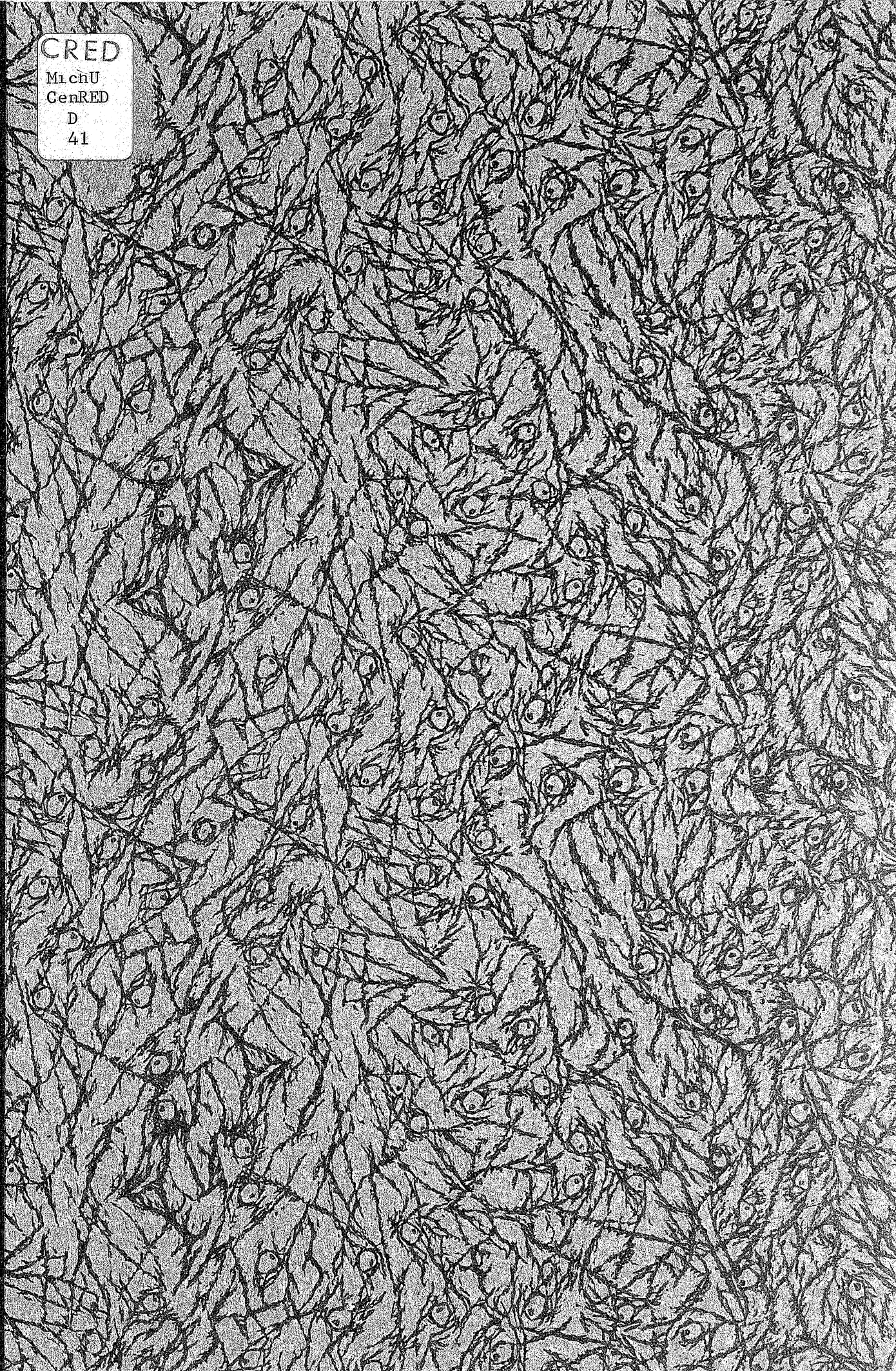


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China and India:
A Comparative Survey of
Economic Development Performance

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ABSTRACT

This paper draws upon the available evidence from China and India to compare systematically the economic development performance of the two nations in the modern postwar period. Three broad economic objectives of development are identified: economic growth, economic equity and economic self-reliance. Separate sections of the paper are devoted to a comparison of the progress made by China and India with respect to each of these three objectives. It is concluded that in each respect China has been more successful than India.

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China and India: A Comparative
Survey of Economic Development Performance

Ever since India's Independence in 1947 and China's Liberation in 1949, the two nations have invited comparison. Each is of continental size, with an enormous population; each entered the postwar era of development as a predominantly agrarian society with an extremely low level of per capita output and correspondingly widespread poverty. Similar in initial economic conditions, China and India have pursued their paths of development under strikingly different political conditions: China with its own brand of revolutionary socialism, India with a Western-style bourgeois democracy. Little wonder, then, that China and India have come to be seen as representative of their respective political systems and that their relative progress has been watched with great interest by the rest of the world.

Any comprehensive evaluation of the development of China and India would have to take account of a wide variety of relevant development objectives, many of them non-economic in nature. For example, a primary Maoist objective has been "the making of Communist man."¹ And both Chinese and Indian leaders have voiced concern, in different ways, about the importance of enabling people to participate in decision-making in various spheres of life. The extent to which China and India have succeeded in attaining these and other non-economic objectives is crucially important in assessing their overall development experiences. However, in view of the conceptual and empirical difficulties involved in analyzing China's and India's success in meeting non-economic development objectives, this paper will necessarily be confined to an examination of development performance in the economic sphere. Thus it will provide only a partial--but a significant--basis for comparison of China's and India's development performance.

In section I of the paper, I discuss the concept of economic development itself and seek to identify relevant indicators of performance. Three broad objectives of economic development are distinguished,

and the performance of China and India in each of these general areas is examined in subsequent sections of the paper: section II is devoted to economic growth, section III to economic equity, and section IV to economic self-reliance. Finally, section V contains a brief summary and conclusion.

VI. Indicators of Economic Development

Until recently, Western economists have tended explicitly or implicitly to identify economic development with economic growth, as measured by the rate of increase of per capita income or product. The appeal of such an identification was due partly to the ease with which it permits quantification of the extent of economic development. It seemed all the more attractive because progress in other aspects of an economy and society were assumed to be highly correlated with increases in per capita income. The prevailing Western view of economic development--influenced largely by the experience of the presently rich countries--stressed the uniformity of the "modernization" process associated with economic growth.

The experience of poor countries in the postwar period, however, has led to increasing doubt about the facile identification of development with growth. On the one hand, political leaders in many of these countries have explicitly enunciated economic development objectives other than economic growth--such as greater equity, higher employment, and more "self-reliance". On the other hand, it has become evident that there are a variety of different ways of achieving economic growth with quite different consequences for other aspects of development. The notion of a uniform pattern of growth, development and modernization is clearly inadequate, and any study of economic development must address itself to a variety of development objectives.

Once economic development is recognized as a process involving more than simply growth in per capita income, the selection of relevant dimensions and indices of development becomes an explicitly normative issue. Ethical judgments are required to choose and to weigh the kinds of changes in the economic structure of a society which are considered to represent development. For the purposes of this essay, I propose not to construct an aggregate index of economic development but simply to compare the performance of China and India with respect to each of a variety of (possibly) relevant indicators. My choice of indicators is designed to reflect within reason the major economic development objectives that have been voiced by political leaders and development planners.

I have found it useful to group the multiplicity of economic development objectives into three broad categories: economic growth, economic equity and economic self-reliance. The principal indicators of economic growth are the rates of increase of GNP and per capita GNP, the former being more relevant for an assessment of aggregate economic potential and the latter for an assessment of the average standard of living. In addition, it is often useful to consider separately the rates of growth of the two major goods-producing sectors: agriculture and industry.

The broad objective of economic equity encompasses a wide variety of different indicators, each of them measuring in some way the ability of a society to distribute economic benefits and opportunities relatively equally among its people. The most obvious and general indicator of economic equity is (a) the degree of equality in the overall distribution of income by income class. But there are also particular dimensions within which the degree of economic equity may be of concern, as reflected by the following indicators: (b) the differential between average levels of living in urban and rural areas; (c) the dispersion of average levels of living as between different regions of a country; and (d) the range of incomes accruing to people working within an economic enterprise, from the highest-paid executive or manager to the lowest-paid worker.

Employment is often suggested as an independent development objective, desirable both for the self-esteem and for the income it brings to the employed. But it seems appropriate to treat employment as an equity sub-objective, since it involves the extension to all people in a society of opportunities that are often unavailable to some. Thus, we are interested in (e) the extent to which employment opportunities are available to the (potentially) working population, as well as the adequacy of provisions made for the unemployed and underemployed.

