

## A COMPARISON OF THE COST OF LIVING IN INDIA AND JAPAN\*

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THE PURPOSE OF THIS ARTICLE is to compare the per capita private consumption expenditure in India and Japan. Since in both countries the government provides subsidized or free medical and educational services, we have included current governmental expenditure for medical and educational services on a per capita basis in total per capita consumption expenditure.

The period for comparison is the financial year 1965-66, i.e., from April 1965 to March 1966. Although it is desirable to compare the cost of living in a recent period, especially after the devaluation of the Indian rupee, the non-availability of Indian data regarding prices, the pattern of consumption, and total per capita expenditure has limited the analysis to only 1965-66. And also the analysis has certain limitations due to the fact that consumer prices based on the farm-household survey have not been included.

### I. SOURCES OF DATA

For Japan, the main source of retail price data and the pattern of household consumption is the *Annual Report on the Family Income and Expenditure Survey, Japan, 1965*, published by the Bureau of Statistics, Office of the Prime Minister. This report provides the average annual expenditure per household for all households in Japan, along with the quantity and average price figures for various items. For most commodities we have taken the average prices from the above source, which are derived from the average household expenditures and quantities for various items. A supplementary source for retail prices in Japan is the *Retail Price Statistics Survey, 1965*, which is also published by the Bureau of Statistics, Office of the Prime Minister.

In India, very little is known about retail prices and there is no official publication giving retail prices for all India. However, retail prices for certain selected industrial centers are regularly collected and published for the purpose of working out the industrial worker's consumer price index. The scope of these prices is very limited and cannot be used for inter-country comparisons. Only recently the Central Statistical Organization, which is responsible for estimating National Income in India, has started the collection of retail prices for the non-working

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class in selected urban centers. Perhaps the two together, i.e., working class and non-working class prices can give an idea of the cost of living in the urban areas of India. In the absence of any published retail prices representing all of India, we have worked out retail prices by adjusting the producer's prices for trade and transport margins and indirect taxes. Since the purpose of the study is to compare the real consumption levels in the two countries, we have also included indirect taxes in the prices of different consumer products. In other words, the comparison is between the prices that are actually paid by the consumers in the two countries. The producer's prices of different products, which we have considered, are mostly the average prices that have been used for estimating the national product and have been taken from various official publications. One of the important publications is the *Brochure on Revised Series of National Product* for 1960-61 to 1964-65, issued by the Central Statistical Organization, Department of Statistics, Cabinet Secretariat, Government of India. In addition, we have used other unpublished materials which give prices of different consumer products at producer's prices.

For the Indian pattern of consumption we have used two sets of figures. One is based on the availability of different goods and services for consumption which are derived indirectly by adjusting the production figures of different goods and services for imports, exports, intermediate uses, and change in stocks. The second set is obtained directly and is based on the household consumption survey conducted by the directorate of National Sample Surveys, Government of India. The estimates obtained by these two methods differ very greatly for many important items. For example, the estimate for consumption of food grains accounts for about 40 per cent of total consumption in 1960-61 according to the National Sample Surveys estimates, while the corresponding percentage is only about 30 per cent according to the production flow method. However, for our analysis we have used both sets of figures for India and have denoted them by (a) and (b), respectively. Further, it may be noted that the survey-based consumption pattern (denoted by [b]) refers to the period from February 1963 to January 1964.

## II. RESULTS

In the following paragraphs we will present estimates of price indexes and the indexes of real per capita consumption in India, with Japan as the base. Table I gives the price indexes by broad groups of items for India, with Japan as the base to compare the purchasing power of the rupee and the yen.

The results thus obtained show that for 1965-66 the overall consumption price index in India with Japan as the base (100) is about 55 and 56 per cent with Indian weights (a) and (b), respectively, and 70 per cent when measured by Japanese weights. If we take the geometric mean of the two price indexes with India (a) and Japanese weights, the price index works out to 62 per cent. This means that in 1965-66 the real purchasing power of the rupee was equivalent to about 122 yen, instead of the official exchange rate of about 76 yen per rupee. It varied

TABLE I  
CONSUMER PRICE INDEXES BY BROAD SUBGROUPS (1965-66)

Price indexes with Japan=100

Items	Ind. wt. (a)	Ind. wt. (b)	Japanese wt.	Geometric Mean (a)	Geometric Mean (b)
1. Food grains	57.4	57.2	56.2	56.8	56.7
2. Milk and milk products	61.2	61.2	61.2	61.2	61.2
3. Meat, fish, and eggs	55.4	49.7	65.3	60.2	57.0
4. Fruits and vegetables	42.9	58.0	39.2	41.0	47.7
5. Sugar and oils	92.4	95.4	98.2	95.2	96.8
6. Beverages	42.8	43.1	163.0	83.5	80.8
7. Other foods	28.8	27.7	79.7	47.9	46.6
8. Total foods	54.2	53.8	71.7	62.3	62.1
9. Tobacco products	59.8	59.8	59.8	59.8	59.8
10. Fuel and light	59.0	58.5	164.6	98.5	98.1
11. Clothing and footwear	59.8	61.4	61.1	60.4	61.2
12. Durable goods	78.6	82.0	107.9	92.1	94.0
13. Other non-foods	51.1	61.5	56.1	53.5	58.7
14. Total non-foods	55.7	61.4	69.4	62.2	65.3
15. Total consumption expenditure	54.8	56.0	70.3	62.1	62.7

from about 105 yen in Japanese weights to about 138 yen by Indian weights. The two sets of Indian weights, although very different in structure, show very similar overall consumer price indexes. For foods, the Indian price index is 54 per cent by Indian weights and about 72 per cent by Japanese weights. The price index for non-foods is about 69 per cent by Japanese weights and 56 and 61 per cent by the two Indian weights (a) and (b), respectively. The notable item in foods is beverages, where the Indian price index is about 43 per cent by Indian weights and about 163 per cent by Japanese weights. The main reason is that the price of alcoholic beverages is very high in India compared to Japan. And they carry very little weight in Indian consumption compared to the much higher weight in Japanese consumption. The lower level of consumption of alcohol in India is mainly due to the discouraging policy of the Government of India, which as a prohibitive measure has levied very heavy excise and customs duties on all alcoholic beverages. The other important difference is for the subgroup fuel and light, where the Indian price index is about 59 per cent by Indian weights and about 165 per cent by Japanese weights. It can be observed that the price of commercial fuels like electricity, gas, and kerosene are higher in India than in Japan. Especially the price of fuel gas is very high in India, since it is used only in big cities. Moreover there is no central supply of gas through pipes, but it is supplied in cylinders involving high transportation and distribution costs. However, in India commercial fuel accounts for very little of the total fuel consumption, and non-commercial fuel, which consists mainly of dried cattle dung cakes, agricultural wastes, and firewood, accounts for the major portion of fuel consumption in India. On the other hand, in Japan the latter type of fuel does not exist at all. In our analysis, all non-commercial fuel has been included with charcoal wood, which is relatively cheaper in India than in Japan. Thus the considerable difference

in two price indexes is explained by the fact that the relatively high priced terms of fuel have very little weight in India while they carry the entire weight in Japan. Similarly, in the case of durable goods, we have a higher price index by Japanese weights than by Indian weights. The reason is the same as in the case of fuel and light. Items like radios, televisions, etc., which have a higher price in India, carry much less weight in India than in Japan.

