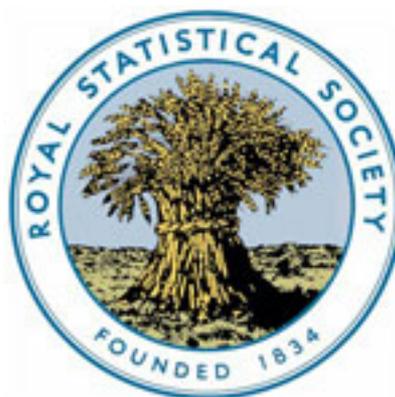


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THE INCREASE IN THE COST OF FOOD FOR DIFFERENT CLASSES
OF SOCIETY SINCE THE OUTBREAK OF WAR.

By FRANCES WOOD.

EACH month since the outbreak of war the Board of Trade have published in their *Labour Gazette* index numbers showing the increase in the retail price of all the principal articles of food since July, 1914, and a general index number for all food, obtained by combining the different articles in the proportions to be found in a typical working class family budget. The figures are based upon returns from between 500 and 600 places, and relate to upwards of 7,000 establishments. Considering that quite a small sample, if well chosen and evenly distributed, is sufficient to give reliable index numbers for retail prices, we have no cause to quarrel with the extent of the data upon which these figures are based, especially in the case of large towns. But a difficulty arises when we try to interpret the figures by translating them into terms of corresponding increases in weekly household bills for food. When the Board of Trade index number shows an increase of 50 per cent. in the retail price of food (all commodities combined) does it mean that, if a pre-war standard is to be maintained, the bills for food in all households in the United Kingdom show approximately a similar increase; and that, if the necessary money is not forthcoming, either a change of diet, or a diminution in the amount of food consumed is necessary?

In order to throw some light upon this point, I have, during the last nine months, collected from my friends rough estimates of the increase that has taken place in the cost of feeding their respective households at various dates since the outbreak of war. These estimates differ considerably among themselves, but they all agree in one particular, namely, in showing a smaller increase than the corresponding Board of Trade figures would suggest, whether the weights used are those suitable for working class expenditure, or whether the weights are roughly adjusted to bring them more into line with the expenditure on different articles of food in a middle class family. In none of these cases has there been any obvious change in the standard of living. The experience of working class housewives, on the other hand, is said to have been the reverse of this, and, according to a number of letters and articles which have appeared in the Press from time to time, among the poor the cost of food has

increased to a greater extent than the official figures would suggest.

It is not difficult to suggest a number of reasons why the experience of middle class housewives should point to a more favourable state of affairs than is indicated by the Board's figures. In the first place, for such a household there are great possibilities of variation in diet, and especially at a time like the present, when various commodities have risen in price to very different degrees, the increase in the cost of food can be reduced by a simple readjustment of diet of such a nature as almost to pass unnoticed. In many middle class households the increase in the price of meat and fish has been partially met by reducing the amount of meat and fish consumed and increasing instead the quantity of vegetables containing proteids. If this is done skilfully members of the households need not be any the wiser or any the worse for it, but such a rearrangement on a large scale is impossible. The Board of Trade figures, however, make no allowance for such changes, and as a matter of fact, it would be a very difficult matter to do so on scientific lines. In extreme cases some adjustment seems called for. It is absurd, for example, to give fish the same weight now as at the beginning of the war.

In the second place, in the case of commodities for which more than one quality is available, the middle classes can reduce their weekly expenditure on food by consuming a cheaper quality than formerly. The larger the sum of money normally spent on food, the greater the scope for this kind of economy when prices are high. The standard of living of the poor is normally so low that any substitution of cheaper qualities is, for the most part, out of the question, and it is with the middle classes that this particular type of economy has been principally in vogue during the past two years. The saving thereby effected is often considerable. By substituting margarine for butter, for example, an increase of 33 per cent. up to July 1, 1916 (the percentage increase in the price of butter), could have been changed into a decrease in expenditure of anything from 15-30 per cent. according to the quality of margarine purchased. During the earlier months of the war, foreign meat was substituted for English meat in many houses, and this was partly responsible for the relatively greater increase in the price of foreign meat that took place. Latterly the amount of foreign meat available for private consumption has fallen far below the pre-war level. This has put a stop to this particular type of substitution on the part of the wealthier; but at the same time it has meant that a section of the poorer classes has been forced to reverse the process, *i.e.*, to substitute English for foreign meat.