Like employment, the comprehensive provision of certain basic public services may be considered relevant equity sub-objectives. Indicators of the most important of these services, from a general welfare point of view, are (f) the extent to which health care is available to all members of a society, and (g) the extent to which literacy and primary education have been made accessible to the whole population. Finally, an important indicator of equality of opportunity--as distinct from equality of current income or welfare--is (h) the

degree of social mobility in a society. All of these equity indicators are of course interrelated, but evidence on each of them contributes to an overall assessment of performance with respect to the broad development objective of greater economic equity.

A final important cluster of development indicators is associated with the objective of economic "self-reliance" or "self-sufficiency," or "independence." The concept of economic self-reliance is an elusive one, despite the emphasis placed upon it by political leaders in many poor countries. No country in the modern world can attain complete autarky; most countries will have to remain highly interdependent--if not dependent--on trade relations with other countries. Even for China and India, with their vast internal markets and their diversified supplies of natural resources, foreign trade represents and will continue to represent a critically important (if proportionately small) share of overall economic activity. Thus I would not find it appropriate to identify the objective of economic self-reliance with trade limitation or minimization.

It would seem more appropriate to define economic self-reliance as the ability of citizens of a particular country--as opposed to foreigners--to make the decisions that affect economic activity within that country. This ability is difficult to measure directly, but the following indicators would appear to be associated with the degree of economic self-reliance attained by a given country: (a) the extent to which the control of productive enterprises is exercised by nationals; (b) the extent to which the country has remained free of foreign exchange problems and foreign debt; (c) the extent to which the country has been able to do without foreign aid; and (d) the extent to which the country has developed an independent technological base for economic activity.

II. Economic Growth

In the early years following China's Liberation (1949) and India's Independence (1947), both countries had to direct their economic efforts primarily toward recovery and rehabilitation. China had suffered through more or less continual warfare for more than a decade, and India had been severely jolted by the partition of the sub-continent.

Each country began its systematic development efforts in the early 1950s, with the launching of India's First Five Year Plan in 1951 and China's First Five Year Plan in 1953. At that time, the level of per capita income was roughly the same in the two countries: agricultural productivity was somewhat higher in China, while industrial development was somewhat more advanced in India.²

Although the data from both countries are less than fully reliable, there can be little doubt that since the initiation of planned economic development in the early 1950s the overall average rate of growth of per capita income has been higher in China than in India. Most estimates of the average annual rate of growth of real output in China from 1952 to 1970 or 1971 range between 4% and 6%, with the corresponding rates of growth of per capita output ranging from 2% to 4%.³ Official figures published by the Government of India imply an average annual rate of growth of real output of 3.5% from 1951 to 1971 and a corresponding rate of growth of per capita output of 1.4%.⁴ These figures may be compared with an average annual rate of growth of 4.6% in GNP and 2.1% in per capita GNP for all the (non-Communist) poor countries in the postwar period.⁵ China has clearly done somewhat better than this average and India somewhat worse.

In both China and India rates of growth have varied considerably since the early 1950s--more strikingly so in the case of China. China experienced its most rapid growth in the period 1952-58, suffered reverses in the following several years (The Great Leap Forward period, with very poor weather and the sudden withdrawal of Soviet technicians), and showed fairly rapid growth again following 1961 except for a minor dip from 1966-68 (The Cultural Revolution period).⁶ India showed more or less steady growth from 1950 to 1964, lost ground in 1965 and 1966 (successive drought years), and moved ahead again from 1966 to 1971.⁷ Since then India has met with further serious economic setbacks, attributable to very poor rainfalls in 1972 and 1974 and (since 1973) sharp increases in world prices of oil, fertilizer and food grains, all of which India imports in significant quantities.⁸ Although official national income figures are not yet available, the 1972-74 period will surely prove to have been one of general economic

stagnation --if not worse--for India.' By contrast, China has been less vulnerable to poor weather and world price increases and appears to have experienced continued economic growth in the past few years. Thus, during the past decade or so, China's average annual growth has been greater and India's has been lower than their respective averages for the entire postwar period. The growth differential between the two nations has been widening and may well remain very substantial in the coming years.⁹

An examination of the sectoral growth rates of agriculture and industry will help to fill in the picture of China and India's comparative growth performance. From the early 1950s up to the early 1970s, the average rate of growth of agricultural output in India was approximately 3%, while in China it was probably somewhat lower.¹⁰ Any long-run growth advantage for Indian agriculture is attributable to non-food products, for the available evidence suggests that the average rate of growth of foodgrain production was similar in the two countries during this period.¹¹ China began the period with a level of per capita foodgrain production roughly 30% higher than India and has maintained a substantial advantage all along.¹²

The long-term rates of agricultural growth cited above are apt to be somewhat misleading. For India's growth advantage was confined largely to the first decade of the period; since the early 1960s the rate of agricultural growth in China appears to have exceeded that in India.¹³ This is true even without taking into account the very serious agricultural reverses suffered by India beginning in 1972. If the more recent past is any guide, China's agricultural prospects appear still brighter than India's.

The differential in industrial growth between China and India has been much greater than in agricultural growth. For the full period from 1952 to 1971, estimates of China's average annual rate of industrial growth range roughly from 8% to 12%.¹⁴ The rate was especially high from 1952 to 1958 (between 15% and 20%), which accounts for the fact that China's overall rate of growth exceeded India's in the 1950s even though Indian agriculture grew more rapidly than Chinese agriculture.¹⁵ Estimates of Chinese industrial growth since

the mid-1960s range from 8% to 10% per year--close to the full period average.¹⁶

Official figures suggest that Indian industry grew at a rate close to 6% from 1951 to 1971, with a slightly higher rate recorded in the 1950s and a slightly lower rate in the 1960s.¹⁷ Since 1972, Indian industry has been stagnating, largely because of the agricultural and trade adversities cited earlier. Once again, the recent past provides an especially gloomy picture and points to increasing relative gains by China.

The differential rates of growth of agriculture and industry in China and India have led to striking differences in the trend of sectoral shares of national product in the two countries. In the early 1950s agriculture accounted for close to half the national product and industry accounted for less than 20% in both countries.¹⁸ By 1970, the share of agriculture had dropped by more than 15 percentage points and the share of industry had increased by more than 15 percentage points in China,¹⁹ while the corresponding changes in India ranged between 5 and 10 percentage points.²⁰ Thus changes in the sectoral structure of the Chinese economy have been much more dramatic than in the Indian economy.

III. Economic Equity

Prior to Liberation and Independence, China and India had highly inegalitarian social and economic structures. With respect to every indicator of economic equity listed earlier, both China and India were among the most unequal societies in the world. Vast differentials of income prevailed; large numbers of people were unemployed or underemployed; health and education facilities were inadequate or non-existent for much of the population; and social mobility was very limited. Quantitative data on subsequent changes in the degree of economic equity in China and India are generally less available and less reliable than data on economic growth. Nevertheless, the information at hand permits broad comparisons to be made with considerable confidence.

(a) Income Distribution. There are no comprehensive data on the distribution of income by income class in China either before or after Liberation, so one must rely largely on qualitative evidence

on this subject. The reports of China scholars leave little doubt as to the nature of China's performance. To quote one reasonably representative observer:²¹

"the overwhelming body of visual, qualitative and admittedly impressionistic evidence, coupled with whatever quantitative evidence is available, strongly supports the conclusion that the Chinese have been remarkably successful in narrowing income inequalities and thereby assuring a certain minimum standard to most, if not all, elements of the population."

Similar statements can be found in the writings of almost every scholar who has commented on income inequality in China.²²

In the case of India, there is no lack of quantitative data relevant to income distribution, but much of the data is characterized by uncertain reliability and partial coverage. A great number of studies have been carried out to determine the degree and trend of income inequality in India, and the only problem is to reconcile differences in the studies and draw overall conclusions. My reading of these studies (to be outlined briefly below) suggests that at the very best there has been no reduction in the highly unequal distribution of income that characterized India at independence. Most probably the degree of income inequality has increased, and especially so in the last decade.

Several studies have made use of the detailed information on consumer expenditure patterns collected annually by the Indian National Sample Survey;²³ assumptions about savings patterns are then added to estimate distributions of income by income class. Several of these studies conclude unequivocally that income inequality worsened during various sub-periods between 1951 and 1968;²⁴ some show a decline in rural inequality but an increase in urban inequality, with little overall change.²⁵ Several of the studies have been criticized for failing to take account of differential price changes facing different income classes.²⁶ For much of the period, and especially in the 1960s, price movements have been differentially unfavorable to the poorer classes with the result that current price estimates tend to understate the increase in income inequality.²⁷ Another set of studies has focused on the proportion of the Indian

population below a very modestly determined "poverty line"; all of these studies show a growing proportion of Indians in poverty during the 1960s, both in urban and rural areas.²⁸

Independent evidence tends to confirm the impression of increasing inequality from the early 1950s to the late 1960s. During this period, there has been a substantial increase in the share of asset income in total non-agricultural income;²⁹ corporate profits have risen faster than national income as a whole;³⁰ the coverage of the federal income tax has remained very low throughout the period;³¹ there has been hardly any increase in the average real earning of factory workers, presumably a privileged elite within the working class as a whole;³² there has been little change in the distribution of land ownership;³³ and there is evidence of no increase in the real wages of agricultural laborers.³⁴

It is possible that, between Independence in 1947 and the beginning of the era of planned economic development in 1951, there was some reduction in inequality resulting from the dispossession of the former rulers of the princely states and some of the largest absentee landlords. How much of an effect these initial moves had on income distribution is doubtful because in all cases considerable compensation was provided by the Indian Government.³⁵ As for the period since 1968, beyond the range of the studies and evidence cited above, there is every indication that income inequality has worsened. Most observers of the "Green Revolution," which took root in parts of India in the late 1960s, agree that whatever its effect on agricultural output it has had a disequalizing effect on agricultural incomes.³⁶ Moreover, the price of food in India has continued to rise more rapidly than the general price index.³⁷ As a result, the poorer classes have been suffering a larger erosion of their money incomes than the rich. Overall, it is hard to escape the conclusion that while income inequality has been dramatically reduced in China since Liberation, income inequality has increased in India since Independence.

