

**The
Planetary Product
in 1980:**

A Creative Pause?



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Prefatory Note

The views and conclusions in this report are solely the author's and should not be interpreted as representing the official opinion or policy of the US Government.

In compiling my figures on world output, I have made use of a "Third World Supplement" to adjust for the substantial understatement of economic activity in the poorer regions of the globe. This adjustment is explained in the text (see p. 11) and is reflected in the numerical estimates of the summary. Unless otherwise indicated, figures in the text include the Third World Supplement for less developed countries.

In preparing this paper I have drawn on many sources and have received helpful advice and information from many scholars. To all of them my warmest thanks, in particular to [redacted] who reviewed and edited the manuscript carefully and understandingly. As to the errors and shortcomings that undoubtedly mar my report: mea culpa!

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The Planetary Product in 1980: A Creative Pause?

Summary

This latest edition of a one-man effort to assess the world's total output over three decades encounters numerous factual, conceptual, and methodological hurdles. Part I describes these difficulties, explains the meaning and reliability of the detailed statistical tables, and examines the relationships between a hard-to-grasp reality and its representation in figures. Part II considers the political and economic influences that have led to wide regional differences in growth.

Even counting recent years of economic sputtering, the past third of this century has proved a period of unprecedented luxuriance. Much of it has been beneficial, some of it problematical. In 1980, according to this report, 4.5 billion people shared a planetary product of \$11.3 trillion, or \$2,500 per capita. (See table 1; all figures in this report are in 1980 US dollars, unless otherwise stated.) From 1950 through 1980 the planetary product quadrupled in real terms, rising at an average annual rate of 4.6 percent. Meantime, world population grew about 2 percent annually, or to 1.8 times its 1950 level. This has meant an average per capita increase in output of 2.6 percent per annum; thus, per capita output slightly more than doubled in the 30-year period. All these rates represent a historical quantum jump over preceding decades and centuries. How did demographic and economic development interact? In advanced countries modest population increase was not a drag on economic expansion; in backward areas the population explosion definitely retarded the well-being of the masses.

The level of well-being and the rate of advance differed by period, by region, and by individual nation-state. The planetary product grew at 4.8 percent in the 1950s, accelerated to 5.2 percent between 1960 and 1973, then fell back to 3.3 percent—all high rates by historical standards. We are now probably in a “creative pause” rather than in the transition from a long boom to an era of sluggish growth.

In the economic marathon, nations performed at different speeds with variations over time. The United States with a 3.3 percent average annual rate of growth over 30 years was somewhat below the world average. This was a reversal of the long-term American record before the First World War. Then the US economy grew by an above-average yearly rate of more than 4 percent; by the turn of the century it was the largest unit in the world economy with a share in the planetary product of almost one quarter.

Table 1**The Planetary Product, 1980: Summary Figures
(GNP/GDP includes Third World Supplements)**

	GNP/GDP (Billion 1980 US Dollars)	Share of World GNP/GDP (Percent)	Population, Mid-1980 (Millions)	Share of World Population (Percent)	Per Capita GNP/GDP (1980 US Dollars)
World	11,269.1	100.0	4,487.9	100.0	2,511
Developed countries	8,475.6	75.2	1,185.2	26.4	7,151
Less developed countries	2,793.5	24.8	3,302.7	73.6	846
Non-Communist countries	8,792.4	78.0	2,962.2	66.0	2,968
Developed	6,655.2	59.1	787.8	17.6	8,448
Less developed	2,137.1	19.0	2,174.4	48.5	983
Communist countries	2,476.7	22.0	1,525.6	34.0	1,623
Developed	1,820.4	16.2	397.4	8.9	4,581
Less developed	656.4	5.8	1,128.3	25.1	582
NATO countries of which:	4,951.9	43.9	578.5	12.9	8,560
United States	2,556.7	22.7	227.6	5.1	11,231
France	504.9	4.5	53.6	1.2	9,420
Germany (Federal Republic)	642.8	5.7	61.3	1.4	10,487
Italy	303.5	2.7	57.2	1.3	5,308
United Kingdom	297.6	2.6	55.9	1.2	5,323
Warsaw Pact countries	1,748.1	15.5	375.0	8.4	4,662
USSR	1,280.1	11.4	265.5	5.9	4,822
Bulgaria	29.9	0.3	8.9	0.2	3,368
Czechoslovakia	85.0	0.8	15.3	0.3	5,540
Germany (Democratic Republic)	99.6	0.9	16.8	0.4	5,945
Hungary	39.4	0.3	10.7	0.2	3,664
Poland	124.9	1.1	35.6	0.8	3,511
Romania	89.3	0.8	22.2	0.5	4,015
OPEC countries	559.7	5.0	335.4	7.5	1,669
Japan	955.3	8.5	117.0	2.6	8,163
China (Mainland)	591.7	5.3	1,032.1	23.0	573
India	302.1	2.7	680.1	15.2	444

Note: The dividing line between developed and less developed countries in this report is a 1979 per capita product of \$2,245 (excluding Third World Supplements), expressed in constant dollars of 1980 purchasing power. This is roughly equivalent in purchasing power to the \$1,000 divide established in this series in 1967 (see the text, p. 6). Totals and per capita figures in this table are computed from unrounded components.

It became a managerial-technical inspiration to other advanced economies and, with a hegemonial position after the Second World War, its modes of production, distribution, and consumption radiated across other lands. Yet US economic growth remained below that of the rest of the world—not only in the interwar period with its Great Depression. In the 1950s the US rate versus that of all other countries was 3.2 percent versus 5.4 percent; between 1960 and 1973, 4.0 percent versus 5.6 percent; from 1973-80, 2.1 percent versus 3.6 percent. The American share in the planetary pie, during the war perhaps 40 percent to 50 percent, dropped by 1980 to 22.7 percent, close to the percentage of 1900. Do these rates inspire a feeling of *deja vu*? They echo the British experience: growth above the world average during the Industrial Revolution and up to the second third of the past century; afterwards below average.

And there is a third case of a model slowing down. During the Great Depression and again during Khrushchev's years of "growthmanship," the USSR had been a wonderment—and not only for confirmed Communists. But in the three subperiods just mentioned its average annual growth rates declined from 5.9 percent to 4.9 percent to 2.7 percent.

The circumstances responsible for growth variations by country and period can be grouped into seven categories. Some of them are mutually exclusive; most of them may be present in combination with others.

First, the degree of resource utilization differed, normally as a result of cyclical fluctuations. In quite a few postwar years American rates were depressed by recessions, mild though most of them were. During the 1950s, the West European countries, Japan, and others expanded with the speed peculiar to reconstruction after war. More recently, individual countries have experienced fluctuations in growth rates because of local wars and revolutions, usually followed by periods of rehabilitation.

Second, productivity gains or losses, especially as a result of changes in management and technology, have been of key importance. Managerial-technical developments—with the United States the leading innovator and others taking over American achievements—remain a crucial source of economic growth. Advances of this kind are hard to quantify since productivity, i.e., output per unit of inputs, is a residue or even an open-ended miscellany, while advance in knowledge is even a residue within the residue and a miscellany in the miscellany. Productivity measures are illustrative rather than precise.

Third, the extent of liberalization or obstruction of international flows of goods and services has changed among countries and from period to period. With the United States shedding much of its previous protectionist inclination, trade liberalization has prevailed through most of the postwar period. Economic expansion profited from a climate of freer trade and greater financial mobility. This is exemplified by the European Community, by Japan, and by many less developed countries, above all by the so-called New Industrializing Countries (usually including the Republics of China and Korea, Hong Kong and Singapore, Greece and Portugal, and Brazil and Mexico). The experience of the New Industrializing Countries attests to the success that market economies can achieve through a dynamic and inventive use of the worldwide division of labor. Recently, however, protectionism seems to be staging a comeback as the result of a rash of global economic difficulties.

Fourth, growth performance has reflected differences in inputs of labor, capital, and land. Economic growth has been registered under widely varying circumstances, e.g., with productivity gains compensating for small inputs, with both inputs and productivity soaring, and with massive inputs boosting output in the absence of productivity gains. The United States expanded up to 1973 through sharp increases in productivity but with small additions to inputs. Japan achieved its sensational growth with a combination of productivity gains in a creative adaptation of the American model and extraordinary and well-directed increases in physical and human capital (made easier because the United States took care of the country's defense needs). The USSR owed its GNP growth to massive increases in inputs while productivity improved little; it even declined in recent years. The current *mal Russe* is easily explicable in terms of the competition of military outlays with investments in new productive equipment and methods; diminishing returns in the production of primary goods; the limitations on growth in the labor force caused by low birth rates in previous years; and the need to bolster sagging morale with offerings of consumer goods.

Fifth, "resource power" or the lack thereof has figured in the fortunes of some countries. OPEC's apex is a prime example of the successful exploitation of raw material resources on a market ripe for cartel action under auspicious political circumstances, namely, superpower rivalry for the support of small countries. To judge from shaky statistics, the 13 OPEC members in 1980 had more than 10 times their combined GNP of 1950. But the case of Iran shows that enrichment may have its own drawbacks.

Sixth, there is the distortion of rates of economic growth and productivity because of variations or vagaries in statistical procedure. Examples: in the case of government activities and some other service sectors, productivity gains may be undercounted and increasing capital intensity may not be captured in the data; economic growth may be exaggerated, on the other hand, as long as environmental damage is neglected.

Finally, the elements enumerated have been strengthened and weakened by forces of cyclical, structural, systemic, and accidental character. Toward the end of the 1950s a hubris developed both in East and West. It was fueled by Khrushchev's boasts that the USSR would soon overtake the United States—boasts given substance by the high Soviet growth rates of the time and by the Sputnik flight in 1957. The United States, in turn, rose to counter the challenge in the economic, space, and military realms. American policymakers subsequently overrated their ability to pay for Great Society programs and a distant war without recourse to inflationary financing and without provoking international currency troubles. An overheated economy in the United States, and in much of the rest of the world, added to OPEC's ability to exploit the energy market in 1973-74. The "oil crunch," in turn, worsened the gathering recession by dislocating key industries and disarranging financial flows. And yet, the Western market economies withstood the slings and arrows of outrageous fortune with a remarkable flexibility and resourcefulness. On the other hand, the Soviet-style command economy—actually favored by the rise in gold and energy prices and the decline of the dollar—responded with the nimbleness of a mastodon; the Kremlin had to face new shortages at home and increased difficulties in its orbit, such as de facto bankruptcy in Poland.

Output in combination with population data can be used as an indicator of world power relations as long as other elements of the game are kept in mind, to wit, leadership, popular moods, geopolitics, military prowess, and Fortune. Our figures show that East-West balances have been more stable than North-South balances. The US-USSR demographic ratio, which in Russia's imperial days, e.g., 1860, was 44:100, rose to 85:100 by 1950 and has not changed since then. The NATO-Warsaw Pact demographic ratio has remained at 155:100. As soon as we compare developed and underdeveloped countries, however, shifts are encountered. The combined populations of NATO plus Warsaw Pact as a share of mankind declined from 27.2 percent in 1950 to 21.2 percent in 1980; by the year 2050, only one lifespan away, the percentage may drop to 11 percent—or even lower if bear and eagle devour each other with nothing left but their tails.

The US-USSR GNP ratio—roughly 250:100 on the eve of both the First and the Second World Wars—was 300:100 in 1950 and declined to 200:100 by 1970; since then it has not appreciably changed. The GNP ratio between NATO and the Warsaw Pact was 355:100 in 1950 and is now 285:100, the difference being chiefly attributable to lower US growth. The American share in NATO's output declined from 59 percent in 1950 to 52 percent in 1980, while the Soviet share in Warsaw Pact output increased from 71 percent to 73 percent. The political implications for the leader's position in each alliance are obvious.

By counting in the US allies in the Pacific and Soviet associates like Cuba, Mongolia, and Indochina, the demographic ratio between West and East increases to 170:100, and the economic ratio—with Japan a heavyweight—increases to 350:100. The Japanese-Soviet demographic ratio has been as stable as East-West ratios in general (now about 45:100), but the GNP ratio has changed dramatically; Japanese GNP, which was 28 percent of Soviet GNP in 1950, had risen to 75 percent of Soviet GNP by 1980.

Statistics are highly uncertain for the People's Republic of China, which harbors about 23 percent of all humankind. We have adopted the estimates which put Chinese GNP at about 45 percent of Soviet GNP, or twice as large as Indian GNP. The implied 30 percent per capita edge of the PRC over India may be on the high side.

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Within the Third World (i.e., the non-Communist less developed countries), India is the largest unit with 31 percent of the population and 14 percent of the combined GNP; the difference between these percentages suggests the dire poverty of the average Indian. The Third World accounts for 2,174 million inhabitants, or nearly half of the world total, and \$2.1 trillion in GNP, or 19 percent of total world output. In both the non-Communist and Communist spheres, the ratio of per capita GNP between developed and underdeveloped nations is about 8:1. OPEC members, ranging from very rich to very poor, have a 7.5-percent share in mankind (two-thirds of this percentage being attributable to Indonesia and Nigeria) and a 5-percent share of the planetary product.

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The Planetary Product in 1980: A Creative Pause?

I. Statistical Preliminaries

This issue of *The Planetary Product* presents, as in previous years, estimates of the nations' product in total and per capita for practically all countries and important groups of countries between 1950 and 1980. The report grew out of a comparison of East-West economic strength in 1949, a time of grave American-Soviet tension. In the 1940s decolonization was already on its way; as it gathered speed, North-South relations became a universal problem. In the 1960s this publication was extended to include North-South comparisons; it became planetary.

Interdependence Between Reality and Its Statistical Reflection

In covering this planet, the author has kept his distance from other celestial bodies, except for a facetious Lorenz curve for the moon after the 1969 Apollo flights. Even so, the reader will quickly note that output calculations over time and space have an Einsteinian quality. The economic concepts and statistical methods employed to grasp an elusive "reality" yield often bewilderingly different results, each of them presumably reflecting the peculiar "true-to-life" assumptions adopted. Insofar as the findings influence the perceptions of public opinion and leadership, the mirrors of reality begin to influence reality itself. To use an overworked expression, an "interdependence" exists between the happenings in the economy and their analysis. (The interplay between reality and perception is still more consequential when military "gaps" between powers are calculated and acted upon.) Since major findings of this report are briefly enumerated in the Summary, we turn first to the concepts and methods underlying the statistics and then, in a second part, to a more detailed discussion of the substantive results.

General Remarks on Statistics

Comparative statistics should ideally be constructed with exactly the same concepts and methods. For example: one should measure output either (a) in terms of gross domestic product (GDP) in purchasers' values or at factor cost or (b) in terms of corresponding data for the gross national product (GNP); one should move national statistics over time with a specific type of deflator; and one should convert national values into dollars with a single rate of exchange for each currency or, if the official or market rates are problematical, at purchasing power parities of a given definition and composition. The statistics in this report do not match these ideal specifications. As will be noted on subsequent pages, different approaches could not be avoided, either because the desired figures are not available and it would be far too time consuming to replace existing figures with estimates, or because the method used in general did not yield a reasonable result in a specific case.

This leads to a related situation, which must be openly confronted. Occasionally the statistician faces a dilemma. Either he puts up with conclusions inherent in the underlying materials and lets the chips fall as they may (in this case the chips off the old Block), or he cannot reconcile himself to findings strongly at odds with his picture of "reality" and so, his eyes in a fine frenzy rolling, he tinkers with the figures. I do not believe that any statistician escapes this dilemma entirely. I favor an occasional tinkering, provided the tinker puts his cards on the table and lets the readers judge.

The observer of the global economic scene must be alert to the manipulation of statistics for political or ideological reasons. The greater the role of government in the economy, the greater the temptation for

statistical offices to accommodate the policymakers, and the greater the need for control and for checks and balances. This warning applies even to countries with a respectable tradition of objective reporting. Farther down the line one can only wonder. On one little developed country it was reported that statistics are made ad hoc according to expectations.

