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A Scorecard on U.S. Economic Performance and the Role of the Public Sector Compared with Japan, West Germany and Sweden

by Lucy Gorham

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EXECUTIVE SUMMARY

This study compares the U.S., Japanese, West German, and Swedish economies over the past two and one-half decades as measured by a variety of indicators of quality of life and economic performance. The results of these comparisons were then used to examine the proposition that an increasing share of an economy devoted to government spending will act as a deterrent to economic progress, i.e. that prosperity can be stimulated by "getting the government off our backs."

The study drew on the universe of relevant data from which such a four-country comparison could reasonably be made. The following were its major conclusions:

1. On the basis of seventeen measures of quality of life, the U.S. performance was worst, while Sweden's performance was the best.

2. On the basis of seventeen measures of economic performance, the U.S. again scored last among the four countries. Japan's performance was the best.

3. During the period studied, the growth of civilian government in the U.S. also lagged behind that of the other three nations including Japan. By 1984 the Japanese were spending 32 percent of their Gross Domestic Product (GDP)[1] on their civilian public sector, compared with 29 percent in the U.S. (When military spending is included, the U.S. spends 35 percent of GDP for its public sector compared with 33 percent for Japan).

4. The U.S. particularly lags behind these three commercial rivals in the share of its economy devoted to public investment for infrastructure. While public investment expenditures in the other three countries rose at a rate that matched or exceeded their growth rates of GDP, in the U.S. such spending rose only 58 percent as fast as GDP.

INTRODUCTION

Over the past two and one-half decades, the United States has been forced to compete in an increasingly global economy. Since *1960, the* share of the U.S. Gross Domestic Product (GDP) represented by imports and exports has roughly doubled, with imports rising twice as fast as exports.

The industrial sector felt the impact first. In a wide range of industries-from textiles and shoes through autos and steel to semiconductors and robotics-other nations have steadily enlarged their share of markets here and abroad. Now the competition has spilled over to areas such as business services, finance, construction, and even advertising.

Many claims and counterclaims have been made concerning the American economic performance in this new era. Some point to the relatively strong growth of employment in the U.S. as a sign that America is doing better than its rivals. Others point to a record trade deficit of over $148 billion in 1985 and sluggish productivity as signs that we are falling behind. Since statistical indicators rarely all move in the same direction at the same time, one can usually find a number to support one's point of view.

A second debate concerns the requirements for successfully competing in the world economy. Some observers maintain that industrial strategies-cooperative arrangements between management and labor coordinated by government- have been crucial to the success of our commercial rivals. The opposite point of view, which has gained particular currency within the last decade, is that an active public sector places a drag on economic performance, and that the larger the public sector the less efficient the private sector will be. This has given rise to the notion that the way to faster economic growth is to shrink the size of government.

This study explores both issues. It examines the relative performance of the U.S. economy in recent years and it analyzes how that performance relates to the size and composition of the public sector. The study compares a wide array of available indicators of the relative quality of life, economic performance, and public sector spending of the United States and three other industrialized countries: Japan, West Germany, and Sweden. (For the purposes of this study we have used the names Vest Germany" and "Germany" interchangeably.) We chose to compare the United States with Japan and West Germany because they are our chief economic competitors. We added Sweden because it has the largest civilian public sector of all major industrialized countries and, for those who believe that domestic government spending is an obstacle to prosperity, Sweden is therefore the "worst case." As Table 1.1 shows, the United States now spends a smaller share of its Gross

TABLE 1.1

Non-Defense Outlays of Government as a Percentage of GDP, 1984

	U.S.	Japan	Germany	Sweden
Total Outlays	35.2	33.1	48.2	63.7
-Defense	6.2	1.0	3.5	3.2
= Total Non-Defense	29.0	32.1	44.7	60.5

Source: OECD; Sivard, *World Military and Social* **Expenditures,** *1985;* Economist Intelligence Unit, *Countty Profile of the United States, 1986-87* and *Countty Report for Sweden, No.* 2-1986; and Swedish National Budget, 1984.

Domestic Product in its civilian public sector than does Japan, West Germany, or Sweden. In fact, the United States nowspends a smaller share of its GDP on civilian public spending than any other advanced industrial country.

The conclusion of the study is that the overall performance of the U.S. economy has been below that of the other three countries during a time when its domestic public sector has been growing slower. In particular, the U.S. has lagged behind in certain categories of public investment. Since public investment in skills training, health, transportation, natural resources, science & technology, and so forth is essential to support the private investment in plant and equipment necessary for national competitiveness, the study suggests that the United States may fall further behind in the future.

The relationship between the public and private sector in the support of economic growth is complex, and beyond the scope of this report. Certainly few will argue that all public spending is necessarily growth enhancing or a wise use of resources. But at the very least, Ms. Gorham's report shows that the widely promoted notion that cutting back a nation's public sector will spur economic growth has little basis in the real world. The issue is not whether government is too big or too small. The issue is what government does to promote productivity and prosperity.

-Jeff Faux, President
Economic Policy Institute

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I. STUDY OBJECTIVES & NOTE ON DATA

This study addresses the following questions:

1. How does the US compare with Japan, West Germany and Sweden on the basis of indicators of quality of life?

2. How does the US compare- with Japan, West Germany and Sweden on the basis of economic performance since 1960?

3. What appears to be the relationship in the four countries between the nature of the public sector and economic performance?

Given that reliable cross-country data are limited, confining the study to the four countries allowed us to maximize the number of comparisons we could make. Even so, some categories of comparative data are extremely limited, particularly quality of life indicators. Any cross-country comparison is also vulnerable to problems of how each country defines or measures certain variables, such as unemployment, as well as to exchange rate fluctuations when comparisons must be converted to a common unit of currency.

These standard caveats about the uses of cross-national data do not preclude making valid comparisons, however, and we have tried to minimize their effects in a number of ways. First we confined our comparison to data available from official sources for all four countries. We relied heavily on data from the Organization for Economic Cooperation and Development (OECD) which corrects its data for comparability to the greatest extent possible. Second, we eliminated indicators where we felt the comparability was questionable or incomplete, such as levels of environmental pollution. Third, we eliminated indicators which we felt were misleading measures of either quality of life or economic performance. For example, more

households on a percentage basis in the U.S. own cars while more in Germany and Sweden own freezers and more in Japan own television sets.[2] Selecting any one such wealth item as an indicator of living standards would obviously be invalid. Fourth, wherever possible we included time series for as long a period as possible (up to 25 years) to balance short-term with long-term performance measures.

Finally, the study separates the examination of each country's performance into two categories: quality of life indicators and economic indicators. Admittedly, this separation is somewhat artificial. Indeed, several indicators, such as the unemployment rate and the "misery index" appear in both sets. The purpose of including quality of life indices in the study was to gain insight into how each economy was enhancing the well-being of its citizens, which after all is the final measure of economic success.

II. QUALITY OF LIFE

In this section, we address the first of our three questions: how does the U.S. compare with Japan, Germany, and Sweden on the basis of indicators of the quality of life? Quality of life is a difficult thing to compare, particularly across cultures where preferences and aspirations differ. However, there are certain aspects of life which we have assumed are valued in each of our four countries: adequate income, good health, a secure livelihood, leisure time, adequate shelter, a long life, and freedom from harm.

To make comparisons concerning the quality of life in each of the four countries, we assembled a list of available and relevant indicators-seventeen in total. Of course, indicators which can be quantified for such a comparison provide only an incomplete picture of quality of life. For example, the indicator "physicians per capita" is obviously not a totally satisfactory measure for the availability of medical care to everyone. It is however a reasonable rough proxy. It tells us something about how much resources a nation is putting into its health sector, but not everything.

Before looking at the indicators, a word also needs to be said about the lack of a reliable comparative measure of per capita Gross Domestic Product (GDP). Per capita GDP is a widely-accepted measure of living standards. While measures of GDP per capita do exist, they are extremely sensitive to exchange rate fluctuations which in recent years have been extremely volatile. The result has been that when the U.S. dollar is strong, our GDP per capita appears high relative to other countries, whereas when the dollar is weak, our GDP per capita appears low. For example, in 1970 Sweden's GDP per capita was only 86 percent of that in the United States, whereas in 1975 it had jumped to 118 percent. Similarly, in 1983 Japan's GDP per capita was 81 percent of that in the U.S. whereas in 1986 it is reported to have jumped to 106 percent.3 Because these shifts are only partially due to real changes in living standards, using them for a comparison would be misleading.

In an attempt to account for this problem, the Organization for Economic Cooperation and Development (OECD) has developed a measure which uses purchasing power parities (PPP's).[4] Purchasing power parities are a means to adjust

GDP per capita to account for the relative purchasing power of different currencies. For example, let's assume that Sweden's GDP per capita is $15,000 and Germany's is $12,000. If a German can purchase the same goods for $12,000 that a Swede must pay $15,000 for, however, their real standard of living is the same. Using a purchasing power parity index, the U.S. level of GDP per capita exceeded that of Germany and Japan in 1984 (in U.S. dollars, $15,356 versus $13,265 for Germany and $12,235 for Japan).[5] Unfortunately, in addition to the measure being somewhat experimental, Sweden was not included in the OECD project and so a comparison between our four countries remains impossible. For these reasons, no measure of the absolute level of GDP per capita is included in the scorecard.