Next we will compare the real level of per capita consumption in India and Japan by important groups of items. The different quantity indexes have been worked out by using the relevant price indexes for different groups of items and the corresponding expenditure ratios. Table II gives the indexes of Indian per

TABLE II  
COMPARISON OF PER CAPITA CONSUMPTION EXPENDITURE BY DIFFERENT  
GROUPS BETWEEN INDIA AND JAPAN ACCORDING TO THE REAL EXCHANGE  
RATES IN 1965-66

	Index of consumption with Japan=100							
	Official Exchange Rates		Real Exchange Rates					
	(a)	(b)	Ind. wt. (a)	Jp. wt.	G. Mean (a)	Ind. wt. (b)	Jp. wt.	G. Mean (b)
1. Food grains	45.5	65.9	80.0	79.0	79.9	117.3	115.3	116.3
2. Milk & dairy products	97.4	76.0	159.2	159.2	159.2	124.1	124.2	124.2
3. Meat, fish, & eggs	5.0	4.9	7.7	9.1	8.4	7.4	9.8	8.5
4. Fruits & vegetables	16.9	10.6	43.0	39.3	41.1	27.0	18.2	22.2
5. Sugar & edible oils	146.1	127.3	148.7	158.2	153.2	129.6	133.4	131.5
6. Beverages	5.0	10.0	3.1	11.7	6.0	6.2	23.3	12.0
7. Other foods	5.7	8.0	7.2	19.9	12.0	10.1	29.4	17.2
8. Total foods	22.2	25.7	31.0	41.0	35.7	35.8	47.8	41.4
9. Tobacco products	43.8	27.6	73.3	73.3	73.3	46.4	46.4	46.4
10. Fuel & light	18.8	20.4	11.4	31.9	19.1	12.4	35.0	20.8
11. Clothing & footwear	11.8	9.8	19.4	19.8	19.6	16.1	16.0	16.0
12. Durable goods	7.9	3.9	6.5	8.9	7.6	3.6	4.8	4.2
13. Other miscellaneous expenditures	7.8	5.6	13.9	15.2	14.5	10.0	9.1	9.5
14. Total non-foods	9.9	7.7	14.2	17.7	15.9	11.1	12.5	11.8
15. Total consumption expenditure	14.6	14.6	20.8	26.6	23.5	20.8	26.1	23.3

capita consumption with Japan as the base, as derived from the real purchasing power rates for different groups of items. It also gives comparable indexes for per capita consumption as reflected by the official exchange rates. On the basis of official exchange rates, the Indian per capita consumption is only 15 per cent of the Japanese level. This, however, works out to be about 23 per cent of the Japanese level if we use the real purchasing power rates. In general, the difference in expenditure in the two countries becomes smaller, compared to the results using official exchange rates. For example, the Indian level of total food expenditure (considering consumption pattern [a]) is only about 22 per cent of that in Japan with official rates while with real rates it works out to be about 36 per

cent. Similarly, for all non-foods it increases from about 10 per cent with official rates to about 16 per cent with the real purchasing power rate. Considering consumption pattern (b), which gives more weight to foods, the level of expenditure for foods increases from about 26 per cent by the official rate to about 41 per cent by the real purchasing power rate. For two items, beverages and fuel and light, the real level of expenditure is lower by Indian prices than by the official exchange rates. This again is explained by the higher Indian prices for alcoholic drinks and commercial fuels compared to the prices in Japan. Similarly, for durable goods, the real level of consumption by Indian prices is slightly lower (6.5) than that obtained from the official exchange rates (7.9). The items where the real level of consumption according to consumption pattern (b) is higher in India are food grains, milk, and sugar and edible oils, while according to consumption pattern (a) only for the last two items is the above observation correct.

As mentioned earlier, the above analysis simply gives a rough indication of the magnitude of the real cost of living in India compared to Japan, and we do not claim that the above figures are very accurate. However, the above analysis should help in providing an idea of the extent to which the real purchasing power with respect to private consumption differs from the official exchange rates.

### III. ESTIMATION OF PRICE RELATIVES

The major problem in inter-country comparison of the real cost of living is to select representative items in each group and then to work out the price index for the whole group. The different customs and traditions in the two countries make it very difficult to select identical commodities to represent a particular type of consumption. In the following paragraphs, we shall discuss the various problems that we faced and the assumptions that we made in working out the relative prices for different items.

*Food grains.* In India the important food grains that are consumed as staple foods are rice, wheat, jowar, bajra, barley, and gram, of which rice and wheat account for about two-thirds of the total expenditure for food grains. On the other hand, in Japan rice is the only staple food and accounts for about 80 per cent of the total expenditure for cereals. Wheat accounts for 10 per cent of cereals and is mostly eaten in the form of bread. On the other hand, in India wheat is mostly eaten in the form of flour, with the processing being done mostly at home. For our comparison, we have considered only rice and wheat for comparing the prices and have allotted weights of other food grains on these two commodities in proportion to expenditures for them.

*Milk, meat, fish, and eggs.* It was relatively easier to find similar products in this group for both countries. For comparing milk and milk products, we have used the price of fresh milk; and for meat and fish use has been made of average prices in both countries for different types of meat and fish; for eggs, the prices of hen eggs have been used for working out the relative prices.

*Fruits and vegetables.* There are many types of fruits and vegetables which are not produced in both countries. For example, mangoes are grown only in India, while persimmons are grown only in Japan. Among vegetables, the prices of potatoes, onions, and sweet potatoes were easily available and there was no difficulty in comparing them. However, for other vegetables (especially green vegetables) it was not possible to compare them item by item, since many are produced either in Japan or in India and we have used the price of spinach to compare all of them together. In fruits too, the same problem is faced. In India, we have plenty of mangoes and guavas, while in Japan we have persimmons, oranges, and apples. In this case, we have taken the price of mangoes in India and have compared it with the price of apples in Japan for working out the relative prices. In fact, we have used this relative price for all fruits other than bananas.

*Sugar, edible oils, and spices.* In Japan, sugar is mainly consumed in the form of white sugar, but in India the consumption of white sugar is only about one-third of the total quantity of sugar consumption and is mainly used in urban areas. In rural areas, most of the population use yellow sugar (called *gur*), which is produced by them and is much cheaper than white sugar. However, for our comparison we have used only the price of white sugar and thus have treated all Indian expenditure for sugar as the expenditure for white sugar. Another item with considerable difference in eating habits is spices. In Japan, spices are very rare and expensive since they are consumed in very small quantities, while in India they are relatively cheaper and are consumed in large quantities. We have compared them by taking the price of chemical spices in Japan and that of red chillies in India. In the case of edible oils, we have compared the price of cooking oil in Japan and the average price of all edible oils in India.

