

The following report of the Experts Committee on the necessity for revision of the Consumer Price Index Numbers for Calcutta working class was expected to be published some time ago by the West Bengal Government. But, for some unexplained reasons, its publication has been held back, presumably at the instruction from the Centre. The Report is significant not only because it points out the faulty calculations of the existing CPI which have affected the wage structure and dearness allowance rate in various industries for the last several years, but also because of its novel collection of the consumer price data. The Committee has suggested that trade unions in the collection of these data and also the taking into account of the objective situation—such as the prevalence of black-market—in this process. The very significant findings of the Committee and its important suggestions are published herebelow the text of this Report.

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—EDITOR

Unpublished
Report on
Faulty
Consumer
Price
Index
Numbers

REPORT
OF
THE EXPERT COMMITTEE
ON
CONSUMER PRICE INDEX NUMBERS
FOR
WORKING CLASS IN CALCUTTA
May 31, 1974

CONTENTS

Chapter

1. Introduction
2. The August 1939 Series
3. The 1944 Series
4. The 1960 Series

APPENDIX

Weighting Diagram and Base Prices of the August 1939 series.

Results of Jagaddal Labour Enquiries by the Indian Statistical Institute.

On Alternative Approaches to the derivation of the linking Factor.

Views of Employers' Representatives.

Views of Employees' Representatives.

Chapter I

INTRODUCTION

1.1 Origin

1.1.1. Strange though it may seem, a very large number of workers in Calcutta industrial area, including those employed in the jute industry, still have their dearness allowances calculated on the basis of a working-class Consumer Price Index (CPI) for Calcutta Centre with base nearly 35 years old, at August 1939.

1.1.2. Of course, the series on base August 1939 discontinued long ago and was replaced, in turn, by the working-class Consumer Price Index numbers for Calcutta centre with base 1944 and with base 1960. The replacements were warranted because even if the August 1939 series had reflected satisfactorily the working class consumer price movements of the time, it would not continue to do so over a long period marked by rapidly changing consumption patterns. But, then, for those who wanted to stick to the base of August 1939, such replacements gave rise to the problem of finding linking factors for converting the indices of the later series to those of the August 1939 series.

1.1.3. At present the CPI numbers on base 1960 are converted to indices on base 1944 by multiplying the former by a linking factor, 1.61, and the resultant indices are converted to indices on base August 1939 by multiplying them by another linking factor, 2.63. The linking factor 1.61 was originally 1.51, but had been revised upward on the recommendations of an Expert Committee headed by Dr B. Ramamurthi, popularly known as the Ramamurthi Committee. So far as the Calcutta centre is concerned, the Committee examined only the pricing deficiencies of the 1944 series with a view to revising the linking factor between the 1944 series and the 1960 series as mentioned above. The examination of the other linking factor, 2.63, and therefore of the August 1939 series, was outside the terms of reference of the Ramamurthi Committee.

1.1.4. To make matters worse, the August 1939 series was constructed, to say the least, in a very unscientific manner. The two later series, one with base 1944 (particularly after it was revised) and the other with base 1960, could not be similarly castigated, though one could certainly point out blemishes. Thus, if changes in the cost of living since August 1939 were to be satisfactorily measured, a close examination (and revision, if needed) of all the three CPI series and of the August 1939 series in particular was called for, in addition to that of the existing linking factors.

1.1.5. Accordingly, an Expert Committee on the CPI numbers for the working-class population in Calcutta was appointed by the Government of West Bengal. The reasons for constituting the Committee, its composition, and terms of reference are set out in the Government Resolution No 4483-IR dated 21.6.73 issued by the Labour Department, Government of West Bengal. The text of the Resolution is as follows:

"Following the demand of the Central Trade Union organisations in West Bengal for setting up an independent Expert Committee to examine the Consumer Price Index Number for Calcutta in all its aspects, the matter was placed before the meeting of the State Labour Advisory Board held on 11th September, 1972. It was decided in that meeting that an Expert Committee would be set up by the State Government. Government also invited suggestions from the Central Trade Union organisations regarding the terms of reference of the proposed Committee. Suggestions were received from the concerned Central Trade Union organisations,

"Having regard to the discussions held in the meeting of State Labour Advisory Board on 11th September, 1972, and in consideration of the suggestions received from the Trade Union organisations, the Governor is now pleased to constitute an Expert Committee and to appoint

Dr S. K. Bhattacharyya,
Head of the Department of Economics,
Calcutta University, as the Chairman,
and the following persons as the members of the said Committee, namely,

1. Dr N. Bhattacharyya,
Economic Research Unit,
Indian Statistical Institute
2. Dr H. Banerjee,
Head of the Department of Economics,
Jadavpur University.
3. Dr (Mrs) P. Chakraborty,
Joint Labour Commissioner (Statistics),
West Bengal.

"Dr (Mrs) P. Chakraborty will sit as Member-Secretary of the Committee.

"The terms of reference of the Committee will be as follows :

"1. The Committee will examine and suggest whether any change is necessary in the linking factor for deriving old Calcutta series based on the year 1939 from Calcutta series based on 1960 compiled by the Labour Bureau, Government of India, because of any deficiencies relating to pricing of various index items included in the Calcutta 1939 series and weightages or any other factor.

"2. The Committee will submit its report to Government within three months from the date of this Resolution.

"3. The Committee will devise its own procedure and it may call for such information and take such evidence as it may consider necessary."

1.1.6. Subsequently the Governor was pleased by Order No 7470-IR to make the following amendment in the aforementioned resolution dated 21.6.73, namely,

"AMENDMENT

"In the said Resolution—
under serial No (1) of the terms of reference, after the words 'or any other factor', add the following words, 'Including the method and existing practice of price collection and principles of substitution.'"

1.2 Meetings of the Committee

1.2.1. The inaugural meeting was held on 6th July, 1973. The Expert Committee first examined its terms of reference as laid down in the Government resolution. The terms of reference appeared to be quite wide because the Committee was asked to examine and suggest necessary changes in the existing linking factor because of deficiencies relating to pricing, weightages and "any other factor". In particular, it was evident that the Committee would have to examine the possible deficiency in the linking factor due to the method adopted for deriving it, in addition to examining the possible

deficiencies because of pricing and weightages. Further, since the linkage between 1939 and 1960 depended on the linkages, viz., 1939-1944 and 1944-1960, both the linkages would have to be studied, even though the primary emphasis would necessarily be on the period 1939-1944, because the other linking factor had already been gone into by the Ramamurthi Committee.

1.2.2. At the first meeting, the Committee heard from the Member-Secretary the background of the issues involved and was also apprised of the relevant records, materials and publications. The Committee made a tentative plan of going through all the relevant materials available in order to frame a questionnaire for eliciting the views of the organisations involved.

1.2.3. The August 1939 series was based on a Family Budget Enquiry conducted by Burmah-Shell, a private company. The details of the results of the enquiry were not available despite exchange of several letters between the Head Office of Burmah-Shell Company, Bombay, and the Member-Secretary of the Committee. Even the items included in the miscellaneous group (whose index was frozen) and their prices during 1939-1944 were not known. The rent index was also frozen but no data on this were available. The Committee, therefore, felt it necessary to collect all relevant information from other sources preparing CPI numbers with base August 1939 or with base years just prior to 1939 or immediately after 1939. Two members of the Committee also conducted limited field surveys among the Calcutta workers for collecting information on house rent.

1.2.4. The Committee considered the different phases of the work involved and drew up a tentative schedule. The broad plan of work drawn up by the Committee was as follows:

(i) Collection of all relevant papers and data from the Statistical Section of the Labour Directorate, Government of West Bengal, Bureau of Applied Economics & Statistics, Government of West Bengal, The Central Statistical Organisation, New Delhi, the Labour Bureau, Simla, various State Governments and the Indian Statistical Institute.

(ii) Framing of questionnaire for obtaining the views of employers' and employees' organisations, and of the technical bodies included in (i) above.

(iii) Collection of price quotations particularly for 1939 and 1944 for various index items from different sources, e.g., published reports as well as private agencies in West Bengal.

(iv) Scrutiny of the memoranda and the basic data received from the various sources referred to.

(v) Recording of oral evidence by the representatives of employers' and employees' organisations on the basis of the memoranda submitted by them.

(vi) Analysis, scrutiny and field visits, with a view to identifying the deficiencies of the indices.

(vii) Technical discussions with the Labour Bureau, Simla, the Central Statistical Organisation, New Delhi and the Bureau of Applied Economics & Statistics, Government of West Bengal.

(viii) Preparation and finalisation of the report.

1.2.5. The questionnaire for obtaining the relevant

information included topics such as the family budget survey, derivation of the weighting diagram, the selection of items of pricing together with their specifications, the price collection scheme, the treatment of house rent, the method of computation of the price index and the derivation of the linking factor.

1.2.6. The Committee visited the Labour Bureau, Simla from 6.11.73 to 8.11.73. The Committee took the opportunity to hold discussion with the officials of the Labour Bureau on the various aspects of the compilation of the CPI numbers. Subsequently, the Committee visited Central Statistical Organisation, New Delhi, on 21.3.74 for discussing certain technical matters.

1.3 Collection of Information

1.3.1. The questionnaire was sent on 24th July, 1973, to all important central organisations of employers and employees and the technical bodies such as the Indian Statistical Institute, Bureau of Applied Economics & Statistics, Government of West Bengal, the Central Statistical Organisation, New Delhi, and the Labour Bureau, Simla.

1.3.2. The last date for receiving replies to the questionnaire was originally fixed as 16th August, 1973. The time limit, however, had to be extended to 16th October, 1973 at the request of certain representatives of employers and employees. In fact, replies to the questionnaire were received from few organisations within the stipulated date. Since it was deemed necessary to have replies from a representative cross-section of the employers' and employees' organisations, the time limit for receiving replies had to be further extended to 30th November, 1973.

1.3.3. By the end of November replies were received from many employers' and employees' organisations as well as from the Labour Bureau, Simla, and the Bureau of Applied Economics & Statistics, Government of West Bengal. These replies were considered sufficiently representative for providing the basis for further work.

1.3.4. The Committee also collected relevant data and information from various State Governments and private organisations.

1.4 Recording of Oral Evidence

1.4.1. The Committee decided that only those organisations that had submitted written memoranda should be invited for oral evidence.

1.4.2. The employees' organisations gave their oral evidence before the Committee on 26th, 27th, 28th December, 1973 and 9th January, 1974. Employers' organisations appeared on 27th December, 1973 for the said purpose.

1.5 Extension of time limit for submission of report

1.5.1. As explained in paragraph 1.3.2., the last date for receiving replies had to be extended first to 16th October, 1973. The Committee received communications from a group of Central Trade

Unions including the Indian National Trade Union Congress, the all India Trade Union Congress and the Centre of Indian Trade Unions that they were expecting changes in the terms of reference of the Committee and that, therefore, they were withholding replies to the questionnaire circulated by the Committee. In the circumstances, the Committee had to extend again the time limit for receiving replies to the questionnaire and had to wait till the end of November 1973. Also, after the amendment made in the terms of reference, the scope of its work became quite wide, and the Committee needed more time for going into the details of all the three series of CPI numbers for Calcutta working class. Accordingly, the Government extended the time limit till 31st May, 1974 in order to enable the Committee to complete its work.

1.6 Acknowledgements

1.6.1 The Committee would like to place on record its appreciation of the cooperation received from the Director, Labour Bureau, Simla, and his colleagues, the Director, Central Statistical Organisation, New Delhi, and his colleagues and the Additional Director, West Bengal Bureau of Applied Economics & Statistics, and his colleagues. Discussions held with these experts were extremely helpful in finalising the present Report. The Labour Bureau and the West Bengal Bureau helped by making valuable information available to the Committee.

1.6.2. The Committee wishes to acknowledge its debt of gratitude to Sri H. K. Chaturvedi of the Indian Statistical Institute who made available some unpublished results of the Jagaddal enquiries, and to Sri A. K. Chatterjee of the same Institute, who made available some unpublished data of an enquiry on industrial labour.

1.6.3. The Committee is also thankful to the various representatives of employers and employees for successfully drawing its attention to the different issues involved and to the agencies of various State Governments for supplying valuable information.

1.7 Scheme of the present report

1.7.1. Apart from the present introductory chapter, the text of the report is divided into four chapters. Chapter 2 deals with the problems associated with the August 1939 series. These problems have been analysed exhaustively to the best of our abilities, and solutions have been recommended to the best of our judgement. In Chapters 3 and 4 are discussed the few points of dissatisfaction that remain with the 1944 series, even after its thorough examination by the Ramamurthi Committee. Chapter 4 touches only on certain broad issues connected with the 1960 series, since a detailed examination was considered to be outside the present Committee's terms of reference. Chapter 5 gives a summary of the report.

1.7.2. The report carries seven appendices. The Committee considers these materials to be an integral part of the report, but decided to relegate them to

their present position in order to lessen the burden of the general reader. Persons with sufficient time and interest to go through the details of different points of view may find the last three appendices particularly useful. (For want of space, the "Questionnaire" and the "List of organisations which submitted memorandum" have been omitted here.—Editor)

Chapter 2

THE AUGUST 1939 SERIES

2.1 Description of the series

2.1.1. This series was originally started by the Controller of Civil Supplies of the then Government of Bengal, but was maintained later by the Office of the Labour Commissioner of the Government of Bengal (subsequently West Bengal). The weighting diagram was based on "a limited budget survey conducted in 1939-40 by Burmah Shell Company, among its workers in and around Calcutta, with some modifications". Nothing seems to be known about this budget survey or its results or about the method of deriving the weighting diagram from the results or about the method of deriving the weighting diagram from the results. The index was computed as the weighted average of price-relatives of 19 items divided into five groups: food, fuel and lighting, clothing, house-rent and miscellaneous. The weighting diagram and the base prices are shown in Appendix No III.

2.1.2. According to the Labour Bureau Monograph², prices were collected every week on a fixed day for definite grades and varieties of the articles from two selected shops in each of the two important industrial zones of Calcutta, viz., Cossipore and Kidderpore, and the Bureau's Compendium of Instructions (see Appendix VII of the said Monograph) was followed in the price collection work.

2.1.3. There was no arrangement, however, for collection of data on house-rent and the index for house-rent was kept unchanged at 100 throughout the life of the index, that is, up to June 1957. The miscellaneous group index was taken as 100 up to December 1942 and as 150 since January 1943. This latter reportedly, was the figure worked out for March 1943 by the Civil Supplies Department. When the work of compilation of the index was taken over by the Office of the Labour Commissioner towards the end of 1943, the details of the items included in the miscellaneous group and their weights were not available from records and this group index was, therefore, kept unchanged ever since. It should also be noted that the clothing group was represented by just one item, viz., "Dhuti and Saree".