(b) The Urban-Rural Differential. There is only limited information on the way in which the differential between urban and rural

per capita income has changed in China since Liberation. The available evidence suggests that the differential increased during the 1950s (in favor of the cities) but narrowed again during the 1960s and 1970s.³⁸ Taking into account the deliberate efforts of the Chinese Government to spread the supply of educational, medical and cultural resources into rural areas--especially since the Cultural Revolution--it seems most likely that the urban-rural differential in overall economic welfare has been reduced but not eliminated since Liberation.

In India one can make use of the NSS consumer expenditure data to investigate changes in per capita consumption levels from the early 1950s to the late 1960s. Once again, differential price movements complicate the inquiry and lead to varying estimates of the trend in real consumption levels. Some studies suggest increases in the differential while others suggest no clear trend.³⁹ The shift of the terms-of-trade in favor of agriculture in the last decade suggests a possible narrowing of the differential in recent years. On the other hand, the provision of public services such as medical care and education has unquestionably been heavily biased towards urban areas.⁴⁰ As a result, it appears most probable that there has not been any significant change in the differential between urban and rural levels of living in India since Independence.

(c) Regional Disparities. Here again the data are somewhat more plentiful and comprehensive in India than in China, but sufficient information does exist to compare the trends in the two countries. In China there is little doubt that up to the end of the First Five Year Plan period (1957) there was a reduction in the degree of economic inequality as between the various provinces. The commitment of the Central Government (1) to provide minimum levels of social services throughout the country and (2) to promote large-scale industrial development in some of the most backward provinces resulted in considerable redistribution from richer to poorer provinces.⁴¹ It has generally been assumed, however, that the decentralization measures introduced in the late 1950s resulted in a subsequent widening of regional disparities because of a diminished ability of the

Central Government to control the regional allocation of resources. Yet recent research on this question demonstrates quite persuasively that the decentralization measures affected the degree of central fiscal control only marginally and that the pattern of social service and capital investment expenditures has continued to have a significantly progressive redistributive effect among regions.⁴²

In India estimates of per capita product are available on a statewise basis for various time periods between 1955 and 1970. These estimates suggest a mixed pattern of change in regional differentials. The fastest-growing states include a couple of the richest and a couple of the poorest in initial per capita product; the slowest-growing states include one of the richest and several intermediate cases.⁴³ There has apparently been some increase in disparity near the top of the statewise distribution and some reduction in disparity near the bottom; an overall measure of dispersion would probably show a modestly egalitarian trend. In sharp contrast to China, the direct redistributive role of the Central Government in India is limited and its redistributive impact among the states has been on balance regressive.⁴⁴ Thus one may conclude that China has been more successful than India in reducing regional disparities of economic well-being in the past quarter-century.

(d) Intra-Enterprise Income Differentials. Unlike some of the more aggregative measures of inequality, wage and salary differentials are easily and precisely measurable; hence comparisons between China and India can be made with great certainty. The Chinese record is dramatic. From a span of incomes as high as 50-fold before Liberation, the Chinese reduced differentials from roughly 2-4 to 1 in the early 1950s.⁴⁵ Differentials were raised somewhat in the later 1950s, contracted again in the 1960s, restored again in the early 1970s; but ever since Liberation anything higher than a 7 to 1 differential between the highest-paid and lowest-paid person (manager, technician or worker) would be extremely rare. A survey made in the mid-1960s showed that the ratio of the top pay to the average pay in Chinese enterprises was typically no greater than 2.5 to 1.⁴⁶ In some enter-

prises the highest pay went to a worker. Chinese intra-enterprise income differentials are unquestionably the lowest in the world.

By contrast, intra-enterprise income differentials in India have long been and still remain among the highest in the world. Top executives and managers in India typically receive net incomes 20 or 30 times greater than the average worker.⁴⁷ The highest-paid employee is invariably an executive, never a worker or a technician. The tremendous contrast between intra-enterprise income spans in China and India actually even understates the difference in the range of employee living standards.⁴⁸ For in China many goods and services are provided more or less equally to all employees at highly subsidized rates. Hence, the inequality in real incomes is less than the inequality in money incomes. On the other hand, in India top-level executives and managers often enjoy various job perquisites that are unavailable to middle and lower-level employees. Here, inequality in real incomes exceeds the inequality in money incomes.

(e) Unemployment. Of all the indicators of equity/inequity, unemployment is certainly the most difficult to measure. In poor and predominantly agricultural countries such as China and India, the line between employment and unemployment is often very blurred. Regular wage-or-salary earners constitute a small fraction of the labor force; most people work for varying periods of time, with varying degrees of effectiveness, at different times of the year. Underemployment--either part-time work, or partly or wholly unproductive work--is far more serious than overt unemployment. Needless to say, it is extremely difficult to measure underemployment in any consistent manner. As a consequence, one must draw on various fragments of related evidence in attempting to assess the significance of unemployment and underemployment in China and India.

There have been several efforts to estimate total non-agricultural unemployment in China in the 1950s,⁴⁹ but the procedures used were so indirect as to render the estimates highly dubious.⁵⁰ I am not aware of any such estimate at all for the 1960s. In India, the National Planning Commission made a practice of issuing figures for the "back-log of unemployment" at the beginning of each Five Year Plan period.

These estimates began at 3.3 million unemployed in 1951 and rose steadily to 9.6 million in 1966; a later estimate by the Reserve Bank of India put the total at 12.6 million in 1969.⁵¹ Although these estimates have been severely criticized on methodological grounds,⁵² they do at least suggest an increasingly serious unemployment problem. The same impression is conveyed by figures on (job) applicants registered at the National Employment Exchanges set up in urban areas by the Indian Ministry of Labour and Employment. The number of registered applicants rose from 330 thousand in 1951 to almost 7 million by 1972.⁵³ These figures undoubtedly over-state the rate of growth in urban unemployment, but they do nonetheless lend support to the widely held view that urban unemployment has worsened significantly in India since Independence.⁵⁴

Some indirect evidence on the relative severity of unemployment in China and India may be gleaned by comparing the rates at which labor has been absorbed by modern industry. Industrial employment increased in China at an average rate of roughly 10% per year between 1950 and 1966, just a percentage point or two less rapidly than industrial output.⁵⁵ Since 1966, the corresponding average growth rates have presumably been slightly lower.⁵⁶ By contrast, in India industrial employment increased at an average rate of only 2.2% per year between 1951 and 1971.⁵⁷ This rate is some three or four percentage points slower than the rate of growth of industrial output.⁵⁸ Thus, China has absorbed labor much more rapidly into modern industry than India, both because industrial output has been growing more rapidly and because the differential between the rate of growth of output and employment has been smaller. This latter point suggests a greater concern for labor-intensive production techniques in China; whether this has resulted in more or less efficient production is a question beyond the scope of this paper.⁵⁹

Some additional impressionistic evidence suggests that (1) there is a substantial degree of (usually disguised) underemployment in the countryside in both China and India;⁶⁰ (2) urban unemployment is more severe in India than in China, but urban underemployment is probably

more serious in China;⁶¹ and (3) unemployment among high school and college graduates is much worse in India than in China.⁶²

All in all, the fragmentary evidence does seem to point to a somewhat better employment situation in China than in India, but the evidence is not absolutely conclusive.

Concern about unemployment on grounds of equity reflects not only concern about the availability of work opportunities but also concern about the availability of basic necessities of life to the economically marginal population. Indeed, some observers view the "unemployment problem" as strictly an "income problem." Hence, it is important in comparing the gravity of unemployment in China and India to examine the manner in which each society provides for its poor, whether unemployed or underemployed. On this question, the following quotation would appear to be amply justified by the available evidence:⁶³

"The basic, overriding economic fact about China is that for twenty years she has fed, clothed and housed everyone, has kept them healthy, and has educated most. Millions have not starved; sidewalks and streets have not been covered with multitudes of sleeping, begging, hungry and illiterate human beings; millions are not disease-ridden. To find such deplorable conditions, one does not look to China these days but rather to India, Pakistan, and almost anywhere else in the underdeveloped world...The Chinese--all of them--now have what is in effect an insurance policy against pestilence, famine, and other disasters."