In many nation-states a sizable part of economic activity consists of illegal or extralegal activity that normally is not captured in official statistics. The extent of this "second economy" is largely a function of the scope of government. Centrally planned economies (CPEs) almost inevitably have a large second economy. The second economy in the USSR is probably second to none.¹ But the scope of the "second" or "parallel" or "hidden" economy is growing also in mixed economies. Some of these activities are meant to escape taxes and similar levies, others trade in goods and services under prohibition for health and moral reasons. In one Caribbean country, marijuana shipments are said to exceed all legal exports. Needless to say, the extent of surreptitious outputs and sales is uncertain. Given the sometimes titillating circumstances of the transactions and their detection, reports may well exaggerate the volume of activity.

In a worldwide survey covering a third of a century, many data are estimates or even outright guesses. This is particularly true of states that restrict the publication of information; possess only a limited statistical know-how; and face extensive social turmoil (such as Lebanon or Iran); also, data for the earlier years in our tables are less solid than for the later years. I remarked in a previous report that what is to the right of the decimal point is usually beside the point. What is to the left is occasionally almost as bad. Yet our demographic figures in the appendix tables are represented in thousands; total product, in millions of dollars; and per capita product in dollars. They do not indicate precision; they were presented because in totaling up or extrapolating figures too much rounding off distorts the results. In the appendix table showing shares of the planetary product and

¹ See Gregory Grossman's well-reasoned "Notes on the Illegal Private Economy and Corruption" in the Joint Economic Committee report *Soviet Economy in a Time of Change*, vol. 1, pp. 834-855, Washington, D.C., 10 October 1979.

population, the two decimal places reflect only a desire not to let the smaller countries drift into the statistical limbo of "0.00"! Even this heroic measure fails to provide a significant figure for the products of Belize and The Gambia; and it leaves us with anomalies such as Qatar, the country with the highest per capita product, not registering in the population-share table.

The dollars used in this report reflect their 1980 buying power, unless otherwise stated. The revised official US deflators for gross national and domestic product indicate between 1978 and 1979 a price rise of 8.5 percent, for 1980 over 1979 of 9 percent (the consumer price index rose in each year by 11.3 percent). For conversion of 1979 dollars to 1980 dollars, the less rounded (not necessarily more exact) factor of 1.0896 has been used.

All the data for 1980, official or not, are preliminary and will undergo some revision in the course of 1981 or even thereafter (everything in life is preliminary). Revisions published in recent weeks for 1980 or earlier years were taken into account as much as possible either in the tables (e.g., US population figures increased in the wake of the 1980 Census) or in the text (such as recalculated estimates for US national accounts and new census data for Indonesia and Brazil).

Communist and Non-Communist: A Problematical Distinction

Political nomenclature shares the unstable character of the human species. Animals and plants transform themselves over aeons, political bodies in a matter of years. Their ever changing groups affect even the meaning of geographic designations. Western Europe, for instance, used to describe European countries bordering the Atlantic; now the term often includes Finland (lying to the east of Poland) and Turkey (97 percent in Asia Minor). Israel, a country entirely in Asia, is shifted to "Europe" in UN population statistics. Another Asian country, Indonesia, in its character thoroughly Asian, becomes in the *World Bank Atlas* part of Oceania, a name that we limit to two large island nations (colonized by Europeans) and

assorted small isles. Japan belongs in modern lingo to the "West," Cuba to the "East." This report began 32 years ago as a comparison between East and West in the context of postwar political rivalry; it still uses the expressions East and West, irrespective of what the magnetic needle shows, as synonyms for Communist and non-Communist.

The latter pair of designations has its own problems as a global subdivision. It was appropriate 30 years ago when (with the sole exception of Yugoslavia after the 1948 break with Moscow) the entire Communist world was identical with the Soviet Bloc and as such in a not exactly splendid isolation from the outside world. But the term non-Communist was never satisfactory, because a negative was used to cover a great variety of mainly positive political and economic structures embracing two-thirds of mankind and four-fifths of its product. Any justification for this label must turn to Spinoza's "*omnis determinatio negatio*" (every definition must be negative). The negation indicates the diverse character of countries that were not created in the Soviet image and thus do not exhibit the combination of institutions and policies peculiar to the USSR. These characteristics include the "centrally planned economy" that the United States and the World Bank highlight in their classifications. Indeed, Communist countries do their level best to own and administer practically everything and to regiment everybody, market forces playing a subsidiary role except on the thriving gray and black markets. But this economic system is blended with an ideology in the name of Marx and a governance in the name of Lenin; with the help of the police, a self-appointed leader or leaders dominates a one-and-only party, the government apparatus, trade unions, and the enterprises. Some of these features can be found in various countries of the "non-Communist" world; their deliberate combination makes a country Communist. But a common system does not prevent humans from starting quarrels among themselves. From a political angle the entries at the end of appendix table 1 tell the current story better than a division between Communist and non-Communist. They provide data for:

- The Western camp, i.e., the whole of NATO and our "Pacific Allies," namely Japan, Australia, New Zealand, and the Republics of China and Korea.

- The People's Republic of China, in isolation, though former Secretary of Defense James R. Schlesinger has called it the 16th member of NATO.
- The Eastern camp, i.e., the members of the Warsaw Pact (the East European Mutual Assistance Treaty) and other Soviet associates (Mongolia, Cuba, and Vietnam, which, in turn, has a hold over Kampuchea and Laos).

On both sides we find mugwumps, a role much more difficult in the East than in the West. Among Communist countries the People's Republic of Korea appears to sit on the fence, and Albania manages to sit in judgment over all the rest as the only outfit truly Communist. We do not classify as "Communist" Soviet-occupied Afghanistan and several countries in Asia (such as the People's Democratic Republic of Yemen, Aden), in Africa (Ethiopia, etc.), and Latin America. These may or may not become Soviet-type Communist countries within Moscow's realm. Some of them may disentangle themselves from the Soviet connection, as did Chile in 1973 after three ruinous years of "Marxist" rule under Allende. However, the brittleness of alliances is not limited to one side.

In all the attached tables, the term "Communist" or "non-Communist" refers to the status of a country in 1979, likewise the lines labeled NATO, Warsaw Pact, OECD, European Community, or OPEC (the Warsaw Pact was formed in 1955; the EC, then six members, in 1958; OPEC in 1960; etc.). Cuba fell under Castro's rule in 1959 and soon became Communist. The Socialist Republic of Vietnam conquered South Vietnam in 1975 and Laos and Kampuchea at about the same time. The exclusion for the year 1950 of Cuba, South Vietnam, Laos, and Cambodia would reduce the combined national products of "Communist" regions by less than 2 percent, their population by less than 3 percent. Between 1960 and 1974, with Cuba Communist, the economic difference is 0.5 percent, the demographic difference 2 percent. In other words, including these countries under "Communist" in years when they were still non-Communist makes hardly any difference in a comparison of the two camps.

But the other "Soviet associates" are not to be overlooked as adjuncts to the Warsaw Pact. Together with Mongolia they increase the Warsaw Pact product by a mere 2 percent but the Warsaw Pact population by 20 percent, the latter percentage chiefly because of the large number of Vietnamese. Economically Cuba and Indochina are a drain on the USSR (and Kampuchea and Laos on Vietnam); the Kremlin must consider the cost worth the strategic advantages in its power game with the United States and the PRC. The importance of the Soviet associates as political opportunities (as well as risks) greatly exceeds their significance in economic or even in demographic terms.

The Communist world has its own North-South tension; in fact, the Sino-Soviet rivalry appears at times more virulent than the East-West conflict. This report lists as "developed Communist countries" the seven members of the Warsaw Pact plus Yugoslavia; all other Communist countries, with the PRC providing the bulk, are considered "less developed."

Developed and Less Developed Countries—Another Troublesome Pair of Concepts

This leads to the second main subdivision, namely between developed and less developed countries. The concepts represent a euphemism hiding embarrassment. After all, it would be most impolite as well as impolitic to divide the world into advanced and backward nations; it would also subordinate the latter's cultural qualities to a classification derived from the dismal science. In a desire to avoid judgments on spiritual, social, and political values, I established in the *Planetary Product* report for 1967 a divide of \$1,000 product per capita between developed and less developed countries. At 1980 prices the \$1,000 has risen to roughly \$2,245. For each group, I established three subgroups (see the brackets in table 2). Because the 1980 GNP/GDP data are still relatively fluid, the ranking of countries by per capita product is based on 1979 product expressed in 1980 dollars.

As time passes, nations may change their rank within a bracket or move from one group to another. Many nations manage to overcome their underdevelopment—after all, in past centuries all mankind was

underdeveloped—and join the club of developed nations. The transition involves not just passing a magical statistical point, but moving through a lengthy period of wrenching social adjustments. In our list Argentina is still carried as "less developed," while Spain has been considered "developed" for about 10 years. Their economic character is basically not different, except that Argentina has lingered on its present level for many years; Spain, on the other hand, has expanded rapidly. Hong Kong moved into the developed ranks around 1970, Greece by 1972. On the Communist side, Poland crossed the divide in 1966, Bulgaria and Romania roughly one year later, and Yugoslavia in 1973.²

Certain cases do not easily fit into this scheme of things. South Africa's product per capita is clearly below the divide, but the country has a dual economy, one part modern and affluent, one part backward and indigent. India likewise has a sizable modern sector, yet it does not elevate the country into the realm of a developed economy; the same is true of South Africa in its entirety. In other instances, a few countries with material resources much in demand have soared into a category of super-rich nations without a corresponding change in the mores and technical skills that accompany development. It is misleading to say that oil-producing Qatar or phosphate-producing Nauru have "overtaken" the American per capita GNP; Beverly Hills, California, or Chevy Chase, Maryland, would be in the same position if they were to declare their independence. These countries are statistical curiosities; their sovereignty gives them an influence in world affairs that they could not claim if they were counties or colonies.

A backward country does not necessarily become advanced in the wake of a sudden bonanza—the lucre may lead not to true development but to waste and strife; nor does a developed country become underdeveloped during a few years of internal or external hostilities. Advanced countries are usually capable of staging a strong comeback when peace is restored, though it is thinkable that in a peculiar case the

² The GNP figures for non-Soviet Warsaw Pact countries were calculated by Thad P. Alton and Associates of the Research Project on National Income in East Central Europe in *Economic Growth in Eastern Europe* (Occasional Paper OP-59, New York, 1980).

Table 2**Number of Independent States,
by Region and Major Category, 1980^a**

	North America (US, Canada)	Latin America	Europe	Asia	Africa	Oceania	Total
World	2	30	35	37	51	11	166
Non-Communist Countries	2	29	26	31	51	11	150
Developed	2	4	24	10	2	3	45
With 1979 per capita product of:							
\$6,733 or more	2		14	5	1	2	24
\$4,489-6,732		1	3	1		1	6
\$2,245-4,488		3	7	4	1		15
Less Developed		25	2	21	49	8	105
With 1979 per capita product of:							
\$1,123-2,244		10	1	4	4	1	20
\$562-1,122		11	1	5	6	5	28
\$561 or less		4		12	39	2	57
Communist Countries		1	9	6			16
Developed			8				8
With 1979 per capita product of:							
\$6,733 or more							0
\$4,489-6,732			3				3
\$2,245-4,488			5				5
Less Developed		1	1	6			8
With 1979 per capita product of:							
\$1,123-2,244		1					1
\$562-1,122			1	2			3
\$561 or less				4			4

^a The determination of status as "developed" or "less developed" and the related per capita product categories are based on 1979 product (excluding Third World Supplements) expressed in 1980 US dollars. This table includes 26 independent states distributed among the "sundry" groups shown in the appendix tables and excludes Puerto Rico, Hong Kong, and Belize.

population may get stuck in the quagmire. To give several different examples: Venezuela (per capita product 1960, \$2,120; 1980 about \$3,400) appears headed toward a reasonably sound expansion. Iran (1960, \$850; 1977 \$3,290; 1980, a guessed-at \$1,460) had managed its wealth badly. West Germany was below the divide in the first years after the Second World War, had recovered to \$2,860 by 1950, and

stood in 1980 with \$10,490 per capita GNP as one of the three or four most advanced countries on the globe. Lebanon tumbled from about \$2,060 in 1974 to perhaps half that amount by 1980 and faces a beclouded future; unquantifiable transfers from abroad play a big role in determining Lebanon's well-being.

Demographic Revisions

In 1980, mankind numbered approximately 4.5 billion persons. These multitudes inhabited 166 "independent" or "sovereign" states (see table 2) and a few dozen dependencies left over from the day of colonial empires. Since my last report, which covered 1978, five more "nations" came into being; several dependencies will become sovereign in the near future. Of all humankind, 58 percent lived in seven countries with a population of more than 100 million each (China, India, the USSR, the United States, Indonesia, Brazil, and Japan); and an additional 18 percent lived in 13 countries with populations between 40 and 100 million. Thus, a number of demographic issues are decisively affected by the nose counts in a few large nations. The difficulties in counting the world's people in an age of rapidly growing population and mass migrations need not be reviewed here. This report adopts the foreign population estimates published by the US Bureau of the Census in its annual volume for the year 1979.³ In addition to extrapolations to 1980, a few figures differ (the major change concerning Saudi Arabia). As to this country, results of the US census of 1980 are included in the tables; the new official figure for 1 July 1980 is 227.64 million, or 2.5 percent higher than had been projected with the help of estimates for the immediately preceding years. In appendix table 2 the difference of 5.443 million people according to the official reading is distributed at a constant rate of growth over the years 1971-79; thus the US 1970 population in the table remains the estimate according to the 1970 census. As is well known, there have been voices charging that not only the old but also the new census undercounted certain minorities and districts. The Environmental Fund, a research organization in Washington, D.C. apprehensive about an overpopulated world, opts for a US population in mid-1980 of 232.4 million. Since immigration, legal and illegal, from Latin America and particularly from Mexico has contributed to raising the 1980 census result, the countries of provenance require demographic downward revisions. Our 1980 population figure for Mexico, 67.4 million, may be too high; the Environmental Fund guesses at 64 million.

³ U.S. Department of Commerce, Bureau of the Census, *World Population 1979*, Washington, D.C., October 1980.

While the US census added 5.4 million people to the world population count, two large nations, Brazil and Indonesia, reduced it apparently by a combined 6.8 million. The Brazilian 1980 census lowers the population total from an extrapolated 121.7 to a recorded 119 million, the Indonesian from 151.2 to 147.4 million, i.e., by over 2 percent in each case. The new figures have at this writing not yet been sufficiently scrutinized to warrant incorporation in this report. If confirmed, the Brazilian per capita product (excluding Third World Supplement) for 1980 would rise from \$2,067 to \$2,113 (at the official rate of exchange); in other words, Brazil is nearing the threshold of a developed country in our definition.

The Indonesian announcement of the first census results contains interesting new insights on the country's natural increase during the 1970s. The Central Bureau of Statistics has lowered its figure not only for 1980 but also for 1970, and this means that the Indonesian population is believed to have grown during the past decade not by 2.1 percent but by 2.34 percent. Does this revision for a typical underdeveloped country suggest that the supposed decline in population growth during recent years was less than what demographers expected? Were the lower birth rates in some countries the result of wishful counting by governments trying to solve their population problem through the statistical offices?