*Beverages.* In this group we have considered the prices of black tea (leaves), coffee (seeds), and Coca-Cola for non-alcoholic drinks. Although there are many types of soft drinks, very few are common to both countries. We will therefore compare all types of soft drinks (other than tea and coffee) by the price of Coca-Cola. Similarly, there are many types of local alcoholic drinks which are difficult to compare in the two countries. Here, too, we will compare the prices of alcoholic beverages only by the price of beer, assuming that other alcoholic drinks also have the same price differentials in the two countries.

*Other foods.* This group includes a number of food items, including meals outside the home. In Japan, biscuits, confectioneries, processed foods, and vegetables carry substantial weight in this group, while in India they are negligible. For these two items, we have used the average price rather than the price of individual items. For other foods, we have used the price of one meal outside the home at an average restaurant. To find the price of an average meal in India and in Japan is a difficult problem, since the eating habits are very different in the two countries. A meal which is very cheap in India may be very expensive in Japan. Similarly, a typical cheap Japanese meal may prove to extremely expensive in India. For

our purposes, we have used the national price of one average meal in Delhi and Tokyo and have used them to work out the relative prices for other miscellaneous food items.

*Tobacco products.* In Japan, the government has a monopoly on tobacco and its products. Here, the only major item is cigarettes, while in India there are a number of products other than cigarettes, like bidi, hookkah tobacco, chewing tobacco, snuff, etc. In the absence of any other similar product in Japan, we have taken the price of cigarettes to represent the whole tobacco group.

*Fuel and light.* In India, total expenditure for fuel and light can be divided into two broad categories, commercial and non-commercial. The latter, as the name indicates, is mainly without monetary transaction and is used in rural areas. For the former, which is entirely purchased on the market, there is no problem in working out relative price. But for non-commercial fuel, which consists mainly of cattle dung cakes, agricultural wastes, etc., there is no equivalent in Japan. The nearest item which we could think of for comparison with non-commercial fuel is charcoal wood, and we have used the same for working out the relative price to represent non-commercial fuel.

*Clothing and footwear.* This is another group where the comparison of prices is very difficult. The available statistics for the consumption of cloth in India only include cotton, wool, and synthetic cloth. A cloth is mostly used without any alteration in the form of sari for women and dhoti for men. There are very few persons who use ready-made clothes. Most people buy cloth and get it sewed in the form of shirts, pants, or coats. Women clothes are mostly tailored at home by the women themselves. On the contrary, in Japan tailoring is not so common and most people buy ready-made clothes. In the absence of many common practices, we have used the prices of cotton cloth and synthetic cloth per meter and wool yarn per hundred grams. A rough allocation of Japanese expenditure for different types of clothing has been made by adjusting the production figures for exports and imports. For other clothing, which includes tailoring services for India, we have used the tailoring charges for a wool two-piece suit for working out the relative price. For footwear, we have taken the price of Western-type shoes for working out the relative price in the countries.

*Durable goods.* There are many items in this category in both countries. In India, utensils, furniture, and bicycles are important durable goods, while in Japan radios, cameras, televisions, washing machines, and passenger cars are important durable goods of which very few are comparable since they differ very much in quality. For our analysis, we have taken the prices of aluminium frying pans for utensils, bicycles, one wave transistor radios, and small wooden tables for furniture for working out the relative prices. The weight of other durable goods has been proportionally distributed over these four items. In the case of bicycles, the usual price in Japan was much higher than what we have used, since there is

considerable difference in quality in Indian and Japanese bicycles. For example, in Japan most bicycles are supplied with shift gears while in India shift gears are not supplied at all. As a conceptual adjustment, we have reduced the Japanese bicycle prices by 25 per cent to make the prices comparable.

*Miscellaneous.* The major items included in this group are education, medical services, transportation and communication, personal care, house rent, reading and recreation, and other non-food items. The total weight of this group is about 20 per cent in India (15 per cent according to consumption pattern [2]), compared to about 40 per cent in Japan.

*Education.* Here we consider both public and private expenditure for education together and subdivide it into expenditures for stationary, etc. For the service part, the comparison should actually be made on a quantity basis, which we have done in the next section in the non-monetary comparison. To obtain an idea of the average cost of education in the two countries, we can consider either the average salaries of teachers in different categories or the tuition fees for different levels of education in national schools. For comparison, we have taken the monthly tuition fee paid by a high school student at a national school. A rough comparison shows that the salary of a high school teacher at a national school will result in approximately the same ratio as we have obtained by comparing tuition fees. For other education expenditures, which are mainly for stationary, etc., we have used the price of a fountain pen.

*Transportation and communication.* The different modes of transportation in the two countries are railways and motor transportation. In both countries, railway transportation is fairly organized and we have used this for working out the relative price. For communications, the cost of a domestic letter and local telephone charges are considered suitable indicators for comparing the prices. We have used the former for comparing the cost of communication, since in India the domestic postcard is the only item which is widely used for communication.

*Medical services.* This again, like educational services, includes both public and private expenditure for medical services, and has been subdivided into expenditure for medical services and for medicine. For the former, we have compared the consultation fee of a physician at his consulting room, and for the latter we have taken the price of aspirin, which is quite common in both countries.

*Personal care.* This group includes different types of toilet articles and cosmetics like soap, face powder, creams, razor blades, etc. It also includes all personal services like hair dressing, laundry services, etc. For toilet articles, we have compared the price of soap, and for personal services we have taken the price of a hair cut in the two countries.

*House rent.* It is very difficult to compare expenditure for house rent in the two countries since housing facilities differ very much in quality. In India, a large