One need only scan the periodic reports from India in the New York Times in 1974 to recognize that no such insurance policy is available to the Indian population.⁶⁴

(f) Health Care. During the past several years, glowing reports on the Chinese system of health care have become almost commonplace.⁶⁵ Particularly notable has been the ability of the Chinese to reduce the bias in favor of urban areas and upper income classes that is characteristic of medical services almost everywhere else in the world. Thus from the point of view of equity the Chinese performance in health care has been especially successful.

India has also made considerable strides in medicine and public health since Independence. Average life expectancy has risen by almost 20 years; the number of doctors and hospital beds per capita

has increased steadily.⁶⁶ Nonetheless, comparative studies suggest that China's progress has been more rapid than India's, and that China has been far more successful in spreading the benefits of improved health care throughout all levels of the population.⁶⁷

(g) Literacy and Education. In the immediate postwar period less than 10% of the Chinese population and about 15% of the Indian population was literate.⁶⁸ Since that time, China has made considerably more rapid progress in reducing illiteracy, even though the nature of the Chinese written language makes it more difficult to acquire basic literacy. By 1970, the overall literacy rate was approaching 50% in China while it was nearing only 30% in India. Much of the Chinese success is attributable to spare-time adult literacy programs, which have been relatively uncommon in India.⁶⁹

China has also maintained a substantial edge over India in the provision of primary education. The proportion of the relevant age bracket in elementary schools has been consistently higher in China than in India, and China has provided a substantial amount of adult spare-time primary educational programs while India has had virtually none.⁷⁰

Only in upper secondary and higher education do India's enrollment figures exceed those of China (with the notable exception of specialized technical and vocational schools).⁷¹ But this merely underlines the relatively top-heavy structure of the Indian educational system, which provides disproportionately great opportunities to those who have the resources to continue their education while at the same time limiting access to the bottom of the educational ladder.⁷² From the point of view of economic equity, China's emphasis on literacy and primary education reflects a much better performance.

(h) Social Mobility. No comprehensive data are available on the extent of social mobility in either China or India; one must rely here again on fragmentary and/or impressionistic evidence. A study of the class origin of key personnel in a sample of Chinese industrial enterprises in the mid-1960s concluded that there were few barriers to promotion on merit and many opportunities for individual advancement.⁷³ Systematic discrimination appears to hurt only the very small

proportion of the population with privileged family backgrounds-- children of landlords, capitalists, etc. By contrast, studies of social structure in India underline the continuing significance of class and caste in limiting mobility and structuring the occupational hierarchy.⁷⁴ The "right social background" and "proper connections" appear to play a large role in determining opportunities for advancement in India. A significant indicator is that the proportion of women in positions of responsibility is much greater in China than in India (with the exception of the top political post!), although in both countries women still appear to have fewer opportunities than men.⁷⁵

IV. Economic Self-Reliance

Before Liberation and Independence, the Chinese and Indian economies were in significant respects dependent upon foreign initiative and enterprise. India had been under direct British colonial rule for almost a century, and many regions of the country had been dominated by the British for much longer than that. As a result, British economic interests had long enjoyed a favorable environment in the sub-continent. China had not been colonized as such, but a series of (unequal) treaties over the past century had ensured a privileged position for foreign business interests. Little wonder, then, that foreign capitalists had come to play an important role in key sectors of the two economies and that the development of indigenous economic and technological capacities had been relatively limited. As China and India began their development efforts, economic self-reliance seemed a distant prospect but all the more compelling a goal.

(a) National Control. The greater part of the Chinese and Indian economies, comprising most of the agricultural sector as well as artisan and small-scale industry and services, has always remained free of direct foreign involvement. The arena for competition between national and foreign control has been essentially confined to the critical "modern" sphere of the economy, including modern industry, trade and transport, and--in the case of India--plantation agriculture. It is extremely difficult to develop any precise

measures of the share of national and foreign control, for estimates can vary widely depending upon the basis of measurement (output; capital; employment) and upon the working definition of "control." I shall therefore confine myself mainly to qualitative observations based on the available evidence.

Prior to World War II, foreigners played a very significant role in the modern sectors of both the Chinese and Indian economies.⁷⁶ The total value of foreign investment was considerably greater in India than in China,⁷⁷ but the modern sector as a whole had developed somewhat further in India so the share of foreign control was similar to that in China. In both cases foreign capital tended to be concentrated in extractive and export-oriented activities and in relatively large-scale enterprises. During the War the share of national control (private and public) increased in both India and (unoccupied) China as wartime conditions tended to favor nationals over foreigners. At the end of the War, the Chinese Nationalist Government gained control of (what remained of) the industrial enterprises established or seized by the Japanese during their occupation. Thus by the time of Liberation the degree of foreign control in China had been very considerably reduced from its pre-War level, while in India at Independence the role of foreign capital had diminished from its pre-War level but remained quite substantial.

After Liberation the Chinese Government initially permitted the remaining foreign-owned enterprises to continue operations.⁷⁸ But in subsequent years the Government began to put pressure on the foreign companies and--partly in response to American seizure of Chinese property overseas--the Chinese terminated all foreign investments by 1952. Since that time, in line with China's socialist economic framework, foreign control of productive resources has simply been out of the question.

In India there was a considerable retreat of foreign capital in the early years following Independence, as Indian private capital moved towards hegemony in many of the traditional areas of foreign investment.⁷⁹ The rather ambivalent attitude of the Indian Government

toward foreign private capital in the late 1940s and early 1950s also discouraged potential new investors. But beginning in the 1950s and accelerating in the 1960s, new foreign capital investment has been flowing steadily into India.⁸⁰ By the late 1960s, the value of long-term direct foreign private assets in India had multiplied more than five-fold since Independence; much of the new investment has been concentrated in the manufacturing sector, and especially in the technologically more sophisticated industries. Estimates of the share of Indian private corporate assets under foreign control in the 1960s range from roughly 25% to 50%.⁸¹ These figures overstate the importance of foreign control by excluding the Indian public sector, which accounted for about 30% of total corporate assets (but a much smaller percent of corporate output) in the mid-1960s.⁸² The same figures, however, understate foreign control by failing to include many cases in which control is exercised solely through technological dependence of Indian firms on foreign collaborators.⁸³ All in all, there can be no doubt that foreign capitalists still play a very significant role in the Indian economy today--perhaps even more so than at Independence.

(b) Foreign Debt. China and India have had strikingly different experiences with their foreign exchange position during the past 25 years.⁸⁴ In 1950, China started out with virtually no international financial resources, while India held more than \$2 billion worth of sterling reserves accumulated during the wartime period. By 1957, China had built up its foreign exchange reserves to almost \$700 million, thanks to rapidly rising exports, expropriation of holdings, remittances from overseas Chinese and long-term Soviet credits. During the same period, India drew heavily on its accumulated reserves and they fell to roughly \$600 million by 1960.

China's balance of payments position worsened considerably during the late 1950s and early 1960s because of the difficulties of the Great Leap Forward period; reserves declined and China incurred some short-term indebtedness. But since 1963, China has maintained a favorable balance of payments in most years and a comfortable level of reserves. By 1965 China had completely paid off its

(long-term) debt to the Soviet Union, and since the early 1960s China has avoided long-term credits altogether. China does continue to use short- and medium-term commercial credits from non-Communist countries, but these credits are generally kept within the limits of China's international reserves and they have always been easily repaid. In sum, China has successfully applied conservative international financial policies to avoid any serious foreign exchange crises and to remain free of major foreign indebtedness.

India has been plagued by a more or less continual foreign exchange crisis ever since its accumulated reserves were run down in the late 1950s. Since that time India's balance of payments (on both merchandise and current account) has been consistently in deficit, often by very substantial amounts.⁸⁵ This deficit has been made up chiefly by large inflows of foreign aid and long-term credits from the Western industrialized nations, on terms that have been worsening over time. The result has been a steadily mounting annual level of external debt service payments that surpassed \$600 million (30% of India's export earnings) by 1971-72.⁸⁶ Thus, India has found itself increasingly indebted to the major capitalist powers for relieving shortages of foreign exchange.

(c) Foreign Aid. While carefully managing to steer clear of foreign exchange problems, China has also managed to do without much net foreign aid. During their period of friendship in the 1950s, China did receive both economic and technical assistance from the Soviet Union.⁸⁷ This assistance was directed primarily into the establishment of heavy industrial plants; it involved a great number of Soviet advisers and technicians as well as a considerable commitment of Soviet loans and credits. After 1957, no new Soviet loans were negotiated, and by then China had already begun the process of loan repayment that ended in 1965. In 1960, the Soviets suddenly pulled out most of their advisers and technicians, leaving the Chinese with many partly completed projects and cancelling many others that had been planned.

