COUNCIL OF INDIAN EMPLOYERS

SECOND SUPPLEMENTARY MEMORANDUM

TO THE

NATIONAL COMMISSION ON LABOUR

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CONTENTS

PREFACE

In November, 1968, on an assignment given by the National Commission on Labour, Dr. A. Fonseca of the Indian Social Institute, New Delhi, submitted to it a Note (Appendix A) on the subject of Need-Based Wage. Simultaneously, the text of the Note appeared in the Press.

For the first time, Dr. Fonseca quantified the concept of the Need-Based Wage in respect of 48 centres in the country, for the year 1967. *Prima facie*, the figures estimated by Dr. Fonseca appeared to be unrealistic, in that the Need-Based Wage for an industrial worker in Jamshedpur was the highest. The figures were Rs. 274/- for Jamshedpur, Rs. 240/- for Calcutta and Rs. 235/- for Bombay. Though the calculations and the resultant figures may be technically justified by the author, they cannot but appear unsatisfactory, to say the least, to the layman.

Lest the conclusions drawn by Dr. Fonseca may be taken serious notice of by the National Commission on Labour, Mr. Naval H. Tata, who is a Member of the Commission and also President of the Employers' Federation of India, immediately drew the attention of the Members of the Commission to the basic defects in the methodology followed by Dr. Fonseca. This was done in a Note submitted by Mr. Tata to the Commission early in December, 1968. A summary of the main points made in the Note is given in Appendix B.

The Committees of the Employers' Federation of India and the All-India Organisation of Industrial Employers, who were seized of the problem, decided that a joint Memorandum, conveying the Employers' viewpoint on Dr. Fonseca's thesis should be submitted by the Council of Indian Employers. The Council, in turn, set up a small Expert Committee to prepare an appropriate representation to the Commission. The Committee's views, which are endorsed by the Council, are incorporated in the pages that follow.

MEMORANDUM ON THE NEED-BASED WAGE

One of the issues around which the problem of wage fixation has revolved ever since the Committee on Fair Wages submitted its Report in 1949, is the concept of the Minimum Wage. This Committee considered the minimum wage to be the lower limit and the capacity of industry to pay to be the upper limit of the fair wage. It held that the 'minimum wage' must provide, not merely for the bare sustenance of life, but for the preservation of the efficiency of the worker by providing for some measure of education, medical requirements and amenities. As their definition was couched in general terms, the wage fixation authorities found it difficult to give concrete shape to it. In order to facilitate the application of this concept, the Indian Labour Conference at its 15th Session in 1957, defined the 'Minimum Wage' and laid down certain guidelines to make the concept practicable.

2. The Central Wage Boards, which were subsequently appointed by the Government of India to recommend a wage structure for the different industries, were asked to take into consideration the Recommendations of the Fair Wages Committee. Even those Boards found it difficult to translate the concept in practice, as the Tripartite Resolution on the subject was also vague in regard to such matters as the composition of diet, quality or variety of basic necessities such as clothing, etc. In view of the vagueness of the Resolution, several Boards diverged from them and strove to work out the need-based minimum wage, having regard to the prevailing consumption patterns disclosed by the enquiries into family budgets conducted by Boards.

3. Despite the vagueness of the concept and the guidelines governing it, they have been used to compute the need-based wages. Recently, Dr. Fonseca of the Indian Social Institute, New Delhi, has made estimates of Need-based Wage for 48 centres, through the method of linear programming on a computer. His is perhaps the first comprehensive attempt in quantifying the concept of the Need-based Wage. Although some of the Central Wage Boards had made a pioneering work in the field, yet unlike Dr. Fonseca, they were primarily concerned at the determination of the minimum wage on the basis of the Norms recommended by the 15th session of the Indian Labour Conference. Dr. Fonseca views the problem in an altogether different perspective. He has worked out the amount of need-based wage by postulating the need to ensure the minimum required nutrients through a cheap or least expensive diet and a better standard of living. This Memorandum seeks to examine the approaches as also the implications of Dr. Fonseca's study.

4. The figures of need-based wage may be considered to consist of two distinct components, viz. (*a*) the diet cost and (*b*) the expenditure on basic necessities such as clothing, housing, fuel and lighting and miscellaneous expenditure. As food costs account for 50 per cent to 70 per cent of total expenditure of the working class families, its computation acquires crucial importance in the determination of the Minimum Wage, or as Dr. Fonseca calls it, a "need-based wage". It is for this reason that the methodology adopted by Dr. Fonseca on food costs has been closely examined in Section I of the Memorandum. In Section II, the author's estimates of the non-food items have been examined. Our general observations on the feasibility and the application of the concept appear in the last section.

SECTION I—ESTIMATES OF DIET COSTS

5. The main object of Dr. Fonseca's study is to establish "on a scientific basis the cost of proper diet for an industrial working class family" as "a first essential step towards the determination of a need-based minimum wage". His estimates of need-based wage are intended (*a*) to ensure that the minimum required nutrients are present in the food consumed, and (*b*) to provide these nutrients through a cheap or least expensive diet.

6. As the intention of Dr. Fonseca was thus to provide a nutritious diet, he has tried to improve the existing diets to provide higher quantum of proteins, fats, calcium and vitamins. In improving the diet schedules, he took into account the following three factors :

(1) The consumption pattern of the workers (as reflected by the zonal pattern estimated by the National Nutrition Advisory Committee);

(2) Availability conditions of the item : e.g. rationing in larger cities ensures supplies and controls prices;

(3) The recommended diet pattern of the National Nutrition Advisory Committee.

7. The diet schedules, worked out having regard to the above factors, are designed to provide 2,735.33 units of calories per person per day uniformly for all the 48 centres. The author has claimed that these factors were taken into consideration while estimating the diet costs for the different centres.

Tripartite Resolution Ignored :

8. Although in his study, Dr. Fonseca has adopted a scientific approach for estimating the need-based wage, it does not make the estimates any more credible. In the first place, the author has not complied with the guidelines prescribed by the Tripartite Resolution in regard to computation of food costs, as also the costs of clothing, housing, miscellaneous expenditure. Secondly, the methodology he has followed to compute diet costs and cost of non-food items is defective in several important respects. These are briefly analysed below.

9. To recapitulate, the Tripartite Resolution set out general guidelines to enable the wage-fixing authorities to determine the minimum wage, which it defined as "Need-based Wage". The Resolution expressed that such a wage "should ensure the minimum human needs of the industrial worker, irrespective of any other considerations". To attain this object, the Resolution laid down the following norms, viz.

(i) The minimum wage should be calculated in regard to a standard working class family consisting of 3 consumption units for one earner.

(ii) The minimum wage should provide for a net intake of 2,700 calories, as recommended by Dr. Aykroyd for an average Indian adult of moderate activity.

(iii) It should provide for clothing requirements at a *per capita* consumption of 18 yards per annum (72 yards for a family of four).

(iv) The minimum wage should allow for the minimum rent charged by the Government in any area for houses provided under the subsidised Industrial Housing Scheme for low income groups, and,

(v) It should provide for fuel, lighting and other miscellaneous items of expenditure to the extent of 20 per cent of the total minimum wage.

10. A close perusal of the Resolution shows that it desired that the need-based wage should be computed for a standard family of 3 consumption units per male worker. It also prescribed that the wage should ensure a minimum intake of 2,700 calories, as recommended by Dr. Aykroyd for an average Indian adult of moderate activity. In working out the estimates, Dr. Fonseca accepted the first norm, but did not conform with the second. For, his diet schedules were designed to provide a daily intake of 2,735.33 calories net, an excess of 35.33 calories.

11. In not adhering to the calorific norm, but in conforming to the norm relating to the size of the family, he has observed the Tripartite Resolution more in letter than in spirit. In the first place, the calories provided by his diets were more than the basic calorific requirements of 3 consumption units, which obviously was not intended by the Resolution.

12. Secondly, since the Resolution did not prescribe any specific requirements other than calories, his estimation of the requirements of proteins, calcium, fats, vitamins, etc., had no basis in the Tripartite Resolution.