TABLE III  
RETAIL PRICE FOR DIFFERENT CONSUMER GOODS AND SERVICES  
IN INDIA AND JAPAN, 1965-66

Items	Unit	Value per Unit			Relative Prices Pi/Pj	(% Pj/Pi
		India (Pi.) (in Rs.)	Japan (Pj.) (in Yen)	India (Pi.) (in Rs.)		
1. Rice	kg	0.85	117	1.54	55.2	181.2
2. Wheat	kg	0.61	71	0.93	64.5	155.0
3. Milk	litre	0.85	106	1.39	61.2	163.5
4. Meat	kg	3.04	660	8.68	35.0	285.5
5. Fish	kg	2.80	246	3.24	86.4	115.7
6. Egg	kg	2.25	210	2.76	81.5	122.7
7. Potatoes	kg	0.48	45	0.59	81.4	122.9
8. Onions	kg	0.32	55	0.72	44.4	225.0
9. Sweet potatoes	kg	0.32	60	0.79	49.4	202.6
10. Spinach	kg	0.25	63	0.83	30.1	332.0
11. Banana	kg	0.75	217	2.85	26.3	380.0
12. Mangoes/Apples	kg	0.75	104	1.37	54.7	182.7
13. Edible oils	kg	3.20	196	2.58	124.0	80.6
14. Sugar (white)	kg	1.35	130	1.71	78.9	126.7
15. Tea (black)	kg	5.70	1,417	18.64	30.6	327.0
16. Coffee	kg	6.70	1,260	16.58	40.4	247.5
17. Coca-Cola	bottle	0.25	45	0.60	41.7	240.0
18. Beer	bottle	4.50	138	1.82	247.9	40.3
19. Spices	kg	4.12	1,610	21.18	19.4	514.0
20. Biscuit & confectionery	kg	5.40	310	4.08	132.4	75.6
21. Preserved fruits & vegetable	kg	3.35	300	3.95	84.8	117.9
22. Cooked meal	meal	1.00	175	2.30	43.5	230.0
23. Cigarettes	10	0.275	35	0.46	59.8	167.3
24. Electricity	kwh	0.21	12	0.16	131.2	76.2
25. Kerosene oil	litre	0.52	20	0.26	200.0	50.0
26. Coke	10 kg	0.95	77	1.01	94.1	106.3
27. Gas	m <sup>3</sup>	1.47	24.5	0.32	459.4	21.8
28. Charcoal	10 kg	2.50	390	5.13	48.7	205.2
29. Cotton cloth	1 meter	1.43	174	2.29	62.4	160.0
30. Woolen yarn	100 gms	2.50	288	3.79	66.0	151.6
31. Synthetic fibre cloth	1 meter	3.56	480	6.31	56.4	177.2
32. Tailoring charges	suit woolen	75.0	12,000	157.9	47.5	210.5
33. Foot wear	pair	20.00	2,600	34.21	58.5	171.1
34. Frying pan (aluminium)	no	4.50	513	6.75	66.7	150.0
35. Bicycle	no	160.0	15,000	197.37	81.1	123.4
36. Radio (one wave only)	no	87.00	3,400	44.73	194.5	51.4
37. Wooden table (60cm 90cm)	no	35.00	2,820	37.10	94.3	106.0
38. Tuition fee (high school)	per month	5.00	750	9.87	50.6	197.4
39. Fountain pen	no	4.50	600	7.89	57.0	175.3
40. Rail fare	per 100 km	2.28	365	4.80	47.5	210.5
41. Post card	no	0.06	7	0.09	66.7	150.0
42. Soap	kg	1.56	170	2.23	69.9	143.0
43. Hair cut (men)	no	1.00	375	4.93	20.3	493.0
44. House rent	one-room apartment with bath	150.0	20,000	263.1	57.0	175.3
45. Newspaper (daily)	no	0.18	30	0.39	46.1	216.7
46. Cinema ticket	no	1.00	250	3.29	30.4	329.0
47. Aspirin	100 tab.	6.00	200	2.63	228.3	43.8
48. Doctor's fee	per visit	2.00	200	2.63	76.0	131.5

TABLE IV  
COMPARISON OF THE COST OF LIVING IN INDIA AND JAPAN, 1965-66

	Consumption Structure		Relative Prices P <sub>i</sub> /P <sub>j</sub>	P <sub>i</sub> /P <sub>i</sub> (%)	Price Indexes (Japan=100)			
	India (a)	India (b)			Japan	Indian Weights (a)	Japanese Weights (b)	Geometric Mean (b)
1. Food grains	26.7	38.8	8.6		57.43	57.17	56.8	56.7
a) Rice	13.8	20.1	7.0	55.2	181.2			
b) Wheat & bread	5.7	6.3	0.8	64.5	155.0			
c) Others	7.8	12.4	0.8					
2. Milk and dairy products	10.0	7.8	1.5	61.2	163.5	61.16	61.20	61.2
3. Meat, fish, & eggs	2.9	2.8	8.4			55.38	65.33	60.2
a) Meat	1.1	1.4	3.3	35.0	285.5			
b) Fish	1.6	1.2	3.6	86.4	115.7			
c) Eggs	0.2	0.2	1.5	81.5	122.7			
4. Fruits & vegetables	6.7	4.2	5.8			42.94	58.05	41.0
a) Potatoes	0.8	1.0	0.3	81.4	122.9			
b) Onions	0.2	0.6	0.2	44.4	225.0			
c) Sweet potatoes	0.2	n.a.	0.1	49.4	202.6			
d) Other vegetables	1.3	1.4	3.1	30.1	332.0			
e) Banana	0.9	0.2	0.3	26.3	380.0			
f) Mangoes/apples	2.2	1.0	0.8	54.7	182.7			
g) Other fruits	1.1	1.1	1.1					
5. Edible oils	2.8	2.9	0.3	124.0	80.6	92.37	98.2	95.2
6. Sugar	4.2	3.2	0.4	78.9	126.7			
7. Beverages	1.1	2.2	3.2			42.79	43.09	83.5
a) Tea	0.6	0.7	0.3	30.6	327.0			
b) Coffee	0.1	0.2	0.1	40.4	247.5			
c) Other non-alcoholic beverages	0.1	0.9	0.9	41.7	240.0			
d) Alcoholic beverages	0.3	0.4	1.9	247.8	40.3			
8. Spices	1.8	2.8	0.3	19.4	514.0	28.80	27.23	47.9
9. Other foods	2.2	2.8	9.9					
a) Biscuits & confectioneries	0.2	0.1	2.7	132.4	75.6			
b) Preserved fruits & vegetables	0.1	0.1	3.3	84.8	117.9			
c) Others	1.9	2.6	3.9	43.5	230.0			
10. Total foods	58.4	67.5	38.4			54.21	53.76	62.3
							71.73	62.1