In India a census was conducted in January 1981; the PRC count, repeatedly postponed, may also come to pass. The two countries are inhabited by 1.7 billion people together; demographic uncertainties of even a few percent involve multitudes. The Government of the PRC appears to have underestimated the Chinese population until recently (see *The Planetary Product* for 1978, pp. 21-23) but has now moved close to the median estimate of John S. Aird of the US Bureau of the Census. Aird has devised alternative series which, for 1980, range from 976.9-1,077.3 million; this report uses 1,032.1. Aird's latest revisions reduced the 1978 estimate of 1,003.9 (as quoted in our 1978 report, p. 36) to 997.2 million. At the same time, however, he raised the figure for 1975 from 943 to 949.7 million and, as a consequence, migration being insignificant, the natural increase declined from an

apparent 1.6 percent to 1.25 percent. There is no way to verify either rate; all I can do is append a question mark and hope for better figures after the contemplated census.⁴

Percentagewise the difference between Aird's high and low series for the PRC is plus or minus 5 percent compared to the mean value. Population data for high income OPEC members are quite dubious, since their boom has attracted large numbers of legal and illegal immigrants. Although the US Bureau of the Census (*World Population 1979*, p. 246) features a figure of over 9 million for Saudi Arabia in 1979, I use a more conservative 7.0 million for 1980 and adjust back to the 1970 figure using a constant rate of growth. In small countries like Qatar or Kuwait the natives are now a minority.

What Concept of National Aggregates?

For the purpose of this report I would prefer data in terms of national income, which is the gross national product (GNP) less an allowance for capital consumption and less payments (such as indirect taxes and

⁴ Between 1975 and 1980 population growth in the less developed regions of the world was an estimated 2.2 percent per annum according to UN statistics. In a country like Nigeria the crude birth rate in 1977 was 5.0, the death rate 1.8 percent, in Mexico 3.8 percent and 0.8 percent, respectively (*World Development Report, 1980*, The World Bank, August 1980, pp. 144-145). Some stray figures from a past age put these data in relief. In 1824 the birth rate in Berlin was 3.5 percent, the death rate almost 3 percent, yielding a natural increase of 0.5 percent. Every seventh child was born out of wedlock; half of these little tots died before their first birthday (from a guidebook for Berlin and Potsdam, published in Berlin in 1933, p. 59; facsimile edition, Berlin 1980). Of Naples it is reported that the 1780 census came up with a birth rate of 3.6 percent for the lay population on the tenuous assumption that monks, nuns, and other clerics, representing 5.5 percent of the population, took their vows seriously. If not, the birth rate was 3.4 percent. The death rate is given as no less than 4.6 percent. In other words, Naples had a natural population decrease, *Vedere Napoli e poi moire*. While the Neapolitan census of 1780 is perhaps shakier than the censuses taken all over the world in 1980, death rates exceeding birth rates were at that time a common experience in cities, with frequent epidemics and pathetic health conditions in general. In the 18th century London had every year 6,000 more deaths than births (see the stimulating account in William H. McNeill's *Plagues and Peoples*, New York, N.Y., 1976, p. 275). The deficit was more than offset by in-migration from a healthier countryside. Rural folks filled the city jobs vacated through illness and death—an important difference, as McNeill points out, from the condition encountered in many fast-growing modern cities with unemployed migrants from rural areas in slums.

subsidies) that distort the conceptually correct compensation for labor, capital, and land. However, sets of national income for international comparison are not easily available (depreciation is particularly hard to estimate). So I used GNP data throughout previous reports. I did so because US statisticians had and still have a preference for the GNP concept, not without good reasons. As a result American economists at universities and in government have recalculated the official Soviet, East European, and Chinese aggregates in terms of Western-style GNP by (a) adding services to the Marxist total of Net Material Product; (b) adapting administrative prices to something approaching factor cost prices; and (c) eliminating some distortions in the underlying statistics of those countries.

Gross national product includes all final goods and services newly produced in an economy during the year, i.e., the domestic output of goods and services plus or minus the balance of foreign transactions. This balance includes factor payments from other countries, namely interest, profits, and other earnings from assets abroad, together with earnings of manpower temporarily at work abroad and government receipts from abroad—all of this reduced by corresponding factor payments to the outside world. The gross national product, when adjusted by subtracting net factor payments from other countries, becomes the gross domestic product (GDP). A country with large factor payments abroad thus will have a bigger GDP than GNP, and vice versa. For the world as a whole, such differences cancel each other out (just as emigrations and immigrations); in this respect, the planetary product is a single concept.

Whether one prefers a concept focusing on national availabilities or on domestic output depends on the purpose of one's inquiries. The US Department of Commerce satisfies the needs of individual research undertakings by offering data on all components of the national accounts in their relation to each other. In general, US statistics operate with GNP as a yardstick, as do World Bank statistics in global surveys published in the Bank's *World Development Reports* and its *Atlas*. The UN, in turn, has a

preference for GDP, as has the International Comparison Project (ICP), which is frequently quoted in this report. The ICP is a comprehensive undertaking aimed at calculating purchasing-power parities for as many countries as feasible; it is sponsored by the United States and the World Bank and is directed by Professor Irving B. Kravis who, together with Milton Gilbert, almost 30 years ago devised an improved method to compare the outputs of nation-states.³

Using the UN System of National Accounts (SNA), the OECD is now publishing standardized GDP series in purchasers' prices; the present report, making use of such comparable data for about two-thirds of the planetary product, has switched from GNP to GDP for as many countries as possible.⁴ The main exceptions are the Communist countries; as will be shown presently, use of their GNPs hardly affects an international comparison.

The width of the gap between GDP and GNP depends, first, on the size of the economy. The gap normally is small in countries with vast domestic markets, and contrariwise. It also varies with the intensity of international relations. Since the USSR and likewise the PRC are very large economies with an inward orientation, their GNPs and GDPs cannot be far apart. It hardly matters when we compare their GNPs or GDPs with Western aggregates. The gap must be slightly larger for the East European countries and other associates of the USSR.

In the United States the gap was 0.6 percent of GDP in 1950 and 1.9 percent in 1980. The ratio is small but has grown, as has the ratio of foreign trade to GDP in the US and practically everywhere. The US 1980 gap

³ Milton Gilbert and Irving B. Kravis, *An International Comparison of National Products and the Purchasing Power of Currencies*, Paris, OECD, 1954; extended in a second, 1958 volume. The first major publication under the ICP was *United Nations International Comparison Project: Phase One, A System of International Comparisons of Gross Product and Purchasing Power*, by Irving B. Kravis, Zoltan Kenessey, Allen Heston, Robert Summers, and assistants, published for the World Bank by The Johns Hopkins University Press, Baltimore and London, 1975. Further ICP books and papers are mentioned in Robert Summers, Irving B. Kravis, and Alan Heston, "International Comparisons of Real Product and Its Composition: 1950-77," *The Review of Income and Wealth*, Series 26, No. 1, March 1980.

⁴ The GDPs of OECD members are taken from that organization's *National Accounts of OECD Countries, 1950-1978*, Paris, 1980.

resulted from the margin of factor income (\$79.5 billion), over factor outlays to the rest of the world (\$29.9 billion). In Canada factor payments made GNP 2.3 percent less than GDP; in Switzerland they made GNP 4.3 percent larger than GDP. The divergence between GNP and GDP becomes important in small economies which, whatever their strategic clout, are, so to say, outriggers of a large country. In Djibouti, French activities in various service sectors have been extensive enough to make (in 1976) the country's GDP 3.1 times the size of its GNP. In Saudi Arabia, GDP in 1974 was nearly twice the size of GNP; the ratio declined to 1.2 percent by 1978. Kuwait's GDP is given as 22 percent higher than GNP in 1970 and 9 percent higher in 1974; GDP equaled GNP in 1976-79, according to the data. In Indonesia, on the other hand, i.e., in an OPEC country with a relatively large economy, the GDP was reportedly only 4 percent higher than the GNP in 1973 as well as in 1978. We will return to these OPEC statistics in a later context.

The GDP figures for the United States in appendix table 1 are based on those supplied by the US Department of Commerce to the OECD for its national accounts publications. They were about 4 percent higher than the data the US published with its own definitions until the Commerce Department's recent revision of its national income and product accounts back to 1929.⁷ At the time of this writing, the revised data had not been used to recalculate the GDP series for OECD use. When the new figures are published, the US GDP data presented here may require a slight upward correction. (The preliminary recalculation for the 1979 GDP, SNA concept, is \$2,590.7 billion 1980 dollars as against the old figure of \$2,561.8 billion, i.e., 1.1 percent higher.) From a purely American angle, the difference between the old and the new figures for both GDP and GNP is small. For 1972, the base year for the official US series in constant dollars, the new GDP figure is 0.9 percent higher in constant and current dollars, the GNP

⁷ See the article in the *Survey of Current Business*, No. 12, December 1980.

figure 1.3 percent higher. For 1979, the difference rises to 2.3 percent and 3.6 percent, respectively. Such changes are tolerable in view of the many uncertainties, estimates, and assumptions incorporated in even the most sophisticated and objective national accounts.

But given the size of the American economy, the upward adjustment of its 1979 GDP approximates Finland's GDP; the GNP increase, almost the Danish GNP. Furthermore, the difference raises the US share in the 1979 planetary product by almost half a percentage point. The revision has also increased measured US economic growth (from 1969-79, for example, the new figures show national product up 34.8 percent, compared with 32.6 percent in the old series). The resulting increase in the average annual rate of growth is less than 0.25 percent. The revision slightly accelerates overall growth in the developed West and in the world at large.

While the US GDP figures in our tables could not be changed, the population data take the 1980 census into account. Appendix table 1 shows a 1979 US GDP per capita of \$11,373 dollars of 1980 buying power using the outdated OECD GDP figure and the new population estimate. The 1979 GDP per capita would have been \$11,579 with old data for both population and GDP; with the 1980 census result and the revised GDP calculation it would be \$11,501.

Exchange Rates and Purchasing-Power Parities

The base currency for our planetary comparisons is the US dollar, not so much because this publication views the world from an American point of view, but because the dollar has been and continues to be the universal currency numeraire. Even the Soviet Government compares its net material product with its American counterpart in dollars and, incidentally or accidentally, in a way quite consistent with the series for the USSR in appendix table 1

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Until the monetary crises of the early 1970s, the dollar was overvalued, and since then it has been undervalued, at least through 1980. These currency troubles affect the dollar value of other countries' GDPs or GNPs. An extreme example is the ratio between dollars and Swiss francs. The Swiss GNP in 1970 when converted at the 1970 exchange conversion factor amounted to \$20.51 billion, or, adjusted to 1980 dollars with the US deflator, \$39.80 billion; the Swiss 1980 GNP was \$100.5 billion at the official rate of exchange. During these 10 years the Swiss GNP rose in real terms by an annual 1.1 percent; the seeming increase by an annual 9.7 percent is almost entirely monetary illusion.

Economists dabbling in international comparisons try to get away from exchange rates that, explainable though they are in view of existing money flows and policies, cannot be used to measure adequately ratios of economic activity; comparisons aim at purchasing-power equivalents. But the concept is actually of a twofold nature.

In one definition, two countries are at purchasing-power parity when exporters, importers, and travellers are able to convert their respective currencies so as to sell or purchase roughly the same amount of goods or services in either money. This state of affairs can be approached—rarely reached—through several methods. In a system of fixed rates of exchange, the price levels are expected to fluctuate around the purchasing power parity. With currency rates in a “clean” float (the global float of the past eight years has been exceedingly “dirty,” i.e., managed, and poorly managed at that), the exchange rates tend to adapt to the price levels in the countries concerned. There exists still a third method of determining the rate of exchange, namely a system of strictly regimented foreign transactions with the country's currency legally limited to the domestic market; black market rates at home and abroad would reflect purchasing power parities plus a risk premium for loss of money or loss of life and liberty for those out of luck. Under all these systems, the rates of exchange may at times be close to the purchasing-power equivalent, if only by happenstance.

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Another type of purchasing power parity encompasses not just a limited number of goods and services entering (actually or potentially) international markets but the entire economies of two or more countries. In a laborious procedure, purchasing power equivalents are calculated for each segment within the GNP of two countries; the sectoral results are then built up to two sets of GNP for each country, reflecting the difference in scarcity relations underlying prices here and there. The two sets are reconciled by applying—as in Irving Fisher's Ideal Index—the geometric means between the two (or through a similar method). This procedure was devised, as mentioned before, by Gilbert and Kravis and is now being used for an increasing number of countries by Irving B. Kravis under the ICP. Economists in the Central Intelligence Agency's Office of Economic Research (CIA/OER) have used this method in assessing the level and growth of Soviet GNP; and Thad Alton's group does the same for Eastern Europe.

When two countries on the same level of development are compared, say the United States and Canada, their purchasing-power parity based on goods that are or could be traded internationally is quite close to the parity based on all goods produced in the economies. The two types of parity tend to diverge greatly in a comparison of a highly developed country with an underdeveloped country, say, the United States and India. It was Colin Clark who about 40 years ago explained that exchange rates—which reflect foreign commercial and financial relations—easily understate the real product of less developed nations; he spoke of “oriental” societies. Differences in development exist, of course, not only between countries but also between time periods within one country. When we compare American scarcity relations today with those 100, 50, or even 30 years ago, we discover that the earlier era had, so to say, an “oriental” flavor. The scarcity relations that differ between countries or periods with a higher or lower stage of development are, incidentally, value ratios for goods and services sold and bought on markets. Still a different problem is the degree of monetization in an economy, namely the changing value of goods and services that are produced and consumed by members of the society without the use of money.

Since it is beyond the production possibilities of this one-man planetary effort to calculate purchasing-power parities even for two countries, I have handled the task of converting products of other nations into dollars in the following fashion. I selected, first, official rates of exchange that appeared to conform to the purchasing-power parity, type one. Then I applied Third World Supplements to less developed economies to bring their products closer to purchasing-power parity, type two.

In the first step, I converted the national accounts of OECD members for 1973 into dollars at rates of exchange prevailing in March-April 1973. To obtain values for the years before or after 1973, I extrapolated the GNPs (and now GDPs) of the individual countries backward and forward with their real rates of growth, hoping—somewhat against hope—that the various indexes were correctly deflated. Then I converted the 1973 dollars into the dollars of the respective issue of the *Planetary Product* (in this issue, 1980 dollars) with the help of the US GNP (and now GDP) deflator. For the products of Third World countries, I used the 1976 dollar values calculated by CIA/OER and moved backward and forward with CIA/OER growth rates, all data converted for this issue into dollars of 1980 buying power. I selected a different procedure in the case of the OPEC members, as will be explained later in this section.

As repeated comparisons of our figures with the findings of the ICP have shown, the rates of early 1973 have served quite well for the larger areas of chief concern to US policymakers. Let me, for instance, compare for 1977 (the latest year in the ICP publications) the GDPs of developed OECD countries without the United States as the measure of comparison (and, of course, without Portugal and Turkey, which for the purposes of this report are regarded as less developed) in different calculations. The ICP total is 3.1 percent to 3.3 percent larger than the figures in appendix table 1. At average official 1977 exchange rates, the total would be 8.9 percent larger than the result in the table.

The 3.1-percent difference just mentioned refers to the ICP set of purchasing power parities with the terms of trade frozen as of 1970; the 3.3-percent difference from another ICP series takes account of changes in the terms of trade. For individual countries, the comparison yields varying fits. Purchasing power equivalents of any type are not precision tools; they differ with alternative aggregation procedures; they require revisions even for the base year; their extrapolation is hazardous. Comparing, again for 1977, the figures in appendix table 1 and the ICP results (adjusted for changes in the terms of trade), we find that the difference is a mere 0.13 percent in the case of Japan, 1.4 percent for France, 3.5 percent for the Netherlands, 4.8 percent for Canada, 5.8 percent for Belgium, 7.5 percent for Italy, and a negative 6.3 percent for the Federal Republic of Germany (FRG)—i.e., the ICP value for West Germany is below the figure in the table. These are tolerable variations. As in the case of the FRG, the ICP findings are below the figures of this report for Switzerland and a few other smaller but highly developed nations. The Swiss per capita GDP of the ICP is almost 26 percent below ours; as in later years, the Swiss franc may have been over-valued in 1973. The ICP per capita GDP of the UK, on the other hand, is by far higher than the findings presented in our table. The difference, now 30.8 percent, has risen with ICP revisions of the UK-US relationship of per capita GDP for the base year, namely from 60.3 percent to 63.5 percent (a 5.3 percent increase); whatever the exact adjustment needed, the pound sterling was indeed undervalued in 1973, with the deplorable result that the series in appendix table 1 understates British performance.⁸ We will return to the British development in Part II. Since the UK economy is large, its differing evaluation is a major source of the 3.3 percent deviation mentioned above.