13. Lastly, his cost estimates were no more bound by the size of the family stipulated by the Resolution.

14. In this context, it may be well to remember that the size of the family which the Resolution envisaged was of a standard family and was based upon the findings of the Family Budget Enquiries conducted during 1943-46 by the Government of

India. Since then, the conditions have altered radically. Due to increase in the employment opportunities under planning and also due to accelerated process of industrialisation and urbanisation, the strength of the wage earners relative to members in the family has gone up considerably. This fact has also been disclosed by the Family Living Surveys conducted by the Labour Bureau in 1958-59. The presence of more than one male earner has been found to be particularly high in the Plantation Centres, where, in the average size of family of 3.26 to 4.90 (in terms of adult consumption units, this comes to 2.71 to 3.89), the earners numbered between 1.62 and 2.11. Since there is thus a high ratio of earners in an average family, and as the Tripartite formula stipulated that the need-based wage should be computed for a family consisting of 3 consumption units per male earner, it becomes necessary to readjust the proportion of consumption units to a single male earner before working out the need-based wage. Such an adjustment would not only conform with the stipulation of the Tripartite Resolution, but would have made a considerable difference in the food cost as well as the cost of need-based wage. In the case of Bombay, for instance, such an adjustment would have scaled down the estimates of Dr. Fonseca from Rs. 134.10 to Rs. 98.78 in the case of food costs and from Rs. 234.85 to Rs. 172.99 in respect of total cost of need-based wage.

Emphasis on Non-Vegetarian Diet :

15. The estimates of Dr. Fonseca do not only pertain to excess intake of calories; they relate mainly to non-vegetarian diet and therefore tend to be higher. It is true that the tripartite Resolution was vague in regard to the composition of diets. In the absence of any specific directive, the Wage Boards generally made use of both vegetarian (improved diet) and non-vegetarian (balanced) diet schedules as suggested by Dr. Patwardhan to compute the notional minimum wages. The vegetarian diet schedule used by the Boards provided for 2,700 calories net, while the non-vegetarian diet schedule was designed to yield 3,000 calories, net. The Boards usually found the cost of non-vegetarian (i.e. balanced) diet to be higher than the vegetarian (i.e. improved) diet. For instance, the diet costs worked out by the Sugar Wage Board for 10 centres, showed that the 'non-vegetarian' diet was costlier by Rs. 23.73 to Rs. 33.15 compared to the cost of 'vegetarian' diet.

16. Further, in his desire to provide nutritious food, Dr. Fonseca took the zonal consumption patterns, and not the centre pattern, as the lower bound and the recommended zonal diet schedules as upper bound. These two bounds were qualified by consideration of the availability conditions, as for instance, the quantum of rice or wheat available under rationing. Consequently, the diet schedules worked out by him diverge sharply from the prevailing consumption pattern obtaining in a centre. This point is illustrated with reference to Bombay in the following Table.

TABLE 1

Consumption Pattern of Working Class in Bombay

(Per Consumption Unit Per Day)

(In Grammes)

Food Items	Consumption Pattern as Disclosed by the Family Budget Survey (1958-59)	Western Zonal Pattern		Author's Estimated Consumption Pattern
		Prevailing	Recommended	
1	2	3	4	5
1. Cereals ...	420	435.44	439.42	439
2. Animal Food ...	39	32.88	70.88	63.8
3. Milk ...	69	83.34	99.22	83
4. Vegetables ...	107	147.42	212.62	148
5. Dals ...	48	52.44	92.14	100
6. Sugar, Gur ...	41	43.37	42.52	45
7. Oils, Fats ...	28	30.6	56.70	50.2

17. A close perusal of the above Table reveals three facts : First, the actual consumption pattern in Bombay, as disclosed by the 1958-59 Survey, markedly differs from that of the prevailing zonal pattern (see Column 3) in almost all items except the consumption of sugar, gur and oil and fats. Second, the diet schedule estimated by the author also diverges sharply from the prevailing pattern in the centre and the zone (which is a Western Zone in the case of Bombay). Compared to the centre's prevailing pattern, the author's diet schedule provides for a higher intake of most of the items, in particular in respect of animal foods, dals, oils, fats and vegetables. Lastly, the author's estimated pattern greatly resembles the zonal consumption pattern recommended by the National Nutrition Advisory Committee. But since the Recommended pattern, which constitutes upper bound in the estimation of food costs, does not concur either with the zonal or centre pattern, it has also distorted the diet schedule worked out by Dr. Fonseca.

18. It may be added here that the strong bias towards non-vegetarianism in the proposed diet schedule raises a question about its acceptability in view of the generally vegetarian outlook of a large section of the workers. This also raises a doubt whether the provision of animal foods to the extent suggested by the author is desirable and even feasible.

Upper Bounds Exceeded :

19. Although the estimated pattern of the author generally conforms to the Recommended pattern, the adherence is not complete. Actually, the author has exceeded even the upper bounds set by the Recommended pattern in several items. Thus, a perusal of Table 1, shows that the pattern estimated by the author for Bombay has outstripped the upper bounds in respect of Dals (by 7.86 grams) and Sugar and Gur (by 2.48 grams). This deviation in the estimated pattern has further tended to vitiate the diet schedule and also to make it costlier.

20. Further, the author has not imposed the constraints uniformly on various food items, although, in the case of Bombay, he has taken the rationed quantum of cereals. The author discovered by several runs on the computer that, if no restrictions were placed on the variables, the item of "vegetables" appeared as a very high figure in the solution. This is presumably due to vegetables being a comparatively low cost item. However, to overcome this, the author imposed, in the case of Bombay, an upper bound of 250 grams for vegetables, the lower bound being 148 grams which was the actual consumption found in the pattern for the city. In the ultimate solution, the vegetable figure obtained was 148 grams, the lowest that the computer could show. It appears strange that the computer, even when given the choice to go upto 250 grams, did not do so, but showed a steep increase in animal-foods, pulses, and sugar and gur which are surely high cost items. This has thus consequently made the diet costlier. This also throws a doubt on the accuracy of programming.

High Calcium Requirements :

21. Still one more reason for the high cost of the nutritional diet estimated by Dr. Fonseca appears to be due to his adoption of a high standard of calcium requirements. In his study, he has stated that he has taken a figure of 866.66 mgs. This is much in excess of the requirement of 400 mgs. to 500 mgs. suggested by the National Nutrition Advisory Committee. As calcium requirements have almost been doubled, it must have increased the ultimate quantum and the cost of food computed.

22. In any case, it will be admitted that, **by getting the calculated need-based wage, the worker is not going to change his consumption habits and take the various items in the proportions thrown up by the computerised calculation.** If that be the case, he need not have put on the computer various restrictions, e.g. that the quantity of cereals should not exceed what is available under the existing regulations with regard to rationing. The removal of such restrictions on the computer will, by itself, result in throwing up a balanced diet which will cost least.

Food Basket : Only 17 Items Covered :

23. Further, the estimates suffer from a bias, since only 17 items have been selected for the computation of the diet costs. The selected items are those which are normally consumed by industrial workers and for which price data were available. This, however, limits the validity of the food cost estimates in two ways. First, the selection of the 17 items places an arbitrary constraint on the choice or composition of diet; second, the food costs would tend to be influenced by the variations in the prices of the major food items. In reality, a wider choice is usually open to a consumer to choose those items which suit both his pocket and palate.

Prevailing Diets are Adequate :

24. Perhaps, one crucial fact which has been overlooked is the adequacy of the nutritional content of the diets obtaining in many of the centres. The National Nutrition Advisory Committee closely examined the nutritional contents of the prevailing consumption pattern in relation to nutritional requirements as suggested by the experts. The Committee found "that the diets consumed by the industrial workers were comparatively better than that consumed by either the plantation or mining workers". It found that quantity of protein consumed was adequate in all the zones, except the South Zone. The Committee, however, pointed out that the diets were generally deficient in Calcium and Vitamin 'A' in the Mining centres of the Eastern Zone, Central Zone and Northern Zone. The last two zones were also deficient in Vitamin 'C'. Except for these deficiencies, the overall nutritive value of diets was found to be good in most of the centres examined by the Committee.

25. The position in regard to the number of centres in which the nutritional value of the existing dietary patterns was found to be adequate or deficient relative to the nutritional requirements is presented in Table 2.

TABLE 2

Comparison of the Nutritional Value of Food Stuffs Actually Consumed with the Requirements in 22 Centres.

