1949, the Marshall Plan, and the Civil Rights legislation of the mid-1960s. Recent examples are the Multilateral Trade Negotiations (MTN) (implemented by the Trade Agreements Act of 1979), and the recent House rules on the budget.

All agreed that these coalitions for change must include the Congress, the Executive Branch, and a number of private committees,

drawing together a variety of private interests, established for a specific legislative purpose.

B. This consensus building on economic issues should be facilitated, in these times of economic stress, when the public senses a danger of adverse economic conditions.

C. In economic policy, there is a lack of strategic coherence aimed at achieving a set of long term objectives. This may make long term change difficult unless broad coalitions are constructed.

D. Everyone recognized the growing trend that economic policy is used as a substitute for military power to achieve foreign policy objectives. This may have adverse consequences for American trade and our ability to open new world markets.

E. An example of the complex relationship between business and government are instances when business seeks government assistance in international trade. Yet, in international trade negotiations, the U.S. government may not be sufficiently strong to protect all U.S. interests.

And in international trade, rather than company v. company, it is often country v. country. In these circumstances business needs government to support its interest.

F. Many participants were not surprised by the findings in the Garth Report that most Americans understood the outlines of our economic difficulties. This public awareness is the first step toward a serious political examination of the problem.

G. There was general agreement that the adversarial relationship between business and labor has overall economic and social costs. In countries where the relationship is less hostile than in the United States or the United Kingdom, economic progress appears to be more stable and long term benefitting both.

H. There was general agreement that a significant level of governmental involvement in the economy is here to stay, and therefore an important objective must be to assure that the character of government involvement advances U.S. competitiveness.

II. *Major policy directions:*

A. There was limited agreement that it was necessary to define an industrial policy. It was mentioned that we already have a de facto industrial policy but that it doesn't work very well. We should work to articulate a policy and then develop the political will to carry it out. In this context it was mentioned that a new economic authority, modeled after the broad outlines of the old RFC (Reconstruction Finance Corporation) might be necessary to assist certain industries.

B. Institutional changes in government may be necessary to develop and implement an industrial policy. These changes may be necessary in both the legislative and executive branches of government.

C. The lessons of enacting the MTN may be a model for greater cooperation between business, labor and government. The private advisory structure, such as the ISACS (Industrial Sector Advisory Committees), should be tested in other contexts. The MTN also provided for a close working relationship between Congress and the executive branch which may have other applications.

D. There may not be one general set of economic values which are applicable in all circumstances to satisfy social needs or enhance economic competitiveness.

A number of participants felt that specified economic policies may be appropriate in one set of circumstances, but inappropriate in another. There may be instances when encouraging competition is beneficial for society. In other circumstances economies of scale may be preferred.

E. Most participants felt that Congress needs to resolve a number of outstanding questions in economic and trade policy and not to leave their resolution to the courts.

III. *Additional points covered in the discussion:*

A. A major problem in turning this country around economically is mistrust among government, business and labor. A complicating factor is the general loss of public confidence in the ability of government to solve economic problems.

B. Many discussed creating a new government mechanism for stimulating and encouraging economic growth. New policy mechnisms may, in themselves, set new trends. New trends may force specific economic choices. These may include accepting austerity in certin industrial sectors as the price to pay for building the foundation of future economic growth.

C. A minority commented that business generally seeks to avoid involvement with government. However, it was pointed out that at times business seeks government protection to avoid the discipline of the market place.

IV. *Alternate policy directions suggested:*

A. It was suggested that a model for facilitating discussion of economic change, and then developing policy alternatives, is the JEC (The Joint Economic Committee). In developing a unanimous report for the Congress, the latest JEC Report emphasized "supply side economics." This is a fundamental change in Congressional thinking on a broad range of economic issues.

B. Many believed that government/business relations would be improved if the process of developing government regulations sought to balance two objectives: (1) defining the benefits of regulations and, (2) evaluating the costs and economic impact of regulations.