Below is a list of the indicators used:

Quality of Life Indicators:

1. Infant mortality
2. Perinatal mortality
3. Female life expectancy
4. Male life expectancy
5. Unemployment
6. Youth unemployment
7. Homicide rate
8. Misery Index 1960-85; and 1979-85
9. Percentage of the unemployed eligible for unemployment benefits
10. Equality in the distribution of household income
11. Equality of male/female earnings
12. Physicians per capita
13. Per capita expenditure on medical care
14. Hospital beds per capita
15. Home ownership
16. Living space per capita
17. Average working hours

For each of the seventeen indicators, we ranked each country according to its comparative standing. For example, the U.S. ranks first in percentage of home ownership but ranks last in infant mortality. Japan, on the other hand, ranks first in male and female life expectancy but last in living space per person. Table 2.1 shows the indicators for which each country achieved both the best and worst performance.

TABLE 2.1

SCORECARD ON QUALITY

	UNITED STATES	JAPAN
BEST PERFORMANCE	1. Expenditure on medical care per capita, 1982 2. Living space per person, 1980 3. Home ownership, 1980 or latest year	1. Infant mortality, 1983 2. Female Iife expectancy, 1980 3. Male life expectancy, 1980 4. Homicide rate, 1978 5. Unemployment, 1980-85 6. Youth unemployment, 1981-85 7. Misery Index, 1979-85 (unemployment + inflation) 8. Equality of income distribution, 1980 or latest year
WORST PERFORMANCE	1. Infant mortality, 1983 2. Perinatal mortality, 1980 3. Male Iife expectancy, 1980 4. Equality of income distribution, 1980 or latest year 5. Misery Index, 1979-85 (unemployment + inflation) 6. Misery Index, 1960-85 (unemployment + inflation) 7. Unemployment, 1980-85 8. Youth unemployment, 1981-85 9. Percentage of unemployed eligible for benefits, 1978 10. Homicide rate, 1978 11. Hospital beds per capita, 1982	1. Average working hours, 1980 2. Equality of male/female earnings, 1977 3. Livingspace per person, 1980 4. Expenditure on medicai care per capita, 1982 5. Physicians per capita, 1982

OF LIFE PERFORMANCE

GERMANY	SWEDEN	
	1. Perinatal mortality, 1980 2. Female life expectancy, 1980 3. Equality of male/female earnings, 1977 4. Hospital beds per capita, 1982	
1. 'Misery Index, 1960-85 (unemployment + inflation) 2. Physicians per capita, 1982	5. Percentage of unemployed eligible for benefits, 1978 6. Average working hours, 1980	*BEST PERFORMANCE*
1. Female life expectancy, 1980 2. Home ownership, 1980 or latest year	None	*WORST PERFORMANCE*

Summary ***of Results***

The United States has the best performance on three indicators: home ownership, living space per person, and expenditure on medical care per person. On average, we appear to be the best-housed nation, despite the existence of substantial homelessness and urban and rural poverty.

While the U.S. does best on three indicators, its performance is ***worst*** on **eleven.** **Our** bottom ranking on infant and perinatal mortality and male life expectancy indicates that our higher spending on medical care isn't necessarily translating into better health. The U.S. also has the poorest performance in both total and youth unemployment. When unemployment strikes, U.S. workers are also less likely to receive unemployment benefits. The comparatively high rate of unemployment is largely responsible for our poor long-term and short-term performance on the "misery index" which combines unemployment and inflation. Family income distribution in the U.S. is the most unequal and the rate of homicide is the highest.

Japan performs the best on eight indicators-the highest number for our four countries-including infant mortality and female and male life expectancy. Japan's improvement in these three indicators of health since 1960 have been dramatic: in 1960 the U.S. surpassed Japan on all three indicators but by 1970 Japan was ahead. Japan also has the lowest homicide rate, the lowest rate of both total and youth unemployment, and the lowest "misery index" for the period from 1970 to 1984.

Japan has the worst performance on five indicators. Not surprisingly, due to its extraordinary population density (322 persons per square mile compared with 25 for the U.S., 246 for Germany, and 19 for Sweden), Japan's household living space per person is the lowest. Japan has the lowest expenditure on medical care per person and the lowest number of physicians per capita. In light of its superior performance on the three health indicators mentioned above, however, it is unclear whether this should be considered a liability or an asset. On average, the Japanese work longer hours (and thus have less leisure time) and the differential between average earnings for men and women are the greatest.

For the most part, Germany's performance falls on middle ground. It performs best, and worst, on two indicators. Germany's best performance is in the "misery index" from 1960 to 1984, largely because of its low inflation rates, and in the number of physicians per capita. Germany performs worst in female life expectancy and on home ownership.

Sweden performs best on six quality of life indicators. Its rate of perinatal mortality is the lowest and its rates of female life expectancy and hospital beds per capita are the highest. Average wages of men and women are the most equal. Swedes on average work the least number of hours per week and when unemployed are most likely to be eligible for unemployment benefits. There are no quality of life indicators for which Sweden performs the worst.

This view of "best" and "worst" excludes the middle ground, i.e. indicators for which each country may not have the top performance but where it does second or third best. Therefore, in order to arrive at an impression of how the four countries compared overall, values were assigned to their rankings for each indicator. Four points were given to the country with the best performance, three points to the country with the second best performance, two points to the third best performance, and one point to the country with the worst performance. For example, Japan has the lowest level of infant mortality which gives it four points for that indicator, Sweden has the second best performance which gives it three points,

Germany is given two points, and the U.S., which has the highest level of infant mortality, receives one point. Because of the difficulty of assigning more or less value to particular indicators, they were given equal weight. The results were:

United States: 32 points
Japan: 52 points
West Germany: 44 points
Sweden: 54 points

*Tables for the **Quality** of life **Comparison***

TABLE 2.2
Average life Expectancy At Birth, Females

	U.S.	Japan	Germany	Sweden
1950	71.2	60.8	68.3	72.4
1960	73.3	70.4	71.9	75.0
1970	74.7	74.9	73.6	77.4
1980	77.5	79.1	76.8	79.1

Source: OECD, *Measuring Health Care.*

TABLE 2.3
Average life Expectancy At Birth, Males

	U.S.	Japan	Germany	Sweden
1950	65.6	57.5	64.4	69.9
1960	66.7	65.5	66.5	71.3
1970	67.2	69.5	67.3	72.3
1980	69.5	73.6	69.9	72.8

Source: OECD, Measuring *Health Care.*

TABLE 2.4
Perinatal Mortality
(Per thousand)

	U.S.	Japan	Germany	Sweden
1950	33	47	50	34
1960	29	41	36	27
1970	23	22	26	16
1980	13	12	12	9
Total Improvement Over the Period 1950-80	20	35	38	25

Source: OECD, *Measuring Health Care.*

TABLE 2.5
Infant Mortality
Per 1000 Births

	U.S.	Japan	Germany	Sweden
1960	26.0	30.7	33.8	12.9
1970	20.0	13.1	23.4	9.6
1980	12.6	7.5	12.7	6.9
1983	11.2	6.2	10.3	7.0
Total Improvement Over the Period 1960-83	14.8	24.5	23.5	5.9

Source: OECD, ***Measuring Health Care.***

TABLE 2.6
"Misery Index"
Unemployment + Inflation

	U.S.	Japan	Germany	Sweden
Average:				
1960-68	7.0	7.0	3.5	5.4
68-73	9.6	8.2	5.4	8.2
73-79	15.2	11.9	8.2	11.7
79-85	14.9	6.1	10.7	12.6
60-85	11.3	8.2	6.6	9.2
1982	15.6	5.1	12.0	11.7
1983	12.8	4.6	11.5	12.2
1984	11.8	4.9	10.6	11.0
1985	10.8	4.6	10.5	10.2

Source: OECD, ***Historical Statistics,*** 1960-84.

TABLE 2.7
Unemployment

	U.S.	Japan	Germany	Sweden
Total Labor Force Average:				
MO-67	5.0	1.3	0.8	1.6
68-73	4.6	1.2	0.8	2.2
74-79	6.7	1.9	3.5	1.9
80-85	8.1	2.4	6.5	2.8
60-85	5.9	1.7	2.7	2.1
1982	9.5	2.4	6.7	3.1
1983	9.6	2.7	8.2	3.3
1984	7.5	2.7	8.2	3.0
1985	7.2	2.6	8.3	2.8

Source: OECD, *Employment Outlook;* and *Historical Statistics.*

TABLE 2.8
Youth Unemployment

	U.S.	Japan	Germany	Sweden
1981	14.3	4.0	6.5	6.3
1982	17.0	4.3	9.5	7.6
1983	16.4	4.5	10.7	8.0
1984	13.3	4.9	9.9	6.0
1985	13.0	4.8	9.5	5.8

Source: OECD, *Economic Outlook,* May 1986, p. *31.*

TABLE 2.9
Percentage of Total Unemployed Eligible for Unemployment Benefits

	U.S.	Japan	Germany	Sweden
1974	51	79	66	92
1978	58	81	75	90

Source: Magaziner and Reich, Minding *America's Business,* p. 15.

TABLE 2.10
Average Working Hours

	U.S.	Japan	Germany	Sweden
1960 (Sweden 1963)	41	49	_	42
1970	39	48	43	39
1980	39	47	40	36

Source: OECD, *Living Conditions in OECD Countries.* p. *80.*

TABLE 2.11
Average Female Earnings as a Percent of Average Male Earnings

	U.S.	Japan	Germanv	Sweden
1968	68	44	68	79
1977	68	53	75	81

Source: Yankelovich et al, The *World at Work*, p. 349. Original Source: OECD.

TABLE 2.12
Annual Homicide Rate

	U.S.	Japan	Germany	Sweden
Per 100,000 Population				
1970	7.9	1.9	3.9	2.5
1972	9.0	1.9	4.4	na
1974	9.7	1.7	4.3	3.2
1976	8.7	1.9	4.4	4.2
1978	8.8	1.6	4.1	4.5

Source: Taken from charts in Simha F. Landau, "Trends in Violence and Aggression, A Cross-Cultural Analysis, *International Journal of Comparative Sociology* XXV, 3-4 (1984).