After 1960, China continued to receive modest assistance from other East European countries. But already in 1956 China had

begun its own foreign aid programs, and since 1958 China has actually been a net exporter of capital. It is estimated that from 1950 to 1957 China's net capital inflow (mostly from the Soviet Union) averaged only about 1/3 of 1% of GNP--or 1% of gross investment--while in the following period from 1958 to 1964 China's net capital outflow averaged 1/2 of 1% of GNP--or 3% of gross investment.⁸⁸

India, since the onset of its foreign exchange shortage in the late 1950s, has received a far greater amount of foreign aid than China ever did in its aid-receiving years. The level of net foreign aid flowing into India averaged between 3% and 4% of NNP--or approximately 25% of net investment--throughout the 1960s.⁸⁹ Most of the aid (over 90%) has come from the Western capitalist nations organized by the World Bank into the Aid-India Consortium; the largest single donor (roughly 60%) has been the United States. The inflow of capital has been accompanied by a substantial amount of technical assistance as well.

Since the late 1960s the net aid inflow into India has been declining because of the mounting deduction of debt service payments from the gross aid inflow and because of declining political support for both aid-giving and aid-receiving.⁹⁰ But the recent inflation in world oil, food and fertilizer prices and the failure of the monsoon in 1974 has driven India's lingering foreign exchange shortage to catastrophic proportions. India now needs foreign aid more desperately than ever before and may succeed in stepping up the rate of net aid inflow again.

(d) Technological Independence. During the 1950s China relied heavily on Soviet technical assistance to develop its modern industry. However serious the short-run difficulties created by the Soviet pull-out in 1960, it had the long-run effect of forcing the Chinese to learn much by doing themselves. This turn of events, as well as a strong determination on the part of the Chinese leadership to promote technological self-sufficiency and limit the role of foreigners, has led to the development in China of a very considerable indigenous technological base.⁹¹

The Chinese performance has been particularly noteworthy in the crucial machine-building industry. In the early 1960s, China's changing production priorities called for a major expansion of

petroleum and chemical fertilizer production. The unfavorable foreign exchange position at that time meant that most of the plant and equipment would have to be produced by the domestic machine-building industry. China's success in meeting this challenge, after surmounting various difficulties, led one scholar to conclude that:⁹²

"The successful shift of industrial priorities which lies behind recent expansion of the chemical and petroleum industries indicates a new ability to apply 'technical knowledge, skills and facilities for producing machinery to accommodate the changing requirements of productive activity' which Rosenberg identifies as a central characteristic of industrialized, as opposed to backward, economies."

There are, of course, many areas in which China still confronts serious technical problems and would find imported technology very useful if not indispensable. But there is little doubt that China is well ahead of India in its overall technological capacity and especially in its indigenous technological base.⁹³ To quote one authority familiar with both countries:⁹⁴

"the point is that the Chinese can produce practically anything they wish to, though in limited numbers and at great costs in many cases. I feel that Red China has a significant lead--perhaps five to ten years--over India in overall product development and know-how in spite of the considerable amount of foreign collaboration and assistance in India's industrial sector."

"In general, Red China appears to be substantially more self-sufficient in technology and product development and much less dependent on foreign assistance or imports than India. These are critical factors to be considered in assessing future technological and product development prospects in the two countries, and in predicting their industrial and economic growth potential."

V. Conclusion

The evidence compiled and presented in this paper leaves no doubt that China's progress in three important dimensions of economic development has been significantly greater than India's in the modern postwar period. The long-term rates of growth of total and per capita output have been considerably higher in China than in

India, with a somewhat larger differential between industrial than between agricultural growth rates. With respect to each of eight different indicators of economic equity China appears to have shown more improvement than India; in a few cases the differences in performance do not seem to have been great, but in several cases (e.g. the reduction of inequality in the size distribution of income, and the reduction of intra-enterprise earnings differentials) the differences have been dramatic. Finally, according to the available evidence on four different indicators, China has achieved a much higher degree of economic self-reliance than India.

The above conclusions might have generated some controversy as recently as five years ago. Many Western observers were still very optimistic about India's development achievements and prospects in the late 1960s, when the "Green Revolution" appeared to have gained significant momentum; and many were rather pessimistic about the Chinese economy, as it experienced the stresses of the Cultural Revolution. But in more recent years there has evolved a widespread consensus that China's economic development performance has been much more impressive than India's. It is interesting to speculate on the extent to which this shift in perceptions has resulted from newly acquired evidence, on the one hand, and from the change in the world political environment, on the other. But in any event it is no longer at all remarkable to contrast China favorably with India.

What remains highly controversial, however, is any effort to determine the reasons for China's superior performance in economic development. To what extent can it be explained by fundamental differences in the Chinese and Indian approaches to development -- as reflected in their basic economic institutions and development strategies? And to what extent must it be attributed to differences in circumstances beyond the control of policy-makers -- e.g., differences in cultural heritage, in ethnological structure, in initial economic conditions, in natural or external events? These are extremely interesting and extremely difficult questions to answer. I intend to explore them in subsequent papers.⁹⁵

FOOTNOTES

- ¹For a good statement of Maoist development objectives, see Gurley (1970), pp. 37-42.
- ²See Chen and Galenson (1969), Chapter 1, and Singh (1973), section III, for assessments of the Chinese economy before Liberation and comparisons with India.
- ³Indices of the growth of total and per capita real output in China from 1952 to 1971 constructed by Ashbrook (1972), Eckstein (1973), Perkins (1974a) and Rawski (1973) are tabulated in Table 1; corresponding average rates of growth are shown in Table 3. The estimates of these four Western scholars are broadly representative of contemporary scholarship in the field. A few writers suggest that the rate of growth of GNP in China may even have exceeded the highest of the four tabulated estimates (5.8%, according to Perkins). Gurley (1970), p. 45, and Singh (1973), pp. 2102-03, believe that a GNP growth rate of 6% or more is quite plausible. By contrast, Swamy (1973), p. 63, arrives at a significantly lower estimate: a growth rate of only 2.3% for net domestic product from 1952 to 1970. However, Swamy's methodology and calculations are highly suspect, and his results have not proven persuasive. China's relatively poor performance turns out to be due largely to Swamy's estimate of an actual decline in the output of China's trade, transport and service sectors between 1952 and 1970. For a detailed critique of Swamy's work, see Perkins (1974b).
- ⁴Indices of the growth of total and per capita real output in India from 1950 to 1972, according to official government publications, are presented in Table 4. The corresponding average rates of growth, calculated from 3-year terminal periods to reduce the effect of short-run fluctuations due to weather conditions, are shown in Table 5. The growth rates from 1951 to 1971 mentioned in the text begin with the 3-fiscal-year period from April 1, 1950, to March 31, 1953, and end with the 3-fiscal-year period from April 1, 1970 to March 31, 1973.
- ⁵These average growth rates (for the period 1950-1968) are reported by Kuznets (1972), Table 3-C.
- ⁶See Tables 1 and 3 for quantitative information on the fluctuations in China's economic growth.
- ⁷See Tables 4 and 5 for quantitative information on the fluctuations in India's economic growth.
- ⁸Current economic developments in India are reported in a variety of periodicals; my primary sources are the *Economic and Political Weekly* (Bombay) and *The Statesman (Overseas) Weekly* (Calcutta).

- ⁹Virtually all current economic forecasts for the next few years in India are very pessimistic; less is known about China's prospects, but one well-informed scholar has concluded that "the potential growth rate of the Chinese economy in the immediate future is high"--Rawski (1973), p. 29.
- ¹⁰According to the official figures on which Table 5 is based, the average rate of growth of agricultural output in India from 1950-53 to 1970-73 was 3.0%. Estimates of the corresponding rate of growth in China vary from Ashbrook's 1.8% to Perkins' 3.5% in Table 3. Perkins' higher estimate is due in part to an exceptionally high estimate for the 1952-1957 period; from 1957 to 1971 Perkins' (and Rawski's) figures imply an average growth rate of roughly 2%.
- ¹¹China's production of foodgrains increased from a level of roughly 125 million tons in the early 1950's (see Bardhan (1971), Table 1) to roughly 240 million tons in the early 1970's (see Perkins (1974a), Table A.1). India's production of foodgrains increased from a level of roughly 55 million tons in the early 1950s (see Government of India, *Economic Survey 1967-68*, Table 1.4) to roughly 105 million tons in the early 1970s (see Government of India, *Economic Survey 1973-74*, Table 1.5). In both cases there was an increase of about 90% in 20 years, which implies an average annual rate of growth of a little over 3%.
- ¹²Bardhan (1971), p. 46, estimates the per capita production of foodgrains in the early 1950s at 237 Kg. in China and 164 Kg. in India. The population growth rates implicit in Tables 3 and 5 are a little higher for India than for China, so equal rates of growth of total foodgrain production imply higher per capita rates of growth in China.
- ¹³According to Table 5, the average annual rate of growth of Indian agricultural output dropped from 3.8% in the 1950s to 2.2% in the 1960s. Estimates of the rate of growth of Chinese agricultural output beginning after the unusually bad years of 1959-61 (to avoid an upward bias) vary widely, but most of them exceed the Indian rate by a very substantial margin.
- ¹⁴See Table 3 for representative estimates.
- ¹⁵See Table 3 for estimates of the rate of Chinese industrial growth in the periods 1952-57 and 1952-58, and Tables 3 and 5 for comparable estimates of Chinese and Indian growth.
- ¹⁶See Table 3 for estimates of the rate of Chinese industrial growth in the periods 1962-71 and 1965-71.
- ¹⁷According to Table 5, the average annual rate of growth of Indian industrial output was 6.0% from 1950-52 to 1970-72, 6.5% from 1950-52 to 1960-62 and 5.6% from 1960-62 to 1970-72.