COST OF LIVING COMPARISON

11. Tobacco products	3.0	1.9	1.0	59.8	167.3	59.77	59.77	59.80	59.8	59.8
12. Fuel and light	5.8	6.3	4.5	131.2	76.2	58.97	58.52	164.60	98.5	98.1
a) Electricity	0.3	0.2	1.9	200.0	50.0					
b) Kerosene	0.9	1.1	0.2	459.4	21.8					
c) Coke	0.1	0.2	0.3	48.7	205.2					
d) Gas	0.1	neg.	0.9							
e) Others	4.4	4.8	0.2			59.75	61.38	61.06	60.4	61.2
13. Clothing & footwear	9.4	7.8	11.6	62.4	160.1					
a) Cotton cloth	5.9	6.8	4.1	66.0	151.6					
b) Wool cloth	0.5	0.1	3.4	56.4	177.2					
c) Synthetic cloth	1.3	0.2	2.5	47.5	210.5					
d) Others (incl. tailoring)	0.8	0.3	0.6	58.5	171.1					
e) Footwear	0.9	0.4	1.0			78.56	81.95	107.94	92.1	94.0
14. Durable goods	2.5	1.4	5.2	66.7	150.0					
a) Utensils	0.6	0.3	0.8	81.1	123.4					
b) Bicycles	0.2	0.2	0.3	194.5	51.4					
c) Radios, etc.	0.1	0.1	0.6	94.3	106.0					
d) Furniture	0.3	0.1	1.0							
e) Others	1.3	0.7	2.5							
15. Miscellaneous	20.9	15.1	39.3	50.6	197.4	51.1	61.5	56.1	53.5	58.7
a) Education	4.0	2.2	6.7	57.0	175.3	50.94	50.91	50.98	51.0	51.0
i) Services	3.8	2.1	6.3	47.5	210.5					
ii) Stationary, etc.	0.2	0.1	0.4	66.7	150.0	48.4	47.5	52.5	50.4	49.9
b) Transportation	2.9	1.4	1.9							
c) Communications	0.2	neg.	0.6							
d) Personal care	2.0	n.a.	2.9	69.9	143.0	28.32	69.93	45.96	36.1	56.7
i) Toilet articles	0.8	1.9	1.5	20.3	493.0					
ii) Services	1.2	n.a.	1.4							
e) Medical care	2.9	2.5	3.1	228.3	43.8	112.20	146.29	125.13	118.5	135.3
i) Medicine	1.4	1.8	1.0	76.0	131.5					
ii) Services	1.5	0.7	2.1	57.0	175.3	57.48	57.04	57.00	57.2	57.0
f) House rent (incl. repairs)	3.8	1.2	4.6	46.1	216.7					
g) Reading	0.6	0.6	1.7	30.4	329.0	40.85	37.35	34.38	37.5	35.8
h) Recreation	0.2	0.5	5.0							
i) Other miscellaneous exp.	4.3	4.8	12.8			51.1	61.5	56.1	53.5	58.7
16. Total non-foods	41.6	32.5	61.6			55.7	61.4	69.4	62.2	65.3
17. Grand total	100.0	100.0	100.0			54.8	56.0	70.3	62.1	62.7

proportion of houses in rural areas have mud walls and straw roofs, contrary to the situation in Japan. According to *National Income Statistics*, the average annual rental dwelling was only 73.0 rupees in rural areas in 1964-65 and about 235 rupees in urban areas, while in Japan the annual rent works out to be about 68,000 yen (i.e., about 890 rupees) per dwelling. The two are not comparable at all, since there are big differences in the facilities provided in the houses. For our comparison we have taken the national figures of monthly rent for a one-room apartment with bath in Delhi and Tokyo on the basis of subjective judgment.

*Reading and recreation.* This group includes all expenditures for newspapers, periodicals, books, etc., and for all types of entertainment. For reading, we have used the price of a daily newspaper, and for entertainment the price of one movie ticket has been used for working out the relative prices for reading and recreation.

*Other miscellaneous non-food expenditures.* It is difficult to think of suitable items since the group includes a variety of items. For example, in Japan it includes pocket money or the money spent on gifts, etc., while in India many services like sanitary services are included in this group. For consumption pattern (b), all services have been put in this group since they cannot be classified separately. For this group we have not used any separate item for comparing prices and have allotted its weight to the other items of the miscellaneous group. The different prices and the corresponding relative prices are presented in Table III. Table IV presents a detailed comparison of the cost of living in India and Japan by the relative prices given in Table III.

#### IV. A NON-MONETARY APPROACH FOR STUDYING THE COST OF LIVING

The cost of living in the two countries can also be compared by finding out suitable quantity indicators for different areas of living. It is generally agreed that it is not possible to have one single indicator of the cost of living. There are many aspects of the cost of living, such as food and nutrition, clothing, housing, education, health, etc., each of which requires separate assessment. This approach has an advantage over the monetary approach since it is relatively easier to get reliable data for the quantitative indicators. Moreover, it is a fact that the comparison of prices in the two countries is a tremendous task and quite often subjective judgments are used in the calculation of the purchasing power of the two currencies. However, in a non-monetary approach we are confronted with a number of heterogeneous indicators, each showing a different level of different aspects of living, and it is not possible to think of some suitable method to aggregate the different indicators in order to obtain a single index of the cost of living. During 1954 and 1960, several agencies of the United Nations considered this question, and for the purpose of international comparison prepared a list of components and suitable corresponding indicators, which include food

consumption and nutrition, clothing, housing, education, health care, recreation and leisure, etc. In the following paragraphs we shall compare the different components of the cost of living in India and Japan with the help of the available indicators. The comparison will generally be for the years 1965-66 and 1967-68, but for some components like housing it refers to the earlier period due to the lack of data.

*Food and nutrition.* The per capita consumption of cereals and sugar is more or less at the same level in the two countries, suggesting that the quantitative food level is not very different. However, there is considerable difference in the consumption of fish, meat, fruits and vegetables, which normally are considered as the measure of the quality of food. The per capita consumption of animal products (milk, fish, meat, and eggs) is around 150 grams per day in India, compared to about 260 grams in Japan. Presuming that the per capita intake of calories and proteins in 1967-68 is not different from 1965-66 for India, we can compare them with the Japanese figures for 1967-68 as an indicator of the present level of food and nutrition. The Indian figure for calory intake is about 94 per cent of that of Japan. The per capita consumption of proteins in India is about 54 grams, compared to 77 in Japan. This gap is greatly increased if we compare the animal protein alone. The Indian consumption of animal protein is about 22 per cent of Japanese consumption. The low Indian consumption of animal protein can be partly due to some inhibitions which prevent a very large section of the Indian population from eating meat, fish, or eggs. The Food and Agriculture Organization (FAO) has prescribed short-term and long-term targets in terms of calories and protein for Asian countries. The following table gives the Indian and Japanese figures of per capita consumption along with the FAO targets.

TABLE V

	India	Japan	FAO Targets	
			Short Term	Long Term
Calories	2,110	2,250	2,350	2,430
Proteins total (gms/day)	54	77	69	74
Proteins of animal origin (gms/day)	7	32	15	21

In terms of calory intake, both India and Japan are short of the FAO targets, but in proteins Japan has already exceeded the FAO targets (both short- as well long-term) and India is lagging behind very significantly. Compared to Western countries, even Japan is not in a very comfortable position. The protein intake in Japan is only 77 grams per day, compared to 96 in the U.S.A., 109 in New Zealand, 102 in France, and 89 in the U.K. The corresponding figures for animal protein are 32 in Japan, 65 in the U.S.A., 72 in New Zealand, 50 in France, and 51 in the U.K.