	Number of Centres where actual consumption compared with requirements was found to be	
	Adequate	Deficient
1. Calories	15	7
2. Proteins	16	6
3. Calcium	3	19
4. Iron	22	Nil
5. Vitamin A	9	13
6. Vitamin B	17	5
7. Vitamin C	15	7

Source: Appendix XIV, page 69 of the Report of the Sub-Committee of the National Nutrition Advisory Committee.

26. It will be seen that it was only in respect of Calcium and Vitamin A that the diets were generally deficient in majority of the centres. The deficiency in calories in two Mining centres (viz. Raniganj and Noamundi) and the industrial centre of Jamshedpur was more apparent than real, since the calorie requirements for these centres were estimated for the intake of 3,900 calories per day per consumption unit and not on the basis of 2,800 calories as was done for other centres. A few other centres reported deficiency in Vitamin 'B' and 'C'.

27. **The nutritional deficiency as revealed by a study of consumption patterns in 22 centres was thus not widespread.** Even these could be corrected wherever necessary through suitable adjustment in the existing consumption pattern. For instance, in centres where consumption of cereals was found to be in excess, its intake could be conveniently reduced and the content of other foodstuffs increased correspondingly to offset the deficiency, say, in calcium or Vitamin A or C.

28. To sum up, Dr. Fonseca has not only overstepped the calorific norm laid down by the Tripartite Resolution, but has added altogether a new dimension, namely, of providing nutrition, to the problem of estimation of food costs. For this purpose, he used the diet schedules recommended by the National Nutrition Advisory Committee. But his adherence to the recommended schedules was not total. He overstepped even the upper bounds set out by these schedules. Further, as he based his diet schedules on the recommended zonal patterns, which basically differed from the patterns at the centres, these hardly conformed to the prevailing patterns. His dietary patterns were, moreover, non-vegetarian. This together with his selection of only 17 items and defective price data tended to make the estimates of food costs highly unrealistic. As a matter of fact, there appears no need to estimate the new dietary schedules, when the prevailing patterns in majority of the centres took enough care of the nutritional requirements of the working class.

SECTION II—ESTIMATES OF THE COST OF NON-FOOD ITEMS

29. So far, we have examined the validity of the diet costs. In this section, we propose to consider the methodology followed by the author in computing the cost of non-food items. As noted earlier, the Tripartite Resolution prescribed a scale of consumption in physical or monetary terms for certain specific items or group of items which it directed should be taken into account while computing the need-based wage. Thus, the Resolution directed that the cost of clothing should be calculated on the basis of a *per capita* consumption of 18 yards (i.e. 72 yards per family). As regards housing, it made a specific reference to the rent payable under the subsidised Industrial Housing Scheme of the Government. For fuel, lighting and miscellaneous items, it desired that this should be computed at 20 per cent of the total expenditure.

Non-food Component not Separately Assessed :

30. But Dr. Fonseca did not adhere to these guidelines. As a matter of fact, he followed a highly simplified method for the computation of the cost of the non-food items. He assumed the estimates of food cost as equivalent of the percentage expenditure incurred on Family Living Budget (say 57.1 per cent in the case of Bombay) and computed the cost of non-food component simply as a proportion of the food cost, viz. 57 : 43. In thus computing, he not only computed the cost of the items specified by the Tripartite Resolution (viz. clothing, minimum rent, fuel, lighting and other miscellaneous items) but even covered the expenditure on several items, such as bedding, footwear, personal care and effects, education, recreation and amusements, transport and communication and services (e.g. washing and laundry charges, etc.) which account for more than 20 per cent of the total expenditure. Consequently, Dr. Fonseca's estimates have little validity, so far as non-food items are concerned.

Assumed Rate of Increase in Prices of Non-food Items not Correct :

31. Moreover, the methodology followed by him in estimating the total need-based wage is also not sound or rational. In equating the food component of the cost of need-based wage with the family budget expenditure on food and deriving the expenditure on non-food items simply as a residual of total expenditure, Dr. Fonseca evidently assumed an identical rate of increase in the prices of food as well as non-food items. This assumption is highly unrealistic, to say the least.

32. In Bombay, for instance, the consumer price index of food went up between 1960 and 1967 by 71 per cent. As against this, the rise in the consumer price index for housing was 6 per cent, for clothing, bedding, etc., 41 per cent, fuel and light 58 per cent, and miscellaneous expenditure 43 per cent.

33. In the case of Jamshedpur, the consumer prices during the same period rose by 116 per cent for food, while in the case of housing, clothing and bedding, fuel and light and miscellaneous items, the increases were 6 per cent, 38 per cent, 57 per cent and 38 per cent respectively.

34. It is obvious that the author was aware of this shortcoming, as he himself has stated that the results yielded by the computer **"are valid for only that part of the total wage comprised by the food component".**

SECTION III—GENERAL OBSERVATIONS

35. In this section we discuss the principles which should be taken into account before determining and applying the need-based wage.

Consideration Within the Economic Framework :

36. The question of the determination of need-based wage cannot be considered in a vacuum or independent of other socio-economic factors. It has to be considered within a given framework of the economy, having regard to such factors as the availability of supplies, prevailing wage rates, needs of the industry and the requirements of planning. In other words, any alteration in the prevailing wage equilibrium needs the overall consideration of economic and social policies, since their interaction is bound to affect the economy as a whole.

Availability Conditions Not Taken into Account :

37. Among the factors which deserve special consideration in the fixation of need-based wage is the capacity of the economy to meet the additional demand for wage-goods resulting from increase in wages. Such a consideration becomes all the more urgent, as the idealistic norms, which form the basis of the need-based wages, are usually out of line with the current state of supplies. In a shortage-ridden economy like ours, the question of availability of goods *vis-a-vis* need-based wages calls for a more careful and thorough examination. The Council feels that the present is not a proper time to promote all-round increase in consumption to accord with the idealistic norms, when the increase in social savings and capital formation is the need of the hour. Further, the grant of higher wage, in scarcity conditions, would not only be self-defeating, but would only help to confer a privilege on a very small section of society. In this context, it would be worth noting the valuable observations of the Second Pay Commission (1957-1959). Said the Commission :

> "There can be little meaning in drawing up a budget satisfying nutritional and other standards, and decreeing that the minimum wage should correspond to the total cost of that budget, without considering whether the economy would be in a position to supply the goods and services postulated. And we have found, on examination, that while the standards set in the particular balanced diet formula may be feasible in respect of pulses, they are clearly impracticable in the case of other foodstuffs such as fruits, milk, meat, fish and eggs. . . . The gap between the present or planned supplies, and the quantities that would be needed on the basis of those included in Dr. Aykroyd's balanced diet is equally wide in the case of other animal foods. These facts have special significance when considered with the finding of nutrition surveys of population groups in different parts of the country that the pattern of deficiency diseases is largely attributable to deficiency of 'protective foods' rather than to deficiency of calories."

The Commission further observed :

> "In any case since it cannot be the object of any rational social policy to ensure a balanced diet to a particular section of the community at the cost of vast numbers whose diet is even more unbalanced and deficient than that of the particular section, determination of minimum wage on the basis of such a balanced diet is clearly unjustifiable. It would be a different matter if a minimum wage so determined were recommended as an objective to be attained over a period of years." (P. 66)

Impact on Prices :

38. In the absence of enough availability of foodstuffs, the purpose of granting need-based wage would adversely affect the price stability in the economy. This is because the increase in the purchasing power resulting from the payment of need-based wages would only feed the flames of wage-price inflation. The rise in demand for the foodstuffs, which is implicit in the payment of need-based wage, would produce a strain on the supply which, in view of the present low marketable surplus and low agricultural productivity, would tend to push up their prices. In the context of the peculiar wage system obtaining in the industrial sector, in which the rise in consumer prices is automatically compensated through the system of dearness allowance, any rise in the prices of foodstuffs would lead to corresponding rise in consumer prices and consequently in the dearness allowance. Such a rise in the face of inelastic supply of food articles would inevitably result in aggravating wage price inflation. In computing the food costs, it is thus imperative to estimate them, not in relation to any ideal norms, but on the basis of the pragmatic considerations regarding the availability of foodstuffs.