TABLE 2.13
Per Capita Expenditure on Medical Care, 1982
Using Purchasing Power Parities

	U.S.	Japan	Germany	Sweden
Current GDP and Purchasing Power Parity (ii U.S. $)	1388	673	883	1239

Source: OECD, *Measuring Health Care.*

TABLE 2.14
Number of Beds in In-patient Medical Care Institutions
Per thousand capita, 1960-82

	U.S.	Japan	Germany	Sweden
1960	9.18	7.36	10.50	13.69
1970	7.88	10.24	11.26	14.88
1982*	5.93	11.84	11.09	13.99

*Figure for U.S. is 1981.

Source: OECD Economic Studies, *Role of the Public Sector,* p. *136.*

TABLE 2.15
Active Physicians Per 1000 Capita, 1960-82

	U.S.	Japan	Germany	Sweden
1960	1.39	1.03	1.43	0.95
1970	1.59	1.09	1.64	1.31
1982*	2.01	1.35	2.37	2.34

*Figure for U.S. is 1981.

Source: OECD Economic Studies, *Rote of the Public Sector,* p. 137.

TABLE 2.16

Average Number of Persons Per Room in Principal Residence*

	U.S.	Japan	Germany	Sweden
1950		1.6	1.2	na
	na			na
1960	0.6	1.0	0.9	0.7
1980	0.5	0.8	0.6	0.7

*Data are for the closest year available to the years indicated except for 1980 which gives data for the most recent year available. Also, the 1950 figure for Japan is for 1953 and includes only urban residents.

Source: Living Conditions in OECD Countries, p. 133.

TABLE 2.17

Percentage of Population Owning Own Residence

U.S.	Japan	Germany	Sweden
	Year		
1979	1982	1978	1980
65	60	36	51

Source: OECD, ***Living Conditions in OECD Countries.***

TABLE 2.18

Equality of Household Income Distribution

Ratio of Income Share of lowest 20 Percent of Households Over the Income Share of Highest 20 Percent of Households

U.S.	Japan	Germany	Sweden
	Year		
1980	1979	1978	1981
13.3	23.2	21.1	17.7

Source: World Bank, *World Development Report 1986,* Oxford University Press, 1986, p. 277.

III. ECONOMIC PERFORMANCE

In this section, we address the second of the questions posed in the introduction: how does the U.S. compare with other nations on the basis of economic performance since 1960? As with our comparison of quality of life, we assembled the available and relevant indicators to construct as comprehensive a picture as possible.

In total, seventeen indicators were examined which are listed below.

Economic Performance Indicators:

1. Growth of real Gross Domestic Product (GDP)
2. Growth of GDP per capita
3. Growth in GDP per person employed
4. Labor productivity growth in manufacturing
5. Employment growth
6. Unemployment
7. Youth unemployment
8. Inflation
9. Misery Index (unemployment plus inflation)
10. Gross fixed capital investment as a % of GDP
11. Growth of gross fixed capital investment as a % of GDP
12. Investment in machinery and equipment as a % of GDP
13. Net savings as a % of GDP
14. Research and development spending as a % of GDP
15. Profit rates, in manufacturing
16. Exports of goods and services as a % of GDP
17. Trade balance as a % of GDP

To begin our analysis of economic performance, we first looked at where each country has had the best and worst performance over the past twenty-five years. With the exception of youth unemployment, for which no long-term data were available, and investment in machinery and equipment, where the results for each country were the same as the more comprehensive indicator of gross fixed capital formation, both a short-term (1979 or 1980 to 1984 or 1985) and a long-term (1960 to 1984 or 1985) measure have been included. The time period varies due to data availability.

The results are presented below in Table 3.1.

TABLE 3.1

SCORECARD ON

	UNITED STATES	JAPAN
		1. Growth of real GDP, 1979-85
		2. Growth of real GDP, 1960-85
		3. Growth in GDP per capita, 1979-85
		4. Growth in GDP per capita, 1960-85
		5. Manufacturing labor productivity growth, 1979-82
		6. Manufacturing labor productivity growth, 1969-79
		7. Growth in GDP per worker, 1979-85
		8. Growth in GDP per worker, 1960-85
		9. Average unemployment, 1979-85
		10. Average unemployment, 1960-85
		11. Net savings as a percentage of GDP, 1980-84
		12. Net savings as a percentage of GDP, 1960-84
		13. Inflation, 1979-85
		14. Misery Index, 1979-85 (unemployment + inflation)
		15. Gross capital investment as a % of GDP, 1980-84
		16. Gross capital investment as a % of GDP, 1960-84
		17. Total exports of goods and services, 1979-84
		18. Total exports of goods and services, 1960-84
		19. Youth unemployment, 1981-85
	1. Employment growth, 1979-85	20. Profit rate in manufacturing, 1980-82
BEST PERFORMANCE	2. Employment growth, 1960-85	21. Profit rate in manufacturing, 1960-84
	3. Growth of gross capital investment, 1979-85	22. Growth of gross capital investment, 1960-85
WORST PERFORMANCE	1. Growth in GDP per capita, 1960-85	1. R & D spending as a percentage of GDP, 1983
	2. Growth in GDP per capita, 1979-85	
	3. Manufacturing labor productivity growth, 1969-79	
	4. Manufacturing labor productivity growth, 1979-82	
	5. Growth in GDP per worker, 1979-85	
	6. Growth in GDP per worker, 1960-85	
	7. Average unemployment, 1960-85	
	8. Average unemployment, 1979-85	
	9. Youth unemployment, 1981-85	
	10. Trade balance as a percentage of GDP, 1980-84	
	11. Trade balance as a percentage of GDP, 1960-84	
	12. Net savings as a percentage of GDP, 1980-84	
	13. Net savings as a percentage of GDP, 1960-84	
	14. Misery Index, 1979-85 (unemployment + inflation)	
	15. Misery Index, 1960-85	
	16. Profit rate in manufacturing, 1980-82	
	17. Gross capital investment as a % of GDP, 1980-84	
	18. Gross capital investment as a % of GDP, 1960-84	
	19. Total exports of goods and services, 1979-84	
	20. Total exports of goods and services, 1960-84	

ECONOMIC PERFORMANCE

GERMANY

1. Trade balance as a percentage of GDP, 1980-84
2. Trade balance as a percentage of GDP, 1960-84
3. Inflation, 1960-85
4. Misery Index, 1960-85 (unemployment + inflation)

BEST PERFORMANCE

1. Growth of real GDP, 1979-85
2. Manufacturing labor productivity growth, 1979-82
3. Employment growth, 1979-85
4. Employment growth, 1960-85
5. Growth of gross capital investment, 1979-85
6. Growth of gross capital investment, 1960-85

WORST PERFORMANCE

SWEDEN

1. R & D spending as a percentage of GDP, 1983

BEST PERFORMANCE

1. Growth of real GDP, 1960-85
2. Inflation, 1979-85
3. Inflation, 1960-85
4. Profit rate in manufacturing, 1960-84

WORST PERFORMANCE

Summary of Results

The fact that the United States has a better record of employment growth and the highest growth rate of investment from 1979 to 1985 compared to the other three countries is counterbalanced by its lack of performance in a broad array of areas. Its absolute rate (as opposed to growth rate) of total investment has been the lowest, as has investment in machinery and equipment. Productivity growth has been the slowest, both long-term and short-term rates of unemployment have been the highest, growth in GDP per capita has been smallest, the trade balance as a percentage of GDP is the weakest, and so on down the list.

Japan's performance is almost a mirror image of that of the United States. Whereas the U.S. has the worst performance on 21 measures out of 31 total, Japan has the best performance on 20 measures. Japan has the best productivity growth, the fastest growth rate of GDP per capita, the lowest average unemployment and youth unemployment, the highest rate of investment, the highest level of savings, the lowest short-run rate of inflation, and the highest level of exports of goods and services. Japan had the worst performance on only one indicator: research and development spending as a percentage of GDP.

Germany's economic performance is less extreme on either end than that of the U.S. and Japan. Germany rates a top performance on four measures: it has the best short and long-term trade balance as a percentage of GDP, the lowest long-term average rate of inflation, and the lowest long-term average "misery index" (unemployment plus inflation). On the down side, Germany's long and short-term rates of employment growth have been the poorest, as has its growth rate of investment. The growth of real GDP has been the slowest as has the growth rate of labor productivity in manufacturing in the short-term.

Like Germany, Sweden's performance has hit more of a middle ground. Sweden has the best performance on only one measure: research and development spending as a percentage of GDP. It has the poorest performance on four measures: average long-term growth of real GDP, both short and long-term inflation, and average long-term profit rates.

As with the quality of life indicators, values were assigned to their rankings for each measure. For each, four points were given to the country with the best performance, three points to the country with the second best performance, two points to the third best performance, and one point to the country with the worst performance. Again, it should be kept in mind that the unweighted overall scores are only a crude approximation of relative performance. The results were:

United States:	50
Japan:	113
Germany:	80
Sweden:	65

Factors Affecting Economic Performance

Let's look at the economic indicators more closely. Table 3.2 shows Gross Domestic Product (GDP) in U.S. dollars for 1984. Clearly the U.S. has the largest economy of our four countries.

TABLE 3.2
Gross National Product (GNP)

	U.S.	Japan	Germany	Sweden
1985 Current Prices and Current Exchange Rates Billion U.S. $	3946.6	1327.9	625.0	100.2

Source: OECD.