*Clothing.* The per capital availability of cloth in India was estimated to be about 16.5 meters in 1965-66, compared to about 46 meters in Japan. Cotton cloth is dominant in India, constituting about 90 per cent of total cloth consumption. In Japan, the consumption of cotton cloth is only 44 per cent, and has decreased to about 40 per cent in 1967-68. Synthetic cloth is becoming more and more popular in Japan, accounting for about half of the total consumption. Although the overall consumption of cloth in Japan is about three times that in India, it is very difficult to compare it directly due to considerable differences in quality. Perhaps as a rough indicator one may take the proportion of non-cotton cloth to total cloth as an indication of quality. In India, this ratio is about 10 per cent, compared to about 60 per cent in Japan.

*Housing.* The position regarding housing is not very satisfactory for both India and Japan, but it is very unsatisfactory in India. There has been very little information in India related to housing conditions. In the 1961 census, some information was collected and has since been published. According to the census, there are about 79 million dwellings, in which about 84 million families live. This compares very well with Japan, with 20.6 million dwellings (including structures other than dwellings) and 21.8 million families in 1963. The average number of persons per room works out to be 2.6 in India in 1961 and 1.2 in Japan in 1963. The situation since then has improved a little in Japan, with an average number of 1.0 persons per room in 1968. According to the Indian results of a detailed tabulation of a 20 per cent sample of the census, about 77 per cent of the families live in dwelling with one or two rooms, compared to about 29 per cent in Japan. Further, it revealed that about 58 per cent of the families reside in dwellings with walls made of mud and unburnt bricks. In Japan, more than 90 per cent of the houses are made of wood, and it is very difficult to compare them in quality with Indian houses. Regarding the facilities that are available in the houses, there are no available statistics for India. In Japan, although the position regarding facilities in the dwellings has improved with time, it is still unsatisfactory according to Western standards. For example, only about 17 per cent of the houses have flush toilets, bath facilities are available only in about two-thirds of all houses, and water is supplied to about 80 per cent of the houses.

*Health.* In medical facilities, there are very substantial differences between India and Japan. The total number of qualified doctors per million population is only about 180 in India, compared to about 1,100 in Japan. In other words, there is only one doctor per 5,560 persons in India, while the corresponding figure for Japan is 900. However, in India there is quite a large number of local medical doctors for which regular statistics are not available. As far as hospital facilities are concerned, the number of hospital beds in Japan is about twenty times more than in India. Four hundred ninety beds per million population in India corresponds to 9,740 beds in Japan. Regarding ancillary medical personnel too, the gap is nearly as wide as for hospital beds. The number of nurses and midwives

is about 16 in India, compared to about 305 in Japan per million population in 1965-66. However, in 1968-69 there was a decrease in the number of nurses in Japan and an increase in India. The corresponding figures for India and Japan in 1968-69 are about 21 and 277, respectively, per million population. The length of life at birth, which may be considered as one of the indicators of overall medical facilities, is 53 and 52 years in India for males and females, respectively, while in Japan the corresponding ages are 69 and 74 years. Another criterion is the overall mortality rate, which is estimated to be about 145 per thousand in India, compared to about 7 in Japan.

*Education.* Education is another field in which India is very much behind Japan. According to the 1961 census, the overall percentage of literacy in India (i.e., the percentage of the population who can read and write) is only about 24 per cent of the total population, while in Japan it is practically 100 per cent. This is mainly due to the fact that education up to the secondary level is compulsory in Japan and only a very small percentage of children in the six to fourteen age group are exempted from attending school on medical or other pertinent grounds. In India, about 45 per cent of children in the six to eleven age group and about 87 per cent in the eleven to fourteen age group are still not able to attend school. Only about 15 per cent of the primary students are able to advance to higher classes, compared to about 65 per cent in Japan. However, the position regarding university education is equally acute in both India and Japan. In Japan, there is very serious competition for admission to a university or college, perhaps due to the limited number of places. This is reflected in the fact that the percentage of university and college enrollment was only 27 per cent of total enrollment in higher secondary classes in 1968-69. The corresponding figure for India is about 26 per cent. In fact, in 1965-66 the percentage was higher in India (23 per cent) than in Japan (17 per cent). While in India there is a serious bottleneck of education facilities at the primary and secondary levels, in Japan there is a very serious bottleneck at the university and college level.

*Transport and communication.* In both countries railways are the most organized mode of transportation and it is only in the recent past that motor transportation has become common. However, there is a very substantial difference in volume. For example, the total number of railway passengers is only about 2 billion in India, compared to 16 billion in Japan. However, the average distance travelled by a passenger in India is about 50 km, compared to about 16 or 17 km in Japan. This is perhaps due to the fact that it is a very convenient mode of transportation for commuters in travelling short distances in Japan, while in India it is used mainly for long trips. But the fact remains that the average number of trips by railway per person per year for the entire population in India is only 4.2, compared to about 160 in Japan, with an average number of kilometers per person around 200 and 2,750, respectively. Taking into account both railway and motor transportation, the average number of kilometers per person works out to be around 390 for India and 3,640 for Japan. Another indicator of transportation

TABLE VI  
NON-MONETARY INDICATORS OF REAL STANDARD OF LIVING IN INDIA AND JAPAN

Items	Unit	India			Japan		
		1965-66	1967-68	1965-66	1967-68	1965-66	1967-68
<b>A. Food and nutrition (per capita per day)</b>							
1. Cereals	gms	355	398	419	394		
2. Pulses	gms	47	55	70	74		
3. Milk & dairy products	gms	138	138	49	75		
4. Fish	gms	7	7	101	110		
5. Meat	gms	4	4	30	35		
6. Fats & oils	gms	10	12	10	13		
7. Sugar	gms	54	—	50	52		
8. Potatoes & other root vegetables	gms	39	—	173}	304		
9. Other vegetables	gms	34	—	113}			
10. Fruits	gms	35	—	80	108		
11. Calory intake	nos	2,110	—	2,193	2,254		
12. Total protein intake	gms	54	—	71	77		
13. Animal protein intake	gms	7	—	28	32		
<b>B. Clothing (per capita per year)</b>							
1. Total cloth	meter	16.5	15.3	46.0	49.2		
2. Cotton cloth	meter	14.6	13.4	20.4	20.2		
3. Synthetic fibre cloth	meter	1.7	1.7	21.2	24.2		
<b>C. Housing</b>							
		India (1960-61)			Japan (1963)		
		Total Urban	Rural	Total Urban	Rural	Total Urban	Rural
1. Total dwellings*	in millions	79.2	14.1	65.1	20.6	14.1	6.5
2. Total families	in millions	83.5	14.8	68.7	21.8	15.0	6.8
3. Families per 100 dwellings		105	105	106	106	105	103
4. Average rooms per dwelling		2.0	1.9	2.0	3.8	3.6	4.3
5. Per cent families with one or two rooms		76.5	78.4	76.1	29.0	33.8	18.8
6. Average persons per room		2.6	2.6	2.6	1.2	1.1	1.1
7. Per cent of dwellings with		—	—	—	68	78	47
(i) Water		—	—	—	59	51	76
(ii) Bath		—	—	—	9	6	1
(iii) Flush toilet		—	—	—	—	—	—
<b>D. Health</b>							
1. Doctors per 100,000 persons		18	19	111	112		
2. Beds in hospitals per persons		49	49	889	974		
3. Nurses (incl. mid wives) per persons		16	21	305	277		
4. Length of life at birth (in years)	(i) Male	48.7	53.2	67.7	69.0		
	(ii) Female	47.4	51.9	72.9	74.3		
5. Mortality rate per 1,000 persons		17.2	14.0	7.1	6.8		
6. Birth rate per 1,000 persons		41.0	38.6	18.6	18.6		