2.1.4. The Labour Bureau Monograph states that in maintaining this series serious difficulties were faced in obtaining the price quotations for clothing items in short supply. There were frequent changes in the varieties of these and the prices of the same grade of cloth were not always available. "Substitutions" had to be made in such cases. It is

Table 2a
BROAD WEIGHTING DIAGRAM OBTAINED FROM WORKING CLASS
FAMILY BUDGET ENQUIRIES*

Group	Calcutta		Jagaddal		Calcutta Menial Class	
	1930-40 (Burmah Shell)	1944-45 (Labour Bureau)	1958-59 (Labour Bureau, NSS & ISI)	1940-41 (ISI)	1944-45 (ISI)	1945 (Prov. Stat. Bureau)
(0)	(1)	(2)	(3)	(4)	(5)	(6)
1. Food	52.5	65.5	62.5	60.6	62.2	71.3
2. Clothing	7.0	7.7	6.2	7.3	7.8	2.9
3. Fuel and Lighting	7.5	7.3	4.7	5.5	8.8	9.3
4. House-rent	14.0	6.7	8.4	4.4	2.7	6.7
5. Miscellaneous**	19.0	12.6	18.2	22.1	18.4	9.9

*Cols (1) to (3) relate to the three official series of CPI numbers for working class in Calcutta. Cols (4) and (5) are based on the enquiries at Jagaddal carried out by the Indian Statistical Institute—see Appendix IV Col (6) gives the weights obtained from the Calcutta Dist. Survey, 1945, in respect of menial class employees of the government; these weights were used to construct the menial class cost of living index for Calcutta on base August, 1939.

**Including pan-supari, tobacco and intoxicants.

stated in this connection that when price quotations for cloth were not available owing to its non-availability in the open market, the controlled price of the cheapest variety was taken into account for the computation of the index. Another important point is that originally 8 varieties of rice used to be taken into account but following rationing and price control of rise in 1944 only 2 or 3 varieties were considered for the purpose of the index.

2.2 Deficiencies of the above series.

2.2.1. The above account brings out a number of deficiencies of the series of CPI numbers on base August 1939, apart from the small number of items used for the computation. The following may be mentioned as the most important:

(i) The weighting diagram was not based on a comprehensive family budget enquiry covering a representative sample of the working class population in Calcutta proper. Moreover, nothing is known about the methodology adopted for holding this enquiry or for obtaining the weighting diagram from its results. The words "with some modifications" appearing in the available account, as mentioned in the beginning, give rise to serious misgivings. From the scientific point of view, lack of documentation appears to be a most serious weakness, especially when one remembers that in India, at least up to the early 40s, the expertise needed for such technical work was extremely rare.

(ii) The group indices for miscellaneous (weight-19%) and house-rent (weight-14%) were kept frozen in an arbitrary manner. The miscellaneous group index was found to be 150 for March 1943, but again the records are completely absent. Also, the indices for the clothing group were constructed in an unsatisfactory manner.

(iii) The choice of a single month, viz., August

1939, instead of a whole year, as the base period of the series was far from appropriate.

2.2.2. The Committee was unable to find any record of the original data or calculations underlying the indices of the CPI series on base August 1939—not even the black proforma used for price collection or for the computation of the index. The only material available seemed to be (i) the five group indices, month by month, from October 1939 to June 1957 and (ii) the weighting diagram and the base price (presented in Appendix III). Under the circumstances, it is not possible to pass any judgement on how well the Labour Bureau's Instructions or other accepted principles were being followed in the compilation of these indices.³

2.2.3. The index was computed as the weighted average of the price relatives of the items in the usual manner. However, presumably, for items with several "specifications" (e.g. potatoes, brinjals and onions for the item "vegetables"), the simple average of the price relatives of the constituents gave the price relative of the item. On the other hand, where more than one variety was selected for an item, the average price of the item was first obtained before computing the price relative.

2.3 On Remedial Measures: The Weighting Diagram

2.3.1. In spite of earnest efforts, the Committee failed to trace any record of the family budget enquiry carried out by the Burmah Shell company, the results of which were utilised for obtaining the weighting diagram. It was not clear whether the enquiry had been confined to the working-class employees of the company or had included its middle-class employees as well. There is also no definite information as to the geographical distribution of the employees covered in the enquiry: presumably, the employees of the company at Budge Budge (outside Calcutta) had also been included.

Table 2b
BROAD WEIGHTING DIAGRAM BASED ON WORKING CLASS
FAMILY BUDGET ENQUIRIES AT BOMBAY AND AHMEDABAD

Centre	Year of enquiry	Weight					
		Food	Fuel and Light	Clothing, footwear, etc	Bedding and Household requisities	House rent	Miscellaneous
0	1	2	3	4	5	6	7
Ahmedabad	1926	57.9	7.0	9.4	1.2	11.7	12.7
	1933-35	49.3	6.6	9.1	0.4	11.0	23.6
Bombay	1921-22	56.3	7.3	8.4	2.3	7.7	18.1
	1932-33	46.6	7.1	7.8	0.1	12.8	25.6

SOURCE: Table 8 in the Appendix to the *Report on an Enquiry into Working Class Family Budgets in Ahmedabad*; Govt. Central Press, Bombay, 1937.

The above table shows how when most prices fell appreciably (in Ahmedabad food prices fell by 40 per cent and clothing prices by 30 per cent, roughly speaking, between 1926 and 1932-35), the weightage of the food group declined considerably, while that of "miscellaneous" group increased.

2.3.2. The weighting diagram of the series on base August 1939 appears to be somewhat suspect, especially when compared with that based on an enquiry at the neighbouring industrial area of Jagaddal conducted by the Indian Statistical Institute during 1940-41 under the personal guidance of late Professor Mahalanobis. These diagrams, besides a few others, are presented in Table 2a.

2.3.3. Compared with the weighting diagrams for Jagaddal (1940-41) and for the menial class (1945), the weighting diagram derived from the Burmah Shell enquiry shows a much smaller weightage for the "food" group and a much larger weightage for "house rent". The same contrasts are observed between the Burmah Shell weighting diagram and that used for the "1944 series" of CPI numbers (see Col 2 above). Indeed, the weightage of "house rent" in Col (1) seems to be too high, when it is considered that a good proportion of workers lived in company quarters at nominal rent. This and the low weightage of the food group may be due to the inclusion of some middle-class families in the Burmah Shell enquiry. It may be noted here that the weightage of "food" group in the "Capital" series of CPI numbers for middle class in Calcutta (base: August 1939) is 53.6. One should expect the weightage of the "food" group to be smaller for the middle-class index than

for the working-class index. It is also possible that the then employees of the Burmah Shell company in the Budge Budge area obtained cheaper food-grains directly from the adjoining rice-growing areas, partly out of home-grown stock; in this respect they probably differed from the vast majority of the other industrial workers in Calcutta.

2.3.4. Examination of the weights of individual items throws further doubts on the weighting diagram of the August 1939 series. We, therefore, refrain from discussing these in detail, in view of the points mentioned in the following paragraphs.

2.3.5. Apart from the aforementioned enquiry at Jagaddal (1940-41), there was no other enquiry into working-class family budgets in and around Calcutta, whose results could be compared with those of the Burmah Shell enquiry. We, therefore, looked into the pre-Second-World-War budget patterns observed in enquiries carried out at other industrial centres in India, e.g., Bombay, Ahmedabad and Madras. A careful perusal of the literature showed that patterns similar to that thrown up by the Burmah Shell enquiry had been obtained in other enquiries.⁴ Even so, the weightage of house-rent in the Burmah Shell enquiry seemed to be rather high. The following results may be quoted in this connection (Table 2b).

Table 2c
BROAD WEIGHTING DIAGRAM BASED ON WORKING CLASS
FAMILY BUDGET ENQUIRIES IN MADRAS:1935-36

Group of workers	Food (including liquor & tobacco)	Clothing	Fuel and light	Housing	Miscellaneous
0	1	2	3	4	5
1. Workers in organised industries	52.6	4.5	6.7		
2. Workers in unorganised industries:				11.1	25.1
(a) bidi	66.5	3.4	6.8		
(b) tailoring	58.1	5.9	7.4	15.9	7.3
(c) harbour coolies & handcartmen	74	3.1	5.8	18.4	10.2
				9.2	7.4

2.3.6. For the sake of interest, we may quote some results for working class in Madras based on an enquiry during 1935-36.⁵ It should be noted that the workers in the unorganised industries were very much poorer than these in the organised industries (Table 2c).

2.3.7. In the light of such results, one cannot rule out the weighting diagram of the "August 1939 series" for Calcutta as altogether implausible. The weight of 53.4 for the food group in the "Capital" series for middle class (base: August 1939) was arrived at after excluding "housing" from the series. If housing were included, the weight for the food group would have been lower than that for the food group in the August 1939 series for the working class. The weight of the food group in the menial-class Index does not appear to be comparable because of the obvious differences between the menial class and the working class. Actually, the sharp changes in the consumption pattern of Calcutta working class between 1939-40 and 1944 appear to be fairly realistic in view of the marked rise in the price level. It should be noted, nevertheless, that such marked shifts in the consumption pattern were not observed for Jagaddal workers between 1940-41 and 1944-45 and this continues to throw some doubt on the weighting diagram of the "August 1939 series". However, while the true weighting diagram could be different from that based on the Burmah Shell enquiry, there is no satisfactory way of replacing the latter by some estimate of the former. The Jagaddal (1940-41) diagram could perhaps be adopted, but as Table 2c for different categories of workers in Madras shows, the weighting diagram can vary a good deal between different groups in industrial workers in the same centre in the same period. Hence, the true weighting diagram for Calcutta during 1939-40 might have differed appreciably from the Jagaddal weighting diagram for 1940-41. There could, of course, be no question of adopting the weighting diagram of the 1944 series for Calcutta as this was expected to be considerably different from the true weighting diagram for 1939-40.

2.3.8. Some technical points may be noted before this section is concluded. The early family budget enquiries in India were often defective by present-day standards. The enquiries at Bombay and Ahmedabad appear to have excluded occasional expenditure on festivals and marriages, but included (under "miscellaneous") gifts, provident fund and above-all, remittance to dependants. This latter could come to about 4 per cent of total expenditure, roughly speaking, according to information available from the reports of the two later enquiries at Bombay and Ahmedabad, so that the corresponding weightage of "miscellaneous" should have been around 20 per cent. In the Madras enquiry, pan-supari, liquor and tobacco were included under "food" and not under "miscellaneous" as was done in the other enquiries at Bombay and Ahmedabad. So far as the workers in organised industries are concerned, these could amount to 10 per cent of the food expenditure at Madras. On the other hand, "miscellaneous" included religious observances, feasts and festivals, PF payments, remittance to dependants and, most imp-

ortantly, repayment of debts. This last item constituted about half of the miscellaneous expenditure of organised workers, so that the corresponding weightage of "miscellaneous" might be, after adjustment for this item, somewhat above 15 per cent. As far as workers in the unorganised industries are concerned, only one point may be noted: about one third of food expenditure by "harbour coolies, etc." was incurred on drinks. We mention these points to stress that only rough comparisons are possible between the results based on such enquiries and those based on the enquiries in and around Calcutta.

2.4 On Remedial Measures: The Indices for Clothing, Food, Fuel, and Light

2.4.1. The clothing group was represented by just one item, mentioned as "dhuti and saree", and the specification was "coarse cloth". The base price is recorded as Rs 1.63 per pair. The sheets mentioned in footnote to paragraph 2.2.2. give the average prices during the twelve months of the year 1944. No other information is available excepting the official admission about the difficulties faced in maintaining a series of comparable price quotations in respect of this item. (see Para 2.1.4)

2.4.2. The Official index numbers of wholesale prices of cotton manufactures in Calcutta (base: July 1914) ceased to be available after March 1942. The official index numbers of wholesale prices of cotton manufactures in the Bombay market (base: 19 August 1939), however, continued to be available for some items and grounds, but again the indices for all indigenous cloth and imported cloth were not available after August 1942.

2.4.3. Clearly, the rise in the clothing group index of the CPI between August 1939 and August 1942 was in satisfactory agreement with the rise in the official wholesale price indices of cotton manufactures. There is, however, a large divergence when we consider the average indices for 1944: whereas the average clothing group index of the CPI on base August 1939 was 467, the index of wholesale prices in the *Bombay market* appeared to have risen to 305 or 310.

2.4.4. Several points may be noted in this connection. First, the divergence was much smaller up to the calendar year 1943, showing that the Calcutta CPI for the clothing group was not doubtful, despite the defect in its composition. It was only between 1943 and 1944 that the *wholesale* prices of cotton manufactures in the Bombay market fell very sharply while according to the Calcutta CPI series the *retail* prices of cloth in Calcutta fell only slightly. The question is whether or not this was a correct reflection of what actually had happened. The Committee is inclined to accept the clothing group price index as reasonable, keeping in mind that the war and the famine of 1943 had created an abnormal condition in Calcutta as compared with Bombay, and this had probably prevented the sharp fall in cloth prices in Calcutta. The results of the two Jagaddal labour enquiries (see Appendix IV) lend some support to this view.

2.4.5. The clothing group price index for the

The following shows some relevant averages of the monthly indices:

	Jan-March 1942	Jan-Aug 1942	Average index during Calendar year 1943	Calendar year 1944
1. CPI Clothing group index	192.0	195.8	479.0	466.8
2. Wholesale price indices of cotton manufactures in Calcutta (July 1914=100)	180.5*	n.a.	n.a.	n.a.
3. Wholesale price indices of cotton manufactures in Bombay (19 Aug. 1939=100)				
(a) grey dhuti, Ahmedabad advance 1940	176.7	200.8	409.5	305.7
(b) -do-; 'lady at toilet'	135.0	151.0	429.4@	307.0
(c) standard shirting (indigenous)	217.3	243.1	428.6@	316.1
(d) all indigenous cloth	185.7	203.0	n.a.	n.a.
(e) all imported cloth	196.3	214.2	n.a.	n.a.
(f) all indigenous plus imported cloth	191.3	209.8	442.1	311.6

*The index for August 1939 was 97.

@November figure n.a.

second enquiry period (December 1944—April 1945) with the first enquiry period (December 1940—April 1941) as base came out as 305 for the Jagaddal industrial area. The corresponding index based on the clothing group indices for Calcutta working class was 44.6.2. (average index during December 1944 to April 1945)+129.8 (average index during December 1940 to April 1941)=344, approximately. Alternatively, if the rise in clothing prices between the two aforementioned periods were the same in Calcutta as in Jagaddal then the clothing index for Calcutta during the later period would have been 305 x 129.1 (average clothing index for Calcutta during December 1940—April 1941)=396 approximately, as against 446.2 found from the indices of the August 1939 series. Clearly, the divergence is much smaller than between the clothing component of the CPI for Calcutta and the wholesale price of cotton manufactures in the Bombay market for the year 1944.

2.4.6. Considering the above, the Committee decided to leave the clothing group index of the "August 1939 series" unaffected as far as its average over the twelve months of 1944 is concerned.

2.4.7. The Committee also compared the prices of food and fuel and light items as recorded in the August 1939 series under discussion, with the corresponding prices from other sources, for the periods August 1939 and 1944. These sources were the Calcutta Municipal Gazette and the base (August 1939) prices of the menial-class cost of living index for Calcutta. The Municipal Gazette prices did differ somewhat from the base prices of the August 1939 series but the discrepancies were usually small and not in any particular direction. In any case, the Municipal Gazette prices cannot be considered as more reliable in view of the fact that these prices were most surely not collected on the basis of detailed instructions and proper checking. The base prices of the menial-class cost of living index were also of undependable quality, because of the reasons explained in the paragraph 2.6.4. The question of black-market prices did not appear to be important in view of the adequacy of amounts of foodgrains

supplied by the rationing system in 1944. In the end, the Committee decided to accept the prices of the August 1939 series as recorded for August 1939 and 1944, since there was no other more reliable source for revising any of them.