As noted previously in a discussion of the quality of life comparisons, no satisfactory means exists to compare the GDP per capita of our four countries. If we measure the *change* in Gross Domestic Product over time, however, the same problems do not arise. Tables 3.3 and 3.4 present data for two such measures: the Growth of Real (adjusted for inflation) GDP; and the Growth of GDP per capita.

For growth of real GDP, Japan is the consistent high scorer with a long-run average rate of growth of 6.8 percent from 1960 to 1985. Even with some slow years during the recession of the early 1980's, Japan's short-term average growth rate from 1979 to 1985 was a healthy 4.0 percent. In contrast, the U.S. GDP growth rate over the same two periods was roughly half that of Japan, although it has exceeded that of both Germany and Sweden. In 1985, however, the U.S. growth of real GDP sank below that of both Germany and Sweden, as well as Japan.

TABLE 3.3
Growth of Real GDP

	U.S.	Japan	Germanv	Sweden
% Change from Previous Period				
Average: 1960-68	4.5	10.4	4.1	4.4
68-73	3.3	8.4	4.9	3.7
73-79	2.6	3.6	2.3	1.8
79-85	2.0	4.0	1.1	1.7
60-85	3.3	6.8	3.1	3.0
1983	3.4	3.2	1.5	2.4
1984	6.6	5.1	3.0	3.4
1985	2.2	4.6	2.4	2.3

Source: OECD, *Economic Outlook,* May 1986.

The picture changes somewhat if we look at growth in GDP per capita. Because GDP per capita accounts for population growth (i.e. how many more people there are to divide the pie) it serves as a better indicator of how fast a nation's standard of living is improving. From Table 3.4, we see that the United States has performed the worst of our four countries in both the short-term (1979-85) and long-term (1960-85) while Japan has performed the best. While the U.S. had the strongest recovery from the 1982-83 recession with a strong growth showing in 1984, this growth has not been sustained.

TABLE 3.4
Growth in GDP/Capita

	U.S.	Japan	Germany	Sweden
% Change from Previous Period				
Average: 1960-68	3.2	9.3	3.2	3.6
68-73	2.2	6.8	4.0	3.1
73-79	1.6	2.5	2.5	1.5
79-85	1.0	3.2	1.3	1.6
60-85	2.1	5.7	2.7	2.5
1982	-3.9	2.2	-0.6	0.8
1983	2.0	2.4	1.6	2.4
1984	6.2	4.3	3.0	3.3
1985	1.9	3.9	2.9	2.0

Source: OECD, *Historical Statistics 1960-1984*, p. 44; 1985: OECD.

Productivity growth is the engine of higher earnings and incomes. Table 3.5 compares productivity improvements as measured by the growth in Gross Domestic Product per employed person from 1960 to 1985.

TABLE 3.5
Growth in GDP Per Person Employed

	U.S.	Japan	Germany	Sweden
Average:				
1960-68	2.6	8.8	4.2	3.9
68-73	1.2	7.3	4.1	2.9
73-79	0.2	2.9	2.9	0.5
79-85	0.6	3.0	1.5	1.3
60-85	1.3	5.7	3.2	2.3
1982	-2.2	3.0	1.0	0.9
1983	1.6	1.8	2.7	2.4
1984	3.0	5.2	2.5	2.2
1985	0.2	3.9	1.4	1.6

Source: OECD, *Historical Statistics 1960-1984*, p. 47, except 1985 figures for Japan, Germany and Sweden, which are from U.S. Bureau of Labor Statistics, unpublished.

In both the short and long-term, U.S. performance has been the worst. U.S. productivity growth averaged 0.6 percent from 1979 to 1985 and 1.3 percent from 1960 to 1985: roughly one fourth the average growth in Japan and half of Sweden's and Germany's. A 3.0 percent growth rate in 1984 fueled hopes that the corner had been turned, but as the drop to a 0.2 percent growth rate in 1985 would indicate, it may have been only a brief post-recession respite rather than a long upward trend.

In the search to explain why U.S. productivity growth has been poor relative to many other countries, some have ascribed the difference to the faster growth

of services in the U.S. economy. As shown in Table 3.6, service sector employment has continued to grow and currently stands at just over 68 percent of total employment. However, Sweden also has a high percentage of total employment in services, barely trailing the U.S. at 65 percent of total employment. Sweden's transition into services over the past twenty-five years has also been faster than that of the United States. Japan and Germany have also experienced sizeable service sector growth in employment.

TABLE 3.6
Composition of Civilian Employment

	U.S.	Japan	Germany	Sweden
Manufacturing Average				
196067	26.8	23.7	35.3	31.4
68-73	25.8	26.9	36.6	28.3
74-79	23.0	25.4	35.1	26.4
80-84	20.8	24.7	33.0	22.9
60-84	24.4	25.1	35.1	27.8
1982	20.4	24.5	33.1	22.4
1983	19.8	24.5	32.3	22.3
1984	20.0	24.9	31.9	22.4
Services Average				
196067	57.9	42.9	40.4	46.1
68-73	61.5	47.5	43.6	53.4
74-79	64.9	52.3	48.4	59.0
80-84	67.4	55.3	51.8	63.8
60-84	62.3	48.7	45.4	54.8
1982	68.0	55.4	51.9	64.1
1983	68.5	56.0	52.6	64.7
1984	68.2	56.3	53.1	65.1

Source: OECD, *Historical Statistics 1960-1984.*

While the growth of the U.S. service sector cannot explain all of the difference in productivity growth rates, legitimate questions remain about how well service sector productivity can be measured and whether it is fair to measure productivity over entire economies with different sector-al compositions. To account for some of this concern, Table 3.7 presents information on labor productivity growth rates in manufacturing alone. Here again, the U.S. has had a lackluster performance compared to Japan, Germany, and Sweden, although it matched Germany's performance from 1979 to 1982.

TABLE 3.7
Productivity Growth in Manufacturing
Compound Annual Growth Rates for labor

	U.S.	Japan	Germany	Sweden
1960's	4.3	11.7	6.9	7.6
1969-79	2.5	8.3	4.5	3.6
1979-82	1.7	7.0	1.7	2.0
1979-85*	2.9	5.9	3.4	3.8
1982-85*	4.2	4.8	4.1	5.7

*OECD estimate based on an estimate for 1985.
Source: OECD, ***Economic Outlook,*** May 19%.

While the U.S. has performed poorly on productivity, it has performed well on job generation. The growth of employment in the United States stands out as particularly significant when compared to our other three countries (Table 3.8). In Japan, long-term employment growth has been a little more than half that of the U.S.; Sweden's average rate is approximately one-third the U.S. rate; and Germany has had negative growth on average from 1960 to 1985. The growth of employment in the U.S. has allowed the economy to absorb large numbers of new, young, and women workers into the labor force and the availability of these groups of workers has in turned spurred new employment generation

TABLE 3.8
Growth in Employment
Year to Year Percentage Change

	U.S.	Japan	Germanv	Sweden
Average:				
1960-68	1.8	1.5	-0.1	0.5
68-73	2.1	0.9	0.7	0.7
73-79	2.5	0.7	-0.5	1.3
79-85	1.3	1.0	-0.3	0.5
60-85	1.9	1.1	-0.1	0.7
1983	1.3	1.7	-1.5	0.2
1984	4.1	0.6	0.1	0.8
1985	2.0	0.7	0.7	1.0

Source: OECD, ***Historical Statistics 1960-1984, p.26,*** 1985: OECD.

While the U.S. has had the best record of our four countries in employment generation, it has simultaneously had the worst record for unemployment over the past twenty-five years. The average rate of unemployment in the U.S. from 1960 to 1985 has been more than twice that of the other countries, as shown in Table 3.9. In 1984 and 1985, Germany's unemployment rate exceeded that of the U.S. and, like the U.S., Germany has had a difficult time pulling its unemployment rate down following the 1982433 recession.

TABLE 3.9
Unemployment

	U.S.	Japan	Germany	Sweden
Total Labor Force Average:				
1960-67	5.0	1.3	0.8	1.6
68-73	4.6	1.2	0.8	2.2
74-79	6.7	1.9	3.5	1.9
80-85	8.1	2.4	6.5	2.8
60-85	5.9	1.7	2.7	2.1
1982	9.5	2.4	6.7	3.1
1983	9.6	2.7	8.2	3.3
1984	7.5	2.7	8.2	3.0
1985	7.2	2.6	8.3	2.8

Source: OECD, *Employment Outlook* and *Historical Statistics.*

Table 3.10 shows that the rate of youth unemployment in the U.S. has also been the highest, followed by Germany, then Sweden, then Japan.

TABLE 3.10
Youth Unemployment

	U.S.	Japan	Germany	Sweden
1981	14.3	4.0	6.5	6.3
1982	17.0	4.3	9.5	7.6
1983	16.4	4.5	10.7	8.0
1984	13.3	4.9	9.9	6.0
1985	13.0	4.8	9.5	5.8

Source: OECD, *Employment Outlook 1985.*

The U.S. experience with inflation has been mixed. Through the end of the 1970's, the average rate of inflation stayed below that of Sweden and Japan but then rose above Japan's in the period from 1979 to 1985. Germany has had the least fluctuation and the lowest rates of inflation, while Sweden fared better than Japan in the 60's and 70's but has since had rates considerably above those of Japan.