In the case of Italy—also discussed in the cited issue of the *Planetary Product*—the higher ICP figure is probably explicable in terms of Italy's less developed

⁸ See a previous statement on the UK in the *Planetary Product* for 1977-78, p. 16.

southern provinces, lesser development being associated with higher exchange-rate deviation indexes. This leads to the statistical problem of adjusting the product of the less developed world to purchasing power parity.

To cope with this problem, this report—to quote the 1977-78 issue of *Planetary Product* (pp. 5-6)—“applies the Third World Supplements I devised years ago, in the full realization that the supplements appear low.” I also indicated that they may be useful for whole groups of nations but not necessarily for any particular country. I have now, first, raised the Third World Supplements for the three national-product brackets of the less developed world from 10 percent, 30 percent, and 60 percent to 30 percent, 60 percent, and 120 percent. Only reluctantly did I apply the supplements to all the less developed countries (except Mainland China) in appendix table 1. For the less developed non-Communist world the output total for 1980 is raised through the increased supplements from \$1,347.8 billion to \$2,137.1 billion, i.e., by \$789.3 billion, or nearly 60 percent. Since I apply the supplements also to less developed Communist countries with the exception of the PRC (see below), the supplements increase the planetary product for 1980 from \$10,455 billion to \$11,269 billion, i.e., by 7.8 percent. The effects of the supplements on major aggregates in the planetary product (developed, less developed; non-Communist, Communist) are set forth in appendix table 9.

As of now the ICP has published purchasing power equivalents for seven less developed countries out of a total of 16 thoroughly researched economies (including the United States as the base country). The equivalents for 111 additional countries, presented in the 1980 publication cited above, were obtained by making each of the 16 economies studied in detail the “representative country” for countries with a similar structure. The list covers most non-Communist countries of any substantial size, developed or less developed. For countries that the present report calls “less developed,” the ICP's average exchange rate deviation index for 1975 is roughly 2; in other words, the ICP doubles their combined GDPs. It lowers, in turn,

the GDPs of the so-called industrialized group (i.e., practically the OECD membership) by about 10 percent below the exchange-rate total, chiefly to offset the relative dollar undervaluation. If I were to adopt Third World Supplements averaging 100 percent instead of the average 60 percent used in this report, the product of the less developed non-Communist world for 1980 would rise an additional \$559 billion, from \$2,137 billion to \$2,696 billion, and the world product from \$11,269 billion to \$11,828 billion, or by another 5.0 percent.

The purchasing power parities vis-a-vis the dollar ought to reflect, aside from vicissitudes on the currency markets, the economic structure of the country in question. We would expect the Third World Supplement or the exchange-rate deviation index to be higher, the lower the level of economic development. In the ICP calculations India has, understandably, a large deviation index; for the base year 1970 it was originally no less than 3.70; later it was reduced to 3.35. I still feel, as I argued in my preceding report, that the index for India may overstate the real value of Indian services as compared with services in an advanced country and, particularly, the United States as the base country. But even Turkey has in the ICP estimate for 1977 a deviation index of 1.7 (without accounting for changes in the terms of trade) or of 1.8 (terms of trade considered), with the result that, expressed in 1980 dollars, its 1977 GDP per person amounts to \$2,322 or \$2,500 compared with slightly over \$1,400 (which includes a Third World Supplement of 60 percent) shown in this report. The ICP estimates that in 1977 Turkey's GDP per capita was 23 percent of the US figure and no less than 33 percent of the ICP's (relatively low) estimate for Switzerland. A product per person one-third that of Switzerland's is something Turks might dream about, even Turkish guest workers in West German cities, much less their relatives at home. And it must be remembered that GDP embraces not only personal consumption but also public consumption and investments which, per head of the population, differ widely between countries like Turkey and Switzerland.

Whether or not the progress of a country from a lower to a higher stage of economic development is to be gauged by a reduced Third World Supplement or by a smaller exchange-rate deviation, its growth statistics encounter an issue closely related to the troublesome index number problem. The index problem arises when we compare for a specific country scarcity and price relations in, say, 1950 with those in a later year, e.g., 1980. The relations change continuously all over the world, but particularly fast in countries that undergo great structural shifts. Measured in prices of the earlier year, growth is in general more rapid than when measured in prices of a later year. Let us now compare the increase in "real" product of a rapidly changing country (such as the Republic of Korea) as measured against the growth in the product of an advanced country with a more stable structure (the United States). If the base year for the purchasing power calculation remains unchanged (the ICP operates throughout with a 1970 base), the growth rate of the less developed country will be the same in constant local currency and in dollars. But if we compare the real products in purchasing power equivalents, first of an early base year and then of a later base year, growth between the two base years will be slower than in local currency. Disregarding disturbances on the currency markets of the types we witnessed in the 1970s, the difference in the growth rate would be attributable to changes in the scarcity and price relations of the base country (the United States), but the theoretical explanation does not eliminate the practical inconsistencies of growth rates when, as is inevitable after some time, base years are changed for purchasing power equivalents.

Trouble With OPEC

Statistics for the 13 OPEC countries exhibit all the difficulties mentioned above. They were, and some of them still are, statistically underdeveloped. Their population numbers are unusually uncertain, if only because of heavy migration. Their incomes have skyrocketed; in several cases OPEC countries moved from poverty to an *embarras de richesses* in a few short years, with correspondingly abrupt shifts in their pattern of demand and their output mix. They share in a worldwide inflation to which they contributed

substantially through their cartel pricing policy (crude oil had on average a posted price in current dollars of \$3.39 per barrel in 1973 and \$34.86 in January 1981, an increase which, after deflation with the OECD consumer price index, averages 24 percent per annum). The GNP-GDP gap in many OPEC countries had been wide because of major factor payments abroad; more recently, the gap has declined in percentage terms, as a larger share of factor income stays at home.

For the present calculations, I used as a starting point the countries' GNP data as published by CIA/OER for 1976 in 1976 dollars. I converted them to 1980 dollars with the US GNP deflator. Then I extrapolated the 1976 OPEC GNPs backward and forward with growth rates that, of all those I scrutinized, I found most convincing, namely the rates inherent in the ICP series accounting for changes in the terms of trade. These rates refer to GDP per capita between 1950 and 1977. GNP and GDP growth differ somewhat; the inconsistency is regrettable but appears tolerable given the wide margins of errors of the entire exercise. For the years 1978-79, I used rates from the CIA *Handbook of Economic Statistics* for 1980, and for 1980 I consulted specialists working on OPEC countries. Finally, I added Third World Supplements to the product data of "indigent" OPEC members according to the three brackets for less developed countries.

The results are far from ideal. I feel the OPEC members should donate some of their money for a thorough revision of their statistics; in the process they would improve their self-knowledge. Of the numerous problems concerning individual countries and specific time periods, I wish to mention two. One concerns Indonesia. I applied in this case the growth rates mentioned above with some misgivings. According to the ICP table, Indonesia in 1950 had a population of 75.449 million and a per capita GDP 3 percent that of the US; in 1977, with 141.777 million inhabitants (a figure possibly overtaken by the new census), its GDP per capita was 10 percent that of the US. Since US GDP per capita in 1977 was 1.74 times the 1950 figure, Indonesia turns out to have 10.8 times as much GNP in 1977 as in 1950. Such an

expansion might take place in one of the tiny oil-producing countries but is unlikely in a nation with the fifth-largest population in the world. However, I did not want to treat that country differently from the other OPEC members, so I just add a modest demurrer.

The second problem concerns Kuwait in earlier years. It was obviously well heeled, even at the beginning of our 30-year time period. Our tables show for 1950 a population of 145,000 and in 1980 dollars a per capita GNP of \$9,836 (see appendix tables 2 and 3). This is a bewildering figure. The 1950 per capita GDP of the ICP is \$7,751. The Kuwaiti GDP should be higher than the GNP; instead it is lower.

Comparing Soviet and US Aggregates

The Soviet ruble is strictly an inland currency; its official valuation has fluctuated widely. Compared with the rough purchasing power equivalents presented in appendix table 1, the ruble was greatly overvalued until 1961. Up to then, one old ruble had the official value of \$0.25. Applied to an estimated GNP of 2,040 billion old rubles in 1960, the official valuation would yield a GNP of \$510 billion, or \$1,317.3 billion in terms of 1980 dollars. My figure in appendix table 1 of \$573.5 billion in 1980 dollars is equivalent to \$222.0 billion in 1960 dollars.

In 1961, Khrushchev introduced a new ruble worth 10 old rubles. At the same time he devalued the currency. The new rate of exchange was 1 ruble = \$1.11. By 1965 the Soviet GNP amounted to 260.6 billion new rubles—at the official rate, \$234.8 billion in 1965 dollars or \$560.3 billion in 1980 dollars. Appendix table 1 presents a GNP estimate for 1965 of \$728.5 billion in 1980 dollars (equivalent to \$305.3 billion in 1965 dollars). The ruble had become undervalued.

By 1980 the dollar was floating while the Soviet stalwarts stuck to their peculiar gold standard. On average the 1980 official rate was 1 ruble = \$1.462. An assumed GNP of 462.6 billion rubles translates into 676.3 billion 1980 dollars. Compared with the \$1,280.1 billion in appendix table 1, the ruble was even more undervalued in comparison with a still

undervalued dollar. It was also undervalued compared with corresponding values in the latest (1980) issues of the *World Bank Atlas* or in the *CIA Handbook of Economic Statistics 1980*.

This leads to a brief discussion of the Soviet GNP figures presented in the preceding paragraphs. They were derived by extrapolating backward and forward the Soviet GNP for 1970 in 1970 rubles (340.2 billion at factor cost) as calculated by [redacted]

[redacted] The USSR has long been suffering from a mild inflationitis, which cannot be quantified for lack of adequate price indexes. Consequently the 1960 and 1965 ruble and dollar estimates underlying the conversion with official rates may be on the high side; even the 1979 estimate could be on the low side without affecting the general statement that the ruble was overvalued until 1961, thereafter undervalued.

Nor is this observation changed by substituting for [redacted] ruble figure and for the data in appendix table 1 the CIA's more recent ruble and dollar figures, which were revised upward. The Soviet values in the table are 8 percent below the dollar figure for 1975 in CIA's *Handbook* for 1976, 16 percent lower than the series in the *Handbook* for 1980. The Joint Economic Committee will soon publish a detailed reexamination by CIA of its Soviet national accounts, following up the sophisticated article [redacted]

[redacted] in the JEC's 1979 volume.¹⁰ In the meantime I stick to my series for reasons explained in my contribution to the same publication.¹¹ The paper by the three authors just mentioned states explicitly (on p. 390):

¹⁰ "U.S. and U.S.S.R.: Comparisons of GNP," in Joint Economic Committee, *Soviet Economy in a Time of Change*, 10 October 1979.

¹¹ *Ibid.*, p. 115.

The ruble-dollar ratios for consumer durables, machinery and equipment, and construction were not adjusted to account for quality differences beyond those reflected in the original matches.

The ratios of established prices in the two countries ignore the substantial advantage that the American consumer has in terms of convenience, variety, and availability. These "services" are covered in the U.S. price but not in the Soviet counterpart. Therefore, the dollar value of Soviet output is overstated and the ruble value of U.S. production is understated.

The ruble-dollar ratios for services—especially health and education—probably are too high . . .

I fully agree.

My figures for the six smaller Warsaw Pact members in Eastern Europe come from the publication of Thad P. Alton and Associates of the Research Project on National Income in East Central Europe cited above. As in previous years, I voice my doubts on the Romanian GNP per capita on the suspicion that dubious investments and their spurious yields, as well as quality claims, ought not to be taken at face value. The Yugoslav GNP data are taken from CIA's *Handbook of Economic Statistics 1980*, table 9.

Statistical Options on the PRC

The group of "less developed Communist countries" in this report consists of one future superpower, the PRC, and seven small or medium powers on three continents (Cuba, Albania, Mongolia, North Korea, Vietnam, Laos, and Kampuchea). Most of the seven smaller countries have their own particular influence for geopolitical, military, or ideological reasons. Their economic weight, however, is inconsiderable, their statistics are poor or nonexistent, and many of the measures of their economic performance can only be guessed at.

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Three different estimates are available for the PRC's national product. One has an official or semiofficial background. The *Washington Post* of 28 June 1980 reported that Beijing gave the World Bank's International Development Agency a figure of \$250 billion (converted to 1980 dollars) for 1978 output, which translates into 270 billion 1980 dollars for the year 1980. The figure refers in all likelihood to Marxist-style net material product and may include Taiwan. This piece of news from Beijing seems to be the source of the 1978 figure for "China" in the 1980 edition of the *World Bank Atlas*, namely \$219.010 billion in 1978 dollars. Although the amount appears to include the Republic of China (with its 1978 GNP of \$25.8 billion in 1978 dollars), it ranks "China" in the World Bank category with Sierra Leone. Quite a comedown from the preceding *Atlas*, which listed a 1978 figure for China of exactly \$424.620 billion.

Secondly, in "An Approximation of the Relative Real Per Capita GDP of the People's Republic of China," we have a calculation published by Professor Kravis after a journey through that country (Addendum to the Report of the Economics Delegation to the PRC, March 1980). Professor Kravis arrives at a 1975 per capita GDP for the PRC that is 10 percent that of the American, using a binary comparison with the United States, and 12 percent in a multilateral comparison. This yields a total 1975 GDP of \$963 billion in 1980 dollars under the binary concept, or of \$1,144 billion under the multilateral. Extrapolated to 1980—at our own risk—with the help of [redacted] GNP index, the binary figure would be \$1,305 billion; the multilateral estimate \$1,550 billion.

The most painstaking work on PRC national accounts has been done by [redacted] recently joined by K. C. Yeh (published by the Joint Economic Committee in past volumes and in a forthcoming book).¹² Their present GNP estimates (all in 1980 dollars) are: for 1975, \$437 billion; for 1978, \$526 billion; and for 1980, \$592 billion. Their year-by-year series, which runs

[redacted]

from 1949 through 1980, poses problems both in regard to growth rate and volume of GNP. Economic growth is presented as amazingly rapid in a country with so much political turbulence and repeated periods of steep decline. The average annual growth rate is 6.7 percent for the past 31 years, or 6 percent, if the base year is 1952, i.e., a time when the country was more or less rehabilitated. It is 6.6 percent for 1970-80 and 7.9 percent for the past four years. Field's GNP totals combine two output series, one for agriculture, another for industry, both derived from physical production estimates; the services sector is assumed to expand at the combined rate of the agricultural and industrial sectors. Farm output has moved in line with the long-term population growth, an average of slightly more than 2 percent per annum, which appears to be a reasonable finding. Industrial output has skyrocketed at annual rates of 10 percent to 11 percent. In my judgment, this rate does not take sufficient account of the difference between product in physical and in value terms (including the likelihood of quality deterioration in some manufactures and the Gerschenkron Effect) and likewise overrates the growth in services.

Faced with the choice between GNP or GDP figures ranging, extrapolated to 1980, from \$270 billion to \$592 billion to \$1,550 billion, I opted mirthlessly for [redacted] that is, the middle series. I will return to the PRC statistics in Part II to discuss their economic and political significance.

The Catchalls, or Sundries

Of the 166 sovereign nations in existence in 1980 (see table 2) 140 are specified as line items in appendix table 1 together with three countries (Puerto Rico, Belize, and Hong Kong) that still are dependencies of a sort. An additional 26 sovereign states and 14 small dependencies are distributed in the income divisions of appendix table 1 as "sundry." These entries cannot be precise; they are memorandum items signaling the existence of additional units. Together, they account for perhaps 0.2 percent of world population and world product. Such ratios, of course, do not detract from the dignity and tradition of these tiny states, some of

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which have a long and noble history. To any faraway coral reef that has escaped my attention in the "sundry" catalogue, my apologies, coupled with the wish that it may soon acquire sovereignty and a vote in the UN.

