PRICES.

An Inquiry into Prices in New Zealand,

1891-1919.

Prepared under the Authority of the Government of New Zealand
by

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PREFACE.

In 1915 the Census and Statistics Office published its "Report on the Cost of Living in New Zealand, 1891–1914," giving details of the results of an inquiry into the course of retail prices for that period, together with an exposition of the technique of the method adopted.

Since then retail-price quotations and index numbers have been continued, first in the now defunct *Journal of the Department of Labour*, and more recently, together with wholesale-price quotations and index numbers, in the *Monthly Abstract of Statistics*. The present report brings up to date and revises the results of these inquiries, and also includes index numbers of producers' and export prices.

The index numbers for retail and wholesale prices for periods subsequent to that covered by this report will be found in the *Monthly Abstract of Statistics* issued from this office each month.

I desire to place on record my appreciation of the services of those retailers, wholesale merchants, and others, together with the officers of the Labour Department, through whom the returns have been received.

MALCOLM FRASER,
Government Statistician.

Wellington, 17th September, 1920.

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PART I.—NATURE AND PURPOSE OF THE INVESTIGATION.

Perhaps the most striking feature of modern economic organization is the immense importance of exchange, accompanied by division of labour in all its forms. The production of commodities for immediate consumption has been entirely superseded by production for exchange, and producer and consumer are separated widely. It is a matter of history that production for exchange was greatly facilitated, if not caused, by the introduction of a money economy and the consequent break-up of the old feudal and communal systems. The industrial revolution of the eighteenth century, with its enormous increase in productive power, and a great development of trade, carried the process a long step further, and the economic history of subsequent times is merely the story of the continuation of the processes then begun. The increased use of machinery in round-about processes of production; the improvements in transport and communication, linking up the whole world in one market; and the ever-increasing specialization of industry, national and local, by trades and processes, have resulted at once in a great increase of vendible commodities and in an unprecedented complexity of organization.

It has been well said that prices are the indicator of the economic machine, and as the machine has grown more complex the importance of prices has become more and more evident. It is the action of prices that guides the regulation of supply and demand. The margin of unprofitable production, the limit of consumption, the ratio of values of various commodities are expressed in terms of price, and indeed the whole economic structure of society is hinged upon the relation between commodities and currency.

Now, it is possible to investigate prices from various standpoints; and it is obvious that the more specialized industry has become, the more viewpoints there are from which the problem may be approached. We might consider the prices of the raw materials of the primary extractive industries, we might follow those raw materials as they gradually passed through process after process, and investigate their prices at any one stage. We might investigate the prices of the finished product when it leaves the hands of the person or firm performing the last process in its production, or we might wait until it has reached the middleman's hands and is sold from the wholesale warehouse. Finally we might investigate prices as the goods are bought by the consumer.

Although there are so many stages of transformation, from the extraction of the raw material till the finished product finally reaches the hands of the

consumer, there are only three stages which are sufficiently definite and important in character either to warrant or to be capable of statistical investigation—viz., (1) the stage when the article has undergone the final process in the chain of production so far as the country under investigation is concerned; (2) the stage when the commodity is exchanged in the wholesale market; (3) the stage when the commodity is finally retailed to the consumer.

The best-known inquiries, such as those of Jevons, Sauerbeck, the *Economist*, and the British Board of Trade, refer to wholesale prices and have as their main purpose the illustration of changes in the general level of prices. It will readily be recognized that the prices at which wholesale transactions are effected are in general more typical than any others, reflecting in large measure as they do producers' prices, which normally precede them, and retail prices, which follow them. Besides this, in wholesale markets standardization has normally proceeded further than elsewhere, so that such inquiries are not to the same extent as others liable to be vitiated on account of variations in the qualities of the articles comprised in the investigation.

There is, however, nothing to prevent one's going even beyond this and compiling an index number of producers' prices as already defined, a particularly important conception in a country such as New Zealand, so dependent on other countries for a market for its produce. In point of fact, results of an annual investigation into the export values of New Zealand produce have now for some years been published in the Trade section of the "New Zealand Official Year-Book," and are reproduced (together with a specially prepared producers' index number) in Part IV of this report.