TABLE 3.11
Consumer Prices

	U.S.	Japan	Germany	Sweden
Average:				
1960-68	2.0	5.7	2.7	3.8
68-73	5.0	7.0	4.6	6.0
73-79	8.5	10.0	4.7	9.8
79-85	6.9	3.6	4.2	9.8
60-85	5.3	6.4	3.9	7.1
1982	6.1	2.7	5.3	8.6
1983	3.2	1.9	3.3	8.9
1984	4.3	2.2	2.4	8.0
1985	3.6	2.0	2.2	7.4

Source: OECD, *Historical Statistics 1960-1984*, p. 83, 1985: OECD.

If we combine inflation and unemployment, we get what has been dubbed the "misery index" since high rates of one or the other bring on misery for workers and consumers. Because the U.S. has had high unemployment without a counterbalancing low rate of inflation, it has had the highest misery index over the entire period from 1960 to 1985. Japan, Germany, and Sweden have all had mixed performances, with Japan's performance in recent years being considerably better than Germany's and Sweden's. The New York Stock Exchange uses the misery index as one component of its Economic Performance Index, which takes growth in GDP and divides it by unemployment plus inflation. Thus in this index, the lower the score the worse the performance. The results for the U.S. are again not very encouraging. While every country has had a worse performance on average from 1974 to 1980 than from 1960 to 1973, the U.S. has had the lowest score in both periods. For 1985, the U.S., Germany, and Sweden have all had an unimpressive performance compared with Japan, with Germany and Sweden performing slightly better than the United States.

TABLE 3.12
"Misery Index"
Unemployment + Inflation

	U.S.	Japan	Germany	Sweden
Average:				
1960-68	7.0	7.0	3.5	5.4
68-73	9.6	8.2	5.4	8.2
73-79	15.2	11.9	8.2	11.7
79-85	14.9	6.1	10.7	12.6
60-85	11.3	8.2	6.6	9.2
1982	15.6	5.1	12.0	11.7
1983	12.8	4.6	11.5	12.2
1984	11.8	4.9	10.6	11.0
1985	10.8	4.6	10.5	10.2

Source: OECD, *Historical Statistics 1960-84*, 1985: OECD.

TABLE 3.13
New York Stack Exchange Economic Performance Index

	U.S.	Japan	Germany	Sweden
1960-73	**50.4**	**145.9**	**123.9**	**55.6**
1974-80	**15.2**	**37.8**	**29.0**	**15.3**
1985	**20.0**	**100.0**	**23.0**	**23.0**

Source: Yankelovich et al, *The World* **at** *Work*.
1985 figures are author's calculation using OECD data.

In addition to the large growth of the labor force, two factors often cited in the slowdown of productivity growth in the U.S. are the low rates of saving and investment. Adequate saving and investment ensure that industry can make the necessary improvements to raise the productivity level of new workers.

Table 3.14 shows net saving (household plus government plus corporate saving minus depreciation of capital stock) as a percentage of Gross Domestic Product. Clearly the U.S. has a lower rate of saving than any of the other three countries: roughly a third that of Japan; half that of Germany, and two-thirds that of Sweden.

TABLE 3.14
Net Saving as a Percentage of GDP

	U.S.	Japan	Germany	Sweden
Average:				
1960-67	9.5	**20.6**	18.2	**15.1**
68-73	**8.7**	**24.6**	**16.9**	**14.3**
74-79	**6.8**	**20.2**	**11.5**	**9.5**
SO-84	**3.8**	**17.3**	**8.7**	**4.7**
60-84	**7.5**	**20.8**	14.4	**11.5**
1982	**2.2**	**17.0**	**7.7**	**2.3**
1983	**1.9**	**16.1**	**8.6**	**4.4**
1984	**4.2**	**17.0**	**9.3**	**6.2**

Source: OECD, *Historical Statistics 1960-1984*.

Table 3.15 reveals the influence of the public sector in the overall high savings rate of Japan, Germany, and Sweden. The U.S. fares comparatively better on household saving in relation to Sweden, although it still falls behind Japan and Germany. But where Sweden makes up much of the difference between its household saving and total saving, and where Germany and Japan expand their margins over the U.S., is through public saving.6 Public saving takes many forms such as large public pension funds, industrial investment funds, and social security funds which are fully funded as opposed to the pay-as-you-go system used in the United States. Germany and Japan both use public policy to encourage household savings[7] while Japan also has a unique system which allows citizens to save through the local post office-a simple and effective way to encourage small savers.[8]

TABLE 3.15

Net Household Saving as a Percentage of Disposable Household Income

	U.S.	Japan	Germany	Sweden
Average:				
1960-67	8.0	16.6	12.2	6.7
68-73	9.2	17.6	12.9	4.0
73-79	8.8	21.6	13.7	4.2
80-83	8.0	17.3	12.6	2.9
60-84	8.5	18.1	12.6	4.6

Source: OECD, *Historical Statistics 1960-1984.*

In order to contribute to economic growth, saving must spur investment activity. Table 3.16 shows gross fixed capital formation as a percentage of GDP, a standard indicator of investment, for 1960 to 1984. Without exception, the U.S. has had the lowest absolute *level* of investment over the period. Japan's level of investment has consistently been the highest.

TABLE 3.16

Gross Fixed Capital Formation as a Percentage of GDP

	U.S.	Japan	Germany	Sweden
Average:				
1960-67	18.0	31.3	25.2	24.1
68-73	18.3	34.6	24.4	22.6
74-79	18.3	31.8	20.8	20.6
80-84	17.5	29.6	21.2	19.1
60-84	18.0	31.9	23.2	21.9
1982	16.5	29.7	20.5	18.8
1983	16.8	28.3	20.6	18.7
1984	17.9	27.8	20.3	18.4

Source: OECD, *Historical Statistics 1960-1984.*

Gross fixed capital formation includes investment in residential and nonresidential construction as well as in machinery and equipment. Investment in machinery and equipment is the critical indicator for industry, and Table 3.17 separates out investment in machinery and equipment to see whether the low level of total investment in the U.S. is representative of the investment found in this subcategory.

TABLE 3.17
Investment in Machinery and Equipment as a Percentage of GDP

	U.S.	Japan	Germany	Sweden
Average:				
1960-67	6.8	na	9.2	8.0
68-73	7.3	14.4	8.9	7.7
74-79	8.0	10.8	7.9	8.6
SO-83	7.8	10.1	8.2	8.0
60-84	7.4	12.6	8.6	8.1
1982	7.4	10.0	7.8	7.9
1983	7.4	9.8	8.1	8.2
1984	na	10.1	7.9	8.2

Source: OECD, *Historical Statistics 1960-1984.*

Here again, the U.S. performance is worse than the other three countries in both the short-term (1980-83) and the long-term (1960434).

Table 3.18, which presents data on the *growth in* investment, shows a more encouraging picture. The long-run average growth rate for the U.S. from 1960 to 1985 still stands below that of Japan but exceeds that of Sweden and Germany. In the short-term (1979-1985) the U.S. growth in investment was the highest.

TABLE 3.18
Growth of Gross Fixed Capital Formation as a Percentage of GDP

	U.S.	Japan	Germany	Sweden
Average:				
1960-68	5.3	14.8	3.1	5.4
68-73	3.9	12.3	5.5	2.7
73-79	1.6	1.5	0.5	0.6
79-85	3.2	2.2	-0.6	1.3
60-85	3.6	7.9	2.0	2.5
1982	-6.6	0.8	-5.3	-1.1
1983	8.1	-0.3	3.2	1.6
1984	18.0	4.6	0.8	3.9
1985	7.4*	5.8	-0.3	6.5

* The 1985 figure for the U.S. is growth of private fixed investment which very slightly understates gross investment levels (in 1983 and 1984 the difference was less than 0.5 percent).
Source: OECD, ***Historical Statistics 1960-1984,*** p.53; and OECD ***Economic Outlook,*** May 1986.

Investment in research and development (R&D) is another factor which contributes to both productivity growth and international competitiveness. Table 3.19 shows public and private R&D spending as a percentage of GDP, a figure which includes defense R&D. Even with defense included, however, the U.S. level of R&D spending falls below that of Germany and Sweden. When defense R&D is excluded, the U.S. rate falls below that of Japan as well. Given Japan's overallatten-

tion to investment, its relatively low level of R&D spending is somewhat surprising. A possible explanation is that, until recently, Japan has been able to rely on purchasing technology from abroad and has concentrated on technology application rather than development. A second factor may be that, because of Japan's less stringent anti-trust laws, companies have been able to cooperate on R&D, thus avoiding duplication of effort but lowering the total amount of resources devoted to R&D.

TABLE 3.19
RESEARCH AND DEVELOPMENT
I. Public and Private R&D Spending as a Percentage of GDP

	U.S.	Japan	Germany	Sweden
1983	2.0	1.6	2.2	2.3

II. Growth Rates and Composition of R&D Expenditure

	U.S.	Japan	Germany	Sweden
Growth Rate Per Capita				
1966-73	2.9	9.5	3.9	3.2
1974-80	1.3	1.9	2.1	0.9
Non-Defense Government R&D plus private R&D As a Percentage of GDP				
1965	1.33	1.53	1.53	na
1975	1.50	1.89	2.19	na

I. Source: OECD.
II. Source: McMahon, Walter. 'Comment," in *International Sources of* ***Productivity and Causes*** *of the* ***Slowdown,*** John. W. Kendrick, editor. American Enterprise Institute/Ballinger, Cambridge, Massachusetts, 1984, p.101.

Table 3.20 demonstrates the extent of the U.S. trade balance problem. The consistently negative U.S. trade balance has placed the U.S. at the bottom once again when compared to Japan, Germany, and Sweden.