Grouped by per capita product, the sundry categories include the following:

- *\$6,733 or more*: states—Vatican City, Monaco, Liechtenstein, Nauru; dependencies—Brunei, Bermuda, French Polynesia.
- *\$4,489 - 6,732*: dependencies—Reunion, New Caledonia.
- *\$2,245 - 4,488*: states—Andorra, San Marino, Oman; dependencies—Martinique, Guadeloupe, French Guiana, Netherlands Antilles.
- *\$1,123 - 2,244*: state—Seychelles; dependencies—Namibia, Macao, Antigua.
- *\$562 - 1,122*: states—Western Samoa, Kiribati, Vanuatu, Tuvalu, Grenada, St. Lucia; dependency—St. Christopher-Nevis-Anguilla; also since the 1967 war this pigeonhole includes the West Bank, i.e., Jordanian territory occupied by Israel.
- *\$561 or less*: states—Dominica; St. Vincent and the Grenadines, Bhutan, Maldives, Djibouti, Guinea-Bissau, Equatorial Guinea, Sao Tome and Principe, Cape Verde, Comoros, Tonga, Solomon Islands; special status—Western Sahara.

Thus "developed" sundries (per capita product greater than \$2,244) include seven states and nine dependencies; "less developed" sundries, 19 states, four dependencies and two special cases; and the total under "sundry," 26 states, 13 dependencies and two special cases. Some other nonsovereign areas are listed in *Status of the World's Nations*, a periodic publication of the US Department of State, latest edition (September 1980).

II. Economic and Political Findings

An Era of Luxuriance

The past three decades were an era of luxuriance, with many good features and others that have become increasingly irksome. In arts and humanities I cannot detect much brilliance; I see only a superabundant quantity of output. At the same time, the physical and biological sciences have made sensational strides; this, after all, was the time when Americans visited the moon. The world economy grew more than ever, cyclical downturns and local flaps notwithstanding; monetary creation outpaced growth, alas! Humanity itself multiplied at an unprecedented pace—the demographic counterpart of inflation. And the era witnessed a proliferation of so-called sovereign nations, often with ill-defined borders, dubious viability, and inadequate leadership. The great powers have remained at peace (of sorts); wars and revolutions have been local affairs (which is no consolation for the many victims). But the general prosperity and general peace were and continue to be viewed with ill ease; the *Planetary Product's* subtitles for 1968 and 1972 apply to more than one year: "Deeply Troubled Prosperity" and "Systems in Disarray." The following facts and figures will elaborate the picture.

The planetary product in 1980 was an amazing 3.8 times the planetary product of 1950, representing an average annual rate of growth in real terms of 4.6 percent. The 30-year period excluded the first four postwar years of reconversion and reconstruction and included several lustreless years of the recent past. During the same 30 years, mankind multiplied at an average annual rate of nearly 2 percent, so that population in 1980 was 1.8 times the population of 1950. Demographic changes interact with economic development in a complicated fashion through the size and composition of the labor supply, the structure of demand for consumer and capital goods, and the stimulation of knowledge. The below-average rate of population growth in the developed world has not been a drag on economic expansion—with immigration alleviating some labor scarcities at the price of ethnic friction. In contrast, the population explosion in backward regions offset much of the increase in output and

held back the improvement of the great masses of poor people. The psychological and political drawbacks of a society turned into a rabbit warren are only too obvious. Product and population growth combined worldwide to provide a 2.6 percent average annual growth in per capita output, with the developed countries running at 3.2 percent, and the less developed countries at 3.0 percent.¹³

All these rates represent a historical quantum jump. Long-term demographic and economic growth was imperceptibly small until the Industrial Revolution began about 200 years ago. Then it accelerated. From the middle of the 19th century until the First World War the planetary product is believed to have increased—with strong fluctuations from year to year—by about 3 percent per annum and half that much per capita. In other words, total growth at that time was not much larger than per capita growth in the past third of a century. The period between the two world wars was at first prosperous but then turned dismal with the Great Depression and barriers to international trade.

The planetary growth indicated above for 1950-80 conceals important differences by period and region, differences that are the essence of history. In the first subperiod, namely the 1950s, the average annual rate of growth worldwide happened to be the same as in the past 30 years as a whole, that is, 4.6 percent. In the following 13 years, it increased to no less than 5.2 percent. After 1973 the rate fell to 3.3 percent. These last years were not seven lean years in the Biblical sense; average growth was still above the "historical" rate of 3 percent; their hallmark were violent ups and downs, from 1.4 percent in 1975 to 4.4 percent in the three years 1976-78 to a preliminary 2.0 percent in 1980. The question arises whether the lower growth rate of the final seven years was only a "creative pause" in the course of an era with a new, higher

¹³ The apparently contradictory numerical results stem from the much greater growth in population in the less developed countries.

“historical” rate of, say, 4 percent or more, or, conversely, whether the period up through 1973 was nothing but an extended boom which planted the seeds of its own destruction and which would even generate into a protracted period of sluggish world growth. Such a question can be asked on purely economic grounds, laying aside the political question of whether the world will enter an era of good feelings or of heightened tensions and quarrels. But interpreting the past is as difficult as predicting the future. At any rate, we must examine conditions by region and country.

US Growth Below World Average

The runners in the world race can be grouped into five classes: star performers, somewhat above average, average, somewhat below average, and laggards. Needless to add, over time many runners vary their speed and change from one category to another. Let us begin with the United States, the largest component in the global economy and the creator of standards for the whole world in the twentieth century. Indeed, the role of the United States as a model helps explain why American economic growth was below average, although an average rate of 3.3 percent per year is really not to be despised.

In the 19th century the United States, moving ahead at more than 4 percent per annum, expanded above the world average. Around 1900 the US share of the planetary product had grown to nearly one-fourth of the total. The frontier spirit in organizational, managerial, and technical affairs in the United States invited imitation in other advanced countries. After the Second World War, when the United States occupied a hegemonial position in the West, its modes of production, distribution, and consumption radiated around the globe, a process helped by large US grants and investments abroad. Even Communist governments hankered after American technical and managerial know-how. Immediately after World War II, the US share in the output of a devastated world economy was probably 40 percent or more; in 1950, with much reconstruction completed, it was still one-third.

But by 1970 the US share in the planetary product had receded to 25 percent (without Third World Supplements, nearly 27 percent), and by 1980 to 22.7 percent (24.5 percent). This is as much as the share in 1900; however, in this century the pace of US growth has changed from above to below the world average. In the 1950s average annual growth was 3.2 percent in the US as compared with 5.4 percent in the rest of the world; between 1960 and 1973, 4.0 percent versus 5.6 percent; and between 1973 and 1980, 2.1 percent versus 3.6 percent.

Should these ratios inspire a *deja vu* feeling? For the first hundred years of the Industrial Revolution, Great Britain led the way in economic growth—outstripping most other countries in overall growth and the United States at least in per capita growth. Then the UK rate fell below average, as did the American in this century. Great Britain’s 2.4 percent average growth rate in the past 30 years is actually half a percentage point above its average growth from 1870 to 1913, but further below the increased world average than before the First World War and, in any case, inadequate by today’s more demanding standards.

Our century has produced a countermodel to the American economy. The Russia of the last two tsars was hardly anybody’s example, though its industrialization showed encouraging progress until the disasters of World War I. After the October Revolution, sympathizers viewed the new Bolshevik state as the future (“and it works”). Some Western observers were impressed later by the USSR’s fast expansion at the time of the Great Depression and again during Khrushchev’s campaign “to catch up with and overtake” the United States in the late 1950s. Communist governments that came into being after the Second World War copied institutions and policies of the USSR as a matter of course.

Soviet economic growth was indeed a wonderment in the 1930s. Even though Stalin’s First Five-Year Plan was a mess and only a few years later the country began to prepare for war, the average annual growth between 1928 and 1940 was 5.3 percent at the minimum, depending on the price basis used and not counting the waste of people and materials. In the

1950s the average annual Soviet growth rate was 5.9 percent (as against 4.8 percent in the world with and 5.4 percent without the US). But between 1960 and 1973 Soviet growth declined to 4.9 percent, compared with the planetary product's 5.2 percent with or 5.6 percent without the United States; it was 2.6 percent from 1973-80 while the world expanded by 3.3 percent with or 3.6 percent without the United States.

The Factors at Work

The circumstances responsible for these worldwide changes can be grouped into seven categories. The sequential discussion of these categories does not imply a rigid pecking order or absence of interaction between them.

Different Degrees of Resource Utilization

First, fast growth occurs when, after a war or similar troubles, materials and equipment are again supplied in sufficient quantities so that both facilities and manpower may be better utilized; or when, at the end of a cyclical downturn, a rising demand results in a flood of new orders.

Between 1945 and 1950, Italy's output is believed to have more than doubled, Soviet output to have risen by perhaps one-third. (Such calculations convey only a sense of general magnitude.) The West German GNP rose by a reported 120 percent between 1948 and 1950, the Japanese by 100 percent between 1947 and 1955, that of the PRC by 70 percent in its three recovery years, 1950-52. The United States, on the other hand, after some dislocations during reconversion from war to peace production, was fully employed or even overemployed until it became afflicted by minor recessions between 1954 and the early 1960s. But, even at a remarkable average growth of 4.2 percent in the first half of the 1950s (only 2.3 percent in its second half), the US could not be expected to match European and Asian economies recovering from the war. The 1950-55 average annual rates were calculated at 10.9 percent for the PRC, about 9.4 percent for Japan and West Germany, 6.5 percent for East Germany, and 5.8 percent for the USSR.

In later years, declines and recoveries with a political-military background were strictly local, dramatic though they were for everybody concerned. To cite some rather speculative percentage changes, the GNP in Cyprus dipped by 30 percent from 1973 to 1975 and then rose by 41 percent in the two following years; in Lebanon it declined by 44 percent from 1974 to 1976 and rose by 20 percent in 1977 with a new plunge thereafter; and Iran had its GNP cut in half between 1977 and 1980.

Managerial-Technological Progress

The better or poorer utilization of existing facilities, for the political or business reasons just mentioned, denotes changes in productivity. Productivity statistics, despite a large amount of indisputably productive research, are tricky. High productivity resembles the *je ne sais quoi* that makes a pretty girl attractive: her charm is obvious but hard to spell out. Not that productivity lacks a definition; it is output per unit of input. Output is the value of goods and services turned out in a specific period; input is the value of the factors of production used up in the process, i.e., the services of the labor, capital, and land required. Depending on how output and input are calculated, the two, if not by chance identical, yield a residue—either positive or negative, either large or small. Not only is productivity a residue, it is also a miscellany and an open-ended one, at that. One component of this miscellany is a residue within a residue, a miscellany in the miscellany. It is meant to measure chiefly productivity gains due to advances in managerial, organizational, and technological skills. These advances are at times extraordinary, either because of a nation's creativity or its ability to absorb foreign innovations. British progress during the Industrial Revolution (with American contributions from the very beginning, for example, from Benjamin Franklin and Eli Whitney) was later assimilated by Germany and other European countries; in this century American knowledge has been taken over on a still larger scale. Transfer is easier, the closer the social and economic systems of the two countries. It was a great success in Western Europe and Japan and likewise in several other Asian countries. Though not the heirs of Max Weber's Protestant ethic, the Asians have exhibited the requisite dynamics, a willingness to save and invest, and a managerial and technical ability of their

own. In the Soviet realm, great native talents have been frustrated and deflected by the defects of the Marxist-Leninist-Stalinist system. In a number of underdeveloped countries, the modernizing effort has been counterproductive; they have retrodeveloped, at least per capita, sometimes in toto. A people reaps what Professor Alexander Gerschenkron called "the benefits of backwardness" only if they have the will and ability at least to copy.

The following estimates illustrate how advances in knowledge influenced the growth of the national income according to Edward F. Denison's seminal research: such advances (and some minor residual sources of growth) contributed in the United States (1948-69) 1.19 percentage points of a 4 percent product growth, in Japan (1953-71) 1.97 points of 8.81 percent, in France (1950-62) 1.51 points of 4.70 percent, in Italy (1950-62) 1.30 points of 5.60 percent. In other words, according to Denison's findings, between one-fourth and one-third of the progress during the respective periods was due to advance in technological and managerial knowledge.¹⁴ The high percentages in foreign countries testify to their reception of American know-how. By now they have proceeded from imitation to creation, and this country, in turn, profits by their advances (while bemoaning their keen competition). An internationally broadened basis for progress makes the often portended technological stagnation or, at least, slackening less likely than ever. Future technological progress (in energy generation and transmission, in a wide application of computers, including for industrial robots, in biological innovations, etc.) in conjunction with trade liberalization will hopefully be a powerful factor in overcoming what I called the "creative pause" of current years.

Trade Liberalization

One aspect of Americanization in the past third of a century was trade liberalization. The United States, despite a long protectionist tradition (and some temptation to revert to it) has worked for a freer trade since the days of Franklin D. Roosevelt and Cordell Hull through autonomous measures as well as international

¹⁴ See Edward F. Denison and W. K. Chung, *How Japan's Economy Grew So Fast*, The Brookings Institution, 1976, pp. 42-43. Also, Denison's latest book, *Accounting for Slower Economic Growth*, The Brookings Institution, 1979, Table 8-1, p. 104.

initiatives. Larger markets improve the cost-reducing division of labor (facilitated by speedier transportation and product miniaturization). Consequently, from 1950 until the price revolution that started or, at least, accelerated in 1973, world trade in real terms rose by an average annual 8.3 percent as compared with a 5 percent rise in the planetary product. Such a ratio was experienced only once before, namely in the free trade era of the mid-19th century (the respective rates at that time were roughly 5 percent and 3 percent). In past decades the share of international trade in GDP or GNP has risen everywhere, likewise the importance of international investment and its reflection in a widening gap between GDP and GNP.

The trade-creating and output-stimulating force of liberalization was particularly visible in Western Europe in the heyday of the European Community (between its beginning in 1958 and its extension to Great Britain, Ireland, and Denmark in 1973), when its combined GNP rose by an average annual 4.9 percent and the exports of goods and services by 10.2 percent. The same is true of the Far East, where the unique development of Japan, the Republics of China and Korea, and the city-states of Hong Kong and Singapore would not have been possible without a freer trade climate throughout the world. Even in the past seven years, with disturbed commodity and currency markets and an upsurge in protectionism, real trade in goods and services increased at least as fast as world output.

The name "New Industrializing Countries" (NICs) is now frequently applied to some fast-growing Third World countries—the Republics of China and Korea, Hong Kong and Singapore, Greece and Portugal, and Brazil and Mexico. Their combined products (without Third World Supplements) rose from \$100.0 billion in 1950 to \$175.6 billion in 1960 to \$445.0 billion in 1973 to \$647.8 billion in 1980; i.e., at average annual rates of 5.8 percent, 7.4 percent, and 5.5 percent during the respective periods. These are very high rates of growth, particularly considering that Portugal lagged behind because of its colonial troubles. The NIC expansion is attributable to the rapid rise of dynamic entrepreneurs who have made use of ample

and low-cost labor to supply relatively free world markets; one can now observe a tendency for wages to rise and a movement toward industries with higher technology and a more highly skilled labor force.¹⁵

Growth Through Massive Inputs

Extraordinary economic growth can also be achieved through massive additions of labor, capital, and also land, despite insignificant productivity gains. Let us begin with some passing remarks on the US economy during the 19th century. As mentioned above, average output growth seems to have exceeded 4 percent, with heavy inputs of labor (including immigrants), capital, and land. The productivity gain was allegedly only 0.3 percent per annum between 1800 and 1890.¹⁶ A rate so low is hard to swallow for a period of rapid technical development, large economies of scale, and improvements in labor education and health. I suspect that the ratio of inputs to output was affected by the index problem, with the result of an undercounted productivity gain. If the analysis was correct—which I disbelieve—19th century America would be a prime example of expansion fueled almost entirely by the use of more manpower, more capital, and more land of practically unchanged overall quality.