2.5 On Remedial Measures: The House Rent Index

2.5.1. There are many theoretical and practical difficulties in the construction of a "housing" group index. The index must reflect the changes in price over time of the same type of housing, i.e. age, material used, etc., must remain the same over time. Most of the early CPI series in India did not attempt to overcome these difficulties.

2.5.2. The index for "house rent" had been frozen at 100 throughout the lifetime of the "August 1939 series". This, of course, was unreasonable. When the prices of the other groups rose by about 200 per cent or more, between August 1939 and 1944, house rent in all probability rose, at least to some extent, for working-class population in Calcutta.

2.5.3 The population of Calcutta was 11.97 lakhs in 1931, and 21.00 lakhs in 1941. It was certainly higher in 1944 because of immigration due to famine, war production, etc. The following statement shows the volume of employment in perennial factories in Calcutta from 1939 to 1944.⁶

Year	1939	1940	1941	1942	1943	1944
No. of factories	165	165	194	181	184	196
Average daily employment ('000)	15.0	15.7	17.5	16.6	18.4	19.5

It appears that in spite of the psychological effect of war and bombing, the pressure of population increased between 1939 and 1944.

2.5.4. Valuable information was made available by Sri H.K. Chaturvedi from the unpublished results of the Indian Statistical Institute enquiries at Jagaddal. The overcrowding in this industrial area had become more acute in the absence of new constructions. The following are the relevant figures:

	Average per person		Percentage rise
	1940-41	1944-45	(+) or fall (-)
1. Floor space (sq. ft.)	28.6	24.0	- 16.1
2. -Do- including uncovered verandah space sq. ft.)	45.3	37.8	- 16.6
3. Housing rent including tax (Rs)	0.38	0.42	+ 10.5

Owing to the steadiness of rents of employers' quarters, which acted as a brake on the rising rents of privately owned houses, per capita house rent increased by only about 10 per cent, but since per capita floor space fell by 16 per cent, the price of housing can be taken to have risen by about 32 per cent between the two periods. It actually appears that in recognition of the increased congestion in the Jagaddal area, some employers had permitted up to seven persons to live in one room which previously could house only four persons.

2.5.5. Since, however, our concern was with the probable rise in the house rent of Calcutta workers, an enquiry was conducted by the present Committee with the help of experienced investigators to get a rough idea of the rise in house rent in three *bustee* areas, viz., Rajabazar, Cossipore and Kidderpore, between August 1939 and 1944. The investigators tried to contact working-class households who could recollect with confidence rates of rent paid during these periods. Of course, the rent had to refer to the same accommodation during both the periods and substantial alterations in the structure must not have been made in the intervening period. No attempt was made to draw samples following a statistical design: only by exhausting typical areas could one get a fair number of dependable informants. Landlords could not be contacted, and no tenant was actually able to produce any rent receipts. Nevertheless, the informants with good memory made supplementary remarks about factors affecting the changes in rent during the war years which gave the investigators some amount of confidence.

2.5.6. The following summarises the findings of the above-mentioned enquiries.

Locality Bustee area	No of households	Average monthly rent/ household (Rs)		Percentage rise
		1939	1944	
Cossipore	12	2.94	3.65	24.1
Kidderpore	20	5.41	6.30	16.4
Rajabazar	15	4.30	4.73	10.1
Combined	47	4.43	5.12	15.8

If only Cossipore and Kidderpore be considered—there were the two markets considered for the August 1939 series—the average rise in rent would

appear to be 20 per cent, rather than 16 per cent, as shown above.

It may be noted that in only one case out of 47, the rent during the two different households which had occupied the same accommodation in the two periods. Because of this, this approach must have over-represented households staying in the same place during the entire period and probably underestimated the rise in rent.

The above should be taken as only suggestive of what actually happened. There are serious weaknesses in the above procedure which should be obvious to any reader.

2.5.7. Nevertheless, other corroborative evidence strongly suggests that house rents in Calcutta did rise to a significant extent during 1939-1944. A survey conducted by the then Provincial Statistical Bureau, Government of Bengal, revealed that in four towns of Bengal (including towns subjected to dislocations caused by the Second World War), house rent rose considerably over the period 1940-46. At the relevant household expenditure level, the rise in rent was nowhere less than 14 per cent. The specific data cannot be reproduced here because the report is still classed as confidential.

2.5.8. A more definitive evidence is provided by The Calcutta House Rent Control Order, 1943, which came into effect on 26th June, 1943. Paragraph 3 of this Order stated that "No landlord with effect from the first day of December, 1941... shall be deemed to have been entitled to charge a rate of rent which exceeds by more than ten per cent, the rent that was being paid on that date...." Thus, over the period 1.12.41 to 25.6.43, ten per cent increase on rent was even legally permitted, in Calcutta as defined under the Calcutta Municipal Act, 1923. The Bengal House Rent Control Order, 1942, which was applicable to the whole of Bengal (except Calcutta and Chittagong Hill Tracts) and which came into effect earlier on 1st April, 1942, permitted an increase of twenty per cent in rent over the period 1.12.41 to 31.3.42.

2.5.9. We are, therefore, of the opinion that the housing group CPI number for 1944 (average of twelve months) on base August, 1939, should be corrected from 100 to 120.

2.6 On Remedial Measures: the Miscellaneous Group Index

2.6.1. It has been noted above that no information was available about the composition of the "miscellaneous" group of the August 1939 series, nor about the weightages and base/current prices of the composing items when the index of 150 was worked out for the month of March 1943. However, the coverage of the miscellaneous group can be reasonably inferred from the items included in the remaining groups.

2.6.2. Considerable efforts were made to collect information on changes in retail prices prevailing in Calcutta between August 1939 and 1944, in respect of the 14 items representing the miscellaneous group in the "1944 series" for Calcutta. Unfortunately, these efforts failed almost completely. Even

leading organisations/dealers had not preserved old records and could not quote the prices with any measure of confidence.

2.6.3. Two other well-known series of cost of living index numbers for Calcutta had adopted August 1939 as base. Of these, the "Capital" series of index numbers for middle class is being compiled even today. In spite of repeated requests, the Committee failed to get the weighting diagram and the base prices used in the construction of this well-known series.⁷ However, as far as the miscellaneous group is concerned, this source of information might not have been really helpful. During the twelve months of the year 1944, the miscellaneous group index in the "Capital" series was on the average equal to 136, which is an incredibly low figure.

2.6.4. The other series was that of menial-class cost of living index number for Calcutta (base: August 1939) which had been started in April 1947. The West Bengal Bureau of Applied Economics and Statistics furnished this Committee with some interesting material relating to this series. The Committee examined this material with great care, but decided to make no use of them in its work. The material did not permit estimation of the movement of the miscellaneous group index between August 1939 and 1944, for the following reasons:

(i) The methodology of collecting the base prices was extremely weak. The Committee understood that the decision to start the menial class indices was made in 1946 and the base prices during August 1939 had to be obtained by various methods such as (a) consulting accounts maintained by certain households, (b) contacting the Bengal Chamber of Commerce for the prices of articles like clothing, (c) contacting well-known dealers/organisations in Calcutta, (d) consulting the *Calcutta Municipal Gazette*, etc. It is not clear which price was collected in which of these ways. The specifications are not always sufficiently precise. That the same set of base prices was used for the old Calcutta series of middle class cost of living index numbers (prepared by the State Statistical Bureau; Base: August 1939) gives rise to serious misgivings: some of the prices, e.g., that of *bidi*, might have related to qualities above the cheapest.

(ii) As the menial-class index was started in 1947, prices during 1944 were not available from this source.

(iii) The base prices of the 1944 series could be compared but only for about half the number of miscellaneous items for which the corresponding August 1939 prices were available. Again, for some items, the specifications cannot be assumed to be the same in the menial-class series and the 1944 series. In fact, some specifications are not perfectly clear in either series. Corrections for quality differences seemed to be necessary and these were rather difficult to apply. For "*bidi*", an item with a large weightage, the base price of the menial-class index appeared to be doubtful.

(iv) There remained, of course, the problem of finding appropriate weights of the different items if one wanted to compute a miscellaneous group index. The weights of the 1944 series were clearly inappli-

cable. The weighting diagram of the menial class index was also based on a Diet Survey in Calcutta carried out in 1945.

2.6.5. The Committee, therefore, examined other available evidence bearing on the true value of the said miscellaneous group index. Fortunately, three strands of evidence seemed to point in the same direction.

First, we examined the relative movements of the different group indices of the 1944 series of CPI numbers for working class in Calcutta. Some relevant figures are given below. It may be noted that these indices were first computed for January 1949.

It is clear that so far as the working class population is concerned, miscellaneous prices rose faster in Calcutta than the prices of other item-groups during the years following 1944. Later, the Korean war gave a greater spurt to clothing prices but only for a short period.

2.6.6. A good deal of information is available from the pioneering enquiries at Jagaddal, an industrial centre within the Greater Calcutta area, carried out during 1940-41 and 1944-45 by the Indian Statistical Institute. Appendix IV gives the relevant results. It may be noted that the construction of cost of living indices was a major objective of these enquiries. In one of his celebrated papers, Professor Mahalanobis dealt at length with various aspects of the findings, and utilised the material for computing the cost of living indices for the later period (1944-45) with the earlier (1940-41) as base.⁸ Table 19 of this paper shows the following indices:

Group:	Food	Clothing	Fuel & Light	Miscellaneous	Total
Index:	277	305	280	276	273

Here it appears that the miscellaneous prices rose just as much as food prices or the general price level. Extensive calculations reported by Professor Mahalanobis point to the high degree of reliability of these cost of living indices for Jagaddal. It may be noted that the period covered is that characterised by the sharpest rise in prices; the inflationary pressure was hardly felt before 1940-41.

2.6.7. The Committee also examined the movements in the miscellaneous group index relative to the general index during August 1939 to 1944 in as many of the official series of working-class CPI

Table 2d
CPI NUMBERS FOR WORKING CLASS IN CALCUTTA
(BASE: 1944=100): AVERAGE OF THE MONTHLY
INDICES FOR SELECTED YEARS

Year	GROUP*				All
	Food	Fuel & Light	Clothing	Miscellaneous	
1944	100	100	100	100	100
1949	137	117	136	149	134
1950	137	106	142	158	136
1951	138	106	189	159	140
1952	132	103	148	148	131
1953	135	101	128	151	132
1954	131	98	127	150	128
1955	123	96	130	148	123
1956	124	100	137	151	132
1957	145	106	142	158	140

*House rent group index was frozen at 100.

Table 2e

RELATIVE MOVEMENTS OF THE MISCELLANEOUS GROUP INDEX AND
THE GENERAL INDEX FOR WORKING CLASS IN DIFFERENT
CENTRES OF INDIA DURING 1939-44

Centre	Base period	Misc. Group Index			General Index		
		Aug 1939	1944	% Change	Aug 1939	1944	% Change
Bombay	July '33-June' 34	98	231	136	105	237	126
Nagpur	August 1939	100	417	317	100	267	167
Sholapur	Feb. '27-Jan.' 28	72	212	194	73	201	175
Jalgaon	August 1939	100	289	189	100	295	195
Ahmedabad	Aug. '26-July' 27	100	220	120	73	212	190
Madras	July '35-June' 36	103	121	17	98	202	107

numbers as possible. The following shows all the information that could be collected (Table 2e).

2.6.8. All the three strands of evidence presented above point to the conclusion that, in general, the miscellaneous group index rises at least as fast as the general index. The Committee is, therefore, of the opinion that for working class in Calcutta the miscellaneous group CPI number for 1944 on base August 1939 may be taken as the same as the corresponding general index. The revised General Index (M) would then be found as follows:

Group	Weights	Group Index (Average of 1944)
1. Food	52.5	338.5
2. Fuel & Light	7.5	346.9
3. Clothing	7.0	466.8
4. House Rent	14.0	120.0 (Revised)
5. Miscellaneous	19.0	M
Total 100.0		

The revised General Index M
 338.5×52.5 plus 346.9×7.5 plus 466.8×7.0 plus
 120.0×14.0 plus 19.0

$$= \frac{338.5 \times 52.5 \text{ plus } 346.9 \times 7.5 \text{ plus } 466.8 \times 7.0 \text{ plus } 120.0 \times 14.0 \text{ plus } 19.0}{100}$$

Or $M = \frac{19}{100} \times M = 312.6$

That is, the revised Miscellaneous Group Index and the revised General Index for 1944 on base August 1939 should be 312.6 (approximately 313).

2.7 On Remedial Measures: The Month of August as Base

2.7.1. Some representatives of employees pointed out that the choice of a single month as the base period for the series on base August 1939 was inappropriate from the scientific point of view. This criticism is no doubt justified. They also urged that since consumer prices are generally high during the month of August relative to the annual average level of prices, the choice of such a base had led to under-estimation of the true rise in the consumer price level. The Committee felt that it would have been more satisfactory if the calendar year 1939 as a whole had been selected as the base. However, according to its terms of reference, the Committee had to examine the linking factors for converting indices of the current CPI series on base 1960 to

indices of the old series on base August 1939 (and not the calendar year 1939). It seemed to be beyond the jurisdiction of the Committee to recommend a change in the base period of the CPI series on base August 1939, however unscientific the choice of August 1939 as base might be.

2.7.2. A related point may be mentioned at this stage. Some employees' representatives argued that the linking factor for converting the indices of the 1944 series to those of the August 1939 series should be derived by comparing the price level in August 1944 (instead of the annual average price level during 1944) with that prevailing in August 1939. If no revision be made in any of the existing indices, this would give a linking factor equal to 2.96. The Committee gave the fullest consideration to this suggestion but in the end was unable to recommend its acceptance.

2.7.3. It should be remembered that the main task of the Committee was to examine the existing linking factor for converting the indices of the current CPI series on base 1960 to indices on base August 1939. This conversion factor can be conceived of as the product of two linking factors as indicated below:

Linking factor = (CPI for 1960 on base 1944) \times (CPI for 1944 on base August 1939). If here the second linking factor is changed to the CPI for August 1944 on base August 1939, then the first factor must also be changed to the CPI for 1960 on base August 1944 (though it would be well-nigh impossible to obtain this index number), and the rise in the second linking factor would be effected by a fall in the first, leaving the product of the two unchanged.

2.8 The Existing Linking Factor and the Recommended Change

2.8.1. We have now to assess the impact of the revisions recommended above on the existing linking factor for deriving the August 1939 series from the later 1944 series. The first thing to do, of course, was to examine the existing linking factor.

2.8.2. The existing linking factor, 2.63, for deriving the series on August 1939 as base from the series on the year 1944 as base, was arrived at by the State Government by some method which is not clear from the available records. In the correspondence

between the State Government, on the one hand, and the Central Statistical Organisation, New Delhi, and the Labour Bureau, Simla, on the other, it was stated that this factor was "obtained by equating to 100 the index for August 1939 on base 1944=100 with the weighting diagram of the index series on base 1944=100". This means that the 1944 series was extended backwards to obtain the index in that series for the month of August 1939 and the reciprocal of the index was taken as the linking factor or, in other words, the linking factor was the Paasche index for the year 1944 on August 1939 as base. This clearly is *not* the usual method of deriving the linking factor followed by the Labour Bureau and other agencies.⁹ It resembles the second method of deriving linking factors described in the Labour Bureau publication, *Working Class Consumer Price Index Numbers in India—a Monograph*, Vol 1, 1972, pp 35-37. The said monograph clearly mentions that this method involves serious data problem and is therefore "only of academic interest". Thus, in the present case, a strict application of this method would require prices during August 1939 in respect of the 58 items of the 1944 series. It is not known how this difficulty was overcome by the State Governments.