Allowance for Fringe Benefits :

39. In the determination of the need-based wage, it is also essential to make allowance for the value of fringe benefits provided by the employers. The Fair Wages Committee had recommended that deductions should be made for that part of the benefits which go directly to reduce the expenses of a worker on items which are taken into account for the calculation of the need-based wage. Such deductions become all the more imperative since fringe benefits account for a significant element in the total wage bill of the industries. According to a Survey of the Fringe Benefits in Indian Industries conducted by the Employers' Federation of India during 1961-62, the expenditure incurred by the Industry on the provision of medical assistance, subsidised foods, housing, value of pay-

ments in kind and other payments accounted for 9.40 per cent of the total wage bill (comprising basic wage, allowances and fringe benefits) in the Plantation sector, 3.38 per cent in the Mining sector and 3.14 per cent in the Manufacturing sector. Taking all sectors together, the average expenditure on fringe benefits works out to 4.65 per cent of the total wage bill. Further if we take into account the minimum bonus of 4 per cent paid by the companies per annum irrespective of the losses sustained by them, the extent of burden borne by the industry by way of fringe benefits would become clear.

40. It may be mentioned here that the view of the Fair Wages Committee has been accepted by most of the Central Wage Boards. Some of the Boards, viz. Cement, Iron and Steel and Coal Mining even gave practical effect to the Committee's recommendation by making deductions on account of certain fringe benefits expenditure. Thus, the Cement Board suggested deduction to the extent of Rs. 3 for the medical and educational facilities provided by the Cement companies, while the latter two Boards made allowance for the expenditure incurred by the employers on the provision of foodgrains at concessional rate.

41. If allowance is made for fringe benefits, the existing minimum wages would compare favourably with the estimates made by Dr. Fonseca for some centres; for instance in the case of Madras where the monthly average minimum wage (comprising basic wage and dearness allowance) paid to a lowest-paid employee in the cotton textile industry in 1967 came to Rs. 177.34 as against the figure of Rs. 180.89 estimated by the author. In the cotton mills in Bhavnagar, the average monthly minimum wage which amounted to Rs. 187.84 actually exceeded the computed estimate of Rs. 185.80. On the other hand in several industries, particularly in the plantations, the mining, the jute textile and the Engineering, the fixation of the need-based wage in the manner suggested by Dr. Fonseca would entail sharp increase in wage payments.

Hypothetic Diet Schedules Useless :

42. But the real heart of the problem is whether the use of idealistic norms in the determination of need-based wage would ensure nutrition and better standard of living among workers. This question assumes particular relevance in respect of the idealistic diet norms which go into determination of the need-based wage. This is because any ideal pattern of diet is unlikely to be accepted or popular with the working class. The National Nutrition Advisory Committee has sounded caution on this point. In its Report the Committee stated :

> "A whole range of cheap foodstuffs are available and so by a judicious combination of these foodstuffs, it is possible to arrive at diet schedules which could be satisfactory from the point of view of nutrition, etc. But there is no point in drawing up such hypothetical diet schedules which will not be in accordance with patterns of consumption. While a change in the pattern of consumption might be desirable from the point of view of health and nutrition and economy, such changes cannot be brought about simply by the prescription of a balanced diet which will adequately meet these requirements. Even in respect of well-to-do and educated classes of population the diets are often ill-balanced although financially they can afford to consume a better diet. Therefore, in recommending a diet schedule we cannot make any significant changes from the existing pattern. Any change in the pattern of consumption is likely to be slow and has to be preceded by sustained education in Nutrition and Health." (P. 34)

43. It is obvious that the mere payment of a need-based wage, will not by itself secure the desired improvement in the nutritional content which Dr. Fonseca has suggested. If the object is to add certain proteins or calcium, this could easily be achieved by providing workers with tablets to supplement their present diet.

Precept and Practice :

44. It is clear from the foregoing observations that the estimates made by Dr. Fonseca are highly hypothetical, and based on wrong premises. They have no relation to the actual facts of life. What would be the result of accepting his findings? This would mean a wholesale revision of the wages all over the country. Such a revision would produce unsettled conditions in industries, where the wage structure has been determined, after due consideration, either through collective bargaining, adjudication, or wage boards.

45. Further, such a revision would prove disastrous to the stability and growth of industries by requiring

industries to pay higher wages when their liquid resources have continued to be squeezed by the rise in prices of materials on the one hand and the payment of dearness allowance on the other. This together with the burden imposed by taxes and the payment of bonus under the statute, is likely to affect the pace of capital formation in industries. Had the paying capacity not been a major criterion, the Union Government would not have grudged the payment of need-based wage (of Rs. 200/- p.m.) as demanded by its employees last year.

The Commission's Task :

46. Since the Indian Labour Conference of 1957 laid down certain broad guidelines for the wage fixing authorities, several misconceptions, some of them ideal and other ideological, have grown round the concept of the so-called "need-based wage". In view of the insurmountable difficulties involved in giving effect to this concept, as propounded by the Labour Conference, it is essential that the National Commission on Labour should leave aside this concept and consider, *de novo*, the problem of fixing minimum wages for various types of employees under the economic conditions of our country. As one of the terms of reference of the Commission is to report on "the need for fixation of minimum wages including a national minimum wage", the Council would invite the Commission's attention to the following recommendations made by the Meeting of Experts convened by ILO on **Minimum Wage Fixing and Related Problems, with special reference to Developing Countries.** The Experts, who met in Geneva in September/ October 1967, have suggested four major criteria for fixing minimum wages.

47. **First, the needs of the workers :** The Experts have stated that if a "minimum wage is to have any significance it must be related in some way to the needs of workers". They have, however, opined that the "difficulty lies in specifying these needs precisely". "A wage earner requires most of all food, clothing and accommodation. But it is hard to specify even these exactly. Experts on nutrition hold different opinions on the necessary diet to help a man to be healthy and active, and this does depend in part on the type of food to which he has become accustomed. In other categories of expenditure, the minimum standard is still more a matter of social convention." The Experts feel that there is a basic dilemma here. For, if "the concept of human needs is interpreted very broadly in a poor economy, it will lead to the setting of wages at a level which throws out of work many of those who are in greatest economic need. On the other hand, if it is interpreted too narrowly, it will have little effect on actual wages, and may indeed be taken as an excuse for paying wages that are quite unreasonably low". The Experts have therefore held "that human needs have to be interpreted relatively, i.e. in relation to the economic levels of the country concerned. Yet an objective minimum standard is necessary for each country, cast in physical terms as far as possible (e.g. so many pounds of rice, etc.). This standard should be such as to end conditions of labour which in the circumstances of that country would be considered "sweated labour", at the lowest cost in terms of swelling the mass of unemployment."

48. **Second, Capacity to Pay :** The Experts have stated that the "capacity to pay lacks precision as an operative criterion for minimum wage fixing. The problem is still further complicated by the existence of firms with different levels of productivity in the same industry. If wages are related to the capacity to pay of the most profitable firm, others will be driven out of business, but if to the least profitable, then the others will continue to pay lower wages than they could". They have therefore held that capacity to pay can best be interpreted in relation to the economy as a whole.

49. **Third, Living Standards Elsewhere in the Economy :** The Experts have stated that in "countries where a substantial fraction of the labour force is engaged in peasant agriculture, the most obvious standard of comparison is the living standards of peasants". They have, however, stressed that "this criterion would be useful for national minimum wages only, the floor to the living standards of workers. There would be nothing to stop any groups of workers from negotiating wages above the national minimum".

50. **Fourth, Economic Development :** The Experts have stated that although "an objective standard based on the human needs of workers should be established as a guide for wage-fixing authorities, the conditions in the country concerned, and its development needs

and possibilities, must in the last resort determine the choice of standard and its exact definition. Minimum wages cannot be set without taking account of the total social and economic context, including the amount of unemployment, the size of the peasant population and the existing relationship between peasant incomes and wages, both rural and urban."

51. In conclusion, the Council would urge that the Commission may, instead of dealing with a vague ideological concept, recommend the general guidelines for fixation of minimum wages of workmen engaged in the various occupations and industries having due regard to the state of our economy and the development needs and possibilities of our country.