From 1890 on, American productivity growth is shown as improving. Between the end of the Second World War and the oil crunch, the United States was a country with unusually high productivity gains and only small increases in the factors of production. Denison has calculated that in the period 1948-73 national income in private nonresidential business (three quarters of the economy) grew in the average year by 3.65 percent, input (with labor education moved from input to productivity) by 1.72 percent (labor 1 percent, capital 0.71 percent, land 0 percent), and output per unit of input 1.93 percent (advance in knowledge almost 1 percent).¹⁷ American capital formation was on the low side (though not quite as low as previously calculated; in the revised statistics of the

¹⁵ See Werner L. Chilton's informative article, "Labor Costs: Why Factories Leave Home" in the Citibank's *Monthly Economic Letter*, November 1980, pp. 9-12.

¹⁶ Moses Abramovitz and Paul A. David, "Economic Growth in America: Historical Parables and Realities," *De Economist*, 121, No. 3, 1973; also referred to by John W. Kendrick, "Productivity Trends and the Recent Slowdown," in the American Enterprise Institute's *Contemporary Economic Problems*, 1979, p. 22.

¹⁷ Denison, *ibid.*, p. 104.

US Department of Commerce, gross investment as a percentage of GNP is now given as 16.0 percent instead of 15.7 percent for 1948-72, as 17 percent instead of 15.5 percent for 1978-79). This explains to a degree the below-average performance of the United States even in the boom period before the oil crunch. Large military expenditures (in 1957, 10 percent of GNP; in 1967, at the height of the Vietnam war 9.7 percent; later declining to 5 percent) may help explain the modest capital formation, though they do not justify an economic policy that failed to stimulate capital formation and finance defense outlays through taxation on consumption. In 1973-80, total US GNP grew by 2.5 percent per annum, with labor input slightly up (larger participation in the labor force), capital formation down, and productivity gains minimal. The failure of productivity to grow appreciably was statistically puzzling and, more important, economically and politically disturbing. The author holds that with large investment requirements accumulating—for housing, energy projects, the modernization of traditional industries, and the application of revolutionary new technologies—we can expect a return to a more typical productivity rate. Such a resumption of productivity gains, however, requires an improvement in the general investment climate and an end to the monetary pollution, a.k.a. inflation.

In past decades the USSR was the prime example of an economy pressing its growth through heavy inputs with little productivity gain. Factor productivity grew by only 1.2 percent per annum in the 1950s; the rate of increase declined to about 0.8 percent in the 1960s; in the past seven years, factor productivity declined in the USSR, by roughly 0.7 percent per annum.¹⁸

The decline in the growth rate of Soviet GNP reflects not only the longstanding difficulties in boosting the productivity of the command economy but also a leveling off of inputs. Fixed capital investment, for example, increased between 1954 and 1958 by 13 percent to 14 percent per year, in the 1960s by less than 7 percent per year, and between 1976 and 1979

¹⁸ CIA, *Handbook of Economic Statistics 1980*, p. 59.

by 4.1 percent per year; the plan for 1981-85 provides for an average rate of growth of only 2.6 percent. Since GNP has grown less than capital formation, the share of investment in GNP has risen almost uninterrupted; it is now close to 30 percent. Labor participation already is high; the annual increase in manpower has been falling off because of the low birth rates in past years.

Japan offers the case of a country that had had the best of two worlds, combining high gains in productivity with substantial increases in plant and equipment. With an iron will to save and invest and with defense expenditures below 1 percent of GNP, Japan has maintained investment at about one-third of GNP. Whereas population growth is only about 0.8 percent per annum, the Japanese have effectively avoided labor shortages through emphasis on education and training. Denison calculated an annual increase in inputs of 3.6 percent and of factor productivity of 5.2 percent, for the period 1953-71.

"Resource Power"

Command over vital raw materials has provided some nations with extraordinary growth rates. The free market anticipates in general, though not without shocks, the approaching scarcity of some primary commodity by increasing the land rent in its cost price and thus stimulates the use of substitutes. When timber became quite scarce in the 16th and 17th centuries, coal technology took over (and played a vital part in England's economic ascent). The question of whether the early 1970s was the right moment for markets to signal a growing long-term scarcity of energy sources need not be discussed in the abstract; OPEC provided the concrete answer in its own inimitable manner.

OPEC members were able, first, to wrest control of oil supplies from the Western corporations and to organize an effective cartel for political, economic, and financial purposes. OPEC's success has stemmed from the worldwide decline in proven oil reserves in relation to current production; the heavy dependence of Western Europe and Japan on oil from the Middle East and the switch of the United States from being a large exporter to being a large importer; the highly dangerous superpower rivalry in the area; and the emotional

cement among most OPEC members, derived from a blend of religious and anticolonialist elements. Oil exporters like the USSR and Mexico, though outside the cartel, readily seized the opportunity to enrich themselves. The combined GNP of the 13 OPEC members in 1980 was more than 10 times their combined GNP in 1950. While enrichment appears preferable to impoverishment, both can be troublesome. Iran's per capita GNP reached \$3,300 in 1976; the guess for 1980 is \$1,465. Still, this is not much below the 1971 estimate of \$1,530; if Iran were able to overcome its convulsions, it might—after a severe loss of wealth and time—resume its progress and even benefit from a costly lesson in self-government.

OPEC's apex tempted other nations exporting primary commodities to imitate its example, but rarely were the economic and political bases for monopoly action as solid as in the case of crude oil. Still, the 1970s—with its flight into inflation-proof goods and repeated crop failures—favored the terms of trade of raw material and foodstuffs exporters in a reversal of previous trends. There were also special cases of countries reaping unusual gains from products, such as narcotics, banned in other countries; their excessive profits were, so to speak, guaranteed by the continual interdiction of supplies by the police of the importing countries.

Statistical Procedures Affecting Growth Rates

As remarked in Part I of this report, statistical methods of measuring reality may have affected output and productivity figures in recent decades. We name two problem areas: services and environment. The product of some service sectors (for example, government and nonprofit organizations) is calculated in terms of their input, in practice only their labor input, thus disregarding investments and productivity gains. Such services have represented a rising share in the product of advanced countries especially, and the way they are measured may have contributed to an understatement of growth rates both in the United States and the UK. Second, environmental damage was insufficiently assessed until the early 1970s. If adequate steps to alleviate external diseconomies would have been taken earlier, they would have

reduced the high growth rates of the 1950s and 1960s. However, these purely statistical peculiarities have only marginal influence on the description of events in the past decades.

Hubris and Despondency in Economic History

Explaining the past is actually as difficult as foretelling the future. We view life through hypotheses and theories which change like fashions. Moreover, periods have their peculiar moods which affect everybody except born naysayers. Currently, opinionmakers are as plaintive and skeptical as they were upbeat in the 1960s, despite plenty of turbulence at that time. Their despondency will be as temporary as the hubris of earlier days. In short, humans do not understand themselves, much less their history, economic history included. It is worth recalling that Edward Gibbon, a man who knew something about the decline and fall of empires, wrote in 1788 from Paris that the French monarchy "stood founded, as it might seem, on the rock of time, force, and opinion . . ." ¹⁹ Worse still, he backed his misjudgment by investing a tidy sum in French Government loans.

The disorders of the 1970s (let us save the word crisis for future happenings) were a compound of cyclical, structural, systemic, and accidental elements; they grew out of the preceding prosperity and will, in turn, determine the course of the 1980s. Whether on top of the usual business cycles of intermediate duration the world economy is under the influence of long waves (a la Kondratief or Kuznets) is beyond our knowledge; extrapolation of long cycles observed in a past age into present and future economic history is a risky undertaking. What is a hard fact is the almost universal boom of 1973. Then the planetary product expanded by no less than 6.9 percent, the US GNP or GDP, depending on the computing method, by 5.4 percent or 5.8 percent. A downturn was anticipated and came to pass under the influence of a variety of unusual events. In March 1973 the Bretton Woods system of currency management gave way and, already preceded by several years of makeshift arrangements, the Great Float began. In many parts of the world the crops were abnormally poor. And in October 1973 the "oil crunch" began.

¹⁹ Quoted from the Durants' *Story of Civilization*, Vol. X, pp. 805-6.

The mistake of a Gibbon teaches us how easy it is to err. There was, to begin with, Khrushchev's boast that the USSR would overtake the United States in per capita output and consumption, a boast made in 1957 and later enshrined in a Party Program adopted in 1961. Khrushchev had hardly voiced his prediction when Soviet economic growth began to plunge, from 7.8 percent in 1956 to slightly below zero in 1963. One year later Khrushchev was ousted. As appendix table 4 shows, the USSR is nearly as far from overtaking the United States as in 1957. But the boast, backed by the high Soviet growth rates of much of the 1950s (for reasons outlined above) and the prestigious Sputnik flight, reverberated throughout the world. The United States rose to counter the Soviet challenge in the economic, space, educational, and military realm. "Growthmanship" began.

In the 1950s Western practitioners of economics became convinced that policymakers could harmonize full employment, fast output growth, accelerated government spending for welfare and defense, stable prices, and a sound balance of payments. In the 1960s it was decided not to cut Great Society programs because "this would finance the war in Vietnam and fight inflation at the expense of the poor" and it was believed that "this country, with its prodigious productive capacity, faces no runaway inflation, no breakaway price-wage spiral."²⁰ Hubris in the East bred hubris in the West; this is the essence of "interdependence."

Even before October 1973, American prices were rising considerably (consumer price index, December to December, was plus 6.1 percent in 1969). And then OPEC struck. In the preceding year a well-reasoned book on the world petroleum market had predicted that "in the years to come, world prices will weaken, not strengthen." Though an oil cartel "might be effective in slowing price erosion," it would be more

²⁰ Walter W. Heller, "Adjusting the 'New Economics' to High-Pressure Prosperity," in *Managing a Full Employment Economy*, Committee for Economic Development, New York, N.Y., May 1966, pp. 16, 20.

likely that by the end of the 1970s "there may well be a rapid and disorderly price decline."²¹ History, malicious as always, spoilt a discerning forecast. And OPEC's action had by far greater consequences than simultaneous price increases for, say, foodstuffs or bauxite. It dislocated important industries, prompted government interventions, incited environmental disputes, disturbed world trade and world finance, and made the West look weak and disunited. And yet, the Western market economies withstood those severe cyclical and structural as well as political shocks with remarkable flexibility and resourcefulness.

A "deepening crisis" of the system exists not in the West but in the East where shortages of labor, capital, and material resources are complicated by low and even deteriorating productivity and where two countries (Poland and North Korea) are for practical purposes bankrupt. But in the vise of archconservative autocracy, the Soviet-type economies stumble on, and while change is the essence of history, it is beyond human intelligence to foresee the character of future leaders, of popular moods, and of foreign adventures. Remember the decline and fall of Gibbon's securities.

East-West Ratios

Using output and population as indicators in world power relations—and fully aware of other elements in the game such as leadership, the national will, geopolitics, strategies, and, last but not least, Fortune—we find that in recent decades East-West ratios have been more stable than North-South ratios. Beginning with the demographic picture we note that the US population in 1950, 1960, and 1970 was 84.6 percent, 84.3 percent, and 84.4 percent of the respective Soviet population; its slight increase to 85.7 percent by 1980 was due to the new benchmark US census data. The UN projection of the ratio for the year 2000 is essentially the same as for 1980. In other words, the demographic development is alike in both industrial societies (the United States compensating for a slightly smaller natural increase through—undercounted!—net immigration). Compare this stability

²¹ M. A. Adelman, *The World Petroleum Market*, Johns Hopkins University Press, 1972, pp. 8-9.

with past changes in the US-USSR population ratio: in 1860 it was 43.6:100, in 1913 61.6:100, and in 1940 67.7:100, an impressive change between countries with heavy immigration or emigration before 1913 and without or with frightful loss of life in wars and other upheavals. Compare the recent US-Soviet demographic stability furthermore with the US population as a percentage of the Latin American (according to UN data) every 10 years, 1950 to 1980: 93 percent, 84 percent, 72.5 percent, 62 percent—and, extrapolated to the year 2000, 43 percent (not counting the increase of Latins in this country).

The NATO-Warsaw Pact demographic ratio, which reflects the far higher population of the Western alliance, has been equally stable: 156:100 in 1950, 155:100 since 1960. Compared with a less developed country like India, on the other hand, we notice a dramatic change; the NATO-Indian population ratio was 113:100 in 1950, 85:100 (or, if the Indian census is correct, less than 84:100) in 1980; in the next 20 years the ratio may decline to 72:100. When we add up the slowly increasing populations of both alliance systems and compare the totals with the world population, we find that NATO plus Warsaw Pact were 27.2 percent of mankind in 1950, 21.2 percent in 1980. If we apply the UN median projection for the year 2050 to the populations of NATO and Warsaw Pact, their share in the world total would be a mere 11 percent. We do not predict that NATO and the Warsaw Pact will still be alive and kicking by the middle of the next century (though, given the hardy life of organizations, their liquidation may still occupy bureaucrats). Still, the member nations will be around, although perhaps somewhat diminished as the results of the Third and Fourth World Wars. Whatever the future demographic reality, that world—which is less than a lifespan away—will have utterly different national, military, and cultural relations, with changes even more pronounced than those of the past 70 years.

Turning to the economies and leaving the future to the next generation, we note a US-USSR GNP ratio of about 250:100 on the eve of the First World War and of 240:100 on the eve of the Second. In 1950, the ratio had increased to 300:100 (it had been even

higher in 1945). Then, as the result of economic developments previously touched upon, it declined to 200:100 by 1970 and has not changed noticeably since then.

When the comparison is extended to NATO and the Warsaw Pact, the change in favor of the East is less pronounced, because the output of Canada and the West European allies grew faster than the US GNP in 1951-70. The NATO-Warsaw Pact GNP ratio was 355:100 in 1950, 304:100 in 1960, 291:100 in 1970, and 283:100 in 1980. Because of the differential growth of output within NATO, the share of the United States in NATO's output fell from 59.1 percent in 1950 to 51.6 percent in 1980, while the Soviet share in the combined outputs of the Warsaw Pact increased from 70.7 percent to 73.2 percent. In terms of 1980 populations, the United States represented 39 percent of NATO, the USSR 71 percent of the Warsaw Pact. As remarked in previous reports, the Eastern protagonist has a stronger position in his alliance than the United States enjoys in NATO.

The Soviet and US roles in their alliances differ mainly because of the characteristics of Eastern authoritarianism and Western democracy; the roles differ also because one bloc consists of a superpower and six middle-sized countries and the other, one superpower and 14 nations, great, medium, and small. The largest member of the Soviet orbit, Poland, has in relation to its mighty neighbor a demographic ratio of 13:100, a GNP ratio of 10:100. Add to this Poland's encirclement by hostile brethren, and the dissent of its population in matters of ideology and policy becomes the more astounding. In NATO, on the other hand, each of the four major European nations boost a population one-fourth of the US population. Their combined GDPs equal 70 percent of U.S. GDP. The weight of Western Europe would be even greater by now if the European Community had fulfilled its earlier promise; demographically the EC surpassed the United States in 1980 (i.e., before Greece became its 10th member) by 15 percent, and its combined GDP fell short of US GDP by only 20 percent.

The East-West gap widens further when we add the other associates of the two superpowers. When the chips are down, the powers that actually unite around

their protagonist may differ from those with formal links and further changes in alliances are likely during protracted conflicts, whether these be diplomatic, economic, or military. As mentioned in Part I, the associated nations included are (a) on the US side, Australia and New Zealand, Japan, and the Republics of China and Korea; and (b) on the Soviet side, Cuba, Mongolia, Vietnam, Kampuchea, and Laos. These additions raise the GDP ratio between West and East to 347:100 and at the same time slow down the decline of the ratio over time (it was 386:100 in 1950), because the American partners in Asia belong to the fastest growing economies in the world. The population ratio rises to 172:100.