- ¹⁸ Sectoral shares of national product in India and China in the early 1950s are tabulated in Raj (1967), Table 9.
- ¹⁹ For changes in the sectoral shares of national product in China, see Eckstein (1973), Table 7.
- ²⁰ For changes in the sectoral shares of national product in India, see Government of India, *Economic Survey 1970-71*, Table 1.3 (1950-51 to 1960-61) and Government of India, *Economic Survey 1973-74*, Table 1.2 (1960-61 to 1971-72).
- ²¹ Eckstein (1973), p. 238.
- ²² See for example, Richman (1969), p. 537, p. 566, pp. 804-05; Gurley (1970), pp. 44-45; Singh (1973), pp. 2103-04; Perkins (1974a), pp. 20-22. It is interesting to note how many Western economic studies of modern China have ignored the question of income distribution altogether, focussing instead on levels and rates of growth of production. One cannot escape the inference that more Western scholars are reluctant to credit the gains that China has made with respect to economic equity.
- ²³ The National Sample Survey (NSS), administered by the Indian Statistical Institute in Calcutta, carries out periodic (now annual) "rounds" of questionnaire surveys on various economic and social characteristics of the Indian population using statistical sampling procedures. The results of these surveys are issued by the Cabinet Secretariat of the Government of India in the form of numbered reports relating to different rounds and aspects of the survey.
- ²⁴ Studies showing evidence of worsening inequality in India include Swamy (1967); Mukharjee and Chatterjee (1967); Dandekar and Rath (1971).
- ²⁵ Studies showing evidence of little overall change in inequality in India include Ojha and Bhatt (1971); Ranadive (1971); Ahmed and Bhattacharya (1972).
- ²⁶ For a useful critique, see Bardhan (1973).
- ²⁷ Estimates of differential price changes during the 1950s and 1960s are presented in Government of India, Planning Commission (1969) and Bardhan (1973), respectively.
- ²⁸ Studies of "poverty" in India include Ojha (1970); Minhas (1970); Dandekar and Rath (1971); Bardhan (1973).
- ²⁹ See Roy Chowdhury (1972).
- ³⁰ Annual data on corporate profits from 1950-51 to 1962-63 are published in Reserve Bank of India (1967); corresponding data for later years are available in selected monthly issues of the *Reserve Bank of India Bulletin*. Growth rates of corporate profits obtained from the above sources can be compared with growth rates of national income obtained from the sources cited in footnote 4.

- ³¹Less than 1% of the Indian population has ever been assessed for income tax, and direct tax revenues as a proportion of GNP have remained below 3%. See Maddison (1971), p. 87, for a brief discussion of the negligible impact of taxation on income distribution in India.
- ³²According to the index numbers of real earnings of Indian factory workers shown in Table 4, the total increase in the level of real earnings from 1951 to 1971 has been only about 10%. Thus the real earnings of factory workers have risen at an average annual rate of 0.5% while overall real per capita income has risen at an average annual rate of 1.4% (see Table 5).
- ³³For a discussion of the ineffectiveness of various government programs for redistributing land ownership and agricultural incomes in India, see Dandekar and Rath (1971), section V.
- ³⁴See, for example, Bardhan (1970), section II, and Krishnaji (1971).
- ³⁵For a discussion of institutional changes in rural India in the years following Independence, see Bettelheim (1968), pp. 180-200.
- ³⁶See, for example, Frankel (1971).
- ³⁷Index numbers of wholesale prices in India are given on an annual and a monthly basis in successive volumes of Government of India, *Economic Survey* (annual); according to the latest volume (1973-74), Table 5.1, the index number of food article prices had reached 301 and the index number of all commodity prices had reached 262 by the end of 1973, from a base of 100 in 1961-62.
- ³⁸See Howe (1973), page 51.
- ³⁹Swamy (1967), Table 7, reports a rise in the ratio of urban to rural per capita consumption from 1.27 in 1951-52 to 1.51 in 1959-60. Chatterjee and Bhattacharya (1971), Table 5, show a ratio averaging approximately 1.4 from the early 1950s to the late 1960s, with some fluctuations but no long-term trend. Dandekar and Rath (1971), Table 2.7, estimate a slight decline of the ratio from 1.38 in 1960-61 to 1.36 in 1967-68.
- ⁴⁰For a thorough study of the problems and biases afflicting the provision of health and educational services in India (and other Asian countries), see Myrdal (1968), chapters 30-33.
- ⁴¹See Lardy (1974), pp. 9-14, for a discussion of these points. Using Chinese provincial data recently compiled by Field, Lardy and Emerson (1974), Lardy has confirmed (in ongoing dissertation research at the University of Michigan) that there was a significant inverse relationship between the initial level and the rate of growth of industrial output by province between 1952 and 1957.
- ⁴²The relevant research has been carried out by Lardy (1974), pp. 14-25. In his ongoing dissertation research, Lardy shows that the provincial data in Field, Lardy and Emerson (1974) confirm his conclusions with respect to the regional distribution of industrial production.

- ⁴³Four Indian states showed rates of growth of domestic product significantly more rapid than that of the nation as a whole between 1955 and 1970: these were Punjab, Haryana, Mysore and Orissa. Punjab and Haryana were among the five initially richest states; Mysore and Orissa were among the four poorest. Four states did relatively badly in the same period: West Bengal (among the richest initially) and Assam, Madhya Pradesh and Rajasthan (close to the average initially). Data on levels and rates of growth of output in all of the major Indian states are provided in Table 6.
- ⁴⁴See Eapen (1967) and Reddy (1972) for documented analyses of the redistributive impact of federal fiscal operations in India.
- ⁴⁵Evidence on intra-enterprise income differentials in modern China is provided by Howe (1973), pp. 36-38.
- ⁴⁶See Richman (1969), p. 804.
- ⁴⁷See Richman (1969), p. 805.
- ⁴⁸Richman (1969), pp. 805 ff., provides additional qualitative evidence on the differences in intra-enterprise differentials as between China and India.
- ⁴⁹Estimates of non-agricultural unemployment in China have been made by Liu and Yeh (1965), p. 102; Emerson (1968), p. 419; and Hou (1968), p. 369.
- ⁵⁰For a critique of the estimates of unemployment in China, see Chen and Galenson (1969), pp. 136-137, and Howe (1971), pp. 30-32.
- ⁵¹For a tabulation of all the estimates of the "backlog in unemployment" in India, see Reserve Bank of India (1969).
- ⁵²For a thorough analysis and critique of the "backlog of unemployment" estimates, see Government of India, Planning Commission (1970), Chapters 1-3.
- ⁵³The 1951 figure is given in Reserve Bank of India (1969), Table 3; the 1972 figure is from Government of India, Ministry of Labour and Rehabilitation, Department of Labour and Employment, Labour Bureau, *Indian Labour Statistics, 1973*, Table 3.1.
- ⁵⁴For a discussion of the problems involved in interpreting the job applicant figures, see Government of India, Planning Commission (1970), pp. 26-28.
- ⁵⁵These figures are based on Richman (1969), Table 7.1.
- ⁵⁶All of the estimates of the growth of Chinese industrial production given in Table 3 show a slightly lower rate from 1965 to 1971 than for the 1952-1971 period as a whole.