APPENDIX A

THE NEED-BASED WAGE

A Computerised Estimate

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(Relevant material extracts from the original Article are reproduced below)

The computation of a need-based wage has become a very controversial subject in India. While the concept of what the need-based wage should cover is fairly clear and is generally accepted both by the employer and the employee, the actual assessment of the need-based wage in monetary terms has raised endless disputes. This project is therefore concerned with the establishment on a scientific basis the cost of a proper diet for an industrial working class family consisting of three adult equivalent units for 48 cities in India as the first and most essential step towards the determination of a need-based minimum wage for a family unit. In other words, the purpose of this project is to find the quantities of foods normally consumed by an industrial worker such that the minimum required nutrients are present in the food consumed and the worker has to incur the least expense for the food in order to obtain these minimum nutritional requirements.

* * *

Wage Boards

The problem of dietetic and other norms as laid down by the 15th Indian Labour Conference was discussed by the Central Wage Boards for Textiles, Cement, Iron & Steel, Jute and Sugar Industries. The Central Wage Board for the Cotton Textile Industry, which was appointed in 1957 and which submitted its report in 1959, was the first wage board faced with the task of interpreting and applying the need-based formula adopted by the 15th Labour Conference. It dismissed the whole question by saying that no useful purpose would be served by referring to the recommendations of the 15th Labour Conference and the norms adopted by it as those norms were just not attainable in the industry.

* * *

In the same way (as the other Wage Boards), the Iron & Steel Board has also attempted to compute the food component in the need-based wage for its workers. It may be mentioned that in all these cases, 2,700 calories *per capita*, as an average for the three consumption units per working class family, have been accepted as the basic calorific value. But despite these clarifications, wide differences in the cost of the diet as calculated by the trade unions and employers' associations appear. On the basis of the All-India Consumer Price Index, which was 152 (1949 = 100) for the year 1964-65, the need-based wage calculated by various unions and employers amounted to the following:

1.	Government of Bihar Pamphlet	Rs. 230
2.	The Indian National Iron & Steel Workers' Federation	Rs. 324
3.	The All-India Trade Union Congress	Rs. 322
4.	The Indian Metal & Engineering Workers' Federation	Rs. 232
5.	The Tata Iron & Steel Co. Ltd.	Rs. 108
6.	The Indian Iron & Steel Co. Ltd.	Rs. 105
7.	The Mysore Iron & Steel Co. Ltd.	Rs. 107 (vegetarian) Rs. 102 (non-vegetarian)

* * *

National Nutrition Advisory Committee

. . . Under a directive of the Health Ministry, the National Nutrition Advisory Committee set up a sub-committee to examine the problem of the nutritional requirements of the worker and his family and the composition of the diet which was to provide the requisite nutrition. The committee was fortunate to have at its disposal the results of an elaborate Family Living Survey of the Industrial Working Class Family in the country conducted by the Ministry of Labour in 1958-59. The survey covered over 25,000 families in industrial areas in India. Among the main objectives of the survey were the provision of the weighting diagram based on the consumption pattern of working class families for the construction of Consumer Price Indices and better knowledge of the standard of living of these families.

Basing themselves on such data, the National Nutrition Advisory Committee suggested a diet formula per adult consumption unit of a working class family after a thorough study of the nutritional needs of the worker. This was prepared on the availability of food resources in 1960-61. In their report

of March 1965, the Committee made the following recommendations:

(i) For purposes of evaluating the nutritional requirements, the family should be taken as the unit and not the individual worker.

(ii) In calculating the nutritional requirements, the standard working class family should be taken to consist of three adult consumption units including the earner.

(iii) The minimum food requirements for the family as a whole should be a net intake of 2,750 calories per adult consumption unit in respect of families of workers in factories and plantations. Special additional allowances will have to be made for workers in mines and in the comparatively heavier industrial occupations.

(iv) For the provision of adequate calories and other nutrients to the different types of workers in different regions, the Committee suggested some diet schedules. These were drawn up taking into account the existing pattern of consumption, the nutritive value of food intakes, possible availabilities, etc.[1]

An important point that was made by the sub-committee in the report is that "the bulk of the working class families in the under-developed countries consume diets which are unfortunately deficient in calories, animal proteins and calcium."[2] This conclusion of the National Nutrition Advisory Committee has influenced the choice of the appropriate items of consumption in this project.

For the purpose of computing the cost of the food component of the need-based wage, the calorie requirements for an Indian working class family as suggested by the National Nutrition Advisory Committee have been adopted in this project. They are as follows:

Worker	2,816
Wife	2,150
Children	
(i) Age group 0-5	1,230
(ii) Age group 6-14	2,010
Total:	8,206

Similarly, the other nutritional requirements as laid down in the Report, most of which have been adopted from the Special Report Series No. 42 of the Indian Council of Medical Research, have been utilized as the basic table for determining the minimum nutritional requirements of the worker and his family. The only exception has been calcium, the requirements of which have been laid down as equivalent to between 400 mgs. and 500 mgs. per adult per day.[3]

Total minimum requirements have been set down in the following table. They have been calculated for the industrial working class family consisting of father, mother and two children, below the age of 14.

[1] Report of the Sub-Committee of the National Nutrition Advisory Committee on Nutritional Requirements of Working Class Families. Ministry of Health, Government of India, p. (i).

[2] *Ibid*, p. 9.

[3] Calcium Requirements, Report of an FAO/WHO Expert Group, World Health Organisation, Geneva, 1962, pp. 30, 31.

TABLE I

	Protein (gms)	Fat (gms)	Calcium (mgs)	Iron (mgs)	Calories (Units)	Vit. A (IU)	Vit. B_1 (mgs)	Vit. C (mgs)
Man ...	60	45	500	25	2816	3000	1.4	35
Woman ...	50	40	500	25	2150	3000	1.2	35
2 Children ...	80	65	1600	50		7000	2.2	60
				Age				
				0–5 :	1230			
				6–14 :	2110			
Per adult equivalent consumption unit ...	63.33	50.00	866.66	33.33	2735.33	4333.33	1.60	43.33

These figures have been confirmed by Dr. Kalyan Bagchi, Nutritional Adviser, Directorate-General of Health, Ministry of Health, Government of India. They are being used here to compute a wage which will provide the commodities that will satisfy these minimum requirements.

Linear Programming

Given the minimum nutritional requirements as suggested by the Special Sub-Committee and the Special Report Series No. 42, it is possible to calculate the minimum cost of the prescribed diet at both 1960 and 1967 prices more efficiently and with much greater reliability through the use of linear programming (Simplex Method). Linear programming is a mathematical technique for determining the optimum allocation of resources (such as capital, raw materials, manpower, plant and other facilities) to obtain a particular objective (such as minimum cost or maximum profit) when there are alternative uses for the resources. The diet problem has become famous in the literature of linear programming because it was the first economic problem solved by the explicit use of this method.

In solving the diet problem for the Indian worker, the nutrient value of the food consumed by him must be taken into consideration. In other words, how many calories, proteins, calcium, fats, iron and Vitamins A, B_1 and C can be derived from a single kilogram of rice, wheat, cereals and the other foods normally consumed by the industrial worker? Further the quantities consumed and the prices of these items must also be available. These are the structural elements on which the solution to the problem depends.

17 food items normally consumed by the industrial worker have been selected. These have been grouped and reduced to 11 items. Each item is treated as a variable and has therefore been given appropriate algebraic symbol, x_1, x_2, x_3 ..... x_{11}.