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		(24 in 1961)	(practically 100%)
<b>E. Education</b>			
1. Literacy (per cent of total population)			
2. Students			
(i) Primary	51.4	55.4	9.8
(ii) Secondary	10.5	12.5	6.0
(iii) Upper secondary	5.3	6.6	5.0
(iv) University	1.2	1.7	4.8
(v) Total	68.4	76.2	0.9
			22.0
3. Upper secondary & university students as per cent of			
(i) Total population	1.5	1.6	6.3
(ii) Total students	9.5	10.9	28.2
(iii) Primary level students	12.6	15.0	63.3
4. University students as per cent of higher secondary students	22.6	25.8	17.0
<b>F. Transportation and Communications</b>			
1. Railways			
(i) Passengers	2.1	2.2	16.2
(ii) Passenger km.	96	107	274
2. Motor transportation passenger km.	82	98	95
3. Passenger km. per person	363	389	3,642
4. Passenger cars per 1,000 persons	0.9	0.9	42
5. Post offices	97	102	19
6. Population per post office	5,051	5,165	18.7
7. Telephones per 1,000 persons	1.8	2.1	20.1
8. Domestic postal articles per person	13	13	5,040
<b>G. Mass Communication &amp; Entertainment</b>			
1. Circulation of newspapers	(1967)	(1968)	(1968)
2. Newspaper per 1,000 persons	25.8	26.3	49.7
3. Radio receivers	50	50	449
4. Radio receivers per 1,000 persons	7.6	9.3	491
5. Televisions	16	18	20.8(1966)
6. Televisions per 1,000 persons	—	neg.	210
7. Feature films	333	—	21.2
8. Movie houses	3,843 (for 1964 only)	350	185
9. Movie attendance	1,825 "	"	209
10. Movie attendance per persons	4	(1966)	494
	(1965)	12.1	3,814
	27	24	313
11. Books published	1,000		4
12. Books published per million persons			(1966)
			30.4
			306

Sources: 1. Planning Commission, Government of India, *Fourth Five Year Plan, 1967-74*.  
 2. Ministry of Finance, Government of India, *Economic Survey, 1967-70*.  
 3. Ministry of Information and Broadcasting, Government of India, *India, 1969*.  
 4. Ministry of Food Agriculture, Government of India, *Bulletin on Food Statistics*.  
 5. Planning Commission, Government of India, *Report of the Committee on Distribution of Income and Level of Living, Part II*.  
 6. United Nations, *Statistical Year Book, 1968*.  
 7. United Nations, *Statistical Year Book for Asia and the Far East, 1968*.  
 8. Bureau of Statistics, Office of Prime Minister, *Japan Statistical Year Book*.  
 \* Includes occupied structures other than dwellings for Japan.

facilities is the number of passenger cars per thousand population. In Japan, there was one car for every 50 persons in 1965-66, compared to one car for every 1,100 persons in India. While the number has remained stable in India over the last few years, in Japan it has improved very significantly to about 24 persons per car. In India, it is still the bicycle which is used very often for travelling short distances, while in Japan it is rarely used. Regarding communications, the number of post offices per million population is more or less similar in the two countries. The population per post office was about 5,167 in India and about 5,040 in Japan in the year 1968-69. However, the average number of postal articles per person handled by the post office in Japan was about eight times that in India (13 in India and 101 in Japan). Another indicator for comparing communications facilities is the number of telephones per thousand population. While in India there is one telephone for about 500 persons, in Japan there is one for every 6 persons.

*Mass communications and entertainment.* In this aspect there is also a very wide gap between India and Japan. If the circulation of newspapers and the number of radios and televisions per thousand population is any criteria, Japan is at least ten times ahead of India in mass communications. The number of newspapers per thousand population is only 50 in India, while in Japan it is about 490. Similarly, the number of radios per thousand population is only 18 in India, compared to about 210 in Japan. In televisions, there is no comparison as India has just started, with the total number of television sets around six thousand for the whole country. In Japan, televisions have become very common, and on the average there is one set for every five persons. Combining the two together, we may say that while there is one radio for every 55 persons in India, in Japan there is one radio or television set for every 2.4 persons. One more aspect which can be used for comparison is the number of books published per million population. The comparative figures are 27 books in India and 246 books in Japan for the year 1965.

For entertainment, the only item which can be compared fairly reasonably between the two countries is the number of persons going to see feature films in movie houses. The average number of films seen per person is the same for both countries. In fact, in Japan there was a decline in movie attendance from 1965 to 1968. This may be due to the fact that in Japan there are many other varieties of entertainment other than movies. Moreover, the increasing popularity of television also must have affected movies attendance. In India, going to movies is still the biggest source of entertainment.

As mentioned earlier and as is clear from the above discussion, the different non-monetary indicators will lead to different conclusions and it is not possible to say exactly to what extent Japan is ahead of India. However, the above indicators will be of immense value if the purpose is confined only to the comparison of some particular aspect of the standard of living. For example, it will be more reliable to compare medical facilities by either the number of doctors or by the number of beds per thousand population than to compare the amount of expendi-

tures per person for medical facilities. Table VI summarizes in detail the different non-monetary indicators of the real standard of living in India and Japan.

## V. CONCLUSION

We shall now sum up the main points that emerge from this study of the problems of the comparison of the real national product and the standard of living in India and Japan. Macroeconomic indicators like growth of gross national product, personal consumption expenditure, etc., clearly indicate that the two economies are at very different stages of development. While the Japanese economy is fast approaching the economic level of the developed countries in Europe, the Indian