But, especially since 1895–96, when prices began to rise all over the world, the aspect of the question that has come into prominence is the influence of prices on the consumer—the problem commonly known as "the cost of living." It is said that the "pinching shoe" of rising prices has been at the root of much social discontent, especially since the variations in prices, so far as they affect the cost of living, are of particular individual concern. To the average man no subject is of greater interest than that which directly touches his pocket and modifies his spending-power. The question has been all the more prominent during the last four or five years, when the abnormal conditions of war have sharply accentuated the general tendencies which were noticeable before.

This period from 1895 to the present time has seen almost universal recognition of the necessity for the accurate and scientific measurement of price-variations, especially as they affect the cost of living. The advancement of statistical method which made it possible to extract representative facts from huge masses of data, by scientific averaging and arrangement, has been specially important in this field of economics. In the absence of sufficient, or in the presence of incorrect, data, any discussion of the problem of the cost of living is apt to lead to erroneous assumptions, and no adequate remedy can ever be found without an accurate measurement of the course and extent of price-variations. It is now recognized that a proper understanding and analysis of the problem is a necessary precedent to any attempt at reconstruction, and in almost every country of any importance it has become a regular part of the work of the statistical offices to analyse

and measure the fluctuations of prices. It is not the function of the statistician to trace the causes or to suggest the remedies, but to ascertain the facts and present a correct measurement of the extent of the fluctuations from time to time.

It is interesting to notice that the first attention given to the subject of prices was from the point of view of the cost of living. Setting aside the contemporary attempts at rough proofs of changes in the values of money which have appeared from time to time, the histories of prices compiled by Arthur Young, Tooke, and later by Thorold Rogers, deal chiefly with prices of foodstuffs, such as corn, compared with wages. The nineteenth century brought not only division of industry, but a growth of scientific analysis, and it was in this century that the measurement of the purchasing-power of money by means of index numbers of wholesale prices took modern shape in the calculations made by Jevons about the middle of the century, following on some figures published by Newmarch. Since then there have been constant improvements in method and continuous extension of the field covered by such investigations. The first calculations dealt with only a few commodities; prices were unweighted, and were obtained only once or twice during the year. Modern calculations embrace a far larger number of commodities, the prices of which are collected frequently and averaged, and great care is taken to give each commodity its proper economic importance.

INDEX NUMBERS.

The measurement of changes in prices is a problem of the utmost complexity—a fact which accounts for the varying estimates of changes in the cost of living. Changes in prices are constant and rapid, and most various—there are many kinds of prices, and innumerable instances and grades of each kind of commodity. Since price is merely the value of any commodity expressed in terms of money, it follows that any changes in production of particular commodities are immediately reflected in prices. The movements of particular prices are confused and contradictory.

But, on the other hand, there is always noticeable a general tendency, around which the particular prices may oscillate, but which is capable of being measured. This general tendency, which reveals itself in what has been called "the purchasing-power of money" or "the general level of prices," arises mainly from the money factor in price. Professor Irving Fisher points out that while business men are at great pains to acquaint themselves with every change of production that may influence the price of commodities, they seem almost to forget that there is another factor, money, which has an important influence in fixing the price.

To measure changes in this "general level of prices" the method of index numbers has been evolved. The ideal measure would be a combination of the prices of all commodities weighted in proportion to the importance of each; but since such a course is obviously impossible recourse must be had to "sampling," taking typical commodities as representing all. The commodities selected should be representative, as far as is possible, of the various kinds of commodities in general use; prices are ascertained for each commodity and combined to form an index number. The index number

for a given period is a numerical statement of the proportion prices ruling at that time bear to prices ruling at some other given time regarded as the standard. For this standard prices are collected and equated to 100 or to 1,000; all other years or periods are then worked out proportionately, so that instead of a complicated series of prices there is given a comparable series of numbers from which percentages may be readily obtained.