- ⁵⁷This figure is given in Table 5.
- ⁵⁸According to Table 5, the average annual rate of growth of Indian industrial output from 1951 to 1971 was 6.0%. The coverage of the industrial output index is somewhat more extensive than that of the industrial employment index; it includes some relatively small-scale activities that do not get counted among the factories and mines whose employment is reported. But any bias resulting from this discrepancy would not significantly affect the growth rates in question.
- ⁵⁹Richman (1969), p. 606, believes that labor intensity has often been promoted in Chinese industry at the expense of efficiency.
- ⁶⁰On underemployment in China, see Richman (1969), pp. 547-49; on underemployment in India (and South Asia in general), see Myrdal (1968), Chapter 21, especially pp. 967-77.
- ⁶¹This is a view expressed by Richman (1969), pp. 375-77.
- ⁶²On graduate unemployment in China, see Richman (1969), pp. 215-18; on graduate unemployment in India, see Blaug, Layard and Woodhall (1969), Chapter 3.
- ⁶³Gurley (1970), p. 44.
- ⁶⁴See, for a particularly poignant example, an article by Bernard Weinraub entitled "Food an Obsession in Misery-Ridden Calcutta" in the New York Times, Sept. 5, 1974, p. 35.
- ⁶⁵For well-documented studies of health care in contemporary China, see the articles published in Quinn (1972) and Wegman, Lin and Purcell (1973), as well as the references cited by Richman (1969), p. 943, footnote 100.
- ⁶⁶According to Indian Census figures, average life expectancy at birth increased from 32 to 52 years between 1941-51 and 1961-71. The number of doctors per capita and hospital beds per capita increased by roughly 30% and 60%, respectively, between 1950-51 and 1969-70 (according to figures given in Government of India, Ministry of Finance, Department of Economic Analysis, *India: Pocket Book of Economic Information, 1972*, Tables 1.1 and 15.4).
- ⁶⁷This is the conclusion reached by Richman (1969), pp. 551-54.
- ⁶⁸Literacy figures for China are reported in Richman (1969), p. 134; literacy figures for India are tabulated in Government of India, Registrar General and Census Commissioner, *Census of India 1971: Paper No. 1 of 1971--Supplement (Provisional Population Totals)*, Statement 13, p. 37.

- ⁶⁹ See Richman (1969), pp. 134-38.
- ⁷⁰ See Richman (1969), p. 138.
- ⁷¹ See Richman (1969), pp. 140-41 and 163-65.
- ⁷² For a discussion of the unbalanced structure of the Indian educational system, see Blaug, Layard and Woodhall (1969), Chapter 2.
- ⁷³ This study was carried out and reported by Richman (1969), pp. 291-307.
- ⁷⁴ See, for example, Kapp (1963); Beteille (1967); and Nijhawan (1969). There is no reason to believe that there has been any noticeable improvement in social mobility in more recent years.
- ⁷⁵ Richman (1969), pp. 303-08, reports on the position of women in industry in China and India.
- ⁷⁶ Foreign involvement in the Chinese economy before Liberation is described in Feuerwerker (1968), pp. 13-17, 63-67, and in Chen and Galenson (1969), pp. 15-22. Foreign involvement in the Indian economy before Independence is described in Kidron (1965), Chapter 1, and Bagchi (1972).
- ⁷⁷ According to figures cited by Feuerwerker (1968), p. 63, the per capita value of foreign investment in India in the 1930s was six times the corresponding value in China; in aggregate terms the ratio would be roughly 3 to 1.
- ⁷⁸ For an account of Chinese Government policy towards foreign investments, see Cheng (1963), pp. 60-62.
- ⁷⁹ See Kidron (1965), Chapters 2-3, for a discussion of the relations between foreign capital, Indian capital and Indian Government policy in the years following Independence.
- ⁸⁰ The growth of direct foreign private investment in India is documented in Chandra (1973), pp. 235-37 and Table 4, and in Weisskopf (1974), pp. 212-13 and Table 4.
- ⁸¹ See Chandra (1973), pp. 237-39 and Table 6, for discussion and estimation of the relative importance of foreign capital in the private corporate sector of the Indian economy.
- ⁸² According to Nigam and Kesary (1971), Table 1, government companies accounted for 30% of total corporate assets and 10% of total corporate sales in India by 1965-66.
- ⁸³ The increasing significance of foreign control via technological collaboration agreements is discussed by Alavi (1966).

- ⁸⁴The ensuing discussion of the evolution of China's balance of payments and international financial position since Liberation is based on information drawn from Central Intelligence Agency (1968), pp. 627-33, and Usack and Batsavage (1972), pp. 341-43. The discussion of India's experience is based on information provided in Weisskopf (1974), pp. 202-13 and Table 1.
- ⁸⁵Statistics on India's balance of payments given in annual issues of Government of India, *Economic Survey*, Table 6.2, show continuous deficits in both the trade and current account balances from the fiscal year 1956-57 through 1971-72.
- ⁸⁶The growth in India's debt service payments from the First Plan period to the early 1970's is documented in Government of India, *Economic Survey 1973-74*, Table 7.6; corresponding levels of export earnings are given in *ibid.* Table 6.2.
- ⁸⁷For details on Soviet and other East European aid to China, see Richman (1969), pp. 405-09.
- ⁸⁸These estimates were made by Singh (1973), p. 2103.
- ⁸⁹For documentation on the magnitude and composition of foreign aid to India, see Chandra (1973), Table 1; Weisskopf (1974), Tables 3 and 7; and--for the early 1970s--Government of India, *Economic Survey 1973-74*, Tables 7.1-7.6.
- ⁹⁰See Weisskopf (1974), pp. 230-32.
- ⁹¹The development of indigenous Chinese technological capacity is described in admiring terms by Raj (1967), pp. 26-29; Richman (1969), pp. 639-43; and Rawski (1973), pp. 24-26.
- ⁹²The quotation is from Rawski (1973), p. 26; he cites Rosenberg (1964), p. 71.
- ⁹³This conclusion is drawn from comparative studies by both Raj (1967), pp. 26-38, and Richman (1969), pp. 639-43. For a pessimistic evaluation of the development of indigenous Indian technology, see Chandra (1973), pp. 403-07.
- ⁹⁴The quotations are from Richman (1969), p. 640 and p. 643.
- ⁹⁵For a preliminary and very cursory effort, see Weisskopf (1975).

TABLE I

CHINA: ALTERNATIVE INDICES OF AGGREGATE GROWTH

YEAR	REAL GROSS NATIONAL PRODUCT				REAL PER CAPITA GROSS NATIONAL PRODUCT			
	ASHBROOK	ECKSTEIN	PERKINS ^{a/}	RAWSKI ^{b/}	ASHBROOK	ECKSTEIN	PERKINS ^{a/c/}	RAWSKI ^{b/}
1952	100	100	100	100	100	100	100	100
1953	107				104			
1954	112				106			
1955	122				113			
1956	132				119			
1957	139	136	145	134	123	126	129	120
1958	161	163			138	148		
1959	156	167			132	149		
1960	151	155			125	136		
1961	122				99			
1962	134		148		108		119	
1963	139	142			110	120		
1964	153				117			
1965	164		204	179 ^{d/}	124		155	
1966	178	182			132	147		
1967	171	171			124	136		
1968	169				120			
1969	185				129			
1970	207	220	276		140	177	188	
1971	217		294	256	144		196	172

^{a/}Gross Domestic Product instead of Gross National Product.

^{b/}Net Domestic Product instead of Gross National Product.

^{c/}Based on Perkins' Gross National Product index and Ashbrook's population index.

^{d/}Average of lower and upper estimate.

SOURCES FOR TABLE I

Gross National Product - (or GDP OR NDP):

Ashbrook: derived from Ashbrook (1972), Table 3.

Eckstein: Eckstein (1973), Table 6.

Perkins: derived from Perkins (1974a), Table 1.

Rawski: Rawski (1973), Table 12.

Per Capita Gross National Product - (or GDP OR NDP):

Ashbrook: derived from Ashbrook (1972), Table 3.

Eckstein: Eckstein (1973), Table 6.

Perkins: derived from Perkins (1974a), Table 1 and Ashbrook (1972), Table 3.

Rawski: derived from Rawski (1973), p. 22.

TABLE 2

CHINA: ALTERNATIVE INDICES OF SECTORAL GROWTH

YEAR	AGRICULTURAL PRODUCTION				INDUSTRIAL PRODUCTION			
	Ashbrook	Eckstein	Perkins	Rawski	Ashbrook	Eckstein	Perkins	Rawski
1952	83	89	72		51	51	57	42
1953	83				64			
1954	84				73			
1955	94				74			
1956	97				91			
1957	100	100	100	100	100	100	100	100
1958	108	110			131	131		
1959	86	91			166	166		
1960	83	81			162 ^a	163		
1961	78				108 ^a			
1962	90		79		110 ^a		134	
1963	90	98			122 ^a	122		167 ^a
1964	96				137 ^a			192 ^a
1965	101		110	110	154 ^a		189	213 ^a
1966	106	113			173 ^a	173		256 ^a
1967	115	117			147 ^a	141		
1968	106				154 ^a			
1969	109				182 ^a			
1970	116	129	134		214 ^a	215	284	342 ^a
1971	115		137	134	240 ^a		311	376 ^a

(a) Average of lower and upper estimate.

SOURCES FOR TABLE 2

Agricultural Production

Ashbrook: Ashbrook (1972), Table 4.
 Eckstein: derived from Eckstein (1973), Table 6.
 Perkins: derived from Perkins (1974a), Table 1.
 Rawski: Rawski (1973), Table 3.

Industrial Production

Ashbrook: Ashbrook (1972), Table 4.
 Eckstein: derived from Eckstein (1973), Table 6.
 Perkins: derived from Perkins (1974a), Table 1.
 Rawski: Rawski (1973), Table 10; 1952 figure derived from Rawski (1973), p. 19.