TABLE 3.20
Trade Balance as a Percentage of GDP

	U.S.	Japan	Germany	Sweden
Average:				
1960-67	0.6	0.2	1.8	-0.1
68-73	-0.1	1.5	2.5	0.7
74-79	-0.7	0.4	2.4	-0.7
80-84	-1.4	1.0	1.4	0.7
60-84	-0.3	0.7	2.1	0.1
1982	-0.9	0.8	2.4	-0.6
1983	-1.7	1.8	2.1	2.3
1984	-3.0	2.8	2.4	3.9

Source: OECD, ***Historical Statistics*** *1960-1984.*

Not surprisingly, given the size of the trade deficit, the U.S. also has had the lowest growth in volume of exports of goods and services as shown in Table 3.21.

TABLE 3.21
Volume of Exports of Goods and Services

	U.S.	Japan	Germany	Sweden
Year to Year % Changes				
Average:				
1960-68	5.8	14.7	7.7	7.0
68-73	8.7	12.3	7.8	8.8
73-79	5.2	8.9	4.3	2.5
79-84	-0.3	11.3	4.7	4.4
60-84	4.9	12.0	6.2	5.7
1982	-8.8	1.0	3.4	4.4
1983	-5.2	7.0	-0.2	10.7
1984	4.7	17.7	7.8	6.5

Source: OECD, *Historical Statistics 1960-1984*, p. 55.

Profit rates in manufacturing have declined somewhat in all four countries, most notably in Japan and Germany (Table 3.22). However, Japan and Germany also started with much higher profit rates initially so that in 1982, Japan's profit rate was still double that of the United States' while Germany's was roughly 25 percent higher. Sweden and the U.S. have paralleled each other very closely with a long-term average rate from 1960 to 1984 of just over 25 percent each.

TABLE 3.22
Profit Rates
Gross Operating Surplus as a Percentage of Gross Value Added in Manufacturing

	U.S.	Japan	Germany	Sweden
Average:				
1960-67	27.3	55.7	36.1	na
68-73	25.1	54.0	33.9	26.1
74-79	25.1	43.5	29.4	21.2
80-84	na	42.2	na	26.1
60-84	25.5	49.7	32.2	25.3
1980	21.8	43.7	25.6	22.4
1981	22.7	42.0	24.5	20.6
1982	21.2	42.0	26.1	23.8

Source: OECD, *Historical Statistics 1960-1984*, p. 73.

Table 3.23 shows that, compared with Japan, Germany and Sweden, the growth of manufacturing wages in the U.S. has been quite modest-just over 10 percent compared with 38 percent for Sweden, 60 percent for Japan, and over 66 percent

for Germany. Table 3.24, which shows real labor costs per employed person, tells a similar story. From 1970 to 1984, the average annual growth rate of labor costs in the U.S. was only 0.5 percent, a little more than half that of Sweden, a fifth that of Germany, and less than a tenth that of Japan. Of course, in 1970 U.S. labor costs were at a higher absolute level, but again the problem of fluctuating exchange rates discussed in relation to per capita GDP makes an absolute comparison of wage rates impossible.

TABLE 3.23
Changes in Real Hourly Compensation in Manufacturing, 1970-83

U.S.	Japan	Germany	Sweden
10.7	60.6	66.8	38.4

Source: *Statistical Abstract of the United States*, 1985, p. 853.

TABLE 3.24
Real labor Costs Per Employed Person
Average Annual Growth Rate in Percentages

	U.S.	Japan	Germany	Sweden
1970-73	1.7	10.6	5.1	1.4
73-75	-1.4	6.0	2.9	2.7
75-79	1.1	3.6	3.1	2.1
79-82	-0.1	3.1	1.1	-1.0
82-84*	0.5	3.0	1.0	-1.2
70-84*	0.5	5.2	2.7	0.9

*1984 is OECD estimate.

Source: OECD, *Employment Outlook, 1985.*

IV. THE ROLE OF THE PUBLIC SECTOR

Reasonable people might argue over the importance of one or another economic or quality of life indicator in comparing the accomplishment of each nation over the last quarter century. But taken as a whole, this examination of the major comparative statistics available for these countries is impressive evidence that the size of a nation's civilian government is not, in and of itself, a burden on economic growth and efficiency. Indeed, the United States, which has had the worst economic performance of our four countries as measured by the indicators, also has the smallest civilian public sector.

TABLE 4.1
Non-Defense Outlays of Government as a Percentage of GDP
Select Years

	U.S.	Japan	Germany	Sweden
1975	30.0	27.2	45.3	45.6
1979	27.7	30.2	44.3	57.5
1984	29.0	32.1	44.7	60.5

Source: 1975 and 1979 figures calculated from OECD figures on total government outlays and from data on military spending and GDP from the *Statistical Abstract of the United States, 1985.* For reference on 1984 figures, see Table 1.1.

Table 4.1 shows that between 1975 and 1979, the share of national resources going to civilian public spending in the U.S. and Japan reversed itself: in 1975 the U.S. spent 30 percent of GDP, which *dropped* to 27 percent in 1979, whereas in 1975 Japan spent 27 percent, which *increased* to 30 percent in 1979. In 1984 the U.S. was still the lowest spender. Since at least 1974, the U.S. has consistently spent between 5 and 7 percent of its Gross Domestic Product on the military sector compared with 1 percent for Japan and between 3 and 4 percent for both Germany and Sweden. As a result, the U.S. civilian public sector has been the smallest of our four countries for quite some time.

It is particularly important to note the dynamic nature of civilian government spending over recent years. As Table 4.2 shows, since 1973 the government share of the economy, including defense, rose faster in Japan than in any of the other nations at the same time that Japan's economic growth was the envy of the world. Going back further to 1960, the proportion of GDP devoted to government doubled in Sweden and rose fifty percent in West Germany while increasing only thirty-nine percent in the United States.

TABLE 4.2
Total Outlays of Government as a Percentage of GDP

	U.S.	Japan	Germany	Sweden
1960	27.5	na	32.4	31.0
1968	31.3	na	39.1	42.8
1973	31.3	22.1	41.5	44.7
1974	33.0	24.5	44.6	48.1
1975	35.6	27.3	48.9	48.9
1976	34.5	27.8	47.9	51.7
1977	33.4	29.0	48.0	57.5
1978	32.8	30.9	47.8	59.2
1979	32.8	31.2	47.6	60.7
1980	34.9	32.1	48.3	61.6
1981	35.2	34.5	49.3	64.6
1982	37.7	33.6	49.4	66.6
1983	38.1	34.3	48.4	66.2
1984	35.2	33.1	48.2	63.7
Average:				
60-67	28.8	na	35.7	34.8
68-73	31.7	20.9	39.8	44.3
74-79	33.7	28.5	47.5	54.4
80-84	36.2	33.4	48.7	64.5
60-84	32.0	28.1	42.1	47.7
Percentage Increase in Government Spending as a Percentage of GDP, 1973-1983				
	21.7	55.2	16.6	48.1

Source: OECD, ***Economic Outlook,*** May 1986. Outlay figure for the U.S. in 1984 is calculated from data in the OECD ***Economic Survey of the U.S., 1985/1986,*** and the ***Economic Report of the President, 1986.***

As government spending expanded during this period, so did government revenues. As Table 4.3 shows, during the same period when the economies of Japan, West Germany, and Sweden were outperforming the U.S. economy, levels of taxation were also rising faster. In Japan, taxes rose 53.2 percent from their average level in 1966-1970 to their level in 1984, compared with 30.8 percent in Sweden, 13.2 percent in Germany, and only 2.5 percent in the United States.

TABLE 4.3
Overall Tax level as a Percentage of GDP

	U.S.	Japan	Germany	Sweden
1966-70	28.3	18.6	32.7	39.0
1971-75	29.2	21.4	35.4	42.4
1976-82	30.1	24.8	37.1	50.0
1984	29.0	28.5	37.0	51.0
Percentage Increase in Overall Tax level from 1966-1970 (Average) to 1984				
	2.5	53.2	13.2	30.8

Source: OECD, *Economic Studies,* Spring 1984, p. 178. From OECD Annual National Accounts and Revenues Statistics.
1984 figures from Owens, "Do U.S. Taxpayers Get Better Breaks than Europeans?"*OECD Observer,* March 1986.

The amount of money raised by different types of taxes varies for each country as shown by table 4.4. Here we see that, when compared to GDP, the amount of revenue raised through the personal income tax in Sweden is 9 percentage points above the average for all OECD countries. In the U.S., on the other hand, the revenue raised through personal income taxes is just slightly below average.

TABLE 4.4
Ratio of Tax Revenue Components to GDP
(% point deviations from sample mean averaged for 23 OECD countries from 1978-1982)*

	U.S.	Japan	Germany.	Sweden
Taxes On:				
Personal Income	-0.6	-5.5	-0.7	9.0
Corporate Income	0.2	2.7	-0.6	-1.2
Social Security:				
Employers	-0.2	-2.5	2.6	na 7.5
Property	1.6	na	-0.5	-1.3
Consumption	-3.6	-1.1	0.5	1.1
Specific Goods and Services	-2.2		-1.3	-0.2

*OECD countries include Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States.
Source: OECD, Economic Studies, The *Rote of the Public Sector,* Spring 1985. p. 49.

Relative to GDP, Japan raises the most revenue through the corporate income tax of our four countries. The U.S. is just slightly above average while Germany and Sweden are both below average, but not dramatically. As we would expect for a country with high spending on social security, Germany's revenue from social

security taxes are above average for both employees and employers, though less so for employers. Sweden's revenue from its social security tax on employers is considerably above average, whereas Japan and the U.S. have social security revenues below average and, like Germany, more revenue is raised from employees than employers.

The U.S. has the highest level of revenues from property taxes of our four countries with an above-average share of revenue coming from this tax. Japan is just slightly above average, whereas both Germany and Sweden are below average. The U.S. relies less on consumption taxes compared to Sweden and Germany.