There is a wide distinction in many respects between the problems of wholesale and retail prices, and the latter, though in some respects more important, are much harder to measure satisfactorily. The number of items which may be included in an inquiry into retail prices is far fewer than in the case of wholesale prices, and it is a statistical commonplace that the precision of an average becomes greater the more commodities are included.

In a wholesale-prices inquiry, too, difficulties of weighting are less; the number of commodities is so great and their importance so evenly distributed that variations in the systems of weighting make little difference to the result. In retail prices, however, such items as bread and rent have such overwhelming influence that weighting assumes far greater importance. The difficulty is rendered worse by the fact that there is constant variation of expenditure from family to family, from group to group. Moreover, especially in such an item as rent, it is practically impossible to separate the factors of increasing rent and improving accommodation. But the problem is so important that some attempt must be made to solve the difficulties and to obtain data which will throw more or less light on the changes in the cost of living.

METHOD ADOPTED.

Since the first tentative measurements, mainly of prices of single commodities, there has evolved a complex system of compilation, so that the methods of index numbers have undergone continuous change. Though investigators like Evelyn and Adam Smith made elaborate inquiries into the prices of the main commodities, it was not till after the middle of the nineteenth century that the first index number was compiled by Newmarch and appeared in the Journal of the Royal Statistical Society for 1859. This index number, which has been from 1864 continued in the *Economist*, consisted first of nineteen and later of twenty-two articles, mainly raw products. The prices of these commodities were combined in an unweighted form, making the *Economist* index number. The defects of this simple method are, of course, obvious: the commodities were few and unweighted; the prices were taken on a given day, not averaged over the year; and the nature of the commodities gave an undue importance to fluctuations in the price of such a commodity as cotton. Changes, however, were made in 1912.

In 1863 Jevons published his celebrated essay, "A Serious Fall in the Value of the Gold Standard ascertained, and its Social Effects set forth." The prices of thirty-nine commodities were included, and in some parts of the discussion one hundred and eighteen. The prices were unweighted; but the use of the geometric average, which lessens the influence of extremes and also lessens the influence of the base period, marked a new departure in method.

In 1886 Mr. R. H. Inglis Palgrave made a thorough and exhaustive attempt to secure accuracy by a very complicated system of weighting

based on the actual annual consumption of the articles discussed. The weights, moreover, fluctuated in accordance with consumption each year.

The well-known index number of Mr. Augustus Sauerbeck, a London woolbroker, was also published for the first time in 1886, and has been continued from year to year since, being taken over in recent years by Sir George Paish in the *Statist*. Forty-five commodities are treated, divided into six groups; but the only system of weighting used is the inclusion of more than one commodity of an important class.

Similar index numbers have been prepared by Soetbeer in Germany, de Foville in France, and by Falkner, Dun, and Bradstreet in the United States. In addition, the Statistical Offices of Canada, United States, the South African Union, and Australia, and the British Board of Trade, have produced index numbers both of wholesale and retail prices.

It was the growing importance of index numbers of retail prices which finally called forth the method adopted in this report. Most of the wholesale prices investigators mentioned above either used rough systems of weighting or simply averaged all commodities as of equal importance. But such a procedure, though perhaps not vitally affecting the problems of wholesale prices, still led to some inaccuracy, and was altogether too rough to measure changes in the cost of living, so that recourse was had to more elaborate methods. As early as 1833, in a proposal for a "tabular standard of value," Scrope had proposed to use a measurement of relative expenditures; but this was superseded by the measurement of price-ratios. However, when the importance of weighting became evident in retail prices, Mr. G. H. Knibbs, C.M.G., the Statistician of the Commonwealth of Australia, evolved what he has called the "aggregate-expenditure method," which is based on Scrope's method.