Extension of the East-West comparison to include the nations just mentioned adds unequal weights on the two sides because of the much greater power potential of Japan and the other Western associates. Japan's military and strategic strength need not be discussed here; its economic importance can be illuminated by the following percentages. In 1950, when Japan was still struck low after the war (the USSR had not yet fully recovered either), the Japanese-Soviet GNP ratio was 28:100, in 1980 it was 75:100. In contrast, Japan's population has remained at about 45 percent of Soviet population. If the economic growth differential of the past seven years is extrapolated into the future, Japan's GNP would surpass Soviet GNP before the end of the century, but it is wiser not to strain the predictive capabilities of a calculating machine. Let us read what Herman Kahn wrote in 1970: "... there will be an increasingly widely held belief—first in Japan and then elsewhere—that Japan will actually surpass the United States in GNP per capita and possibly in total GNP by the year 2000."²²

PRC and India in the World Balance

The demographic dimensions of the PRC, highly controversial until a few years ago, are currently set aside, although the forthcoming Chinese census may reopen the discussion. The PRC, with perhaps 1,030 million inhabitants in mid-1980, harbors about 23

²² Herman Kahn, *The Emerging Japanese Superstate*, Hudson Institute, 1970, p. 181.

percent of mankind. This represents an enormous potential for global political power but also for domestic trouble. The Chinese share in the world population has changed greatly in the very long run—insofar as historical statistics can be trusted—and is expected to change again in a not too distant future, with projections as uncertain as peeks into the past. Six hundred years ago, after epidemics had destroyed large numbers everywhere, there lived 65 million Chinese in a world population of maybe 350 million; their share was apparently less than one-fifth. Two hundred years ago more than 300 million Chinese represented about one-third of mankind.²³ The Occident's population, which up to the 18th century had grown little, exploded thereafter and the Chinese share dropped correspondingly. Demographers now surmise that by the middle of the next century China will have 1.5 billion inhabitants, i.e., 13 percent to 14 percent of mankind, and that India, with a faster birth rate, will have a population of 2.2 billion. But these are simply extrapolations of uncertain rates of growth. Leroy-Beaulieu predicted in 1874 that in a few hundred years the world would contain 300 to 500 million Chinese, Russians, and Anglo-Saxons as well as 200 million Germans.²⁴ This appears absurd—but then history is absurd.

Unfortunately we are as uncertain about the size of the PRC economy today as about population numbers in a remote future. As mentioned at the end of Part I, this report adopts the GNP data developed [redacted]

[redacted] for 1949 through 1980. While their growth rates over time appear excessive, the values for the recent past can be fitted more or less convincingly into a picture of the world. Expressed, as throughout this report, in 1980 dollars, the Chinese GNP for 1980 amounts to \$592 billion in toto, or \$573 per capita. This compares in our tables with an Indian GNP per capita of \$444, which incorporates the Third World Supplement devised for countries in India's low per-capita product bracket. The 30-percent margin of the PRC over India appears high, but I cannot disprove it either. The per capita ratio makes more sense than the one

²³ Derived from statistics in William K. McNeill's stimulating book on *Plagues and Peoples*, New York, 1976, pp. 163, 229.

²⁴ Leroy-Beaulieu, *De la Colonisation chez les Peuples Modernes*, 1874. Quoted in Gustav Schmoller, *Grundriss der Allgemeinen Volkswirtschaftslehre*, Leipzig, 1900, p. 182.

calculated with the figure coming out of Beijing, namely \$262, which would give India a much larger advantage. Professor Kravis, in his tentative estimate of the PRC's GDP, operates for the year 1975 with a Chinese-Indian ratio of almost 2:1, namely, expressed as percentages of the US GDP per capita, of 12.3:6.6. Using [redacted] (very high) growth rates for the PRC and the generally accepted official growth rates for India, the per capita comparison would yield for 1980 on the Chinese side \$1,509 multilaterally (or \$1,271 in the binary calculation), on the Indian side \$691, i.e., the PRC-Indian ratio would be 218 (or 184):100. I cannot bring myself to accept this ratio. It would yield a PRC-USSR per capita ratio of 31:100, a ratio much too advantageous to the Chinese side (even the 26:100 ratio arrived at with CIA's higher Soviet GNP estimate is high).

Looking at the economies as a whole, GNP for 1980 is given in the attached tables as \$591.7 billion for the PRC [redacted] \$302.1 billion with Third World Supplement for India, and \$1,280.1 billion for the USSR. In other words, the Chinese GNP is 46 percent of Soviet GNP, and nearly twice Indian GNP. In the ICP calculation, the PRC's GDP is 121 percent that of the USSR (even with the high CIA estimate, 102 percent) and more than three times the Indian GNP. I am considerably more comfortable with my own ratios.

Extrapolated backward to 1950—in the face of statistical gaps and a formidable index problem—the attached tables yield product estimates of \$85.0 billion for the PRC and \$108.9 billion for India, implying per capita figures of \$155 and \$294. As repeatedly mentioned, the PRC growth rates are high; as a result, the level of PRC output in 1950 appears to me to err on the low side. The ICP calculations would yield—with [redacted] PRC growth rates—a PRC total of \$231 billion compared with an Indian total of \$193 billion or, per capita, \$422 for the PRC, \$520 for India. The Maoist regime had just conquered China in 1949; the country was prostrate. But India, so soon after the bloody division of the subcontinent, was also in a poor shape.

Coda on the North-South Problem

Deducting the two alliances (including associated nations), and the PRC from world totals yields a residual population of 2,236 million, or 50 percent of mankind, and a combined product (with Third World Supplements) of \$2,737.4 billion, or 24 percent of the planetary product. These other countries range from the very rich to the very poor, with the poor far more numerous; they are politically as diverse as Vatican City and Mozambique. Included in this remnant is OPEC in its entirety. OPEC's share in the world population is 7.5 percent, i.e., half as much as India's; two OPEC members, Indonesia and Nigeria, are populous. OPEC's share in the planetary product of 1980 is 5 percent, or twice as much as India's; 10 years earlier it had been 2.5 percent, or less than the Indian share.

Both alliances contain countries defined as developed and less developed in this report, while the third member of the triangle, the PRC, is less developed by our definition. Of all the countries labeled non-Communist, 73.4 percent of the population belongs to the less developed world; of all Communist countries, 74.0 percent. The share of the less developed countries in the total output of each group is 24.3 percent among non-Communists, 26.5 percent among Communists. Of 150 sovereign states in the non-Communist category, some 105, or 70 percent are in the Third World (49 in Africa). The Communist world consists of only 16 states, divided evenly between developed and less developed countries.

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Appendix Table 1

Planetary Product With Third World Supplements, Selected Years, 1950-80 ^a

	GNP/GDP							
	1950	1955	1960	1965	1970	1971	1972	1973
World	2939527	3781275	4678310	5985920	7673252	8019629	8408318	8991257
Non-Communist countries	2364386	2994419	3651784	4692088	5995396	6265320	6600830	7046456
Communist countries	575141	786857	1026526	1293832	1677856	1754309	1807488	1944800
Developed countries	2355407	3017292	3722902	4787441	6058881	6290309	6599160	7019502
Non-Communist countries	1884598	2399110	2903260	3757862	4748068	4925986	5198957	5529396
Communist countries	470809	618182	819642	1029579	1310813	1364323	1400204	1490105
Less-developed countries	584120	763984	955409	1198479	1614371	1729320	1809158	1971755
Non-Communist countries	479787	595309	748524	934227	1247328	1339334	1401873	1517060
Communist countries	104332	168674	206885	264252	367043	389985	407284	454695
US\$733 or more per capita (1979)	1588193	2031848	2458500	3195717	4042441	4197683	4442200	4714300
Non-Communist countries	1588193	2031848	2458500	3195717	4042441	4197683	4442200	4714300
North America	1020469	1255569	1415128	1779684	2085697	2152738	2276612	2403917
United States	958994	1176205	1318621	1652391	1925054	1980850	2094755	2208420
Canada	61475	79364	96507	127293	160643	171888	181858	195497
OECD-Europe	432083	577780	756612	974452	1229789	1277585	1334393	1401451
Sweden	35524	41943	49598	64046	77534	77688	78932	81615
Germany (Federal Republic)	142902	224356	307593	391874	487099	502686	521285	546830
Denmark	17986	19821	24547	31714	39874	40843	43052	45309
Switzerland	23393	29755	36717	47365	58212	60598	62538	64414
Norway	12383	14947	17548	22145	26618	27843	29291	30491
France	125174	153089	207585	274635	356750	376014	398200	419702
Luxembourg	1351	1512	1748	2068	2476	2577	2729	3008
Belgium	28439	33639	38281	49039	62082	64503	68244	72680
Netherlands	31558	40458	49197	62253	81365	84863	87749	92750
Iceland	427	576	673	923	1033	1165	1240	1338
Austria	12946	17683	23126	28392	36747	38805	41133	43314
Oceania	38783	46754	56913	71910	96576	102024	104778	110750
Australia	38783	46754	56913	71910	96576	102024	104778	110750

^a Product brackets and country groups in descending order of the 1979 per capita product (excluding supplements) shown in the last column of this table.

Product in Million 1980 US Dollars;
Population, Thousand Persons;
Per-Capita Product, 1980 US Dollars

1974	1975	1976	1977	1978	1979	1980	1979 Population	1979 Per Capita Product
9296146	9422251	9867146	10285627	10709652	11048971	11269078	4408026	2329
7270511	7338883	7715579	8038070	8347612	8625294	8792355	2907320	2706
2025635	2083368	2151567	2247557	2362039	2423677	2476723	1500706	1599
7167265	7189690	7546114	7831455	8126005	8366308	8475592	1175514	7117
5615023	5599561	5887747	6113846	6351240	6569306	6655228	781122	8410
1552242	1590128	1658367	1717609	1774764	1797002	1820364	394392	4556
2128881	2232561	2321031	2454172	2583647	2682662	2793486	3232512	588
1655488	1739322	1827832	1924224	1996372	2055987	2137127	2126198	611
473393	493239	493200	529948	587275	626675	656359	1106314	545
4762729	4755534	5008832	5213583	5421729	5605711	5674083	562489	9966
4762729	4755534	5008832	5213583	5421729	5605711	5674083	562489	9966
2382295	2363674	2497265	2619817	2734205	2798472	2793595	248942	11241
2179955	2159108	2281039	2397772	2504222	2561820	2556706	225254	11373
202340	204566	216226	222045	229983	236652	236889	23688	9990
1431072	1415934	1483156	1518458	1563900	1622333	1648402	170579	9511
85043	85723	86838	84555	86923	90400	91666	8296	10897
549564	539847	567919	583253	603667	631435	642801	61302	10300
44906	44715	47831	48754	49256	50980	50476	5118	9961
65380	60933	60091	61534	61657	63014	65031	6343	9934
32077	33423	35362	36812	38468	40200	41687	4074	9867
432293	433157	454815	467551	482979	498434	504914	53478	9320
3150	2880	2964	3014	3111	3195	3211	358	8924
76095	74531	78779	79803	81392	83346	84513	9849	8462
95996	95046	100083	102885	105355	107672	108534	14029	7675
1391	1385	1433	1516	1579	1620	1661	226	7169
45176	44294	47040	48780	49513	52037	53910	7506	6933
113851	116470	120895	122225	124303	129772	133277	14417	9001
113851	116470	120895	122225	124303	129772	133277	14417	9001

Appendix Table 1 (continued)

	GNP/GDP							
	1950	1955	1960	1965	1970	1971	1972	1973
OPEC	4312	7175	12273	18988	32269	39880	46040	58039
Qatar	363	512	782	960	1962	2731	2889	3741
Kuwait	1426	2639	4875	5462	6606	9502	10798	14894
Saudi Arabia	1710	2987	5213	7611	11955	14083	17260	22723
United Arab Emirates	381	534	817	1362	4119	4653	4947	5949
Libya	431	503	586	3594	7626	8912	10146	10733
Other Asia	91904	143647	216477	349179	595160	622538	677320	736925
Japan	91904	143647	216477	349179	595160	622538	677320	736925
Sundry Group 1	642	923	1097	1504	2951	2918	3056	3219
US4489-US6732 per capita (1979)	624396	798505	1027373	1275002	1611189	1659208	1698531	1816256
Non-Communist countries	239036	290994	349450	428155	526766	539452	556938	598400
OECD-Europe	227850	276397	330669	402627	495068	506095	521306	560314
Finland	8772	11649	14212	18390	23660	24156	25992	27707
United Kingdom	144058	167223	188797	219759	248987	255958	262101	283069
Italy	75019	97525	127660	164477	222422	225981	233213	249537
Oceania	7900	9482	11520	14659	16785	17205	17968	19258
New Zealand	7900	9482	11520	14659	16785	17205	17968	19258
Other Asia	1776	3231	4930	7957	11268	12451	13955	14918
Israel	1776	3231	4930	7957	11268	12451	13955	14918
Other Latin America	360	469	621	817	1060	1049	968	968
Bahamas	360	469	621	817	1060	1049	968	968
Sundry Group 2	1152	1416	1710	2094	2585	2652	2743	2943
Communist countries	385360	507511	677923	846847	1084423	1119756	1141592	1217857
Communist Europe	385360	507511	677923	846847	1084423	1119756	1141592	1217857
Germany (Democratic Republic)	31764	43485	55443	63313	73887	75533	78129	80535
Czechoslovakia	30478	36056	49000	54986	65099	67302	69721	72031
USSR	323118	427970	573479	728548	945437	976920	993742	1065291

Product in Million 1980 US Dollars;
Population, Thousand Persons;
Per-Capita Product, 1980 US Dollars

1974	1975	1976	1977	1978	1979	1980	1979 Population	1979 Per Capita Product
102102	108764	116962	120646	125458	133466	138453	12191	10948
3526	4690	5394	4816	5202	5346	5506	210	25455
23260	18171	18105	16175	16984	19277	17525	1277	15096
50689	62194	64291	68144	72164	77648	83860	6913	11232
6756	7900	9033	9501	9098	9185	9553	871	10546
17872	15809	20140	22010	22010	22010	22010	2920	7538
729629	746410	785970	827626	869007	916803	955308	115880	7912
729629	746410	785970	827626	869007	916803	955308	115880	7912
3780	4283	4584	4812	4856	4865	5048	480	10136
1871690	1885852	1962951	2018765	2076882	2109546	2140103	420735	5014
606852	596033	621598	630422	646835	666712	675405	125338	5319
567276	555661	580758	589906	607506	626220	633770	117542	5328
28622	28794	28880	28995	29402	31519	32753	4764	6616
278886	276125	286343	290065	300216	302919	297562	55901	5419
259768	250742	265536	270846	277888	291783	303455	56877	5130
19815	20191	20212	19680	17548	17723	18202	3107	5704
19815	20191	20212	19680	17548	17723	18202	3107	5704
15783	16319	16617	16744	17548	18390	18988	3783	4861
15783	16319	16617	16744	17548	18390	18988	3783	4861
987	924	944	976	1030	1066	1097	236	4515
987	924	944	976	1030	1066	1097	236	4515
2990	2938	3067	3115	3202	3312	3347	670	4944
1264838	1289819	1341353	1388343	1430048	1442834	1464698	295397	4884
1264838	1289819	1341353	1388343	1430048	1442834	1464698	295397	4884
84397	87562	89525	92564	94843	97059	99583	16758	5792
74616	76815	77970	81599	82753	83303	84969	15239	5466
1105825	1125442	1173859	1214181	1252452	1262472	1280146	263400	4793

Appendix Table 1 (continued)