2.8.3. The working sheets mentioned in a footnote to paragraph 2.2.3 suggest that probably the calculation were based on price data for the 19 items of the August 1939 series and *revised weights, appropriate for 1944, somehow worked out for these items*. Such a procedure must be considered as extremely unusual; in fact, it is not mentioned at all in the Labour Bureau Monograph referred to above. Also, it does not tally with the broad description of the procedure given in the correspondence referred to earlier.

2.8.4. The Committee, however, found that the factor 2.63 is obtained through the undermentioned steps of computation:

(i) taking the reciprocals of the five Laspeyre-type group indices (on base August 1939) averaged over the twelve months of the year 1944;

(ii) calculating the weighted average of the five group indices for August 1939 on 1944 base obtained as reciprocals in (i) above, using the group weights of the 1944 series, to obtain the over-all index (+38) for August 1939 on 1944 as base; and

(iii) taking the reciprocal of over-all index reached in (ii) which come out as 2.63.

This means that the data problem mentioned at the end of paragraph 2.8.2 might have been overcome by accepting the Laspeyre-type *group indices* of the August 1939 series for the year 1944 and working out a Paasche-type linking factor on the basis of these. However, such a hybrid index also finds no mention in the literature.

2.8.5. It should be noted that it is customary to take as the linking factor the simple average of the indices of the old series over the base period of the new series. The Committee decided to adopt this approach.¹⁰ In the present case, the simple average of the (twelve month) indices of the series on base August 1939 during the year 1944 turns out to be 2.70 and not 2.63. The Committee is of the view that even disregarding the downward bias in the

August 1939 series because of freezing of the miscellaneous and the house-rent group indices, 2.79, instead of 2.63, should have been the linking factor. The Labour Bureau, Simla, expressed the same view in its memorandum submitted to the present Committee.

2.8.6. The committee wishes to recommend further change in the linking factor as would be required by the revision of the August 1939 series for the year 1944, due to corrections of the miscellaneous and the house rent group indices and the consequential correction of the general index as recommended above. We, therefore, recommend that, considering all aspects of the case, the linking factor for converting the 1944 series to the August 1939 series be corrected from 2.63 to 3.13, as warranted by the calculations given in the paragraph 2.6.8.

2.8.7. The Committee is aware that the linking factor 3.13 recommended by it may be somewhat higher or lower than the true linking factor which remains unknown. The Committee has been severely handicapped by the absence of dependable statistical data. The *true* group indices for "clothing", "housing" and "miscellaneous" may differ to some extent from those adopted above. Also, the weightage of the housing group (14.0%) is probably too high and that of the food group (52.5%) too low.

Some calculations were made by varying these weightages and group indices which go into the computation of the above linking factor assigning each of them a set of different plausible values. For example, if the weightage of housing be reduced by 1 (%) and that of food correspondingly increased by 1 (%), the linking factor of 3.13 would increase by about 0.03. It appeared on the whole that the true linking factor may lie anywhere in an interval having the figure 3.13 recommended by us near the centre.¹¹

Chapter 3

THE 1944 SERIES

3.1 The Construction of the 1944 series

3.1.1. A detailed account of the 1944 series, along with the weighting diagram, specification and units for pricing, is given in the Ramamurthi Committee Report. We, therefore, give a brief account, bringing out the salient points, and refrain from reproducing the weighting diagram, etc.

3.1.2. The State series of CPI numbers for Calcutta working class on base 1944 used to be compiled by the Labour Commissioner, Government of West Bengal. It was introduced as late as in July 1957, even though monthly group indices were available from January 1949. The series for Calcutta Working Class on base 1960 is being compiled and published every month since April 1963 by the Labour Bureau. Although the publication of the 1944 series was discontinued from July 1963, its compilation was continued for the sole purpose of compiling the all-India working-class CPI number on base 1949.

3.1.3 The weighting diagram of the 1944 series

was based on a working-class family budget enquiry conducted during August 1944—July 1945 in 11 of the municipal wards in the Calcutta Corporation area having the largest concentration of labour bustees. The enquiry carried out under the auspices of the Government of India Cost of Living Index Scheme was confined to non-casual labour families. The weighting diagram was based on the 2707 multi-member families in the sample; that is, single-member families forming about 45 per cent of sample families were ignored for this purpose. The reference period for the enquiry was one week preceding the date of interview, but for clothing and household requisities the "inventory method" was followed. House rent included imputed rental values for workers residing in their own houses:¹³ 58 items were included for the compilation of the series—24 food items, 5 representing fuel and lighting, 14 representing clothing and footwear, 1 for housing and 14 for the miscellaneous group. The weights of those items were obtained by suitable imputation procedures for taking account of the excluded items.

3.2 Correction of the 1944 Series by the Ramamurthi Committee

3.2.1 Many criticisms of the 1944 series of CPI numbers were answered by the Ramamurthi Committee. The Committee however, agreed that the group index for clothing, besides that for housing, needed corrections. As regards clothing, the price collection work seemed to have been unsatisfactory: substitution of varieties had been frequently and carelessly resorted to whenever the specified variety was not available in the market. It appeared that in many cases the price range had been the guiding consideration rather than the equivalence of quality.

3.2.2 As no record of substitution had been kept, the Committee could not locate the errors made and correct the deficiencies for individual items of the clothing group. They, however, felt that the clothing group indices of the 1944 series for the year 1960 could be an under-estimate. The clothing group indices of the said series were then compared with the series of official all-India wholesale price indices for cotton manufactures converted to base 1944—100¹³ it was observed that from 1953 to 1960 the CPI numbers for the clothing group were lower than the corresponding wholesale price indices: they also showed no rise in prices between 1950 and 1960, while the wholesale price indices rose steadily during the period. Between 1944 and 1960, the CPI for the clothing group rose by 42 per cent, as against 63 per cent for the all-India wholesale price index of cotton manufactures.

3.2.3 The Ramamurthi Committee concluded that the CPI numbers for the clothing group had understated the increase between 1944 and 1960. Being unable to correct the prices of individual items of the group, they applied a rough correction to the clothing group index for 1960, by allowing the same rate of increase in the index as observed in the all-India wholesale price index for cotton manufactures between 1944 and 1960. Accordingly, the 1960 CPI number for clothing group for Calcutta on base 1944

was raised by 21 points, from 142 to 163. In defence of this procedure, it might be stated that there is no reason to believe that *relative changes* in retail prices should be appreciably greater or appreciably smaller than the corresponding *changes* in wholesale prices.

3.2.4. As regards the house rent index, the Ramamurthi Committee noted that freezing this index at 100 was a major deficiency which required correction. Essentially, the Ramamurthi Committee compared the average expenditure per family on house rent in 1944 with that in 1960 and obtained a house rent index of 224 for the year 1960 on base 1944. There could be many theoretical arguments against the procedure adopted, but it does not seem to be possible to improve upon it.

3.2.5. Dependable information on rent-free and owned houses occupied by workless in the Calcutta Corporation area was not available for the base period. Both in the 1944-45 and in the 1958-59 family budget enquires, the expenditure on house rent included the imputed value of owned and rent-free houses.¹⁴ The 1944-45 enquiry showed that the average multi-member working-class family in Calcutta spent Rs 4.81 per month on house rent, taxes and repairs. *Comparable* information for 1960 was not available from the six-monthly house rent surveys conducted by the Labour Bureau. The 1958-59 working-class family living survey for Calcutta gave an estimate of Rs 10.66 per month which seemed to be comparable. This estimated expenditure on housing was then projected to get the corresponding figure for 1960 by applying the average rate of change of house rent expenditure as revealed by the six-monthly house rent surveys of the Labour Bureau during 1960-62. The resulting figure worked out to Rs 10.79 and yielded the house rent index of 224 mentioned above.

3.2.6. The arguments behind the last-mentioned step of projecting the estimate for 1958-59 to get the level of expenditure on housing for the year 1960 are not very clear to this Committee. The Ramamurthi Committee simply writes: "After careful examination of the movement of house rent index of the Labour Bureau series we have come to the conclusion that the rate of change of house rent as revealed by the six-monthly house rent surveys for the period 1960-62, would be applicable for the period 1958-59 to 1960. This is, of course, debatable. Also, the present Committee has some doubts about the correctness of the time-trend revealed by the house-rent survey.¹⁵ However, it does not feel that the estimate of the Ramamurthi Committee can be revised with any certitude.

3.2.8. The revision of the house-rent and clothing group indices as described above led to a revision of the general index for 1960 on base 1944 from 151 to 161. The Ramamurthi Committee, therefore, recommended that the linking factor (1.51) for deriving the series on base 1944 from the series on base 1960 be raised to 1.61, and this recommendation was accepted by the Government.

3.3 Further Objections against the 1944 Series

3.3.1 Doubts were expressed by some represent-

atives of employers about the low weightage of the housing group in the 1944 series (6.7%) and in the 1960 series (8.4%). It was also alleged that the estimated per family expenditure on house rent, etc., as revealed by the FLS enquiry of 1958-1959 for Calcutta working class was incredibly low. This latter had served as the basis of the revision of the house rent index carried out by the Ramamurthi Committee. Some statistical evidence was cited in this connection. The Committee went carefully into this matter and came to the conclusion that estimates utilised in the official CPI numbers are quite sensible and the statistical evidence mentioned above is either in broad agreement with them or too weak to contradict them seriously. To all appearances, the family budget enquiries of 1944-45 and 1958-59 were comprehensive enquiries conducted on sound scientific principles and threw up sensible results.

3.3.2. As regards the weightage of the housing group in the 1944 series, one may note that the corresponding weightage in the menial-class series for Calcutta (base: August 1939) derived from the Calcutta Diet Survey carried out in 1945 was very similar, viz. 6.69 per cent. The ISI enquiries at Jagaddal gave even lower weightages, 4.4 per cent during 1940-41 and 2.7 per cent during 1944-45.¹⁶ But what is important is to note that in Jagaddal, during the war, there was a substantial fall in the weightage of housing resulting from much sharper rise in other prices relative to house rent, and the same must have happened for Calcutta also, the weightages being 14.0 per cent for the August 1939 series (though regarded as doubtful) and 6.7 per cent for the 1944 series. The weightage of 8.4 per cent for housing in the 1960 series for Calcutta is in agreement with the pattern revealed by the FLS enquiries in other centres in West Bengal and elsewhere. The higher weightage of house rent in the 1960 series is expected in view of the faster rise in house rent than in the general price level over the years 1944-45 to 1958-59.

3.3.3. The 1944-45 family budget enquiry in Calcutta was confined to *non-casual* labour families and the weighting diagram was based on the consumption pattern of multi-member families. The 1958-59 enquiry included *casual* labour families and the weighting diagram was based on *single* as well as multi-member families. There was thus some lack of comparability between the two weightages, though it was likely to have been inconsequential. Had the 1958-59 procedures been followed in the earlier enquiry, the 1944 weightage for house rent might have been slightly lower than 67 per cent, as according to the 1944-45 enquiry, house rent had a weightage of 5.4 per cent in the budgets of single-member units.

3.3.4 We come now to the statistical evidence placed by the workers' representatives before this Committee. The *Report on the Enquiry into Housing Conditions in 21 Urban Centres in the State* by the West Bengal State Statistical Bureau, based on an enquiry conducted in 1953 and published in 1955, shows that for households in the lowest expenditure levels, at least 15 to 20 per cent of the total household expenditure was incurred on house rent. Apart

from the fact that the consumer expenditure data collected in this enquiry were very weak, this enquiry excluded the *bustees* and covered all sections of this population in the remaining areas. The Results for Calcutta strongly suggest that the working-class households did not form the bulk of the sample. Thus, even in the lowest expenditure levels, overwhelming majority of the households were living in "mainly pucca" houses. In the lowest expenditure level of Rs 1-100 per month, the average household was occupying roughly 1½ rooms, that is, about 155 sq. ft. of floor space. As is well known, middle-class households would be spending a larger proportion of their income on house rent than working-class households at the same level of income.

3.3.5. The *Report of the Bustee Survey in Calcutta, 1958-59*, by the West Bengal State Statistical Bureau (see, in particular, Cols IX & XX relating to Kidderpore-Chetla and Canal West areas, respectively), was cited to show that the weightage of house rent could not be lower than 15 per cent and that the average expenditure on housing per family per month was well above Rs 10 and far above the corresponding FLS 1958-59 estimate of Rs 7.36. Now, the house rent figures in the *Bustee* survey related to natural (i.e. multi-member) families paying rent. Figures strictly comparable with those of the FLS 1958-59 are not available. However, the FLS estimates of expenditure on house rent *per multi-member* family per month is Rs 10.66 (and not Rs 7.36 as mentioned above), including imputed rental of owned and rent-free houses, and constitutes 8.62 per cent of total consumer expenditure.

3.3.6. The average monthly rent figures for the two *bustee* areas are not much higher; they are Rs 11.46 and Rs 11.29. The corresponding averages of monthly income are not available but the average for all natural families were, respectively Rs 122.24 and Rs 116.25. The rent-payers formed about 80 per cent of this group in both the areas and the owners about 8 to 10 per cent. The owners seemed to have much higher average income than the remaining households. Making rough corrections, it would be roughly about 10 per cent which is not so different from the weightage based on the FLS data. The two sets of weightages are not strictly comparable, however, as one relates house rent expenditure to income and the other relates it to total consumer expenditure. It is quite possible that the income figures in the *bustee* survey suffered from downward bias.

3.3.7. Some evidence was also cited from *The City of Calcutta: A socio-Economic Survey* by Dr S.N.Sen, based on the socio-economic survey of the Departments of Economics and Statistics of the Calcutta University. Here the over-all percentage of income spent on rents appears to be 13, roughly speaking, but the survey covered all classes of population living in the city and no separate results seem to be available for the working-class population. The monograph by Sri Shyamal Chakraborty entitled *Housing Condition in Calcutta*, based on the same survey, shows that in 1956-57, the average

amount of monthly rent per renter family was Rs 7.47 for tenants of *all-kutcha houses* and Rs 9.43 for tenants of *all-kutcha and semi-kutcha houses*. Table 11 (iii) show that where the per capita room space was not greater than 30 sq. ft., the monthly rent per tenant household was Rs 12.34, on an average, for all types of houses. Such figures are not available for multi-member families separately; nor is any adjustment possible for imputed rental of owned or rent-free houses. From Table 11 (vi) it appears that tenants in *semi-kutcha and all-kutcha houses* spent 11.9 per cent of their income on house-rent. However, this percentage is obtained in a doubtful manner. While the average income is calculated by including non-renter families, the average rent is that paid by the rent-payers only. In any case, the former average was only 78.80 per month which was much lower than the FLS 1958-59 average for working-class families in Calcutta (Rs 97.36), and Sri Chakravorty admits¹⁷ that the income data utilised in his analysis were possibly underestimated. On the whole, therefore, these data do not seriously contradict those based on FLS 1958-59.