The question of allowing for (a) possible changes in diet, and (b) the substitution of one quality of food for another in the preparation of retail prices index numbers is an exceedingly difficult one. For, even it were conceded that such an allowance were desirable, it would be a matter of very great difficulty to carry out the necessary adjustments statistically. Up to the present, food index numbers have always been prepared on the assumption that, during the period under discussion, no changes either in diet or in the quality of the commodities under discussion have taken place. Since these two conditions are frequently not fulfilled the figures have a theoretical value, but do not necessarily coincide with actual experience. The very poor are the class least able to avail themselves of these two devices to meet rising prices, and it is for this reason that a sudden rise is always felt more severely by them than by a class of people who normally live considerably above the subsistence level.

There is still a third reason why the level of expenditure at present should be relatively low in middle-class, and relatively high in working-class, households. Where more than one quality of a commodity is habitually sold it has almost invariably happened that, during the last two years, the price of the cheapest quality has risen the most. In some cases the Board of Trade give index numbers for only the cheapest quality, *e.g.*, granulated sugar, but in other cases an average for all qualities is given as the index number of the commodity in question. Thus, in the case of meat, the index numbers for beef are the mean of the figures for British and foreign meat: and the index numbers for British and foreign beef are, in their turn, the average of the figures for "ribs" (taken as typical of the dearer joints) and "thin flank" (taken as typical of the cheaper joints). The index numbers for mutton are obtained in a similar manner. If the price of all the different joints and qualities moved together, this method of calculation would be sufficiently accurate, but since the price of the cheaper joints and qualities has increased very much more than that of the dearer ones, the actual index numbers for all food published by the Board of Trade show too favourable a situation when expenditure by the working classes is considered, and too gloomy a state of affairs in the case of the middle classes.

In the following table figures are given contrasting the rise in price of the different qualities and joints of beef and mutton at three-monthly intervals since the outbreak of war. The figures, which have been taken from the *Labour Gazette*, are for large towns only. Unfortunately a similar comparison is not possible for sugar, bacon and tea, as the official figures refer to one quality only.

TABLE I.—Increase in the retail price of meat at quarterly intervals since the outbreak of war. Large towns (populations over 50,000).

(Level of prices in July, 1914=100.)

	Percentage increase since July, 1914.			
	September, 1914.	October, 1914.	June,* 1915.	September, 1915.
All Beef	12	16	46	54
(a) British beef	7·5	9	40	46·5
(1) "Ribs"	6	7	35	40
(2) "Thin flank"	9	11	45	53
(b) Foreign beef	17	23	52	61
(1) "Ribs"	12	16	43	51
(2) "Thin flank"	22	30	61	71
	Percentage increase since July, 1914.			
	December, 1915.	March, 1916.	June, 1916.	July,† 1916.
All Beef	51	56	85·5	86·5
(a) British beef	43·5	47	75	76
(1) "Ribs"	36	39	62	62
(2) "Thin flank"	51	55	88	90
(b) Foreign beef	59	64·5	96	97
(1) "Ribs"	50	55	84	85
(2) "Thin flank"	68	74	108	109
	Percentage increase since July, 1914.			
	September, 1914.	October, 1914.	June,* 1915.	September, 1915.
All Mutton	13	16	42	49
(a) British mutton	8	9·5	35·5	40·5
(1) "Legs"	5	5	29	30
(2) "Breast"	11	14	42	51
(b) Foreign mutton	18·5	22·5	48	57
(1) "Legs"	14	18	38	47
(2) "Breast"	23	27	58	67
	Percentage increase since July, 1914.			
	December, 1915.	March, 1916.	June, 1916.	July,† 1916.
All Mutton	47	57·5	92	91·5
(a) British mutton	37·5	45·5	73	74
(1) "Legs"	27	33	56	57
(2) "Breast"	48	58	90	91
(b) Foreign mutton	56	69·5	111	109
(1) "Legs"	45	54	91	90
(2) "Breast"	67	85	131	128