TABLE 3

CHINA: SELECTED RATES OF GROWTH^a

PERIOD:	1952- 1971	1952- 1957	1952- 1958	1957- 1965	1962- 1971	1965- 1971
Gross National Product						
Ashbrook	4.2	6.8	8.3	2.1	5.5	4.8
Eckstein	4.5 ^b	6.4	8.5		6.5 ^c	
Perkins	5.8	7.7		4.3	8.0	6.3
Rawski	5.1	6.0		3.7		6.2
Per Capita GNP						
Ashbrook	2.0	4.1	5.5	0.1	3.2	2.5
Eckstein	3.2 ^b	4.7	6.8		5.5 ^c	
Perkins	3.6	5.2		2.3	5.7	4.0
Rawski	2.9	3.7				
Agricultural Production						
Ashbrook	1.8 ^b	3.8	4.5	0.1	2.8	2.2
Eckstein	2.1	2.4	3.6		4.0 ^c	
Perkins	3.5	6.8		1.2	6.3	3.6
Rawski				1.2		3.4
Industrial Production						
Ashbrook	8.5	14.5	17.0	5.6	9.1	7.7
Eckstein	8.3 ^b	14.5	17.0		8.5 ^c	
Perkins	9.3	12.0		8.3	9.8	8.6
Rawski	12.3	19.2		9.9		9.9

(a) All figures in % per annum.

(b) For 1952 - 1970 instead of 1952 - 1971.

(c) For 1963 - 1970 instead of 1962 - 1971.

SOURCES: All figures calculated from Tables 1 and 2.

TABLE 4

INDIA: SELECTED INDICES OF GROWTH

YEAR ^a	PRODUCTION				INDUSTRIAL EMPLOYMENT (Millions)	FACTORY LABOR		
	Real NNP	Real Per Capita NNP	Agriculture	Industry		Money Earnings	Price Index	Real Earnings
1950	69.5	84.4	67.3	56.6	3.64			
1951	71.5	85.4	69.0	58.7	3.60	76.9	85	90.5
1952	74.3	87.2	70.2	60.8	3.72	82.3	83	99.2
1953	78.8	90.8	80.4	62.0	3.70	82.8	86	96.3
1954	80.8	91.3	82.5	66.3	3.74	82.8	81	102.2
1955	82.3	91.3	80.7	71.9	3.86	86.9	77	112.9
1956	86.4	94.0	87.4	77.9	4.06	88.7	85	104.3
1957	85.5	91.2	81.6	80.6	4.20	92.9	90	103.2
1958	91.5	95.5	92.4	82.0	4.25	91.3	94	97.1
1959	93.2	95.2	91.8	89.2	4.26	93.5	98	95.4
1960	100.0	100.0	100.0	100.0	4.43	100.0	100	100.0
1961	103.4	101.1	100.3	109.2	4.60	106.5	104	102.4
1962	105.4	100.7	98.7	119.8	4.79	111.3	107	104.0
1963	111.2	104.0	101.2	129.7	5.07	114.9	110	104.5
1964	119.6	109.5	112.0	140.9	5.30	120.7	125	96.6
1965	113.5	101.6	93.3	153.9	5.42	135.2	137	98.7
1966	114.7	100.6	93.4	153.2	5.40	146.2	151	96.8
1967	125.0	107.3	113.5	152.6	5.43	157.3	172	91.5
1968	129.2	108.2	111.8	163.0	5.40	171.6	177	96.9
1969	136.2	111.7	119.3	175.2	5.44	179.4	175	102.5
1970	142.0	113.9	127.9	184.2	5.62	188.7	184	102.6
1971	144.4	113.1	127.0	186.0	5.63	190.3	190	100.2
1972	141.9	108.8	115.4	199.2				

(a) Figures for NNP, per capita NNP and agricultural production apply to the Indian fiscal year beginning on April 1.

SOURCES FOR TABLE 4

NNP, Per Capita NNP.

1950 - 1960: ES (1970-71), Table 1.1

1960 - 1972: ES (1973-74), Table 1.1

Agricultural Production.

1950 - 1958: derived from ES (1970-71), Table 1.5

1959 - 1972: derived from ES (1973-74), Table 1.4.

Industrial Production.

1950 - 1960: derived from BSRIE (1960-61), Table 1.

1960 - 1972: derived from ES (1973-74), Table 1.11.

Industrial Employment (Employment in Factories and Mines)

1950 - 1954: BSRIE (1960-61), Table 82.

1955 - 1960: BSRIE (1962-63), Table 86.

1961 - 1971: ILS (1971, 1973), Tables 2.1 and 2.5

SOURCES FOR TABLE 4 (continued)

Money Earnings of Factory Labor

- 1951 - 1961: derived from ILS (1968), Table 12.7
- 1961 - 1966: derived from BSRIE (1968-69), Table 57
- 1966 - 1969: derived from ILS (1971), Table 4.1
- 1969 - 1971: derived from ILS (1973), Table 4.1

Factory Labor Price Index (General Working Class Consumer Price Index).

- 1950 - 1960: derived from SAIU (1962), Table 87.
- 1960 - 1971: ILS (1973), Table 5.1.

Real Earnings of Factory Labor

- 1951 - 1971: divide money earnings by price index.

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1. BSRIE: Government of India, Planning Commission, Statistics and Survey Division, Basic Statistics Relating to the Indian Economy (annual).
2. ES: Government of India, Economic Survey (annual).
3. ILS: Government of India, Ministry of Labor and Rehabilitation, Department of Labor and Employment, Labour Bureau, Indian Labour Statistics (annual).
4. SAIU: Government of India, Central Statistical Organization, Department of Statistics, Statistical Abstract of the Indian Union (annual).

TABLE 5

INDIA: SELECTED RATES OF GROWTH

PERIOD:	1951-1971	1951-1961	1961-1971
Net National Product ^a	3.5%	3.7%	3.3%
Per Capita NNP ^a	1.4%	1.6%	1.1%
Agricultural Production ^a	3.0%	3.8%	2.2%
Industrial Production ^a	6.0%	6.5%	5.6%
Industrial Employment	2.2%	2.4%	2.1%
Factory Labor Money Earnings	4.6%	3.3%	6.0%
Consumer Price Index	4.1%	2.0%	6.2%
Factory Labor Real Earnings	0.5%	1.2%	-0.2%

(a) All growth rates based on 3-year averages for terminal years.

SOURCES: All figures calculated from Table 4.

TABLE 6

INDIA: GROWTH OF PER CAPITA PRODUCT BY STATE

Rank ^a	STATE	Indices of Real Per Capita Product ^b				Growth 1955-1970 ^e	
		1955-56	1960-61	1964-65	1967-70 ^c	Rate ^d	Rank
1.	West Bengal	148	139	143	136	-0.6	15
2.	Punjab	130	138	165	207	3.6	2
3.	Maharashtra	128	151	151	147	1.1	11
4.	Gujarat	120	137	150	146	1.5	8
5.	Haryana	118	129	145	182	3.4	3
6.	Kerala	107	100	113	127	1.2	10
7.	Assam	106	126	127	118	0.8	12
8.	Tamil Nadu	100	124	125	128	2.0	5
9.	Madhya Pradesh	96	99	107	99	0.2	14
10.	Rajasthan	93	97	102	103	0.7	13
11.	Andhra Pradesh	92	113	126	115	1.7	7
12.	Uttar Pradesh	88	88	107	104	1.3	9
13.	Mysore	79	105	120	117	3.1	4
14.	Orissa	71	81	100	119	4.1	1
15.	Bihar	66	78	86	85	1.9	6
--	All-India	100	110	120	119	1.4	--

- (a) In descending order of real per capita product in 1955-56.
 (b) All-India real per capita product in 1955-56 = 100.
 (c) Average for the three fiscal years 1967-68, 1968-69, 1969-70.
 (d) Average annual rate of growth from 1955-56 to 1967-70, calculated from index numbers given in the table.
 (e) In descending order of growth rates from 1955-56 to 1967-70.

SOURCES FOR TABLE 6

Indices for 1955-56: derived from Myrdal (1968), Table 12.5. (Figures for Punjab, Haryana, Maharashtra and Gujarat were obtained by applying to Myrdal's estimates for the erstwhile Bombay and Punjab states correction factors reflecting the per capita product levels of the four new states relative to the per capita product of the old state of which each formed a part. These correction factors were calculated from suitably disaggregated data provided in Tables 1 and 20 of National Council of Applied Economic Research, "Inter-District and Inter-State Income Differentials - 1955-56" (Delhi, India: Zodiac Press, 1963).

Indices for 1960-61, 1964-65: derived from Government of India, Report of the Finance Commission, 1969 (New Delhi: 1970), Appendix V, Table 5. Index numbers were keyed to the 1955-56 base using the all-India real per capita NNP growth index given in Table 4 of this paper.

Indices for 1967-70: derived from Government of India, Report of the Finance Commission, 1973 (New Delhi: 1974), Appendix VII, Table 3. Index numbers were keyed to the 1955-56 base using the all-India real per capita NNP growth index given in Table 4 of this paper.

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