All four countries experienced a budget surplus in 1960. In 1982 all ran budget deficits ranging from 3.5 percent of GDP in Germany to 6.3 percent of GDP for Sweden (Table 4.5). On average from 1974 to 1982, the U.S. deficit as a percentage of GDP was twice that of Sweden but roughly half that of Japan and Germany. Given the solid economic growth of both Japan and Germany during this same period, the U.S. deficits cannot be held responsible for the comparatively poor performance of the U.S. economy over these years.

TABLE 4.5

I. General Government Expenditure, Revenue, and Net lending Relative to GDP at Current Prices, Percent

	U.S.	Japan	Germany	Sweden
1960: Expenditure	27.6	18.3	32.5	31.1
Revenue	27.3	20.7	35.1	32.2
Net Surplus	**1.1**	**0.6**	**3.0**	**2.0**
1982: Expenditure	**37.6**	**34.2**	**49.4**	**67.3**
Revenue	**32.0**	**30.2**	**45.3**	**59.7**
Net Deficit	**-4.0**	**-3.6**	**-3.5**	**-6.3**

II. Trends in General Government Net lending Percentage of Nominal GDP

	U.S.	Japan	Germany	Sweden
Average 1960-1966	**0.2**	na	**1.2**	**3.3**
Average 1967-1973	**-0.5**	**1.0**	**-0.1**	**4.2**
Average 1974-1982 (Japan 1970-82)	-1.6	-3.6	-3.2	-0.8

Source: OECD, ***The Role of the Public Sector.***

Table 4.6 shows expenditure elasticities for different types of public spending with respect to GDP. It answers the question: if GDP increased 1 percent, how much did government spending increase in comparison?

For each country, total government spending increased faster than GDP: 13 percent faster in the U.S. (1.13), 32 percent faster in Japan (1.32), 25 percent faster in Germany (1.25) and 35 percent faster in Sweden (1.35). Thus, relative to GDP growth, ***the U.S. had the smallest increase in total government spending.***

TABLE 4.6
General Government Expenditure Elasticities With Respect to GDP

	U.S. 1960-1982	Japan 1965-1982	Germany 1960-1982	Sweden 1960-1982
Total	1.13	1.32	1.25	1.35
Consumption	1.02	1.16	1.25	1.30
Transfers	1.41	1.54	1.32	1.53
Investment	0.58	1.14	0.97	0.96

Source: OECD, The *Role of the Public Sector.*

While the United States has been increasing government spending relatively less than its major commercial rivals over the last two decades, the *composition* of its public spending has also differed. Governments spend money in three basic ways (excluding public enterprise which is addressed further on):

- transfer payments-includes many kinds of income support programs, most importantly social security. It also includes interest payments on the national debt.
- consumption-includes defense, other purchases of goods and services, and employee salaries.
- investment-includes, dams, bridges, roads, public transport, and other infrastructure.

Transfers, by which the government directly reallocates purchasing power, have risen the fastest in each country. Table 4.7 shows that the portion of the GDP going to social security transfers has risen steadily in all four countries.

TABLE 4.7
Social Security Transfers as a Percentage of GDP

	U.S.	Japan	Germany	Sweden
Average:				
1960-67	5.5	4.1	12.4	8.8
68-73	7.8	4.8	13.2	11.6
74-80	10.6	8.4	16.7	15.9
SO-84	na	10.8	17.0	18.2
60-84	8.4	6.6	14.6	13.0

Source: OECD, *Historical Statistics 1960-1984.*

Government consumption also grew faster than GDP but only by 2 percent for the U.S. The increase was greater for Japan at 16 percent above GDP growth, 25 percent above for Germany, and 30 percent above for Sweden.

Where the largest difference occurred was in the growth of public investment spending relative to GDP. In the U.S., spending on public investments-dams, bridges, roads, public transport, and other infrastructure-rose only 58 percent as fast as GDP. In Japan, the rate of growth of government investment was 114 per-

cent of GDP growth. Sweden's and Germany's government investment spending just kept pace with the increase in their GDP.

Table 4.8 presents a more detailed look at the structure of overall government spending divided somewhat differently. Unfortunately, a complete set of data which includes all local spending is not available for Sweden, so the following understates Swedish public sector activity in some categories as noted in the table.

TABLE 4.8

Structure of General Government Expenditure in 1981 as Percent of GDP*

	U.S.	Japan	Germany	Sweden+
Non-Defense	28.1	33.6	46.4	60.8
TOTAL	32.8	34.5	49.3	64.6
Of Which:				
Public Goods	8.4	4.2	6.8	–
Defense	4.7	0.9	2.9	3.8
General Public Services	3.7	3.3	3.9	(2.8)
Merit Goods	10.2	12.5	14.3	–
Education	5.7	4.9	5.2	7.8
Health	3.7	4.7	6.8	10.7
Housing	0.4	2.4	1.4	(1.7)
Social Services	0.4	0.5	0.9	–
Income Maintenance	7.8	6.9	16.7	–
Pensions	6.7	4.7	12.6	12.7
Sickness Benefits	0.1	0.1	0.6	(0.3)
Family Allowances	0.5	1.6	1.2	(1.2)
Unemployment Benefits	0.4	0.4	1.4	.6
Other	0.0	0.0	0.9	(3.7)
Economic Services	3.2	6.0	4.9	(4.7)
Capital Transactions	0.7	3.6	2.0	–
Subsidies	0.2	1.2	1.6	–
Other	2.3	1.1	1.3	–
Uncategorized Spending	–	–	–	14.6
Public Debt Interest	2.7	3.6	2.2	–
Balancing Item	0.5	1.3	4.4	–
Net Lending	-0.2	-4.4	-3.9	–

*Figures for U.S. are 1979.

+ Figures for Sweden in( ) represent national spending only and so are not directly comparable. All other figures are aggregate national and local.

Source: OECD. ***The Role of the Public*** Sector, and OECD data from various sources for Sweden.

First, we see that the U.S. spends the highest share of its GDP on public goods (primarily defense), but a relatively small share on merit goods, income maintenance, and economic services (infrastructure investment, subsidies, and other spending to promote economic development) relative to Japan, Germany, and Sweden.

Under the category of merit goods, the U.S. spends more on education (5.7

percent of GDP) than the other three categories combined (4.5 percent of GDP for health, housing, and social services). In spite of this high commitment to education, the U.S. is still outspent in this category by Sweden by roughly 50 percent (7.8 percent of GDP). Japan's spending on education in 1981 stood at 4.9 percent of GDP and Germany's at 5.2 percent.

Accurately assessing relative education expenditure requires taking the size of the school-age population into account. Table 4.9 shows public expenditure per pupil as a percent of GDP per capita, using GDP per capita as a measure of a society's ability to pay for education. Looking at the period 1971 to 1980, we find that accounting for school-age population doesn't substantially alter our earlier results. Sweden spends the highest share of its per capita resources (36 percent in 1980) followed by the U.S. at 20.8 percent with Germany and Japan not far behind at 18 percent and 17 percent, respectively.

TABLE 4.9

Public Education Expenditure Per Pupil as a Percent of GDP Per Capita, 19714980

	U.S.	Japan	Germany	Sweden
1971	**21.9**	**19.4**	19.8	**36.9**
1975	**21.7**	**18.5**	**20.9**	**32.5**
1980	**20.8**	**18.0**	17.0	**36.0**

Source: OECD, *Educational Costs, Expenditures and Financing: An Analysis of Trends.*

Of course, simply comparing levels of education spending cannot answer the more difficult question of how well each country is educating its youth. An international evaluation of competence in reading, mathematics, and civic education shows the U.S. ranking behind Japan, Germany, and Sweden in mathematics and civic education for high school students and behind Sweden in reading.9

One explanation of the poor performance of U.S. students is that a higher proportion (78 percent) of students in the U.S. continue into secondary school, whereas in other countries secondary school is more elite. While this may partially explain the superior performance of German and Swedish students, it cannot account for the superior performance of the students from Japan, where a high proportion of students continue into secondary school (70 percent).[10]

In the area of health, Sweden, Germany, and Japan all spend a greater share of national resources than the U.S. The United States is the only one of our four countries without a system of national health care. Table 4.10 shows the percentage of the population of each country that is eligible for medical services under a public scheme.

TABLE 4.10
Percentage of Population Eligible for Different Medical Services Under A Public Scheme, 1983

	U.S.	Japan	Germany	Sweden
Hospital Care	40	100	95	100
Ambulatory Services	25	100	92	100
Pharmaceuticals	10	100	92	100

Source: OECD, Measuring *Health Care.*

In Japan and Germany, all citizens are eligible for public health services in hospital care, ambulatory (out-patient or walk-in) services and pharmaceuticals and in Germany over 90 percent of the population is eligible for all three categories of medical services. In contrast, only 40 percent of U.S. citizens are eligible for public health services in hospitalization, only 25 percent for ambulatory care, and only 10 percent for pharmaceuticals.

The U.S. government also provides the least assistance for health care financing, whether public or private. Table 4.11 shows that in 1982, the U.S. public share of total health care financing was 48.5 percent, compared with 71.6 percent in Japan, 80.6 percent in Germany, and 91.8 percent in Sweden.

TABLE 4.11
The Public Share in Total Health Care Financing, 1960-82

	U.S.	Japan	Germany	Sweden
Percentage of Total:				
1960	(29.7)*	60.1	66.1	72.6
1970	41.3	64.8	75.7	86.0
1980	49.4	72.6	81.0	92.0
1982	48.5	71.6	80.6	91.8

* U.S. figures include tax expenditures which add approximately 5-6 percentage points to the total. The figure for 1960 is the source author's estimate.