Procedure

The procedure to determine the least cost of the improved diet containing the required nutrients at 1967 prices is now described. The nutritive value of the 17 food items in terms of proteins, fats, calories, calcium, iron and Vitamins A, B_1 and C has been arranged in the following table :

TABLE II

Nutritive Value per kilogram

Item	Proteins (gms)	Fats (gms)	Calories (units)	Calcium (mgs)	Iron (mgs)	Vit. A (I. U.)	Vit. B_1 (mgs)	Vit. C (mgs)
Rice ...	68	5	3450	100	31	—	.6	—
Wheat ...	121	17	3410	480	115	490	4.9	—
Other Cereals...	110	34.5	3550	335	95.5	1495	3.5	—
Meat ...	214	36	1180	120	—	—	—	—
Fish ...	337.33	19.66	1573.33	6386.66	93.66	—	.033	—
Eggs ...	133	133	1730	600	21	12000	1.00	—
Milk ...	43	83	1170	2100	2	1600	.4	10
Vegetables ...	30.17	3.62	371.86	973.61	35.11	29446.03	.64	409.61
Dals ...	226.44	20.58	3423.70	731.40	64.81	2167.60	4.854	1.30
Sugar & Gur...	2·5	.5	3905	460	57	—	.1	—
Oils & Fats ...	—	1000	9000	—	—	12500	—	—

The food items were then arranged together with their nutritive values and the minimum requirements in the form of equations which, in linear programming terminology, are called constraints. Similarly, the same variables together with their respective prices were expressed in the form of linear equations which in linear programming terms is called the objective function, since the purpose of the exercise is to reduce this function to a minimum, i.e. to reduce the cost of the diet to a minimum. It is intended to calculate the cost of the minimum nutritional diet for moderate work at 1960 and 1967 prices.

Pattern of Consumption

Besides the nutritive value of the food items, the pattern of consumption of industrial workers in each centre must be kept in mind because the foods they are accustomed to consume cannot be omitted, nor can ratios of these foods to each other and to the total food intake be neglected in the final solution.

The prevailing consumption pattern of industrial workers in the Western Zone (which has been assumed for Bombay in the example given below) is as follows:

TABLE III

Cereals (gms)	Animal Food (gms)	Milk (gms)	Vegetables (gms)	Dals (gms)	Sugar & Gur (gms)	Oils & Fats (gms)
435.44	32.88	83.34	147.42	52.44	43.37	30.6

The National Nutrition Advisory Committee considered this diet inadequate and unbalanced. So we have attempted to improve the diet given above in line with the suggestions of NNAC, keeping in mind however the need to cover the minimum nutritional requirements and to procure the diet at the minimal cost.

Fixation of Bounds

In the first attempt at finding a solution to the problem, the computer, when left completely free to choose the cheapest combination from among the variables without any limitations, provided an answer that had no reference to the workers' consumption preferences. Foods like rice and wheat were completely excluded from the solution. Only 'other cereals', leafy vegetables and oils were suggested by the computer, and all other items were excluded. It is obvious that such a solution was far from satisfactory since the workers' consumption preference must be respected and secured in any acceptable solution.

So it became necessary to impose restrictions on practically each variable and each group of variables. This was done taking into consideration the following:

(1) the consumption pattern of the workers.

(2) availability conditions of the item, e.g. rationing in larger cities ensures supplies and controls prices.

(3) the recommended diet pattern of the National Nutrition Advisory Committee.[4]

It is only then that the programme was fed into the computer which can turn out a feasible solution even when restrictions are placed on the variables.

Take the case of Bombay as an example. Bombay was under a rationing system in 1967, for which year the solution was required. The available ration was 235 gms. of wheat and 67 gms. of rice per adult per day. Representing rice by x_1 and wheat by x_2, a narrow range of values was fixed for the two food items, so that they could enter the solution within the imposed limits; rice between 65 and 70 gms., and wheat between 230 gms. and 235 gms. Since cereals were in short supply, no increase over the amount consumed at that time was imposed even though a slight increase in the total cereal consumption has been suggested by the National Nutrition Advisory Committee. So the range for 'other cereals' was fixed between 105 gms. and 139 gms. 105 gms. was the per day adult consumption in the city.

Similarly, for vegetables, it was discovered by several trial runs on the computer that if no restrictions were placed on the variables, the item vegetables appeared as a very high figure in the solution. So an upper bound of 250 gms. on vegetables was imposed. The lower bound of 148 gms. for vegetables was the per day per adult consumption of industrial workers in the city.

Actual per day consumption of animal food was 33 gms. which was rather on the low side. So an increase was suggested. The imposition of the upper bound of 71 gms. (as recommended by the National Nutrition Advisory Committee) however was introduced to avoid unbalanced results. From the consumer price index, it was found that per day consumption of meat, fish, eggs were respectively 17 gms., 14 gms., 2 gms. So these were included as lower bounds for the respective variables.

Per day consumption of various dals, viz. Arhar, Gram, Masur, Urd and Moong were respectively found to be in the ratio of 64:13:12:8:3. The total amount consumed per day per person was 52 gms., but this was found to be on the low side. So an increase in the consumption of dals was desirable. The imposition of the upper bound of 100 gms. on the total dal consumption was introduced to avoid any undesirable results.

Sugar was a rationed commodity. So a small range of variation was fixed for sugar. This range satisfied the availability conditions of sugar if it were consumed together with gur. The range fixed for sugar and gur was between 43 gms. and 63 gms. A range between 30 gms. and 60 gms. was likewise fixed for oils and fats. In these two cases, 43 gms. and 30 gms. represent the per day consumption of gur and oils and fats respectively. Upper bounds in both the cases were imposed mainly to avoid any undesirable solution. Finally 83 gms. of milk per day per adult implies low consumption. Again an increase was found to be desirable. Hence milk x_7 had been made equal to or greater than 83 gms.

Solution

Results obtained with the help of the computer for Bombay at 1967 prices under the restrictions just indicated are given below:

[4] *Op. cit.* Report of the N.N.A.C., Appendix 15, p. 71.

TABLE IV

Bombay 1967

Items		*Nutrients*	
Rice	67 gms	Proteins	97.844 gms
Wheat	233 gms	Fats	70.989 gms
Other cereals	139 gms	Calories	2735.33 units
Meat	17 gms	Calcium	866.66 mgs
Fish	44.8 gms	Iron	60.792 mgs
Eggs	2 gms	Vit. A	5077.401 I.U.
Milk	83 gms	Vit. B_1	2.422 mgs
Vegetables	148 gms	Vit. C	61.582 mgs
Dals	100 gms	Value of food:	Rs. 1.493 or Rs. 1.49
Sugar & Gur	45 gms		
Oils & Fats	50.2 gms		

The Value of Food and Calculation of Wages:

The total cost of the food needs per month for a family consisting of three adult equivalent consumption units can now be obtained. It is Rs. $1.49 \times 3 \times 30 =$ Rs. 134.10.

The General Index of the workers' expenditure pattern prepared by the Central Labour Bureau, Simla, shows that the expenditure on food amounts to 57.1 per cent of total expenditure. The total need-based wages of the worker in Bombay therefore amount to the following:

$$\frac{134.10 \times 100}{57.1} = \text{Rs. } 234.85$$

Another illustration

Results obtained with the help of the computer for Bangalore at 1967 prices using the same procedure and the placing of analogous restrictions on the variables are given below:

TABLE V

Bangalore 1967

Items		*Nutrients*	
Rice	377 gms	Proteins	68.93 gms
Wheat	47 gms	Fats	50.00 gms
Other cereals	93 gms	Calories	2735.33 units
Meat	36 gms	Calcium	866.66 mgs
Fish	2 gms	Iron	50.198 mgs
Eggs	2 gms	Vit. A	5297.316 I.U.
Milk	87.7 gms	Vit. B_1	1.910 mgs
Vegetables	197 gms	Vit. C	109.65 mgs
Dals	69.6 gms	Value of food:	Rs. 1.40
Sugar & Gur	42 gms		
Oils & Fats	35.2 gms		

N.B.—There was no rationing system in Bangalore in 1967.

The Value of Food and Calculation of Wages:

The total cost of the food needs per month for a family consisting of three adult equivalent consumption units can now be obtained. It is Rs. $1.40 \times 3 \times 30 =$ Rs. 126.00.

The General Index of the workers' expenditure pattern prepared by the Central Labour Bureau, Simla, shows that the expenditure on food amounts to 57.5 per cent of total expenditure. The total need-based wages of the worker in Bangalore therefore amount to the following:

$$\frac{126 \times 100}{57.5} = \text{Rs. } 219.13$$

Conclusions:

1. The results yielded by the computer cover 48 industrial centres in India, for which the required data was made available by the Central Labour Bureau, Simla, and are valid for only that part of the total wage comprised by the food component.