TABLE VII  
MACRO ECONOMIC INDICATORS OF DEVELOPMENT IN INDIA AND JAPAN

	1960-61	1965-66	1967-68	1968-69	1969-70
Japan (at 1967 prices in billion yen)					
1. Gross national product	20,348	32,294	40,668	46,299	52,123
(index)	100.0	158.7	200.0	227.5	256.2
2. Private consumption expenditure	11,952	18,229	21,678	23,770	25,890
(index)	100.0	152.5	181.4	198.9	216.6
3. Gross domestic capital formation	6,248	10,649	15,696	18,410	—
(index)	100.0	170.4	251.2	294.7	—
4. Government consumption expenditure	2,119	2,990	3,334	3,560	—
(index)	100.0	141.0	157.3	167.9	—
5. Private consumption as % of GNP	58.7	56.4	53.3	51.3	49.7
6. Gross capital formation as % of GNP	30.7	33.0	38.6	39.8	—
7. Population (in millions)	93.4	98.2	100.2	101.4	102.6
8. Per capita consumption					
(in 1,000 yen)	128.0	185.6	216.4	234.5	252.3
(index)	100.0	145.0	169.1	183.2	252.3
India (at 1960-61 prices* in billion rupees)					
1. Gross national product	150.0	174.6	188.6	—	—
(index)	100.0	116.4	125.7	—	—
2. Private consumption expenditure	119.0	130.2	143.2	—	—
(index)	100.0	109.4	120.3	—	—
3. Gross domestic capital formation	24.0	31.2	33.4†	—	—
(index)	100.0	130.0	139.2	—	—
4. Government consumption expenditure	10.9	16.7	16.8	—	—
(index)	100.0	153.2	154.1	—	—
5. Private consumption as % of GNP	79.3	74.6	75.9	—	—
6. Gross capital formation as % of GNP	16.0	17.9	17.7	—	—
7. Population (in millions)	434	490	514	—	—
8. Per capita consumption					
(in 1,000 rupees)	274	266	279	—	—
(index)	100.0	97.1	101.8	—	—

\* All components have been deflated by using the official implicit gross national product deflator.

† Provisional.

TABLE VIII  
NATIONAL INCOME BY INDUSTRIAL ORIGIN AT CURRENT PRICES

	Japan (billion yen)			India (billion rupees)		
	1960-61	1965-66	1967-68	1960-61	1965-66	1967-68
1. Agriculture	1,941	2,907	4,008	68.2	98.5	149.7
2. Mining, manufacturing, & construction	4,837	9,373	13,402	26.2	42.8	49.1
3. Transportation, communications, & public utilities	1,224	2,214	3,066	6.5	11.1	13.0
4. Trade, banking, insurance, & housing	3,348	7,079	9,603	18.4	31.5	40.7
5. Government services	511	1,079	1,330	5.4	9.9	12.0
6. Other services	1,433	3,400	4,413	9.1	13.7	17.3
7. Net domestic product at factor cost	13,294	26,052	35,822	133.8	207.5	281.8
8. Net income from abroad	-24	-98	-115	-0.7	-1.7	-2.6
9. National income	13,270	25,945	35,707	133.1	205.8	279.2
10. Population (millions)	93.4	98.2	100.2	434	490	514
11. Per capita income*	142.1	264.3	356.4	307	420.0	543
12. Per capita (index)	100	186.0	250.8	100	136.9	177.0
13. Price deflator (index)	100	127.0	138.3	100	136.8	169.0
14. Real per capita income*	142.1	208.1	257.7	307	307	321 (320)†
15. Real per capita income† (index)	100	146.4	181.4	100	100	104.6 (104.2)†
Percentage Distribution of Net Domestic Product by Industrial Origin						
1. Agriculture	14.6	11.2	11.2	51.0	47.5	53.1
2. Mining, manufacturing, & construction	36.4	36.0	37.4	19.6	20.6	17.5
3. Transportation, communications, & public utilities	9.2	8.5	8.6	4.9	5.3	4.6
4. Trade, banking, insurance, & housing	25.2	27.1	26.8	13.8	15.2	14.4
5. Government services	3.8	4.1	3.7	4.0	4.8	4.3
6. Other services	10.8	13.1	12.3	6.7	6.6	6.1
7. Net domestic product at factor cost	100.0	100.0	100.0	100.0	100.0	100.0
Index of Growth of National Income by Industrial Origin (1960-61=100)						
1. Agriculture	100	149.8	206.1	100	144.4	219.5
2. Mining, manufacturing, & construction	100	193.8	277.1	100	163.4	187.4
3. Transportation, communications, & public utilities	100	180.9	250.5	100	170.8	200.0
4. Trade, banking, insurance, & housing	100	211.4	286.8	100	171.2	221.2
5. Government services	100	211.2	260.3	100	183.3	222.2
6. Other services	100	237.3	308.0	100	150.5	190.1
7. Net domestic product at factor cost	100	196.0	269.5	100	155.1	210.6
8. National income	100	195.6	269.1	100	154.6	209.8

\* For Japan, the unit is 1,000 yen, and for India, 1 rupee.

† Figures in brackets are for 1968-69.

economy has not made much progress during the past decade. The vast difference in the economic development of the two countries is also reflected in the fact that in Japan about 40 per cent of the gross national product is used for gross domestic capital formation, while the corresponding figure in India is only about 18 per cent. Moreover, the Japanese economy, like other developed economies, has a very small proportion of income from the agricultural sector, which contributes only about 11 per cent of the total income. In India, on the other hand, agriculture is still the most dominant sector, contributing about 50 per cent of the total income. This suggests that a comparison between India and Japan is virtually a comparison between a developing nation and a developed nation which will present difficulties in finding indicators or criteria which are really comparable.

Next, we compared the real standard of living in 1965-66 in the two countries both by comparing the total per capita expenditure after adjustment for differences in the real purchasing power of the two currencies as well as by comparing certain non-monetary quantitative indicators suitable for different aspects of the cost of living. The former gives an overall comparative index for the cost of living in the two countries, although there is likely to be a certain margin of error due to the various assumptions which we made in working out the price indexes. The main conclusion is that real per capita consumption in India is about 23 per cent of that in Japan, which is higher by about 60 per cent than the level of consumption obtained by using the official exchange rates of the two countries (according to official rates, the Indian per capita consumption in 1965-66 is about 15 per cent of that in Japan). If the difference in the real cost of living of the two countries is any indicator, which accounts for about 70 per cent of the total gross national product in India, it is doubtful whether any useful purpose will be served by comparing the official figures for gross national product or national income, especially when the countries involved are relatively developed on the one hand and underdeveloped on the other.

Lastly, we have compared different important aspects of the standard of living in the two countries by comparing the related non-monetary indicators. For example, comparing food and nutrition, we find that in quantitative terms, usually measured by calory intake, the level of food differs very little in the two countries. But there is a considerable difference in the quality of food as measured by the total protein intake and the percentage of animal protein. Similarly, for other aspects of the standard of living, like clothing, housing, health, education, etc., we find that the Indian levels are considerably lower than in Japan, although many are also rather low in Japan compared to other developed countries.

It may be noted that the above findings mostly relate to the period 1965-66, i.e., just before the devaluation of the Indian rupee. According to the present official exchange rate, a rupee is equivalent to only forty-eight yen, compared to about seventy-six yen before devaluation. It is therefore expected that in 1969-70 the index of consumer prices in India with Japan as the base (100) will be lower than what we have obtained for 1965-66. However, to obtain a precise idea we must take into account the rise in consumer prices in both countries during the period of 1965-69.