* The figures for June, 1915, are for large and small towns combined, as separate returns for this month are not shown in the *Labour Gazette*. Only average figures for meat are given for March, 1915, so this month has been omitted.

† Figures for July, 1916, have been included as being the latest available at the time of going to press.

There is no question of the conclusion to which the figures in the preceding table point. For example, by July 1, 1916, the price of foreign beef had increased by 21 per cent. more than the price of British beef; while foreign "thin flank" showed a 47 per cent. greater increase than British "ribs." The figures for mutton are even more significant. The increase in foreign mutton was 35 per cent. greater than the increase in British mutton; while the increase in foreign "breast" was considerably more than double the increase in the case of English "legs." Official figures for bacon, tea and sugar are not available, but a study of the prices charged by four or five London firms points to a similar state of affairs. With regard to butter the situation is rather different, if margarine be looked upon as the cheapest quality of butter. In this case the poor score, for the increase in the price of margarine has been very much less than the increase for any quality of butter.

A variety of reasons could be given to account for the relatively high level of prices in the case of cheap meat; but the following are probably the most important. In the first place, the shortage and high price of freights, &c., must have had the effect of sending up the price in this country of all kinds of Colonial and Foreign produce; and in the second place, the huge demands on the part of the Government for foreign meat for the Army coupled with the attempt to substitute foreign for British meat on the part of the middle classes during the early months of the war, must have had a similar effect upon prices. Whatever the causes may be, it is not possible, in these circumstances, to give one series of food index numbers to apply to rich and poor alike, but instead one must prepare separate series of figures for the different classes of society, using in each case only those particular kinds and qualities of commodities habitually consumed by the class in question. It was originally my intention to prepare a number of such series to apply to the different sections of Society from the wealthy to the very poor, but I have found it impossible to do this with anything approaching accuracy for either the wealthy class or the middle classes generally. The difficulty consisted in estimating the relative importance of the different commodities for these two classes. As far as I know there is no collection of well-to-do family budgets from which a series of weights could safely be prepared. In normal times, it might be sufficiently accurate to use a system of weights prepared from such data as one could collect personally, relying on the well-known fact that in dealing with index numbers relatively large changes in weights produce comparatively little effect upon the final figures. But at a time like the present, it would be very unsafe to rely upon this. The prices of different

commodities have increased by such very varying amounts, that the weights used would undoubtedly have a considerable influence in determining the magnitude of the final figure, and it would be rash to depend upon a system of weights based upon the returns of a minute sample of the population. With regard to the wealthiest class, it is difficult to say whether the increase in the price of food has been greater or less than the official figures. It is certainly clear that for the wealthy the percentage rise in the price of meat has not been so great as for the working classes. It is quite safe to say that for the middle classes generally the cost of food has not increased to the extent that the official figures would suggest. The reasons for this conclusion have already been dealt with.

In the case of the working classes I have calculated fresh series of index numbers for what I will call the artisan class, and the very poor class, using for each class only those particular kinds of commodities which they are in the habit of consuming. I have assumed (*a*) that the artisan class is in the habit of eating all joints of foreign and the cheaper joints of British meat, and equal quantities of cheap butter and margarine, and (*b*) that the very poor consume only the cheap joints of foreign meat and margarine instead of butter. Unfortunately a similar analysis cannot be made in the case of sugar, tea or bacon.