	GNP/GDP							
	1950	1955	1960	1965	1970	1971	1972	1973
US2245-US4488 per capita (1979)	142817	186939	237028	316722	405251	433418	458430	488945
Non-Communist countries	57369	76268	95309	133989	178861	188851	199818	216696
OECD-Europe	35711	46664	55079	81265	110098	115173	121775	131133
Ireland	4732	5283	5606	6782	8552	8903	9411	9843
Greece	4960	6855	8973	13208	18702	20030	21813	23405
Spain	26019	34526	40500	61275	82843	86240	90551	97885
Other Europe	544	668	811	1033	1495	1632	1737	1761
Cyprus	349	452	544	757	1063	1191	1269	1302
Malta	195	216	267	276	431	441	467	459
OPEC	11963	16283	22261	28309	35583	38449	40130	44508
Gabon	337	339	340	454	705	615	763	1054
Venezuela	8552	11751	16173	20056	25174	27257	28652	31851
Iraq	3074	4193	5748	7798	9704	10577	10715	11603
Other Asia	2713	4011	5677	9136	14215	15072	16448	18039
Singapore	1122	1564	1910	2531	4630	5208	5907	6586
Hong Kong	1438	2229	3462	6180	8991	9270	9947	10843
Bahrain	153	218	305	425	594	594	594	611
Other Latin America	4958	6685	9099	10799	12796	13616	14517	15630
Puerto Rico, et al.	4032	5230	6756	7954	9371	10133	10896	11986
Trinidad and Tobago	708	1199	2040	2464	2875	2947	3098	3098
Barbados	218	256	304	381	550	535	523	547
Sundry Group 3	1481	1957	2383	3447	4674	4909	5213	5625
Communist countries	85449	110672	141719	182732	226389	244567	258611	272249
Communist Europe	85449	110672	141719	182732	226389	244567	258611	272249
Romania	16057	22769	28257	37797	48154	54919	58434	60325
Poland	35998	45070	56382	70175	85331	91431	98092	105314
Hungary	13374	17413	21035	25841	30027	31346	32017	33697
Bulgaria	6328	8518	12113	16695	21403	22121	23173	24091
Yugoslavia	13691	16901	23932	32225	41475	44751	46895	48822

Product in Million 1980 US Dollars;
Population, Thousand Persons;
Per-Capita Product, 1980 US Dollars

1974	1975	1976	1977	1978	1979	1980	1979 Population	1979 Per Capita Product
532846	548303	574330	599107	627394	651051	661406	192290	3386
245442	247994	257317	269841	282677	296883	305740	93295	3182
136354	138993	143964	148244	153466	155670	157909	49886	3121
10297	10420	10722	11333	12025	12254	12376	3365	3641
22592	23970	25502	26369	28136	29205	29380	9444	3092
103465	104603	107741	110542	113305	114212	116154	37077	3080
1610	1513	1785	2076	2272	2445	2541	968	2526
1106	910	1079	1284	1393	1486	1560	621	2393
504	604	706	792	879	959	981	347	2763
67567	67157	68116	73152	77253	85298	89096	28084	3037
2022	2104	2312	2428	2023	2330	2469	637	3657
44945	41810	40726	44643	47321	49063	51025	14539	3375
20600	23243	25078	26082	27908	33906	35602	12908	2627
18702	19031	21573	23747	25942	28653	31027	7633	3754
7001	7288	7820	8445	9172	10025	10928	2363	4243
11005	11092	12944	14485	15933	17766	19187	4900	3626
696	650	808	816	837	862	913	370	2329
15404	15397	15704	16201	17049	17909	18098	4824	3712
11768	11550	11659	11800	12389	13075	13075	3395	3851
3098	3318	3506	3832	4066	4200	4369	1150	3653
538	530	539	569	594	633	654	279	2269
5805	5902	6174	6420	6696	6908	7068	1900	3636
287404	300309	317014	329266	344717	354168	355666	98995	3578
287404	300309	317014	329266	344717	354168	355666	98995	3578
63726	66560	75141	77748	82323	86026	89295	22057	3900
111554	116813	121651	125016	129925	129854	124859	35227	3686
34575	35325	35273	37418	38477	38968	39359	10710	3639
24825	26878	27963	27630	28398	29149	29878	8827	3302
52722	54733	56986	61453	65594	70170	72275	22174	3165

Appendix Table 1 (continued)

	GNP/GDP							
	1950	1955	1960	1965	1970	1971	1972	1973
US1123-US2244 per capita (1979)	185060	237886	308892	396578	544843	594492	643589	710812
Non-Communist countries	176717	228594	298523	384580	531334	581390	630416	696832
OECD-Europe	5383	7332	9121	12413	16603	17698	19114	21254
Portugal	5383	7332	9121	12413	16603	17698	19114	21254
Oceania	310	391	494	569	773	820	885	997
Fiji	310	391	494	569	773	820	885	997
OPEC	15581	21754	30654	33242	49020	61708	71427	87204
Iran	10118	13537	18246	21458	31524	45458	52782	65712
Algeria	5463	8217	12408	11784	17496	16250	18645	21492
Other Africa	18173	21573	26325	36185	47799	50370	52560	54804
South Africa	16610	19831	24151	32678	43344	45483	46716	48854
Tunisia	1564	1742	2174	3507	4455	4887	5844	5949
Other Asia	15474	21077	25822	36361	55937	61036	65824	74294
China (Taiwan)	3824	5935	7847	11983	18683	20822	23301	26106
Malaysia	4604	5609	6771	9080	12238	13003	13754	15142
Korea (South)	7046	9533	11204	15298	25015	27211	28769	33046
Other Latin America	120513	154966	204309	263628	358532	386998	417714	455272
Argentina	26177	30454	37423	46461	57736	60852	63161	66192
Brazil	40214	55880	77793	96916	140288	158957	177542	202401
Mexico	31432	39761	53359	74294	103715	107242	115075	123815
Suriname	170	279	402	579	814	831	885	885
Chile	9235	10723	13442	17182	20808	22409	22395	21615
Jamaica	1551	2266	3313	4164	5391	5487	5938	5788
Costa Rica	870	1244	1779	2256	2819	3009	3255	3544
Uruguay	3344	4458	4458	4632	5201	5150	4986	5031
Panama	735	892	1205	1789	2595	2776	3019	3210
Peru	6785	9009	11134	15355	19165	20284	21460	22791
Sundry Group 4	1283	1501	1798	2181	2670	2761	2891	3006
Communist countries	8343	9292	10369	11998	13509	13102	13173	13981
Communist Latin America	8343	9292	10369	11998	13509	13102	13173	13981
Cuba	8343	9292	10369	11998	13509	13102	13173	13981

Product in Million 1980 US Dollars;
Population, Thousand Persons;
Per-Capita Product, 1980 US Dollars

1974	1975	1976	1977	1978	1979	1980	1979 Population	1979 Per Capita Product
784712	815480	868111	903635	929504	964576	992338	431437	1720
769286	799573	851807	886708	911940	946587	974164	421613	1727
21488	20603	21838	23062	23800	24776	25940	9843	1936
21488	20603	21838	23062	23800	24776	25940	9843	1936
1023	1024	1052	1013	1125	1193	1265	618	1485
1023	1024	1052	1013	1125	1193	1265	618	1485
116470	126448	141668	145049	130261	113495	93013	55575	1571
90743	98927	113416	116218	98489	79435	56739	37430	1632
25728	27521	28252	28831	31772	34061	36275	18145	1444
59155	61594	63019	63345	65470	67845	72504	34111	1530
52580	54421	55129	55129	56518	58270	62353	27799	1612
6575	7173	7890	8216	8952	9575	10150	6312	1167
78091	81674	92369	100783	112440	120453	122059	70270	1319
26262	26899	29973	32381	36885	39661	42248	17456	1748
16134	16544	18400	19873	21389	23159	24661	13674	1303
35695	38231	43996	48529	54166	57632	55151	39140	1133
489989	505036	528545	549941	575092	614972	655473	249756	1894
70966	69988	68019	71008	68204	74001	73780	27210	2092
222232	234682	256270	268310	284408	302610	326819	119175	1953
131124	136492	139353	143957	154042	166366	179342	65770	1946
871	847	874	933	952	970	992	404	1847
22494	19930	19987	21700	23287	25270	26913	10848	1792
5669	5612	5259	5057	4972	4860	4718	2215	1688
3742	3822	4031	4342	4598	4782	4854	2184	1684
5112	4986	5296	5434	5758	6235	6485	2910	1648
3417	3506	3506	3562	3659	3786	4174	1876	1553
24363	25171	25950	25638	25213	26092	27396	17164	1169
3071	3194	3316	3516	3752	3853	3909	1440	2058
15425	15907	16304	16927	17564	17989	18173	9824	1409
15425	15907	16304	16927	17564	17989	18173	9824	1409
15425	15907	16304	16927	17564	17989	18173	9824	1409

Appendix Table 1 (continued)

	GNP/GDP							
	1950	1955	1960	1965	1970	1971	1972	1973
US\$62-US\$122 per capita (1979)	82377	107640	135442	174992	229323	250308	261539	280367
Non-Communist countries	79047	101303	126097	161338	211778	231206	240333	257231
OECD-Europe	12727	17306	22291	27461	37733	41168	43884	45812
Turkey	12727	17306	22291	27461	37733	41168	43884	45812
Oceania	793	934	1104	1456	2134	2582	2502	2772
Papua New Guinea	793	934	1104	1456	2134	2582	2502	2772
OPEC	12744	17470	24017	28710	36450	43443	41201	45059
Ecuador	2320	2784	3358	4538	5774	6543	6511	7571
Nigeria	10424	14686	20659	24172	30676	36900	34689	37487
Other Africa	13694	15987	17704	21952	27815	29055	30565	31958
Ivory Coast	2284	2742	3290	4554	6588	6898	7292	7620
Mauritius	511	537	563	762	765	798	865	968
Morocco	7322	8717	9039	10739	13305	13931	14642	14862
Congo	614	654	697	818	1137	1105	1121	1199
Angola	2964	3337	4114	5080	6020	6321	6644	7308
Other Asia	19547	25462	31977	44876	58469	62918	66246	71652
Syria	2676	2955	3251	4796	6177	6993	7559	7601
Jordan	385	628	1025	1752	1928	1970	2028	2035
Thailand	6973	8316	10687	15167	23030	24843	26116	28556
Philippines	7985	11837	15063	20955	24843	26307	27545	30195
Yemen (North)	1527	1726	1951	2205	2491	2805	2999	3265
Other Latin America	19316	23853	28647	36508	48003	50798	54618	58584
Guatemala	2643	2960	3841	4962	6569	6939	7451	7958
Dominican Republic	1715	2299	2946	3408	4897	5417	6088	6733
Belize	52	70	91	117	153	162	171	181
Paraguay	1259	1444	1599	2075	2549	2660	2796	2999
Colombia	8717	11259	13717	17270	22826	24149	26056	28037
Nicaragua	865	1294	1491	2303	2798	2934	3044	3171
Guyana	401	485	586	710	833	851	914	919
Bolivia	2291	2326	2359	2852	3879	4027	4233	4524
El Salvador	1374	1717	2019	2812	3499	3659	3865	4062
Sundry Group 5	227	291	359	375	1173	1243	1318	1395

Product in Million 1980 US Dollars;
 Population, Thousand Persons;
 Per-Capita Product, 1980 US Dollars

1974	1975	1976	1977	1978	1979	1980	1979 Population	1979 Per Capita Product
312138	336041	357659	381557	401314	420050	440777	357458	734
286546	308618	330794	354570	372514	390030	409754	334499	729
49703	54131	58734	61314	63162	63540	64175	44561	891
49703	54131	58734	61314	63162	63540	64175	44561	891
3107	3087	3087	3150	3225	3323	3422	3067	677
3107	3087	3087	3150	3225	3323	3422	3067	677
58049	65078	71621	81392	85669	91825	100296	82358	697
9283	9979	10727	11478	12259	12913	13494	7763	1040
48765	55099	60894	69914	73409	78911	86802	74595	661
34259	34991	36424	37259	38912	40043	40999	37121	674
7894	8438	9493	9939	10992	11564	11968	7761	931
1036	1009	1079	1138	1212	1290	1374	941	857
16347	16904	17869	18579	19322	19900	20298	20368	611
1257	1283	1295	1234	1321	1400	1470	1508	580
7725	7357	6688	6368	6065	5889	5889	6543	563
77128	84319	90240	96087	101903	108620	114361	111186	611
9486	11459	11701	12543	12920	13307	13706	8506	978
2258	2416	3019	3262	3523	3769	4146	3189	739
29986	32304	34954	37116	40341	43009	45589	46687	576
32182	34379	36680	38982	40725	43915	46077	47678	576
3216	3760	3884	4184	4393	4620	4843	5126	563
62824	65451	69039	73613	77822	80773	84555	54946	919
8467	8637	9276	10582	11133	11633	12041	6849	1062
7333	7706	8199	8560	8886	9330	9704	5551	1051
192	202	214	227	239	255	262	152	1047
3248	3412	3668	3964	4381	4819	5349	3117	966
29859	31143	32576	34498	37257	39679	42060	26205	946
3593	3658	3884	4179	3961	3149	3619	2365	832
983	1032	1079	1016	1006	1006	1016	832	756
4827	5098	5394	5593	5744	5865	5924	5213	703
4322	4564	4747	4995	5214	5038	4580	4662	675
1477	1560	1649	1754	1822	1905	1947	1260	945

Appendix Table 1 (continued)

	GNP/GDP							
	1950	1955	1960	1965	1970	1971	1972	1973
Communist countries	3330	6337	9344	13654	17545	19102	21206	23136
Communist Europe	976	1264	1621	1953	2354	2458	2580	2702
Albania	976	1264	1621	1953	2354	2458	2580	2702
Communist Asia	2354	5073	7723	11701	15192	16644	18626	20434
Korea (North)	1918	4358	6625	10460	13773	15167	17085	18828
Mongolia	436	715	1098	1241	1419	1477	1541	1606
US\$61 or less per capita (1979)	316682	418457	511075	626910	840204	884519	904030	980575
Non-Communist countries	224023	265412	323904	388309	504215	526738	531125	562997
OPEC	10538	12592	15099	19903	41329	52027	55568	69682
Indonesia	10538	12592	15099	19903	41329	52027	55568	69682
Other Africa	65976	78626	97898	121903	149480	157299	160902	162669
Liberia	784	916	1072	1146	1661	1843	1925	2002
Egypt	14052	16300	18829	27342	33986	35262	34236	32920
Swaziland	82	115	163	256	408	446	479	494
Ghana	4916	5406	10229	11895	13215	14246	14332	15121
Zimbabwe (Rhodesia)	1894	3270	3785	5190	6652	7469	8045	8366
Zambia	2157	2869	3797	5298	5871	5825	6384	6338
Cameroon	3447	3572	3689	4279	6005	6448	6599	6856
Botswana	77	89	101	122	268	326	393	436
Senegal	3164	3644	4145	4567	4622	5154	4914	5003
Sudan	5842	7280	9056	9891	10356	10787	12163	11410
Madagascar	3751	3979	4202	4622	5818	5935	5741	5616
Togo	479	542	614	920	1318	1364	1357	1412
Mauritania	261	309	369	594	748	734	757	801
Kenya	2960	3514	4159	4905	7076	7573	8088	8534
Benin	959	1079	1247	1333	1333	1652	1661	1745
Uganda	3699	4598	5068	6206	7750	7875	7994	7899
Mozambique	1918	2229	4099	4794	6496	6942	7352	8088
Gambia, The	96	110	132	177	221	245	256	254
Sierra Leone	695	863	1064	1402	1666	1652	1676	1700
Lesotho	168	216	256	360	463	470	453	487
Tanzania	2124	2548	3080	3852	5336	5506	5837	6070
Guinea	1175	1386	1649	2004	2284	2332	2400	2471
Malawi	544	669	815	959	1266	1510	1625	1752