C. The seminar examined three approaches to changing economic policy:

(1) Some contended that all the economic tradeoffs between social and economic policy could be resolved at one time, working to achieve a comprehensive set of objectives, and that this was preferable to a piecemeal approach.

(2) Others felt it is possible to make limited decisions and to take a slow step-at-a-time approach. Over the long run, the total of these small steps will be broadly recognized change and progress.

(3) Finally, some argued that we may already have begun the process of changing the course of America's economic future, but the changes are incremental and very difficult to perceive. In looking back, we may be making more progress than we realize.

D. It was also discussed that other countries have forms of unemployment compensation where government transfers payments equal to our unemployment compensation not to the worker but to the firm to keep the worker employed and productive. This may be one example

of European and Japanese policies which may be examined, adopted, and modified to meet our own unique political-economic situation.

Summary: Seminar No. 6—Productivity, Employment and Standard of Living

There is general, if not universal, agreement that the decline in productivity experienced by the United States since 1973 is one of the crucial issues facing our country as it enters the decade of the 1980s.

There is less agreement on the causes of such a decline and the seminar discussed the now familiar list of possible causes for the decline. Out of this discussion, a consensus formed that lack of investment capital was one of the major causes of lagging productivity and must be addressed if we are to get to the root of the productivity problem. The group recognized that inflation and productivity are related in complicated ways, and that improvements in productivity can help reduce inflation, and that reductions in inflation can help to stimulate business investment and so contribute to improving productivity.

There were additional comments that the pattern of unit labor costs and automatic indexing of spending programs also contributed to the increase in inflation and therefore indirectly to a decline in productivity. There was a division of opinion, however, on the role of higher energy costs in the decline in productivity. It was pointed out that other countries more dependent on OPEC oil than the United States had fared much better in productivity measurements, thus casting some doubt on the conventional wisdom that soaring energy prices were primarily behind the reduction in U.S. productivity.

Comments were made that in certain economic sectors, government regulations contributed greatly to productivity decline, but a full dicussion was curtailed because regulation was the topic of another seminar.

Seminar participants discussed the use of national economic planning by our trading competitors. It was generally acknowledged that such practices give a competitive edge to those countries whose governments and economic structures allow for such a coordinated system of labor-business-government cooperation in setting goals and long term policies for trade and business expansion. Despite this acknowledgment, there was significant disagreement as to the advisability of attempting to institute such practices in the United States. Although this reluctance was strongly stated by some members of the Seminar, there was general agreement that there should be more efforts made to reduce the traditional adversarial relationships among management, labor, and government. Furthermore, segments of our economy should endeavor to work more closely together in an effort to set long term goals for the United States in improving our productivity performance.

The seminar also discussed the internal trade-offs that may have to be addressed in any effort to improve productivity. Specifically, mention was made of potentially divisive regional competition among segments of our country competing for a share of the increased industrial payout flowing from substantive changes in government policies directed toward improving productivity. One participant suggested

a blue ribbon commission similar to the temporary National Economic Commissions be created to address both the regional and sectoral problems and provide long range planning in this area.

The Seminar addressed specific policy recommendations in the following manner:

A. There was full agreement that a tax cut effective in 1981 could and should be used to reverse the downward trend in productivity. The seminar voted overwhelmingly to recommend that such a tax cut be evenly divided, with half designed to promote capital cost recovery, preferably through a dramatic accelerated depreciation proposal similar to "10–5–3," or possibly through the investment tax credit or a combination thereof. The second half of the tax cut should, in the view of the majority of the seminar participants, consist of a reduction in the payroll tax. However, there was one participant who registered a strong dissent on this point, arguing that now was not the time to signal any changes in the financing of the social security system. Review of this report developed additional dissents to any payroll tax reduction.

B. The Seminar also voted by a sizable majority that such a tax cut should take precedence over a balanced budget. One dissent was registered on this point, and four participants abstained from voting on this issue.

Beyond these two recommendations, the Seminar refrained from adopting other policy goals. There was a discussion of the need to index the tax code so that inflationary increases in income would not be taxed, but the Seminar did not directly speak to this point, and there appeared to be no consensus view on this subject.

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