The appropriate weights to be used can readily be obtained from the Board of Trade's Report on the Cost of Living in 1905. In that Report the Board published the results obtained from the collection of 1,944 working-class family budgets. These were divided into five classes according to the amount spent on food. The weights obtained from a consideration of the relative amounts spent on the different articles of food by (*a*) the class spending the least, and (*b*) the class spending the most, on food have been used in calculating index numbers showing the increase in the cost of food for the very poor and for the artisan class respectively.

In certain districts the artisan class is said to insist upon having the best joints of British meat, the best fresh butter and so forth. I have prepared a third series of index numbers for this special type of artisan, not because I imagine that the type is a frequent one, but because the figures themselves provide an interesting comparison with the other two series. I am not so much concerned with calculating the increase in the cost of food for any one particular class or classes as with demonstrating that the values obtained differ considerably according to the kind and quality of the commodities considered, and that consequently, as prices continue to rise, more than one series of combined index numbers should be prepared in order

to obtain accurate figures which can be directly applied to particular classes of society.

Index numbers showing the increase in the cost of food as a whole, at quarterly intervals since the outbreak of war, and calculated in the manner indicated above, are given in the following table for (a) the special artisan class, (b) the ordinary artisan class, and (c) the very poor class, and, for comparison, the figures published by the Board of Trade. The index numbers for individual commodities have, in every case, been taken from the Board of Trade *Labour Gazette*, and apply only to large towns.

TABLE II.—*Increase in the retail price of food for certain classes of society at quarterly intervals since the outbreak of the war. Large towns (populations over 50,000).*

Level of prices in July, 1914 = 100.

Class of society.	Percentage increase since July, 1914.			
	September, 1914.	December, 1914.	June,* 1915.	September, 1915.
Board of Trade figure	11	17	32·5	37
Special artisan class	10	15	31	36
Ordinary artisan class	13	19	35	40
Very poor class	15	20	40	44

Class of society.	Percentage increase since July, 1914.			
	December, 1915.	March, 1916.	June, 1916.	July,† 1916.
Board of Trade figure	46	51	62	65
Special artisan class	45	49	58	61
Ordinary artisan class	50	55	68	70
Very poor class	52	61	75	77

* The figures for June, 1915, are for large and small towns combined, as separate returns are not shown for this month in the *Labour Gazette*. Average figures only for meat are given in the *Gazette* for March, 1915, so this month has been omitted.

† Figures for July, 1916, have been included as being the latest available at the time of going to press.

The amount by which the price of food has increased varies considerably for the different classes, especially during the later months. In every case the increase for the very poor has been the greatest; the increase for the ordinary artisan class the next in magnitude, while for the class which has been assumed to live upon

the most expensive food the increase has been the least. The Board of Trade's index numbers throughout are greater than the figures for the special class, and smaller than the figures for the ordinary artisan class. They are much smaller than the figures for the very poor. The biggest difference for any one month is shown for June, 1916, when in large towns the increase for the most prosperous class of working people was 17 per cent. less than for the poorest. For this month the calculated figure for the poorest class was 13 per cent. higher than the Board of Trade figure. In these calculations no allowance has been made for the different qualities of sugar, tea and bacon consumed by the three classes, and if this could have been done, the differences shown would have been still more marked. Moreover, no allowance has been made for the fact that the classes with the lowest standard of living are least able to meet rising prices by a re-arrangement of diet or by the substitution of cheaper qualities of food. It is thus perfectly clear that by far the biggest increase in the cost of food has, during the past two years, fallen upon the class least able to bear it.

The index numbers published by the Board of Trade are of great value in showing the increase in the price of food for the United Kingdom as a whole, but they are in the nature of an average for the different classes of society, and cannot be taken as representing closely the experience of a large section of the working classes. When it was only a question of an increase in prices of one or two per cent. over a whole year, there was no need to calculate more than one series of final index numbers, but now that the average price of food has risen by over 60 per cent. in the course of two years, it undoubtedly is necessary to have more than one series of numbers if the figures are to be put to practical use. It will become still more necessary if further increases in the price of food take place in the future.