2. The minimum nutritional requirements have been covered in every case. As a rule, calorie and calcium requirements have been fulfilled precisely. The quantities of other nutrients tend to deviate in a positive direction; they are surplus to minimum requirements. This is not surprising. Since the prevailing pattern of consumption of the industrial workers in each city has been closely followed, the quantities of each of the nutrients tend to vary, e.g. the amount of proteins obtained from the diet in centres where rice forms the chief item of consumption is considerably less than where wheat and dal form a substantial portion of the diet, for, both wheat and dal are rich sources of proteins, but this is not the case with rice.

Similarly, Vitamin A often appears in excess of the minimum requirements. This has been brought about by the influence of vegetables like radish tops, cabbages, etc., which contain large quantities of Vitamin A. But these vegetables are sources of calcium as well, and are therefore picked up by the computer to meet the minimum calcium requirements. In trying to satisfy calcium requirements, the computer has been compelled to choose food items which are rich sources of Iron and Vitamin C. Thus in some cases, both Iron and Vitamin C are present in quantities considerably surplus to minimum requirements.

3. By using the Simplex Method, however, the required diet yielding the minimum nutrient requirements is obtained at the lowest cost. This is an optimal solution in the sense that no other alternative is possible at this cost. Attempts have been made in the course of this project to equalise the minimum requirements of all nutrients in all the centres. When restrictions were placed on the extent to which the requirements could vary in the form of a fixed percentage above the minimum prescribed, no feasible solution could be obtained from the computer. It

is clear therefore that the patterns of consumption are responsible for such variations in the nutrient quantities obtained from specific diets. In linear programming, an increase in the number of restrictions placed on any of the variables or constraints must necessarily affect all the others, generally with very adverse effects on the efforts to minimise costs.

4. The results have been given for two specific years, 1960 and 1967. While 1960 may be considered to be a normal year, 1967 was far from normal, especially where food prices are concerned. The failure of the monsoon for two consecutive years set food prices spiralling upwards. Some of the larger centres took to rationing of essential commodities. In these cities because of rationing the expenditure on food was checked relatively to its increase in neighbouring cities where no rationing existed. This has produced an abnormal situation which is reflected in the relative increase of the expenditure on food in the smaller centres as compared with the larger. It would be very useful to compute the minimum need-based wage for the year 1968, using the same Linear Programming technique, in order to examine the manner in which the price levels of food are evolving in industrial centres, and therefore affecting the wage levels in them.

5. A careful consideration of the monthly food values for the year 1960 as compared with those of 1967 shows a wider range of variation among the centres in the latter year. The Eastern Zone appears to be the most expensive, while the Central and the North-West Zones appear to be the cheapest, followed closely by the Southern Zone. The Western Zone tends to be slightly ahead of the Southern. The gap in expenditure on food between the Eastern region and the rest of the country is probably due to the fact that this region was hardest hit by the drought. In 1960, however, in the Eastern Zone the expenditure on food was higher than the other zones except the Western, but the gap was not so wide.

6. Finally, certain limitations of the solution must be pointed out. First, the number of items included in the matrix is limited because of the non-availability of the prices of certain items and the fact that the weightage of certain foodstuffs was not given in the consumption pattern.

Secondly, the accuracy of the solution depends directly on the precision with which prices of the foods consumed by industrial workers have been gathered by the Central Labour Bureau, Simla.

Thirdly, the pattern of consumption has been based on the Family Budget Survey of the Ministry of Labour that was undertaken during the years 1958-59. Quite possibly, this pattern has changed appreciably in the last two years because of the phenomenal rise in prices of certain foodstuffs.

Fourthly, subsequent refinements are possible in so far as basic data can be made more precise and accurate.

Need-Based Wage by Zones

	1967	*1960*
Eastern Zone	Rs. 222.55	Rs. 114.33
Southern Zone	Rs. 191.99	Rs. 117.21
Western Zone	Rs. 228.13	Rs. 126.70
Central Zone	Rs. 192.28	Rs. 88.66
Northern Zone	Rs. 202.08	Rs. 99.68
North-West Zone	Rs. 214.84	Rs. 91.31
Need-Based Wage at the National Level:	Rs. 211.27	Rs. 115.70

MINIMUM NEED-BASED WAGE

	Centre	*1967*		*1960*	
		Monthly Expenditure on Food	*Wages*	*Monthly Expenditure on Food*	*Wages*
(a) *EASTERN ZONE*:					
1. DIGBOI	Industrial	Rs. 150.80	Rs. 252.94	Rs. 70.20	Rs. 114.75
2. RANGAPARA	„	Rs. 126.00	Rs. 175.48	Rs. 76.50	Rs. 108.05
3. JAMSHEDPUR	„	Rs. 156.60	Rs. 274.35	Rs. 74.70	Rs. 130.87
4. MONGHYR	„	Rs. 145.80	Rs. 219.24	Rs. 57.60	Rs. 86.61
5. ASANSOL	„	Rs. 145.10	Rs. 209.51	Rs. 76.50	Rs. 112.00
6. CALCUTTA	„	Rs. 150.30	Rs. 240.48	Rs. 75.60	Rs. 120.96
7. HOWRAH	„	Rs. 150.30	Rs. 230.69	Rs. 75.60	Rs. 119.55
8. JHARIA	Mining	Rs. 150.30	Rs. 230.87	Rs. 69.30	Rs. 108.45
9. KODERMA	„	Rs. 143.80	Rs. 205.89	Rs. 59.40	Rs. 85.46
10. NOAMUNDI	„	Rs. 156.60	Rs. 259.14	Rs. 80.10	Rs. 132.55

	Centre	1967		1960	
		Monthly Expenditure on Food	*Wages*	*Monthly Expenditure on Food*	*Wages*
11. RANIGANJ	Mining	Rs. 145.80	Rs. 215.04	Rs. 74.70	Rs. 110.50
12. DOOM DOOMA	Plantation	Rs. 125.10	Rs. 186.99	Rs. 75.60	Rs. 113.00
13. LABAC	„	Rs. 135.00	Rs. 209.95	Rs. 65.70	Rs. 103.58
14. MARIANI	„	Rs. 144.00	Rs. 214.28	Rs. 74.70	Rs. 111.16
15. DARJEELING	„	Rs. 144.00	Rs. 214.92	Rs. 80.10	Rs. 119.55
16. JALPAIGURI	„	Rs. 129.60	Rs. 191.71	Rs. 80.10	Rs. 118.14
(b) *SOUTHERN ZONE*:					
17. GUDUR	Industrial	Rs. 105.30	Rs. 152.39	Rs. 69.30	Rs. 100.28
18. GUNTUR	„	Rs. 112.50	Rs. 171.23	Rs. 66.60	Rs. 101.37
19. HYDERABAD	„	Rs. 134.10	Rs. 226.52	Rs. 72.00	Rs. 121.62
20. ALLEPPEY	„	Rs. 115.20	Rs. 176.95	Rs. 66.60	Rs. 102.30
21. ALWAYE	„	Rs. 148.50	Rs. 232.03	Rs. 74.70	Rs. 116.71
22. BANGALORE	„	Rs. 126.00	Rs. 219.13	Rs. 68.40	Rs. 118.95
23. CHICKMAGALUR	„	Rs. 118.80	Rs. 186.79	Rs. 58.50	Rs. 91.98
24. SAMBALPUR	„	Rs. 117.90	Rs. 199.76	Rs. 70.20	Rs. 118.94
25. MADRAS	„	Rs. 108.90	Rs. 180.89	Rs. 72.00	Rs. 119.61
26. COIMBATORE	„	Rs. 100.80	Rs. 170.55	Rs. 77.10	Rs. 120.30
27. MADURAI	„	.....	.....	.....	.....
28. KOLAR GOLD FIELD	Mining	Rs. 128.70	Rs. 210.63	Rs. 67.50	Rs. 110.47
29. BARBIL	„	Rs. 146.70	Rs. 236.99	Rs. 86.40	Rs. 139.58
30. MUNDAKKAYAM	Plantation	Rs. 118.80	Rs. 185.62	Rs. 68.40	Rs. 106.87
31. AMMATHI	„	Rs. 120.60	Rs. 186.68	Rs. 66.60	Rs. 103.09
32. COONOOR	„	.....	.....	.....	.....
(c) *WESTERN ZONE*:					
33. AHMEDABAD	Industrial	Rs. 134.10	Rs. 224.62	Rs. 70.20	Rs. 117.58
34. BHAVNAGAR	„	Rs. 115.20	Rs. 185.80	Rs. 58.50	Rs. 94.35
35. BOMBAY	„	Rs. 134.10	Rs. 234.85	Rs. 76.50	Rs. 133.97
36. NAGPUR	„	Rs. 120.60	Rs. 210.83	Rs. 67.50	Rs. 118.00
37. SHOLAPUR	„	Rs. 111.60	Rs. 177.14	Rs. 63.00	Rs. 100.00
(d) *CENTRAL ZONE*:					
38. BHOPAL	Industrial	Rs. 117.00	Rs. 209.31	Rs. 53.10	Rs. 94.99
39. INDORE	„	Rs. 105.30	Rs. 184.30	Rs. 50.40	Rs. 88.11
40. GWALIOR	„	Rs. 108.00	Rs. 190.14	Rs. 48.60	Rs. 85.56
41. BALAGHAT	Mining	Rs. 105.30	Rs. 185.38	Rs. 52.20	Rs. 91.90
(e) *NORTH-WEST ZONE*:					
42. YAMUNANAGAR	Industrial	Rs. 109.80	Rs. 180.91	Rs. 50.40	Rs. 83.04
43. AMRITSAR	„	Rs. 109.80	Rs. 190.29	Rs. 51.30	Rs. 88.90
44. AJMER	„	Rs. 116.10	Rs. 216.20	Rs. 54.00	Rs. 100.55
45. JAIPUR	„	Rs. 117.90	Rs. 212.81	Rs. 54.90	Rs. 99.09
(f) *NORTHERN ZONE*:					
46. SRINAGAR	Industrial	Rs. 111.60	Rs. 177.99	Rs. 49.50	Rs. 78.45
47. KANPUR	„	Rs. 112.50	Rs. 207.18	Rs. 55.80	Rs. 103.75
48. SAHARANPUR	„	Rs. 127.22	Rs. 236.22	Rs. 53.10	Rs. 98.15
49. VARANASI	„	Rs. 121.50	Rs. 185.49	Rs. 47.70	Rs. 72.81
50. DELHI	„	Rs. 103.50	Rs. 191.31	Rs. 54.90	Rs. 101.47