The fundamental principle of this method is that, instead of giving an arbitrary system of weights to a series of price-ratios, the prices of different commodities are multiplied by the quantity consumed, and so the aggregate expenditure is measured. In the retail- and wholesale-prices investigations it is assumed that throughout the period covered the quantities of each article consumed remain constant and equivalent to the arithmetic mean of the estimates of their consumption for a series of years. So long as consumption does not vary greatly the error involved in the use of the arithmetic mean instead of the more scientific geometric mean may safely be neglected. It is admitted that the method assumes a fixed consumption of the articles treated, and over a course of years this may become a serious defect. However, in retail prices especially, the relative consumptions or usages do not vary greatly from year to year, and new commodities are introduced but slowly. During the war period this has, however, not been so true as in normal times. For example, the close of 1918 witnessed such a soaring in the price of potatoes as to warrant the assumption that there must have been a considerable reduction in the consumption of this article of diet, with or without a substitution therefor of other commodities. So also from time to time difficulties of transport and of production have effected shortages of various commodities in common use, and so brought about a curtailment of their consumption.

It should be remembered, however, that these changes in consumption have almost without exception been but transitory phenomena, and New

Zealand's condition during the war period has been in no way comparable with that of countries lying nearer the storm-centre and dependent in large degree for the very necessaries of life on supplies from overseas. It is demonstrable by tolerably simple mathematical reasoning that small errors in the number of units of a commodity assumed to have been consumed do not seriously prejudice the validity of the result (although this is far from true of small errors in the price).* Perfect constancy could in no circumstances be expected, much less amid the turmoils of war. It is, however, seriously advanced that practically all such fluctuations as have occurred in the cases of the commodities selected have been so small and of so ephemeral a character as in no way seriously to vitiate the validity of the investigation as a criterion of changes in the level of the retail prices of the classes of commodities investigated. There have, however, admittedly been a few cases—e.g., that of potatoes above quoted—where there has been a change in the standard of comfort as a direct result of scarcity. For example, inquiries instituted at the time indicated that sales of potatoes in Wellington had dropped in quantity to practically half the normal amount. Now, this circumstance has been proffered as a criticism of the continued use for statistical purposes, without adjustment, of a system of weights based on a standard of consumption which has not remained constant. But such criticisms arise out of a serious misconception as to the nature and objects of this investigation into retail prices. The Census and Statistics Office makes no claim to have investigated changes in the cost of living; it professes merely to have measured, by the only practical and mathematically sound method yet devised, changes in the general level of retail prices of certain groups of commodities; and the basis of this method is the assumption of a fixed "regimen" or list of commodities, with the amount of each, consumed. It is freely admitted that for some purposes a more useful system would be one whereby changing standards of living (whether the changes are rapid ones due to shortages of commodities or whether they are secular ones due to changes of fashion, the dissemination of a sounder knowledge of dietetics, &c.) were fully recognized. But no sound system that is not open to grave exception on practical grounds has yet been propounded in order to overcome this difficulty of varying standards.

In what is perhaps the most exhaustive and complete discussion extant of the relative merits and demerits of various index numbers, Professor Irving Fisher has used a series of tests to determine the best formula to use for an index number, and finally pronounces in favour of the weighted arithmetical method followed by Scrope, Sidgwick, Sauerbeck, and Giffen.† He states the formula in non-mathematical language, as meaning "that the level of prices in any year is found by dividing the *total value of the quantities* sold in that year by what that value would have been at base prices."

The decision to adopt for New Zealand the "aggregate expenditure" method, devised by the Commonwealth Statistician, was therefore mainly influenced by two reasons: The first was that it is very simple in construction; and the fact that index numbers computed on this method are

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* See Bowley: "Elements of Statistics," page 205.
† Irving Fisher: "Purchasing-power of Money," Chapter x, Appendix.

reversible is of very considerable advantage from a practical point of view, as it enables a change of base to be made to any year or any town, with very little labour. Moreover, Mr. Knibbs's exposition of the theory of determining price-indexes, as contained in Appendix VIII of his first "Report on Price-Indexes and Cost of Living in Australia," is sufficiently convincing to establish the belief that his method is the one which so far gives the best and most accurate measurement of exchange value. In concluding his very exhaustive mathematical inquiry into the various methods of computing price-index numbers, Mr. Knibbs sums up the advantages of the method of aggregate expenditure as follows :—

(i.) It is incomparably superior to the unweighted price-ratio method if the mass-units are at all near the true usage-quantities.