3.3.8. It may be in order to mention here another kind of argument placed before this Committee. Table 4.02 on page 40 of the *Survey of Housing Condition in Calcutta Corporation Area, 1963*, published by the West Bengal State Statistical Bureau, shows how average household expenditure on house rent and taxes varied markedly with the period of occupation of the dwelling. Actually, the average monthly expenditure per 100 sq. ft. of floor space was Rs 17.29 when the period of occupation was more than 12 years, but Rs 44.28 when that period was only one year. From this, the workers' representatives argued that the rate of rent per 100 sq.ft. had gone up from Rs 17.29 in 1951 to Rs 44.28 in 1963, that is, by 156.1 per cent in course of 12 years. This argument, however, cannot stand scrutiny. For either period, the average expenditure has to be worked out by considering all renter household, irrespective of period of occupation. For this and for other weighty reasons, the figures given in the aforementioned table cannot give a house rent index for (say) 1963 on base 1951. Moreover, the survey had left out *bustees*, refugee colonies, messes, etc., and hardly covered the working-class population.

3.3.9 The representatives of workers raised many other points. Some criticised the smallness of the sample sizes, that is, the number of markets and items covered in the price collection; some stressed the need of taking note of the seasonality in consumption and prices; others the choice of the year 1944 as base and its use for a prolonged period up to 1960; and so on. The Committee felt that while there was substance in some of these criticisms, there was no basis for supporting that such deficiencies of the 1944 series had led to significant bias of the CPI numbers. Question was also raised regarding the refusal of the authorities to take into account the black-market prices but it did not appear to be important in view of the adequacy of amount of foodgrains supplied by the rationing system in 1944 and the absence of any such system

in the year 1960. Doubts were raised in general term about the quality of price data collected for items in groups other than clothing and house rent, but concrete instances were not mentioned and no evidence quoted to show that some prices were *prima facie* inaccurate.

3.4 The Second Linking Factor

3.4.1 The present Committee has to examine the linking factor for deriving the old Calcutta series of CPI numbers for working class, base August 1939, from the current series on base 1960. The existing linking factor is the product of two linking factors, the first (2.63) for deriving the August 1939 series from the series on base 1944, and the second (1.61) for deriving the 1944 series from the 1960 series. For reasons mentioned in Appendix V, the Committee decided that the over-all linking factor be obtained in this way, as the product of two linking factors, and that such of the existing factors be subjected to careful examination. The examination of the first linking factor has been carried out in the preceding chapter; that of the second will now be our concern.

3.4.2 The second linking factor was 1.51 in the beginning, but was raised to 1.61 subsequently on the recommendations of an Expert Committee headed by Dr. B. Ramamurthi. This Expert Committee had been set up by the Government of India in 1967 for examining the State series of CPI numbers for four centres, including Calcutta. As regards the Calcutta centre, the Committee was asked to examine the CPI number for Calcutta (base 1944—100) and to suggest whether any change was necessary in the linking factor (1.51) worked out by the Labour Bureau for deriving the 1944 series from the series on base 1960, "*because of any deficiencies relating to pricing of various index items*" including in the 1944 series. Chapter IV of the Report of this Expert Committee¹⁸ gives an account of the examination made by the Committee also its recommendations, in respect of the Calcutta centre.

3.4.3 If the terms of reference of the present Expert Committee be interpreted in a strict manner, a fresh examination of the linking factor for deriving the 1944 series from the 1960 series seems to be included in the terms of reference. Since, by their terms of reference, the Ramamurthi Committee could only correct the pricing deficiencies in the 1944 series, other types of deficiencies might profitably be examined by the present Committee.

3.4.4 The present Committee made a thorough examination of the linking factor for deriving the 1944 series from the current series on base 1960, and came to the conclusion that the existing factor of 1.61 accepted on the recommendations of the Ramamurthi Committee, did not require any further revision, or more precisely speaking, no further revision could be made with a reasonable measure of confidence.

3.4.5 The only step that this Committee could possibly take to further revise the linking factor of 1.61 arrived at by the Ramamurthi Committee was to use a weighting diagram obtained by pooling

the single-member families to get the over-all consumption pattern during 1944-45. The necessary information is available in the Report of the 1944-45 enquiry. But, *a priori*, the procedure of leaving out the single-member families has no known bias as far as the CPI number is concerned and the effect of the above revision would in all probability be very small. Also, nothing can be done now to take account of the casual workers excluded in the 1944-45 family-budget enquiry. Taking all these into consideration, the Committee concluded that it was not worthwhile to make a further revision of the existing linking factor (2.61).

Chapter 4

THE 1960 SERIES

4.1 General

4.1.1. The extended terms of reference of the Committee include examination of the methodology of price collection and substitution followed in the current series of CPI numbers for the working class in Calcutta (base: 1960). As the interest centres on the linking factor for converting the indices of the current series on base 1960 to the indices of the old series on base August 1939, the methodology of constructing the indices of the current series may not, strictly speaking, be relevant to the major question referred to this Committee. But, if the current series of index numbers be defective in the sense that it fails to measure with reasonable accuracy the changes in consumer price level after 1960, the usual method of linking the current series to the older series (see Appendix V) cannot be justified and an examination of the methodology adopted for constructing the 1960 series may become necessary. Since, however, any "revision" of the 1960 series was obviously outside the scope of the present Committee, it was decided to make only a broad examination of the existing procedure of price collection and substitution with a view to making some general observations including some suggestions for improvement.

4.1.2. The first point that struck this Committee was the inadequacy of the organisation set up for the price collection work. The five markets in Calcutta are covered by five part-time Price Collectors appointed from the employees of the Labour Directorate of the State Government. Their work is supervised by the Price Supervisor, who also is a Joint Labour Commissioner of the Government of West Bengal. The Price Collectors are remunerated at Rs 25 per month besides Rs 5 paid as TA and the Price Supervisor is paid on honorarium of Rs 52.50 per month inclusive of Rs 10 as TA. There is, besides, the supervision exercised by the whole-time staff of the Regional Office of the Labour Bureau at Calcutta. The Regional Office (Calcutta) and the two Senior Investigators have to check the price collection work at 13 centres including Calcutta. The total number of markets in these 13 centres is as large as 28. The following observations may be made in this connection.

4.1.3. The Price Collectors' remuneration is

extremely meagre and should be revised upward in view of the rise in consumer prices. Also, the staff of the Regional Office requires strengthening. The Price Collectors should be whole-time workers as far as possible. Considering the importance of the work done by them—vast sums of money are paid out on the basis of the CPI numbers—the endless variety of problems faced by them in the field and the need of solving them urgently by probing enquiries, we feel that the price collection work needs greater time and attention than given at present from the primary workers as well as the Supervisors. In any case, the Price Collectors should be allowed to spend more time over price collection work during office hours, whenever necessary to carry out the primary investigations and settle points of doubt to their satisfaction either singly or with the help of the supervisory staff. The State Government should attach high priority to this work and should not overburden the Price Collectors and the Price Supervisors with other duties so that they may be able to do full justice to this job.

4.2 House Rent

4.2.1. There is some room for criticism of the treatment of house rent as made in the current series of CPI numbers, although what is being done is a vast improvement over what used to be done in the earlier series of CPI numbers in India. The house rent index is periodically revised on the basis of data on house rent collected twice a year through the National Sample Survey in respect of dwellings inhabited by working-class families. The dwellings selected for the purpose are those occupied by a sub-sample of industrial workers' families covered by the main Family Living Survey (1958-59) at each centre. The sample of dwelling is staggered uniformly over each half-year (viz. January to June and July to December), known as a round. The sample dwellings are covered in each round in the same order month by month so as to maintain an interval of approximately six months between two successive visits to the same dwelling. The sample is kept fixed subject to substitutions necessitated by casualties, etc. in case of Calcutta, a fixed sample of 120 dwellings is sought to be covered in each round of the house-rent enquiry.

4.2.2. This procedure of covering a fixed sample of dwelling for the house-rent enquiry ignores the rents paid by the tenants of newly constructed dwellings in the Calcutta area. Enquiries on housing conditions have clearly revealed that the rents are subsequently lower for households with a longer duration of occupation.¹⁹ Thus, the report on the *Survey of Housing Conditions in Calcutta Corporation Area, 1963*, published by the West Bengal State Statistical Bureau shows that (see Table 4.02) p 40, and also p 15 the average monthly rent plus taxes paid per 100 sq. fit. of floor space was Rs 17.29 for those who moved into the dwellings more than 12 years ago, as against Rs 44.28 for those who moved in only a year ago. Since the procedure adopted excludes entrants to newly constructed dwellings, it may lead to underestimates of the true

rate of rise in the house rent index. Presumably, the current procedure also ignores deterioration of the dwellings due to aging. This would strengthen the tendency of under-estimation mentioned above. The Committee could not examine the implications of the chain-base method followed for computing the housing group index. The account of the chain-base method given in the Labour Bureau publication *working-Class Consumer Price Index Numbers in India—a Monograph, Vol I, 1972*, suggests another source of the likely downward bias in the house rent index. If a dwelling is found vacant during a particular six-monthly round and is later rented at a higher rate, the increase in rent for this dwelling may not be reflected in any of the link indices being computed at present from the "matching dwellings". The Committee desires that this point be looked into by the authorities concerned.

4.2.3. The findings of two enquiries suggest that house rents for working class households in Calcutta rose faster in fact than indicated by the housing group index of the 1960 series.

4.2.4. First, we may refer to the *Survey of Housing Conditions in Calcutta Corporation Area, 1963*, by the State Statistical Bureau, Government of West Bengal. This survey excluded *bustees* and refugee colonies, besides messes, hostels, etc., and covered a representative sample of families of all social classes from proper Calcutta. Average family size was 6, roughly speaking, and about 90 per cent of the families were living in mainly *pucca* buildings. Nevertheless, the finding (*see*, Preface of the said Report) that average monthly house rent per 100 sq. ft. had risen from Rs 18.86 in 1960-61 to Rs 26.24 towards the end of 1963 cannot be completely overlooked. A careful perusal of the Report shows that, for reasons not very clear, the figure quoted for 1960-61 was based on only one of the two samples covered in that year. If the two samples were pooled to obtain an over-all figure, average house rent/100 sq. ft. would be nearly Rs 20 per month. Even then, the rents seemed to have risen by 30 per cent, roughly speaking, between 1960-61 and 1963. Part of this rise may be due to sampling errors, but surely the finding is in sharp contrast with the house rent indices of the "1960 series" for Calcutta centre, which were raised from 100 to 101 in January 1963, then to 102 in July 1963, and then to 104 in January 1964.

4.2.5. Next, we may quote some results based on a survey of about 1900 industrial workers chosen by probability sampling from the Greater Calcutta area, carried out by N. Bhattacharyya and A.K. Chatterjee of the Indian Statistical Institute during October 1969—April 1970. Apart from geographical coverage there were differences in the definition of industrial workers and industrial households used in this enquiry and in the Family Living Survey of 1958-59. To obtain the results given below, the authors picked up households living in proper Calcutta and having the major share of their income from factory Labour. Other differences remain.²⁰ Broadly speaking, the FLS employed a wider definition of working class than this ISI enquiry. Actually, 181 households were found in the sample covered by the aforesaid

enquiry, meeting the more obvious conditions laid down in the FLS definition.

4.2.6. The average household size was found to be 4.02 which appears to be on the high side. About 20.7 per cent of the household were living in rented premises, 8.8 per cent were living in rent-free company quarters and another 8.8 per cent were living in owned premises. The average monthly house rent turned out to be Rs 17.89 for the renters and Rs 14.43 for all households taken together; imputed rental for non-renters was not included. The corresponding half-sample estimates were Rs 17.42 and Rs 18.27 for the renters and Rs 13.98 and Rs 14.80 for all households. The average monthly expenditure on house rent per multi-member family, including imputed rent of owner-occupied houses, was about Rs 10.79 in the year 1960 (*see* paragraph 3.2.5). Since the average size of multi-member family in the FLS enquiry was of the order of 4, one may compare the figure Rs 10.79 with the figure Rs 17.89 based on the ISI enquiry. These results suggest that for the working class households in proper Calcutta average house rent might have risen by 65 per cent between 1960 and October 1969—April 1970. As against this, the house rent index in the 1960 series stood at 134 from July 1969 until in July 1971 it was raised to 135.

4.2.7. In the light of the above, the Committee feels that the Housing group index of the 1960 series for Calcutta needs to be carefully examined on the following lines:

(a) A broad check can be applied by comparing the average per family expenditures on housing in the latest FLS enquiry for working-class households in Calcutta with the corresponding figures for 1960.

(b) The data collected in the NSS house rent enquiries may be examined to see if the distribution of the fixed sample of dwellings in Calcutta by period of occupation is a reasonable one.

(c) Whether or not the chain method of computing the house rent index is responsible for under-estimation may be examined, for example, by computing fixed base indices as a broad check.

4.3 Open Market Prices

4.3.1. As regards open market prices of goods supplied at controlled prices from fair price shops but not covered by statutory rationing, it is obvious that a suitable weighted average of controlled and open market prices should be used for index computations. This seems to be the current practice. However, for milk, the price quotation used for Calcutta is virtually the administered price of cow milk supplied from Haringhata which alone is mentioned in the printed proforma for price collection. While the difficulties of collecting open market prices for milk are admittedly serious, there can be little justification for not attempting to overcome these difficulties. We suggest that open market prices for milk be collected *once a month* from all the markets in Calcutta.

4.4 Black-Market Prices

4.4.1. The question of taking account of black-

market prices of rice, wheat, etc., subject to statutory rationing in Calcutta, is difficult but extremely important. The Committee is fully alive to the moral and legal objections to the collection and utilisation of black-market prices in the compilation of CPI numbers and also to the practical difficulties of collecting (and supervising the collection of) black-market prices from vendors without fixed shops.

4.4.2. Another objection may be explained by way of illustration. It has been argued that since in Calcutta the average intake of cereals was 32.52 kg (rice—23.19 kg, wheat—8.63 kg) per month per average working-class family of 2.53 persons or 2.15 consumption units in 1958-59 (according to FLS, 1958-59), while such a family might be currently getting only 16.26 kg of cereals per month (rice—6.92 kg, wheat—9.34 kg) from the ration shops, the shortfall of 16.26 kg. composed entirely of rice is being purchased from open market. Thus, one should take the weighted average of the controlled price and the black-market price of rice giving much larger weightage to the latter for arriving at the weighted average. But this can be criticised by saying that in actual practice the consumption of rice has been seriously curtailed and the quantity purchased at black-market prices is very much smaller than would appear from the type of calculations indicated above. Indeed, the upward bias of the Laspeyre index would be marked in this particular case and it may be permissible to use the current weights for averaging controlled and black-market prices.