APPENDIX B

Summary of Mr. Tata's Note to the National Commission on Labour on Dr. A. Fonseca's Paper on Need-based Wage

(1) Although the Fair Wages Committee had defined minimum wage, living wage and fair wage as far back as 1948, yet it did not indicate any procedure as to how to determine these wages.

(2) The Indian Labour Conference which met in 1957 held that the concept of minimum wage as spelled out by the Fair Wages Committee was a need-based wage and accordingly laid down certain guidelines for the determination of the minimum wage. These guidelines prescribed that the need-based wage should provide for a *per capita* consumption of food yielding 2,700 calories net, 18 yards of cloth per annum, housing, fuel, lighting and miscellaneous expenses.

(3) The tripartite Conference Resolution was however vague in several details. In the case of the diet norm, it did not stipulate whether the need-based wage should be calculated for vegetarian diet or non-vegetarian diet. Similarly, it did not specify the type of cloth to be taken into account in calculating the wage.

(4) As the application of the Resolution norms posed several practical difficulties, a number of wage boards used the Diet Schedules of Dr. Aykroyd and Dr. Patwardhan only as a guide and worked out notional minimum wages for different centres having regard to actual consumption pattern in different centres.

(5) The Second Pay Commission (1959) questioned the validity of the assumptions regarding the minimum nutritional requirements as suggested by Dr. Aykroyd and Dr. Patwardhan. It, accordingly, suggested its own diet schedule.

(6) In view of the difficulties encountered by the Wage Boards in applying the diet schedules of the experts in the computation of the need-based wage, a tripartite sub-committee was set up in 1962 by the National Nutrition Advisory Committee to examine the nutritional requirements of the working class family. It recommended a mixed (i.e. non-vegetarian) diet schedule yielding 2,800 calories net.

(7) Dr. Fonseca has not used the diet schedules of either Dr. Aykroyd, Dr. Patwardhan or of the Sub-Committee. He has worked out diet schedules for *each centre* on the basis of the cheapest combination of foodstuffs and having regard to (i) zonal consumption patterns, (ii) availability of foodstuffs, and (iii) the recommendations of the Sub-Committee.

(8) In his study, he has referred to diet schedules for Bombay and Bangalore. His schedule for Bombay yields 2,735.33 calories—whether net or gross, it is not clear from his note. This compares with a figure of 2,700 calories net recommended by the tripartite Conference. Further whereas Dr. Aykroyd's original diet schedule was vegetarian, that of Dr. Fonseca is non-vegetarian. Secondly, whereas Dr. Aykroyd and Dr. Patwardhan sought to provide a large proportion of calories primarily through the intake of cereals and vegetables, Dr. Fonseca's diet schedule relies on the intake of not only cereals, pulses and vegetables but also animal foods.

(9) The diet schedule as framed by Dr. Fonseca greatly resembles the diet schedule worked out by the *Sub-Committee* (in 1962) for *Western Zone* and not for *Bombay proper*. As a result, his consumption pattern for Bombay sharply differs from the actual one.

(10) As a matter of fact, the author's approach to frame and then estimate the need-based wage for each centre on that basis does not appear sound, since in majority of the centres, the nutritional content of the foodstuffs consumed by the working class has already been found to be in excess of the calorie intake recommended by the Nutrition Advisory Committee (1958). A study of the diet and nutritional levels made by the Sub-Committee (in 1962) for 22 centres (covered by Dr. Fonseca's study) on the basis of the Reports of the Family Living Surveys for 1958-59, has revealed that the nutritional value of the foods consumed by the working class families (at the prevailing prices and wages in 1958-59) exceeded in varying proportions the requirements of calorie intake in 15 centres, while it fell short of these requirements in 7 centres. Dr. Fonseca thus starts with an unrealistic premise in estimating his need-based wages.

(11) A comparison of the Estimates of Dr. Fonseca with those made by the Company Managements or Employers' Organisations in the Sugar and Iron and Steel industry shows that Mr. Fonseca's estimates were generally on the higher side.

(12) Again, Dr. Fonseca's estimates appear to be much higher than the prevailing minimum wages, as for instance, in the Cotton Textile Industry. The comparison reveals that his estimates for Calcutta are almost double the prevailing minimum wage, while an analysis of his estimates for different centres shows that he would want employers to pay much higher need-based wage to workers in Jamshedpur (Rs. 274.35) as compared to Bombay (his figure is Rs. 234.85).

(13) His methodology also leaves much to be desired. Instead of computing the cost separately for such items as clothing, housing, light, fuel, etc., as required by the tripartite Resolution, he has first estimated the diet cost and taking it as an equivalent of the percentage expenditure on food as disclosed by the Family Living Survey for each centre (in the case of Bombay, the percentage is 57.1), he has proceeded to estimate the cost of the remaining items (viz. clothing, housing, fuel, light, etc.) by imputing to them the remaining percentage (i.e. 42.9%). This procedure may be commendable for the simplicity and ease with which it facilitates the computation; but it cannot be said, that this method ensures the coverage of only these four items. For, besides housing, the remaining expenditure covers several items such as bedding, footwear, personal care and effects, education, recreation and amusements, transport and communication and services (e.g. washing and laundry charges, etc.).

(14) This method of computation thus allows expenditure on several extraneous items which are not covered by the tripartite Resolution. This has consequently tended to inflate the minimum wage estimated by Dr. Fonseca. Even assuming the food costs estimated by Dr. Fonseca and working out the costs for the other three items as per the tripartite Resolution, the difference between his estimate and our estimate of minimum wage comes to Rs. 22.20 for Bombay and Rs. 37.57 for Jamshedpur. These differences are indicative of the extent to which Dr. Fonseca has overstepped the bounds of the tripartite Resolution.

(15) It may be mentioned here that in computing the need-based minimum wages for Bombay and Jamshedpur, we have not made any deductions on account of fringe benefits given by employers which go directly to reduce the expenses of a worker on items which are taken into account for the calculation of the need-based minimum wage.

(16) To sum up, both in the assumptions and methodology, Dr. Fonseca's estimates do not conform to the guidelines prescribed by the tripartite Resolution.