Source: Poullier, Jean-Pierre, "Levels and Trends in the Private-Public Mix of the Industrialized Countries Health Systems," 1986, p. 7.

Housing is another area where Japan, Germany, and Sweden each devote a higher share of national resources through public spending than does the U.S.. The range of public sector involvement has varied significantly. The different approaches taken by Sweden, Germany, and the U.S. are apparent from Table 4.12 which shows housing starts by type of builder for 1971. While the information is dated, the differences in type of builder in 1971 are fairly representative of differences in housing policy since World War II. Whereas the United States has relied primarily on the private sector to build its housing stock, Germany and Sweden have relied on an intermediate sector of non-profit local institutions. As in the U.S., the government role in Japan, Germany, and Sweden is concentrated on financing and subsidization.

TABLE 4.12
Housing Starts as a Percentage of Total Housing Stock
By Type of Builder, 1971

	U.S.	Germany	Sweden
Type of Budder:			
National County, and Local Governments	2.0	2.4	3.7
Quasi-Public Bodies	–	30.6	56.7
Private Builders	98.0	67.0	39.0

Source: Heidenheimer, Heclo, and Adams, *Comparative Public Policy,* p. *72.*

For income maintenance, Germany and Sweden spend more in every category, even without the addition of Sweden's local government spending. Japan spends as much or more than the U.S. in every category except pensions.

The information presented in Table 4.13 gives a sense of how social spending

TABLE 4.13
Share of Government Spending Going to Major Social Programs
1970-1981*

		U.S.	Japan	Germany	Sweden
Education					
	1970	19.4	19.6	9.3	16.5
	1976	17.9	18.7	9.8	12.7
	1981	16.0	17.7	9.1	12.0
Health					
	1970	8.5	15.2	11.4	14.3
	1976	10.8	14.8	12.9	17.3
	1981	16.0	14.5	12.7	16.6
Pensions					
	1970	16.1	6.2	23.5	14.4
	1976	20.8	14.1	31.1	17.7
	1981	21.3	17.9	29.1	19.7
Unemployment Compensation					
	1970	1.3	1.4	0.8	0.6
	1976	2.9	1.8	2.3	0.5
	1981	1.8	1.7	3.1	0.9
Other Social Expenditure					
	1970	2.2	5.5	13.2	7.1
	1976	7.0	8.2	14.9	9.3
	1981	9.2	7.3	14.5	6.8
TOTAL					
	1970	47.5	47.9	63.2	52.9
	1976	59.4	57.6	71.0	57.5
	1981	59.5	59.1	68.5	56.0

*1981 figures are 1980 for Sweden and 1979 for the United States.

Source: OECD, unpublished report, 'Educational Costs, Expenditures, and Financing: An Analysis of Trends." May, 1986.

priorities changed from 1970 to 1981. In all four countries, the share of total public spending devoted to education declined, primarily as a result of declining school enrollments. On the other hand, as each country's population has aged, spending for pensions generally went up, even in Germany where it has always been high. The expansion of medical care benefits for the elderly in the U.S. also caused the share of the budget going to health to almost double.

The priority given to defense in U.S. government spending clearly emerges in a comparison of research and development spending. Table 4.14 demonstrates that whereas defense comprises 49 percent of U.S. R&D spending, it comprises only 5 percent of Japan's, 19 percent of Germany's, and 33 percent of Sweden's.

TABLE 4.14

Government Spending on Research and Development By Major Objective*

	U.S.	Japan	Germany	Sweden
Defense	49.0	5.0	19.0	33.0
Industrial Productivity	0.4	13.0	15.0	10.0
Agricultural Productivity	2.0	0.0	3.0	3.0
Energy	10.0	19.0	21.0	12.0
Health	12.0	7.0	6.0	11.0
Advancement of Knowledge	4.0	0.0	9.0	5.0
Other (e.g. space, telecommunication, environment)	23.0	25.0	27.0	26.0
	100.0	100.0	100.0	100.0

*Does not include general support to universities.

Source: Piekarz, Thomas, and Jennings, p. 263.

Table 4.14 also points out the exceptionally low share of U.S. government R&D spending which is devoted to industrial productivity:: only 0.4 percent of the R&D budget compared to 15 percent in Germany, 13 percent in Japan, and 10 percent in Sweden. The attention Japan gives to energy R&D reflects its heavy dependence on outside sources of energy and a desire to be more energy independent. Japan's zero percent share of R&D going to advancement of knowledge reflects a focus on product development rather than basic research."

Under economic services, which includes infrastructure investment and other spending to promote development, the U.S. again ranks at the bottom, devoting just over half the resources that Japan does.

Because the U.S. devotes a lower level of public spending to economic services and civilian research and development, it is not surprising that the government contribution to investment is also the lowest of our four countries. In 1982, the U.S. government share in total national investment was only 9.2 percent, compared to 13.9 percent for Japan, 16.6 percent for Sweden, and close to 20 percent for Germany.

TABLE 4.15
General Government Share In Gross Fixed Investment

	U.S.	Japan	Germanv	Sweden
Current Prices				
1960	15.1	12.8	na	14.6
1970	14.4	17.3	12.6	21.4
1975	13.3	17.9	16.3	15.7
1980	10.0	15.5	19.5	16.6
1982	9.2	13.9	19.8	16.6

Source: OECD, *The Role of the Public Sector.*

Finally, it is important to note that the degree of government involvement in the economies of Japan, West Germany, and Sweden is understated by spending comparisons because they do not include the activities of public enterprises. Table 4.16 exhibits the degree to which each country has an ownership share in different industries.

The U.S. has the lowest share of public ownership, wholly owning only the Post Office with a quarter interest in electricity and railways (including Conrail which is about to be sold). Japan has greater involvement than the U.S., but not by a wide margin. Japan has concentrated its ownership in the traditional areas of posts, telecommunications, and railways, although it is currently privatizing parts of its telecommunications. It also owns a quarter interest in airlines.

TABLE 4.16
The Extent of Public Enterprise
(Percentage of Public Ownership)

	U.S.	Japan	Germanv	Sweden
Industry:				
Posts	100	100	100	100
Telecommunications	0	100*	100	100
Electricity	25	0	75	50
Gas	0	0	50	100
Oil Production	0	na	25	na
coal	0	0	50	na
Railways	25	75	100	100
Airlines	0	25	100	50
Motor Industry	0	0	25	0
Steel	0	0	0	75
Shipbuilding	0	0	25	75

* Japan is currently in the process of privatizing part of its telecommunications.

Source: Chandler and Trebilcock. Original source: *The Economist,* December 30, 1978, p. 39.

Germany's public enterprise is more extensive. It includes 100 percent of its airline as well as its railways. The government also owns a quarter of the shipbuilding and the motor industry. In more traditional areas, Germany has full ownership of posts and telecommunications and a somewhat less, but still substantial, interest in utilities.

Like Germany, Sweden owns 100 percent of its posts, railways, and telecommunications. It also owns all of the gas industry, half of coal, and a three-quarter share of both steel and shipbuilding.[12]

V. CONCLUSION

Our examination of the relative economic performance and public sector spending in the United States,' Japan, West Germany, and Sweden leads us to three main conclusions:

First, the evidence fails to support the assertion that public sector spending is a burden on the economy.

Japan has had rapid economic growth at the same time that its public spending has also increased rapidly and it currently devotes a higher share of its national resources to civilian public spending than does the United States. Germany and Sweden have consistently had higher levels of public spending than the U.S. and have both generally outperformed the U.S. on the basis of a comprehensive array of economic indicators.

Second, we *need both public and private investment for economic dynamism and an improved quality of life.*

Modem economies are mixed economies and the activity of the public sector must complement that of the private sector, and vice versa. Investments in human capital and infrastructure are two key ingredients in our ability to compete effectively in the world economy. Investments in health care, social services, and other public amenities ensure that all of us are able to fully enjoy the benefits of economic growth. An adequate, competent public sector is essential for economic growth and efficiency.

Third, the real issue is not whether government has a vital role to play, but what that role should be.

Particularly now that the United States faces challenges from nations which are willing to use their governments to support an international market strategy, the U.S. must determine how to use its public sector resources creatively. If we allow our economic dynamism, and the social benefits it brings, to be hobbled by an outmoded "laissez-faire" ideology, we will all be the losers.

ENDNOTES

1. Gross Domestic Product is a measure of the total national output of goods and services available to the economy. GDP differs from GNP in that it excludes net property income from abroad, whereas GNP includes this.

2. OECD. ***Living Conditions in OECD Countries,*** OECD, Paris, 1986.

3. For comparison of Sweden and the United States, see Magaziner and Reich, ***Minding America's Business, p.13.*** For comparison of Japan and the United States, see Economist staff, "Richer than You," ***The Economist.***

4. OECD. ***Purchasing Power Parities and Real Expenditures in the OECD,*** OECD, Paris, 1985.

5. OECD, ***Economic Surveys 1985/1986***, OECD, Paris, 1986.

6. Kuttner, Robert, ***The Economic Illusion*** (Boston: Houghton Mifflin Co., 1984), pp. 68-77.

7. IBID.

8. Vogel, Ezra, ***Japan as Number One.***

9. Tyler, Ralph W. "The U.S. vs. the World: A Comparison of Educational Performance," ***Phi Delta Kappan***, January 1981, Vol. ***62 No. 5.***

10. IBID.

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12. Chandler and Trebilcock, in ***Economics of Industrial Policy and Strategy,*** University of Toronto Press, Toronto, 1986, p. 173.

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