4.4.3. Notwithstanding all these, the Committee feels that from the scientific point of view, there can be no justification of the present practice²¹ of completely disregarding black-market prices of statutorily controlled commodities. This violates the spirit of the recommendations made by the ILO. Black-market purchases are made in the open by almost all sections of the people in Calcutta and the price collection work does not seem to be very difficult. Indirect methods may also be tried. Thus, one may use price relatives of the same commodities based on price quotations for markets just outside the statutorily controlled area, or the price relatives of related products (like *muri* or pulses, in case of cereals). As Calcutta is rather exceptional in having statutory rationing, the present procedure has been depressing the CPI numbers for Calcutta relative to those of most other centres. If a CPI number is to be worth that description, it can by no means ignore black-market prices when black-market purchases have become very widespread. It should be remembered that CPI numbers have their scientific uses as well. Moral and legal questions should not have precedence over scientific principles. We strongly recommend that the CPI numbers for working class in Calcutta take black-market prices of food grains, etc., into account. Of course, the employers may revise their agreements with the workers in such a way that black-market purchases are not "encouraged" by the agreements.²²

4.5 Dissemination of information

4.5.1. Another observation which the Committee would like to make is that it is extremely desirable to dispel the mistrust of and resentment against the CPI numbers in the minds of the workers. It was clear to this Committee from the written memoranda submitted by the workers' representatives as well as from their oral evidence, that much of this mistrust and resentment arises out of genuine misunderstanding of various technical matters. Efforts should therefore be made by the official agencies to clarify these matters through special publications released from time to time. Obviously, this is an all-India problem and the sort of questions that are frequently asked can be picked up and dealt with in these publications.

4.5.2. There is, however, another aspect of this problem. There are complaints from representatives of workers about the *secrecy* maintained by officials, e.g., regarding the sample of shops covered for price collection or the actual price quotations used for index computation.²³

4.5.3. The whole thing deserves serious consideration and a national policy should be evolved and uniformly followed in all the centres. Within the short time at its disposal, the Committee could not go deep in to this question. However, the Committee strongly feels that though it may not be advisable to adopt a procedure where the representatives of various trade unions also visit the sample shops to keep a check on the price collection work, the price quotations finally accepted for index computation should be regularly published for examination by (say) the workers' representatives. Further, even the working sheets showing how the index is arrived at should be open for examination. In case, some of the quotations be regarded as doubtful by workers' representatives, the price collecting agency should try to meet these criticisms as far as possible.

4.5.4. The Committee was given to understand that for some centres in Gujarat and Maharashtra the aforementioned practice of displaying the price quotations already exists, and also that the computation of the index is done concurrently by the State agency and by the Labour Bureau. There is no reason why West Bengal should not follow this example.²⁴ This should go a long way to clear up the atmosphere of misunderstanding.

4.6. Suggestions for Methodological Studies.

4.6.1. Before concluding, it may be in order to suggest taking up of some methodological studies for clarifying certain issues. Most representatives of workers have insisted on the enlargement of the *sample* of markets and items. It should be possible to analyse the available data to throw light on the effects of the sample size (no. of markets and items) on the reliability of the CPI numbers. There has been considerable discussion on the sampling errors of price index numbers in recent years. Calculations like these made by Professor Mahalanobis in *Recent Experiments in Statistical Sampling in the Indian Statistical Institute* might go a long way in this direction.²⁵ It is quite possible that the sampling errors are sufficiently small even at present and

It is more important to reduce the non-sampling errors by improving the quality of field work rather than to expand the sample size. But to settle the issue, the Committee recommends that methodological studies be carried out, and the results published, to guide the choice of sample size(s) in future price collection work.

4.6.2. For allaying suspicion in the minds of the workers regarding price collection work, it should be possible to undertake another type of study. At present, the price collection work is checked by the Price Supervisor and the staff of the Regional Office of the Labour Bureau, who take the filled-in price sheets to the markets concerned and check the entries. This procedure of checking, often done after some time-lag, may not serve the intended purpose because of normal reluctance of any checking staff to change the entries already made unless required for compelling reasons. The representatives of the workers want to close this loopholes by undertaking parallel checking, which does not appear advisable for obvious reasons. But, the Labour Bureau itself can undertake similar work. It can set up a completely separate wing whose task could be to collect the prices themselves, may be at longer intervals. These price data could then be compared with the price data collected by the present organisation, for locating possible investigator-bias and identifying the links that require strengthening.

4.7 Concluding Remark

It should be obvious to any reader of this report that the present Committee was asked to accomplish a job which is nearly impossible. Of the two linking factors now used to convert the 1960 series, the one that convert the 1944 series to the August 1939 series has been found to be very much deficient; in the absence of the basic data, its correction must necessarily remain an exercise in informed judgement, with little claim to scientific precision. The other one that convert the 1960 series to the 1944 series has not been found to be as deficient, but both the linking factors try to link the current 1960 series to bases which are by now 30-35 years old. The Committee sees little reason why wage agreement must continue to be governed by the August 1939 series or by the 1944 series when they have been discontinued long ago. Surely, the amount of wage, payable in 1960 (arrived at according to any mutually acceptable formula) could be considered as the basic wage in 1960 and dearness allowances calculated thereafter on the basis of the 1960 series. Much of the present controversies would then be placed in proper perspective.

Chapter 5

SUMMARY OF FINDINGS AND RECOMMENDATION

5.1 The August 1939 Series

5.1.1. This series was originally started by the Controller of Civil Supplies of the then Government

of Bengal. Its weighting diagram was based on "a limited budget survey conducted in 1939-40 by Burmah Shell Company". Apart from the weighting diagram and the base prices, no other details are available.

5.1.2. The index for house rent was kept unchanged at 100 throughout the life of this index, up to June 1957; the *Miscellaneous group index* was kept at 100 up to December 1942 and at 150 thereafter up to June 1957. The *clothing group* was represented by just one item, viz., "Dhuti and Saree", even so, the price quotations were difficult to get.

5.1.3. The weighting diagram of the August 1939 series, when compared with those of many working-class CPI series, appears to be somewhat suspect, in view of much low weightage for the "food" group and much high weightage for "house rent". However, certain pre-Second-World-War budget patterns show that the weightage of the food group can become very low, when prices are considerably lower. Also, the weightages can differ markedly as between different groups of workers at the same place and time. There is, therefore, no satisfactory way of replacing the weighting diagram based on the Burmah-Shell enquiry by some estimate of the "true" weighting diagram.

5.1.4. The Committee decided not to make any change in the indices for food, fuel and light, and clothing, as recorded in the August 1939 series. Alternative sources of information, did point to some discrepancies; but the sources were not necessarily more reliable.

5.1.5. The Committee could not find any reason why the "house rent" index should have been kept unchanged at 100. There is strongly corroborative evidence that house rents did rise appreciably in Calcutta, between August 1939 and 1944. The present Committee also directly conducted an enquiry and found weighty support for this evidence.

The House Rent Control Orders of 1942 and 1943 could be considered as incontrovertible proofs of rise in house rent. Collecting all the evidence, the Committee recommends that the house-rent index for 1944 (average of twelve months) on base August 1939, should be 120.

5.1.6. The Committee could not similarly find any reason why the "miscellaneous" group index should have been fixed arbitrarily at 150 in March 1943 and kept constant thereafter. The Committee attempted to collect the necessary price information but failed to get any dependable figures. However, it was found that three strands of evidence strongly corroborate the view that the "miscellaneous" group index rises, in general, at least as fast as the general index. The Committee accepts this evidence and recommends that the "miscellaneous" group index and the general index for 1944 (average of twelve months) on base August 1939, would be 315.

5.1.7. It seemed to be beyond the jurisdiction of the Committee to recommend a change in the base period (a single month of August) for the series, however unscientific the choice might be.

5.1.8. For arriving at the linking factor, the Committee decided to adopt the customary method of taking the simple average of the indices of the old

series over the base period of the new series. The Committee, therefore, recommends that the linking factor for converting the 1944 series to the August series be corrected from 2.63 to 3.13.

5.2 The 1944 Series

5.2.1. The series with base 1944 used to be compiled by the Labour Commissioner, Government of West Bengal. It was introduced as late as July 1957 and discontinued from July 1963. A detailed account of the 1944 series is given in the Ramamurthi Committee Report.

5.2.2. The 1944 series was examined by the Ramamurthi Committee. This Committee revised the 1944 series group indices for clothing and housing, and raised the clothing index for 1960 to 1963 from 142 and the house rent index for 1960 to 234 from 100 (the house rent index in the 1944 series was frozen). Accordingly, the general index for 1960 on base 1944 was raised to 1.61 from 1.51.

5.2.3. Further objections against the 1944 series were placed before the present Committee. Doubts were expressed about the low weightage of the housing group (6.7%) in the 1944 series and the linking factor for deriving the 1944 series from the 1960 series, as accepted by the Ramamurthi Committee. The Committee went carefully into this matter and came to the conclusion that estimates utilised in the official CPI numbers (as revised by the Ramamurthi Committee) are quite sensible and the statistical evidence given to the Committee is either in broad agreement with them or too weak to contradict them seriously.

5.2.4. Certain other points were made regarding number of markets and items covered, sensibility of consumption, use of the 1944 series for a prolonged period up to 1960, non-admissibility of black-market prices, etc. The Committee felt that while some of these criticisms were relevant, there was no basis for supposing that such deficiencies of the 1944 series had led to significant change of the CPI numbers.

5.2.5. The present Committee made a thorough examination of the linking factor deriving the 1944 series from the current series on base 1960, and came to the conclusion that the existing factor of 1.61, accepted on the recommendations of the Ramamurthi Committee, did not require any further revision.

5.3 The 1960 Series

5.3.1. The extended terms of reference of the present Committee include an examination of the methodology of price collection and substitution followed in the current series on base 1960. However, as the interest centres on the linking factor for converting the current series on base 1960 to the indices of the old series on base August 1939, an examination of the indices of the current series did not appear to be relevant. It was decided to make only a broad examination of the existing procedure of price collection and substitution.

5.3.2. The first point that struck the Committee was the inadequacy of the organisation set up for the

price collection work. The State Government should attach high priority to this work and should not overburden the Price Collectors and the Price Supervisors with other duties so that they may be able to do full justice to this job.

5.3.3. There is some room for criticism of the treatment of house rent as made in the current series of CPI numbers, although what is being done is a vast improvement over what used to be done in the earlier series of CPI numbers in India.

5.3.4. It has been found that the open market prices of commodities supplied at controlled prices but not covered by statutory rationing, are not taken into consideration in all cases. Also, the "black-market" prices of commodities covered by statutory rationing are not considered at all. The Committee recommends that both open-market prices and black-market prices should be taken into account.

5.3.5. Steps should be taken for removing the mistrust and suspicion in the minds of workers against the official CPI numbers. One sure way of doing this would be to take the workers into confidence and dissensions to information to the maximum extent possible. The examples of Gujarat and Maharashtra in this connection should be followed.

5.3.6. The Committee suggests some methodological studies for improving the quality of the official CPI numbers. One would be to analyse the available data for studying the effects of the sample size (no of markets and items) on the reliability of the CPI numbers. The other would be to set up arrangements for independent collection of price information and study investigator-bias.

5.3.7. The Committee strongly recommends that the present system of calculation of dearness allowances on the basis of the August 1939 series of the 1944 series be discontinued and that all wage agreements be revised on the basis of the 1960 series, with the total wage of 1960 being considered as the basic wage.

NOTES

¹The amendment made later on in the terms of reference seemed to widen the scope further.

²See Labour Bureau, *Cost of Living Index Numbers in India, A Monograph*; 1954, pp 31-33.

³The Committee also came across some working sheets which could not be identified with certainty, but which might relate to the computation of the existing linking factor, 2.63, between the August 1939 series and the 1944 series. These sheets show the itemwise prices during the twelve months of the year 1944, but the prices of different specifications composing an item like "vegetable" are averaged before computing the price relatives.

⁴Results of many such enquiries were brought together by Professor Radhakamal Mukherjee in *The Indian Working Class*; (see Table IXXVIII, p 220). See also *Industrial Labour in India* by the ILO.

⁵N.K. Adyanthya, *Report on an Enquiry into the Family Budget of Industrial Workers in Madras City*; Office of the Director of Industries, Madras; 1938.

⁶*Report on an Enquiry into the Family Budgets of Industrial Workers in Calcutta*; Labour Bureau, Government of India, 1949.

⁷The final letter from the Bengal Chamber of Commerce stated that "... The Chamber has been advised that the information desired... is treated as strictly confidential by Capital".

⁸P.C. Mahalanobis, "Recent experiments in statistical sampling in the Indian Statistical Institute," *Journal of Royal Statistical Society*; Vol 109, Part 4, 1946.

*See Appendix V for a detailed technical discussion of the different methods of deriving such linking factors.

¹⁰See (i) Labour Bureau, *Working Class Consumer Price Index Numbers in India, a Monograph*; Vol 1, 1972; PP 35-37; (ii) Appendix V to this report for a technical note.

¹¹It may be of interest in this connection to note some observations on the rise in cost of living the Second World War made by the Government of India Labour Investigation Committee (see Main Report, 1946, Chap VIII, Sections XXX and XXXI). The Committee mentioned the deficiencies in the then available working class CPI's and quoted the indices for nine centres (base: August 1939) during the years 1940 through 1944 (*op. cit.*, Table 127, P 271). The Committee then observed (see p 271): "No published figures are available for Bengal and Assam, but from such enquiries as it was possible to make it would appear that in both these Provinces, cost of living as compared to the pre-war period has gone up by about 200%. It will thus be seen that the lowest recorded increase has been in Madras which was of the order of 107% as compared to the pre-war period, the highest, excluding Bengal and Assam, being in Jabbalpur and Cawnpore where the rise was over 200% in 1944." Again, in the "Concluding Section" the Committee observed (see p 275): "...while the available information shows that the rise in the cost of living in Madras has been about 100%, that in Bengal and Assam has been more than 200 per cent." (Italics ours)

¹²The weighting diagram of the 1940 series was based on working-class family living survey (FLS) conducted in Calcutta during July 1958-September 1959 by the Labour Bureau with the help of the National Sample Survey and the Indian Statistical Institute, under the guidance of the Technical Advisory Committee on Cost of Living Index Number. There were some difference between the definitions and procedures adopted in this case and those adopted in the 1944-45 enquiry. Thus, single-member as well as multi-member families were covered for obtaining the weighting diagram of the 1960 series. Also, the 1958-59 enquiry used the same reference period of one calendar month for all items,—including clothing.

¹³Such index numbers are not available separately for the Calcutta Centre.

¹⁴According to the 1958-59 family living survey for Calcutta, about 20% of the working-class families were living in owned houses or employers' quarters.

¹⁵See our comments in the next chapter.

¹⁶The Jagaddal weightages were certainly lowered by the facts that the proportion of workers living in employers' quarters at low rents was considerable in Jagaddal area and that for self-owned houses, only taxes and land rent (if any) were considered, but not the imputed rental of such houses.

¹⁷See his monograph, p 35.

¹⁸See, *Report of the Expert Committee on Consumer Price Index Numbers for Kanpur, Calcutta, Bangalore and Mysore*, Government of India, Ministry of Labour, Employment and

Rehabilitation; 1968.

¹⁹See, *Cost of Living Index Numbers in India—a Monograph*, by the Labour Bureau, Government of India, 1954. On page 7 of this Monograph it is stated that "... if the data are collected from an unchanging sample of dwellings, no account will be taken of new dwellings coming into the rental markets at a higher price level than those in the sample which may be subjects to rent control..."

²⁰The details of the FLS definition may be seen from the reports of FLS enquiries. In the ISI enquiry, a person was considered to be industrial worker if he was an employee with an industry included in the industry divisions 2,3,4,5 & 7 and families 341 and 343, of the standard industrial and occupational classification; and with an occupation in occupation divisions 7 and 8, occupation groups 61,63,64 & 69 and occupation families 410 and 662 in terms of the same classification. The FLS definition did not mention any condition on the industry of the worker, and included many groups and families in occupation divisions 4,5 and 9. On the other hand, the ISI enquiry had covered persons employed in non-factory units and all households containing at least one industrial worker.