(ii.) If the mass-units are only approximately correct, small differences in their value will not sensibly vary the result.

(iii.) One can instantly see in practical computation the influence of each term on the result, and thus estimate the effect of any uncertainties.

(iv.) It is the simplest possible of all methods the precision of which entitles them to consideration.

The first conclusion given above, the justification of the trouble involved in any system of weighting, is, of course, particularly important in an inquiry into retail prices, and indeed the whole method is admirably suited for such an investigation. The second conclusion follows from the statistical law, already referred to, that errors in weighting are much less important than errors in prices; and the third is intimately connected with this point, since it follows that even small fluctuations in the prices of important commodities are readily reflected in the index numbers.

The second and a very important reason for the adoption of this method lay in the proximity and similarity of New Zealand to Australia. The economic conditions of the two countries are very similar; their social problems are largely identical, and it is obviously desirable that any statistical work should be conducted on similar lines.

Perhaps the simplest explanation of the aggregate-expenditure method of constructing index numbers is the illustration of the housewife's weekly marketing. Imagine that the housewife each Saturday takes her basket and goes to town to do the week's shopping. She purchases just what is required for the household for the following week, and returns home with her basket containing just so much of each commodity as is necessary for consumption during the week. If exactly the same quantities of each commodity were purchased every week, then the difference in the total cost of the contents of the basket, which may be termed the "composite unit" or "regimen" for one week as compared with another, is the correct measurement of the price-variations between the two periods. So in the aggregate-expenditure method, by taking a definite composite unit or regimen, based on the consumption within the country of the various commodities selected, and recording the prices of these commodities at intervals during the year, it is possible to construct a series of index numbers which accurately represent variations in the level of prices of the commodities dealt with as a whole.

The method may also be explained by a concrete numerical example in connection with the seven commodities which have been selected to comprise the dairy-produce group in the retail-prices investigation. These commodities are milk, butter, cheese, eggs, shoulder bacon, middle-cut bacon, and ham. The average price of each of these commodities in Wellington in 1911 was—milk, 3·98d. per quart ; butter, 14·50d. per pound ; cheese, 8·25d. per pound ; eggs, 16·47d. per dozen ; shoulder of bacon, 6·75d. per pound ; middle-cut bacon, 10·50d. per pound ; and ham, 11·25d. per pound. In 1891 the average price for the same seven commodities was 3·08d. for milk, 10·62d. for butter, 8d. for cheese, 13·60d. for eggs, 5d. for shoulder bacon, 8·75d. for middle-cut bacon, and 9·50d. for ham. The total annual consumption by the people of the Dominion of these commodities is reckoned approximately at 78,600,000 quarts of milk, 21,400,000 lb. of butter, 4,300,000 lb. of cheese, 5,200,000 dozen eggs, 2,800,000 lb. of shoulder bacon, 7,100,000 lb. of middle-cut bacon, and 4,200,000 lb. of ham. Therefore the actual expenditure of the people of New Zealand on these commodities in the two years under comparison on the basis of prices ruling in Wellington would be as follows :—

EXAMPLE ILLUSTRATIVE OF THE COMPUTATION OF INDEX NUMBERS BY THE AGGREGATE-EXPENDITURE METHOD.

Commodities.	Unit of Quantity.	Annual Consumption (00,000 omitted).	Average Price.		Total Expenditure.	
			1911.	1891.	1911.	1891.
			d.	d.	d.	d.
Milk	Quart	786	3·98	3·08	3,128·28	2,420·88
Butter	Pound	214	14·50	10·62	3,103·00	2,272·68
Cheese	,,	43	8·25	8·00	354·75	344·00
Eggs	Dozen	52	16·47	13·60	856·44	707·20
Bacon (shoulder)	Pound	28	6·75	5·00	189·00	140·00
,, (middle cut)	,,	71	10·50	8·75	745·50	621·25
Ham	,,	42	11·25	9·50	472·50	399·00
Aggregate expenditure	..	..	..	..	8,849·47	6,905·01

The aggregate expenditure was thus found to be 6,905·01 in 1891, while in 1911 it rose to 8,849·47. Now, the base has been computed for this group of commodities, as for all other groups taken separately or in combination, by taking the annual aggregate expenditure of each of the four chief centres for a period of five years (1909 to 1913 inclusive), and dividing the total thus obtained by 20 : i.e., 5 (number of years) × 4 (number of centres).