²¹The Labour Bureau wrote in its publication entitled, *Cost of Living Index Numbers in India—a Monograph, 1954*, para, 5, 6, p 19, that in constructing the Labour Bureau series of Working Class Cost of Living Index numbers for 17 individual centres (mostly on base 1944) black-market prices were obtained for rationed or controlled articles and the weighted average of controlled and black-market prices was used for index compilation. It is indeed puzzling to find that this practice was dropped.

²²The Committee understands that the authorities concerned have recently taken some steps in this matter. The Committee could not go into these as the relevant report was received at a very late stage of the work. However, the Labour Bureau Monograph of 1954 (*op. cit.*) opined against the approach of solving the problem by altering the weights of individual items.

²³Indeed, up to the time of recording their oral evidence, none of the representatives of employers and employees know about the procedure adopted for arriving at the existing conversion factor (2.63) for converting the 1944 series Calcutta to the August 1939 series.

²⁴It appears that some years ago, such concurrent index computation used to be done by the West Bengal Labour Directors also, but for some reason this practice had been discontinued, It would be extremely helpful to revive this practice.

²⁵*Op. Cit.* Professor Mahalanobis computed CPI numbers separately by localities, by investigators, by household sizes, by expenditure levels, etc. and demonstrated the reliability of the indices. The price collection was organised on a Latin Square design which allowed the estimation of sampling errors.

Appendix III

WEIGHTING DIAGRAM AND BASE PRICES OF WORKING CLASS COST OF LIVING INDEX SERIES FOR CALCUTTA (AUGUST 1939=100)

Sl No	Articles	Specifications	Units of quantity	Base price	Weights
1	2	3	4	5	6
	<i>Food</i>				
1.	Rice	Medium	Per maund	Rs. 4.40	24.00
2.	Atta	Chaki	Seer	as. 1.75	8.80
3.	Flour	Fine	"	as. 2.25	2.50
4.	Dal	Masur, Arhar, Moong, Chola	"	as. 2.33	6.70
5.	Ghee	Cow & Buffalo	"	Rs. 1.25	7.70
6.	Mustard Oil	Mill & Ghanj	"	as. 6.50	5.00
7.	Salt	Crushed	"	as. 1.00	0.80
8.	Spices	Chillies, Halud, Jira, Dhanja	"	as. 5.92	4.50

1	2	3	4	5	6	
9.	Sugar	Granular	..	as. 4.50	5.00	
10.	Tea	Lipton, Tosh, Excel, Medium	..	as. 8.00	1.00	
11.	Milk	Cow & Buffalo	Seer	as. 4.00	9.00	
12.	Vegetables	Potatoes, brinjals, onions	..	as. 1.25)		
13.	Fish	Cut pienes & imported	..	as. 8.50)	25.00	
	<i>Fuel & Lighting</i>				100.00	
14.	Kerosene oil	White bottle of	22 ozs	as. 1.75	35.00	
15.	Coal	Soft coke	Maun	as. 8.00	61.00	
16.	Matches	Box of 60 sticks	Box	pies 4.00	4.00	
	<i>Clothing, etc.</i>				100.00	
17.	Dhuti & Saree	Coarse cloth	Pair*	Rs. 1.63	100.00	
18.	MISCELLANEOUS Group Index kept constant at 150 from 1943				100.00	
19.	HOUSE RENT Group Index kept constant at 100				100.00	
					100.00	
Groups:	Food	Fuel & Lighting	Clothing	Miscellaneous	House Rent	Total
Weights:	52.5	7.5	7.0	19.0	14.0	100.0

SOURCE: Appendix V (xxxvii) of Labour Bureau publication, *Cost of Living Index Numbers in India—a Monograph, 1954*.
*Recorded as "yard" in the Labour Bureau Monograph. On checking with the records, the unit has been corrected as "pair".

Appendix IV

RESULTS OF LABOUR ENQUIRIES AT JAGADDAL CONDUCTED BY THE INDIAN STATISTICAL INSTITUTE

THREE enquiries were carried out by the ISI under the leadership of Professor P.C. Mahalanobis at Jagaddal, an Industrial area with a large concentration of Jute mill workers, about 20 miles north of Calcutta (proper), during December 1940—April 1941, October 1941—February 1942, and December 1944—April 1945 (Professor K.P. Chattopadhyay of Calcutta University was in charge of the third enquiry). These pioneering enquiries had the construction of cost of living indices as a major objective and the price data were carefully collected from representative markets/shops mainly frequented by industrial workers.

The results are available in a number of publications¹ including the celebrated paper, "Recent Experiments in Statistical sampling in the Indian Statistical Institute," by P.C. Mahalanobis (see *Journal of the Royal Statistical Society*, Vol 109, part 4, 1946). In this paper, Professor Mahalanobis presented the cost of living indices for the second and the third enquiry periods (mentioned as 1942 and 1945) taking the first enquiry period (mentioned as 1941) as base. He demonstrated the high degree of reliability of these indices by carrying out analyses of variance on locality x investigator-wise indices and estimating margins of error, and also showed that the indices were vary nearly the same for households of varying sizes, expenditure levels, etc. The index (base: 1941) was 122 for 1942 and 273 for 1945. For the latter index the standard error was only about

1.6. The group indices were as follows:

Year	Food	Clothing	Fuel and Light	Miscellaneous	Total
1942	122	158	126	117	122
1945	277	305	280	276	273

Clearly, by inadvertence, changes in "rent and tax" were ignored by Professor Mahalanobis. The correct picture as available from the publications numbered 3 and 4 in footnote, and in greater detail from unpublished results made available by Sri H.K. Chaturvedi of the ISI has been presented in paragraph 2.5.4 of text.

Although, strictly speaking, the present Expert Committee is concerned with consumer price indices for the working class in proper Calcutta, its recommendations would mainly affect jute mill workers in the surrounding industrial area. The results of the Jagaddal enquiries acquire additional interest on account of this. It should be recognised that there was very little price rise between August 1939 and the first Jagaddal enquiry period.

Detailed patterns of consumption are shown especially in publication No 1 mentioned in footnote given earlier. The broad consumption pattern has been quoted in text. Many prices collected during the first and the third enquiries are quoted in Chaturvedi and Bhattacharyya (1948). The following prices of miscellaneous items were extracted from an unpublished draft of the above-mentioned paper made available to us by Sri H.K. Chaturvedi. Since we are interested in relative changes in prices and not the prices themselves, the location itself may not make much difference and the price relatives for Jagaddal may not be far from the price relatives for Calcutta proper.

Item	Unit	Prices in Rs		Price Relative (%)
		1940-41	1944-45	
Pan	1 goch	0.04	0.06	150.0
Tobacco	Seer	0.34	2.76	811.8*
Country liquor	1 measure	1.44	2.34	162.5
Ganja	Tola	1.71	2.07	121.7
Kharam	Pair	0.18	0.48	266.7
Shoe	"	1.16	5.74	494.8
Hair Oil	bottle	0.81	1.58	195.1
Soap (toilet)	Cake	0.13	0.40	307.7
Soap (washing)	Seer	0.30	1.03	343.3
Barbar	Cut plus shave	0.03	0.21	262.5
Dhobi	Score	1.06	1.50	141.5
Cinema	Show (av. class)	0.36	0.55	152.8
Newspaper	copy	0.06	0.12	300.0

*This startling rise is also mentioned in Chattopadhyay and Chaturvedi, 1948.

The following prices are also quoted for ready reference from Chaturvedi and Bhattacharyya (1948):

Item	Price per seer in Rs		Item	Price per seer in Rs	
	1940-41	1944-45		1940-41	1944-45
Rice	0.15	0.41	Gur	0.13	0.45
Chira	0.20	0.51	Ghee	1.52	3.20
Muri	0.23	0.88	Milk	0.19	0.57
Atta	0.15	0.28	Fish	0.39	1.13
Chhatu	0.19	0.52	Meat	0.40	1.68
Maida	0.16	0.35	Veg. Oil	0.43	1.31
Pulses	0.15	0.54	Tea (per lb.)	0.59	1.52
Potato	0.06	0.32	Egg (each)	0.05	0.13
Onion	0.09	0.44	Dhuti (,,)	1.17	3.25
Salt	0.10	0.19	Lungl (,,)	0.97	4.08
Sugar	0.27	0.50	Sarl (,,)	1.75	4.68

The paper by Professor Mahalanobis mentioned above shows very clearly that on the whole there was considerable lowering of consumption standards and marked changes in consumption pattern consequent on the price rise during the Second World War for both working-class families at Jagaddal and middle-class families in Calcutta.

Appendix V

ON ALTERNATIVE APPROACHES TO THE DERIVATION OF THE LINKING FACTOR FOR CONVERTING THE INDICES ON BASE 1944 TO INDICES ON BASE AUGUST 1939

1. Several methods of deriving linking factors are mentioned in *Working Class Consumer Price Index Numbers in India—a Monograph*, Vol 1, 1972, prepared by the Labour Bureau, Government of India (see Chapter II, Section 9.6, pp 35-37). It is, however, noted that the linking of two series of consumer price index numbers "is normally (italics ours) achieved by splicing the old series on to the new series at a common point of time which is usually the starting point (or the base period) of the new series. The most expeditious method of splicing is

the simple arithmetical ratio method.... Thus, the index figure in the old series, corresponding to the base period of the new index, would provide the linking factor." The Monograph also observes that "general experience throughout the world shows that the simple arithmetical ratio linking is by far the most practical and convenient method". This method would give a linking factor equal to 2.79, which is the average of twelve monthly indices of the August 1939 series during 1944, if the indices on base August 1939 are not revised in any manner.

2. The existing linking factor, 2.63, for converting the CPI numbers on base 1944 to indices on base August 1939, appeared to have been derived in an unusual manner (see paragraph 2.8.2 of text). The procedure followed resembled apparently the *second* method mentioned in the Labour Bureau Monograph (*op. cit.*, p 36). It might be argued that if the CPI series (base: August 1939) built on the Laspeyre's formula were linked to the CPI series (base: 1944) built on the same formula, there would be no continuity of the basket of goods and services priced in the two series. Such objections were presumably sought to be overcome by working out a Paasche-type index in the *older series* in respect of the later

series, and using this as the linking factor. There were, however, serious difficulties in giving shape to this idea. The price quotations in respect of August 1939 were not available for all the items (and specifications) that were included in the CPI series on base 1944. It is not clear how these difficulties were overcome.² Such data problems are recognised in the Labour Bureau Monograph, which states that this second method of using a Paasche-type linking factor "could be regarded as only of academic interest" and that "on balance of considerations, the arithmetical ratio method (at the base period of the new index) is the best suited and operationally most convenient...." (*ibid*)

3. When the linking factor 2.63 was adopted by the State Government in preference to the factor 2.79 derived by the standard method favoured by the Labour Bureau, the following argument was put forward in favour of the former. Indexes on base 1944=100 by the two linking factors mentioned above in respect of the years 1952 to 1954. It appeared that the resultant indices were much closer to the actual indices on base August 1939=100 when the factor 2.63 was used than when 2.79 was tried. This argument, however, hardly bears scrutiny. The many deficiencies of the CPI series on base August 1939 have been noted in the text. The freezing of the group indices, viz., housing and miscellaneous, is especially open to criticism. Prices of miscellaneous items rose steadily before and after 1944, and the "miscellaneous" group index of 150 seen became a serious underestimate. House rent also rose sharply at least after Partition. If only for these reasons, as the years passed, the downward bias of the CPI numbers on base August 1939 became more and more serious. And surely one's object cannot be to estimate the inaccurate indices of such a series during the fifties; the object should and must be the accurate measurement of changes in the price level. Anyway, coming more to the point, one may note that while the housing group indices were frozen in both the series, the miscellaneous group index was frozen in the series on base August 1939 but not in the series on base 1944. As a result the differential downward bias of the former series relative to the latter would grow with the passage.

... Ramamurthi Committee revised the housing group index for the year 1960. There is absolutely no reason why in such a situation where the later series is far more reliable, the older series should not be used as little as possible and the common point of time chosen for splicing the older series on to the new one should not be the earliest possible year, namely, the calendar year 1944.

6. In support of the above, we may quote the following paragraph from the Report of the Ramamurthi Committee (*see pp 12-13*):

"7.11. We have examined the different possible ways of linking the old series with the new series and came to the conclusion that the simple arithmetical ratio based on the Lespeyre approach of linking at the base year of the new series was the most suitable and operationally convenient course to be adopted. The linking factor, according to this approach, is obtained by dividing the corrected average annual

general index on old base for the year 1960 by 100, which is the base year value of the new index."

Appendix VI

VIEWS OF EMPLOYERS' REPRESENTATIVES

THE five organisations of employers expressed very similar views in their written memoranda and made a joint statement at the time of the oral evidence. The major points made by them were as follows:

(1) It was submitted that the examination of the limitations, deficiencies, etc. of the working class CPI series for Calcutta on base 1944 and on base 1960 was outside the terms of reference of this Expert Committee.

(2) It was noted that the linking factor for converting the indices of the 1960 series to indices on base 1944 had been thoroughly examined by another Expert Committee headed by Dr. E. Ramamurthy and that the linking factor had been raised from 1.51 to 1.61 as per recommendations of the said Committee. It was accordingly submitted that there was no scope for re-examining this linking factor *do novo*, as otherwise, there cannot be any finality in such matters.

(3) It was also stated that from the very beginning the construction of the current series on base 1960 had been done in a very thorough and scientific manner, under the guidance of the Technical Advisory Committee (set up by the Government of India in 1954) which has followed the standards laid down by the ILO, and representatives of employers and employees had been consulted at various stages of the work. In view of this, again, it was submitted, the question of examination of limitations and deficiencies of the 1960 base series did not arise.

(4) It was urged that in examining the pricing deficiencies of the various index items and weightages of the items included in the 1939 series, the committee should not envisage any revision of the fixed basket of goods and services during the lifetime of the series so as to take account of the changing consumption pattern. It was also stated that since the basket for index base 1939=100 was fixed as a result of a family budget enquiry conducted among the workers in and around Calcutta in 1939, any addition to or alteration in the said basket would in fact amount to construction of a new index. As the detailed results of the enquiry and the methods adopted for deriving the weighting diagram are not known, it would be impossible to rectify the weights at this distance of time.

(5) Regarding the treatment of house rent, the memoranda stressed the difficulties of getting a satisfactory houses rent index. Complications arise when new houses are provided for the new entrants to the labour field and the standards of housing constructed for labour improve. Average house rent is not strictly comparable over time. Besides quality, the age factor of houses cannot also be ignored. One must also take account of free and near-free accommodation provided to many workers. (All these arguments indirectly supposed

the freezing of housing group index at x 100 in the 1939 series). Doubts were also expressed about the availability of suitable data for working out indices measuring changes in house rent since the year 1939.

(6) Regarding the miscellaneous group index of the 1939 series, it was submitted that "since the details of items included in the miscellaneous group and their weights were not available from records, the Labour Department, Government of West Bengal, had no other alternative but to keep the group index since 1943 unchanged at 150 points". "In the absence of records and relevant information it is not possible to rectify the deficiencies...."

(7) On the question of controlled and open market prices, it was stated that rationing was introduced in Calcutta with effect from 31 January 1944 and discontinued with effect from 10 July 1954. There was thus no question of taking controlled and open-market prices during the base period of the 1939 series. There was also no rationing in Calcutta during 1956-57 when the 1939 series was discontinued and linked with the 1944 series. Again, where rationing was introduced in 1944, each adult was supplied cereals from the ration shop at the rate of 4 seers per head per week. Now the 1958-59 working class FLS in Calcutta centre showed that the consumption of cereals per adult per week was 3.73 seers approximately. Hence it was argued that the quantum of ration supplied in 1944 was quite adequate for working-class households and the question of their purchasing from the open market did not arise.

(8) Regarding the method adopted for arriving at the existing linking factor of 2.63 for deriving the 1944 base series to the 1939 series, the employers' representatives thought that this had been obtained as the ratio between the average (347) of the 1939 series for the year 1956 to the corresponding average (132) of the 1944 series.³ They justified this procedure by referring to an agreement reached in the 25th Session of the Indian Labour Conference held in August 1968. It had been agreed in this meeting that in principle the linking factor—another linking factor was under consideration—should be obtained on the basis of the relationship between the average of the two series for the period of 12 months ending in the month in which the old series would be discontinued. (It should be noted here that the 1939 series was continued till June 1957.) It was urged that it would be more rational and scientific to follow this approach which watches the behaviour of the two series just before the older one is discontinued, than the follow the usual procedure followed in linking the 1960 base series to the 1944 base series. In this connection, it was also stated that the upward revision of the linking factor from 1.51 to 1.61 for deriving the 1944 series from the 1960 series had resulted in upward revision for the linking factor for deriving 1939 series from the 1944 series, as the CPI number on base 1944 for the year 1956 had not been revised at the time of revising the CPI number for the year 1960 on base 1944-100.

It was also stressed that since wage settlements

had been entered into taking the existing linking factors into consideration, any changes in these factors after so many years might upset these settlements and adversely affect employer-employee relationship. It was urged that the revision of the linking factors, if any, should not affect the payment of DA with retrospective effect.

In short, it was urged that no change was warranted in the linking factor for deriving working class CPI series based on 1939 from the working class CPI series based on 1944.

Appendix VII

VIEWS OF EMPLOYEES' REPRESENTATIVES

THE representatives of employees' organisations submitted fairly extensive memoranda and supplemented them by detailed observations at the time of oral evidence. The following is a brief summary of the main points made by them.

I. Regarding the series on base August 1939

(a) The family budget enquiry which provided the weighting diagram of the 1939 series was conducted on a very limited scale during a few MONTHS of the year 1939. Such enquiries should, in principle, cover a twelve-month period, in order to take account of seasonality in consumption pattern. Naturally, the weighting diagram is unreliable and unscientific. The weight (52.5%) of the "food" group is suspiciously low. As the report of the enquiry is not available, information from other sources may be utilised to rectify the deficiencies of the weighting diagram of the 1939 series.

(b) The year 1939 was a period of rising prices, and August is usually a high-price month. So the choice of August 1939 as the base period is objectionable. The base prices being unduly high, the CPI numbers were depressed and did not correctly reflect the changes in "cost of living". Actually, the base period should have been a twelve-month period, rather than a single month.

(c) Only 19 items were considered for the construction of CPI numbers. There was no real standardisation of these items to ensure high quality of the price collection work. Thus, in case of clothing, the only item mentioned was "dhuti and saree" and the specification was "coarse cloth" simply.

(d) The freezing of the house rent index at 100 and of the miscellaneous group index at 100 (up to December 1942) and later at 150 (from January 1943) was strongly criticised. As regards the former, it was pointed out that according to the 1958-59 FLS enquiry, an overwhelming majority of the working-class families in Calcutta lived in rented premises; self-owned houses and employers' quarters accounting for a small proportion of these families. The picture was very likely the same ever since 1939. It would also be too much to contend that the renter families continued to live in the same premises and that there was no rise in rents between August 1939 and 1944.⁴ It was not for nothing, some representatives argued, that the then Bengal Government had

to promulgate "The Bengal House Rent Order, 1942", "The Calcutta House Rent Order, 1943", and "The Calcutta House Rent Ordinance, 1946". It was stated by some representatives of the workers that whereas the average monthly expenditure on house rent per working-class family in Calcutta was Rs 4.81 according to the 1944-45 family budget enquiry, the corresponding figure was Rs 2 in August 1939. But this latter figure was not substantiated by any evidence.

(e) Some representatives of the workers compared the base prices of the "August 1939 series" with the corresponding prices published in the Calcutta Municipal Gazette and claimed that the former prices were somewhat higher for a number of items.

II. Regarding the series on base 1944

(a) The introduction of this series as late as July 1957 was severely criticised. It was already time, argued the trade union representatives, for starting a new series, since the weighting diagram had already become outdated. This, they felt, had depressed the CPI numbers of the 1944 series.

(b) As prices were abnormally high owing to war conditions, the choice of the year 1944 as base period was extremely unsatisfactory.

(c) The weightage of the housing group, only 6.71%, appeared to be too low, according to some groups of representatives.

(d) The house rent index was frozen at 100, as in the 1939 series. The Ramamurthi Committee, composed of Government officials, revised the group indices for housing and clothing upward, before revising the linking factor between the 1944 series and the 1960 series. The revision was done in an arbitrary and *ad hoc* manner and did not fully rectify the deficiencies. Evidence from other statistical enquiries was produced to show that the estimated average expenditure on house rent per working-class family in Calcutta (Rs 7.36) as obtained from the FLS enquiry of 1958-59, was incredibly low. This estimate has been used by the Ramamurthi Committee for revising the housing group index.

(e) Only controlled prices were taken into account in case of items subject to price control.

III. Regarding the series on base 1960

(a) The weighting diagram was based on the 1958-59 Family Living Survey of industrial workers in Calcutta. The Report of the survey shows that a large number of casual workers were included in its scope. About 55% of the families turned out to be single-member families, and the average family size was only 2.53, that is 2.15 consumption units. The size distribution of family incomes as well as the consumption pattern showed that the survey had given high weightage to the extremely low income groups. Such results made some trade union representatives doubt the representative character of the sample. The representatives demanded the modification of the weighting diagram for giving increased weightage to fish, meat, etc.

(b) Results of other statistical enquiries were cited

to prove that the weightage of the housing group was too low, and that the housing group index of the 1960 series was serious underestimate of the corresponding true index. It was pointed out that no information is available about the prices and the procedure actually used for arriving at this group index. Accordingly, the suggestion was made that this index should be continually revised on the basis of investigations carried out by a Committee including the representatives of central trade unions. The following points were also made in this connection:

(i) The average monthly rent of flats under the Government Industrial Housing Scheme in the Calcutta Industrial Area was Rs 33 on 31 December 1972. This was put forward as an indication of the current level of house rent. Rents of privately owned flats is expected to be much higher. It was stressed that an increasing number of workers are coming from middle class families and living in such flats rather than in *bustees*.

(ii) The average monthly expenditure on house rent per working-class family in Calcutta was estimated as Rs 7.36 from the FLS enquiry of 1958-59. The corresponding figure for June 1973 was worked out as Rs 30.72. This was obtained as the weighted average of per family rents of (a) employers' quarters (average rent taken as Rs 15 per month), (b) self-owned houses (imputed rental taken as Rs 10), (c) privately owned dwellings (rent taken as Rs 35), and (d) dwellings owned by public bodies (taken as Rs 33 *vice* sub-paragraph (i) above). As 80% of the families lived in privately owned dwellings, the figure assumed in (c) above is crucial, and no evidence was produced to support this figure.

(c) The organisation for collecting weekly prices and for supervising the same was criticised as weak and faulty, and it was suggested that the organisation be strengthened by appointing some full-time staff and by improving the remuneration, etc., of the part-time staff. Prices quoted by shopkeepers are seldom verified from actual purchases, not to mention verification through actual purchases by the Price Collector. There is also no system of independent checking of price data collected by another collector.

(d) A Resolution of the International Labour Office was quoted in support of the view that "in a period of price control or rationing, where illegal prices are charged openly... such prices should be taken into consideration, as well as controlled prices". This tenet was not being followed by the authorities in spite of repeated urging. According to the results of the FLS (1958-59), the monthly consumption of rice and wheat was 32.52 kg per average working-class family in Calcutta consisting of 2.53 persons or 2.15 consumption units. The quantity currently obtained by such a family from ration shops works out to 16.26 kg only. Since the short-fall of 16.26 kg entirely of rice, is being purchased in the open market, the CPI number should utilise the weighted average of ration prices and open-market prices for rice, instead of the ration prices as used at present. This would raise the CPI number *substantially*. Similar procedure should be followed for Calcutta centre in respect of sugar, coal,

milk, kerosene, bread, mustard oil, vanaspati, etc. Milk, it may be noted, is not an average of this price and the price of milk supplied by small businessmen should be used for index compilation.

(e) It was urged that the sample of markets and shops should improve its representative character. The exclusion of the industrial area surrounding Calcutta proper was regretted, as most of the industrial workers lived in this surrounding area and the prices of many articles like electricity were appreciably higher in this area than in the Calcutta Corporation area. It was pointed out that in including the Mettiaburuj market, which is outside Calcutta Corporation area, the authorities had themselves deviated from their (wrong) policy of relating the CPI number to Calcutta proper.

(f) Many detailed comments were made about the selection of items. Thus, the inclusion of "Kishalay" was criticised, as this book has a nominal price highly subsidised, by the Government. The need of extending the sample of items was stressed. Some memoranda argued, for instance, that there should be a number of items representing durable goods. For bus and tram fare, it was suggested that the average rates should be used rather than the fare for the lowest stage. A similar point was made for cinema tickets. No evidence was, however, produced to show that the existing procedures are actually depressing the CPI numbers, as stated.

(g) It was suggested that indebtedness be included as an item in the construction of CPI numbers.

(h) It was complained that, contrary to instructions, the price collectors were frequently collecting prices in the evening and collecting prices of stale/inferior goods. It was pointed out that for vanaspati, the printed form mentions that specification as "inferior quality, Prasad, Loose". Such choice of the specification may be objected to on the ground that it lowers the quality of the price data.

(i) Doubts were raised about some prices utilised in recent index calculations for the Calcutta centre. Thus, in September 1973, the price of firewood was recorded as Rs. 8.14 per 40 kg. According to the employees' representatives, the actual price was Rs 10 per 40 kg. The question was raised whether in actual field work adjustments were made for the reduction in weight of bread from 120 gms to 100 gms, or in the number of sticks in a match from 60 to 50 (say).

(j) Last but not the least, the demand was placed by TU representatives that the names and addresses of shops in each selected market should be made known and that the representatives of central trade unions should be permitted to verify the prices collected by the official agency and also to examine the actual computation of the CPI number.

NOTES

¹See: 1. P.C. Mahalanobis, *Bengal Labour Enquiry—Draft Report: Jagaddal; First Sample 1941*. Printed but unpublished. Statistical Laboratory, Calcutta.

2. S. Bhattacharyya, "A Note on the Scale of Minimum Wage for Jute-mill Workers of Bengal on the Basis of Pre-war Prices," *Sankhya*, Vol 8; pp 282-4, 1947.

3. H.K. Chaturvedi and S. Bhattacharyya, "On the Change in Standard of Living of the Jute Mill Workers of Jagaddal between the Years 1941 and 1945," *Sankhya*, Vol 8; pp 360-71, 1948.

4. K.P. Chattopadhyay and H.K. Chaturvedi, "How Jute Workers Live," *Science & Culture*, Vol XII; pp 376-9, February 1947.

²However, the present Committee found that the figure 2.63 could be arrived at by following a hybrid (see text paragraphs 2.8.3 and 2.8.4).

³The linking factor would come to 2.62 if, instead of the single year 1956, the averages over the years 1950 to 1956 were considered for the purpose.

⁴Even in case of old tenancy, house rent did increase appreciably over time. Also, the poor people changed their residence rather frequently and paid higher and higher rents as new tenants. See Dr S.N. Sen, *The City of Calcutta*, p 156.

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Bequest of Slovak National Rising

JAN PESL

OF all the traditions which have emerged in the course of the historical development of Slovakia that of the Slovak National Rising is the most vital.

Against the background of these revolutionary events stood out the courage of the ordinary people who were determined to defend their freedom by deed, if need be by arms. Out of this tradition there has grown and is growing all that is new and creative, all that has inspired the further development of Slovakia and continues to shape its progress. The Slovak people will always find the Slovak National Rising a source of moral strength, self-confidence and justified pride.

At the same time, Slovak National Uprising presented a revolutionary bequest for entire mankind due to its internationalist character. Thousands of foreigners, Russians, Frenchmen, Poles, Yugoslavs, Rumanians as well as Germans who escaped from Nazi camps or were dropped by the allies, found an opportunity to fight for a common cause.

Partisans had been active for some time and the Communist Party of Czechoslovakia had been carrying on an extensive underground struggle against fascism when, thirty years ago, on August 29, 1944, the spark of revolution set aflame the towns and villages of north, central, south and east Slovakia. The common people, the workers, the farmers, the partisans and soldiers not only attracted the attention of the whole world but demonstrated their ability, as patriots, to meet the exacting demands of the period they lived in.

About sixty thousand Slovak soldiers and fifteen thousand partisans rose against the fascist forces in Slovakia. Never before had the fight for national and social liberation, for a common state of the Czechs and Slovaks assumed such proportions.

The importance of the 1944 military and political events in Slovakia was multiplied by the large-scale offensive of the Soviet armies. Together with the First Czechoslovak Army Corps, the Soviet armed forces at the risk of great sacrifices, attempted to fight their way at the Dukla Pass

through the Carpathians and through German defences and come to the aid of the fighters of the Slovak National Rising.

The Carpathians—Dukla operation has gone down in history as a proof of the fraternal concern of the people of the Soviet Union for Czechoslovakia. It was an act which sealed the bonds of friendship and alliance between the two countries.

During the memorable year of 1944, the Slovak people, arms in hand, started to settle accounts with the past which had always entailed material and spiritual misery. The first decisive attack on the old social system was made in the name of the principles of proletarian internationalism, and the foundations were laid of a people's democracy in a new Czechoslovak Republic, a state of two equal nations—the Czech and the Slovak. This was the greatest achievement of the Rising.

In the 1944 Rising, for the first time in Slovak history, the idea of a new type of State power based on the people was implemented by means of the Revolutionary National Committees (local bodies formed by the patriots illegally to fight the Nazi hordes and run parallel administration). Thus the Slovak National Rising can be defined as the beginning and part of the national and democratic revolution on Czechoslovak territory.

It became clear that the working class led by the Communist Party was the strongest force in the anti-fascist struggle which it carried on to ultimate victory in 1945.

The mass participation of the people in the Rising further demonstrated that the people were the driving force of social progress and of revolutionary changes. Thanks to the people, developments on the territory held by the revolutionaries proceeded in such a way that the bourgeoisie could not attempt to carry out their planned military coup which was to have taken place before the arrival of the Soviet army.

On the contrary, the struggle against the Slovak and German fascist forces had such wide popular support that it created