In this group the average annual aggregate expenditure for the five years (the average of the four chief centres) is 8,690·84. This number is made the base (= 1,000). Therefore the index number for the dairy-produce group in Wellington in 1891 is $\frac{6,905·01}{8,690·84} \times 1,000 = 795$. and in 1911 $\frac{8,849·47}{8,690·84} \times 1,000 = 1,018$.

If instead of seven commodities a large number is taken—as, for instance, in the groceries group, in which the aggregate expenditure is computed from thirty-one commodities—and the computations are carried on over a period of years, the index numbers thus obtained furnish a sufficient index of price-variations from year to year.

In the wholesale-prices investigation the method adopted is a modification of the " aggregate-expenditure method." The method of the investigation into export and producers' prices differs, however, in an important respect from that employed in the retail and wholesale prices investigations, and will be found fully explained in Part IV of this report.

SELECTION OF BASE.

The index numbers for the whole period under review must be based on some definite period, the prices for which have been equated to 1,000, so that each index number is relative to the base. The choice of a base period, therefore, is of some importance. since an abnormal period will apparently distort the whole series. It is always advisable to fix the base as near the end of the series as possible, since a base at the beginning is more out of touch with present conditions. In the Commonwealth the single year 1911 has been taken ; but a single year is open to the objection that, since each group is for that year shown as 1,000, it might be assumed, though wrongly, that the aggregate expenditure in that year was identical in each group and in every town. This difficulty is plainly illustrated by the graphs, which all converge to a point in 1911. For this reason, and also to avoid taking any single year which might possibly be considered as abnormal in regard to some of the commodities selected, it was decided to take as the base or standard for New Zealand the average of the five years 1909–13, the last complete five years at the time the inquiry was decided on and originated. Perhaps, however, the principal reason actuating the departure from the single year was the desire to adopt one common base for all towns, so that the index numbers would be in every way comparable within a group—i.e., to make the index number for, say, Wellington comparable not only within itself one year with another, but also comparable with the index number of any other town for the same group. For these reasons, therefore, it was decided to adopt as the " base " or " standard " the average annual aggregate expenditure of the four chief cities (Auckland, Wellington, Christchurch, and Dunedin) for the five years 1909–13 inclusive. The relative comparability of the index numbers one with the other is not really affected by the base adopted, and, moreover, since the index number is reversible, by a very little labour, from the index numbers themselves, any year may be made the base and fresh numbers computed.

The only drawback which may be urged against the adoption of a period instead of a single year lies in the fact that in the tables of index numbers there is no concrete figure which may be pointed out as the basis of the table.

SCOPE OF INQUIRY.

Arrangements have been in operation since 1914 for collecting reliable and accurate statistics of retail prices in New Zealand. The plan is similar

to that in use in Australia, and the data received have been satisfactory and complete. Since the retail prices are so relevant to the cost of living, and are more liable to local, though not to temporary, fluctuations, it is advisable to extend the collection of the data as widely as possible. With this object in view data have now for some years been collected monthly from twenty-five towns in New Zealand, representative of inland and coastal districts, of large and small centres, and scattered widely over both Islands. On the 15th of every month the Inspectors of Factories in these towns collect current retail prices from local grocers and butchers, and forward in addition prices of other commodities; these returns are checked and tabulated in the Census and Statistics Office, and have appeared each month, together with an index number of retail prices, in the "Monthly Abstract of Statistics," published by the Census and Statistics Office. The work of the Inspectors of Factories in this connection has been invaluable, and their duties have been promptly and efficiently carried out. Every month returns are received from twenty-five Inspectors of Factories, eighty-nine grocers, and sixty-two butchers, while twice each year the index numbers for rent are compiled from approximately four hundred returns forwarded by house agents and owners. This means in the aggregate that nearly eight thousand price-quotations are examined each month, excluding rent returns.

At the same time, it was advisable in initiating the inquiry to go back as far as reliable data could be obtained; but the very nature of the retail trade has rendered it impossible to go beyond 1891. Arrangements for the prosecution of this work were made during the first half of 1914, and although the work was hampered by the outbreak of hostilities in August of that year, it was completed in 1915. Except in the case of Chrischurch groceries, complete data have been obtained for all cities back to 1891, and the results of the investigation based on these data are presented in the following pages.

It has already been seen that index numbers of retail prices are of considerable value on account of the light they shed on changes in the cost of living. Index numbers of wholesale prices, on the other hand, are of value rather for their bearing on commercial and industrial conditions. Indeed, it might be said that the former approach the problem of prices from the consumers' point of view, while the latter are more or less typical of all prices. Moreover, in the case of wholesale prices it is possible to include a large proportion of commodities which never find their way into the housewife's basket in the form for which the wholesale prices are quoted.

The compilation of index numbers of wholesale prices was an integral part of the original scheme of price-investigation inaugurated in 1914 by the Census and Statistics Office, but the outbreak of war soon after the scheme was set afoot delayed the prosecution of this portion of the work. Accordingly, it was not until towards the end of 1919 that it was found practicable to commence publication in the "Monthly Abstract" of a series of index numbers of wholesale prices.

In the compilation of the index numbers of wholesale prices the same method of collecting data was employed as in the retail-prices investigation, but the sphere of the inquiry has in the case of wholesale prices been confined to the four chief centres.

The data of the export and producers' prices investigations are the Statistics of Trade and Production, published annually in Volumes II and III respectively of the "Statistics of New Zealand."

The remaining portion of this report is divided into four sections, respectively dealing in detail with the results of a retail-prices investigation, a wholesale-prices investigation, an inquiry into the level of prices from the points of view of the producer and the exporter, and a general comparison of the results of each of the separate investigations.

PART II.—RETAIL PRICES.

CHAPTER I.—METHOD OF THE INVESTIGATION.

SELECTION OF COMMODITIES.

The selection of the commodities to be included is perhaps the most important step in any prices inquiry. After all, the chief practical use of the retail figures is the light they throw on the cost of living, although it is not seriously advanced that the figures are a direct index of anything more than the general level of the prices of the commodities falling within the scope of the investigation. It is obvious, then, that unless the number of commodities included is sufficient, and such as to cover the principal commodities ordinarily necessary for the "living" of the mass of the people n the country, any conclusions drawn as to variations in the cost of that living may be seriously misleading. The ordinary necessaries and conventional comforts required for the maintenance of the people may be grouped under five main headings—viz., food, clothing, housing, fuel and light, and miscellaneous. Consideration of the items which are covered by these groups show that there are no obstacles to the inclusion of housing and food, but that in regard to the other two—clothing and fuel and light—there are reasons which make their inclusion impracticable and inadvisable.

Food.—Except for fruit and vegetables, the principal items of food, although they do manifest variations as to grade or quality, do not vary to such an extent as to preclude the retailers by whom the particulars are supplied from determining that grade or quality which exceeds all the others in the quantity sold. It is quite possible, therefore, to cover the main food items.

Housing.—While houses vary greatly in size, convenience, situation, &c., it is quite practicable to follow the rent-movements from year to year, and there is no valid reason why house-rent should not be included.

This item, however, was long considered in many respects the most difficult item to handle in a satisfactory way. The method used was to divide houses into classes on the basis of the number of rooms they contained, and to collect from house agents in different towns returns of average rents for the various classes. Each class was given a weight corresponding to the relative number of that class in the centre, and in this way was obtained an average weekly rent for all classes of houses.

By this method it was possible to get a fairly good indication of the changes in house-rent over the period : but in some instances the data could not be considered altogether satisfactory, and in August, 1916, a new system of collection of information was inaugurated in lieu of the somewhat loose method of calling upon house agents to state what was in their opinion the predominant rent for each class of house. Under the new system persons or firms collecting rents are called upon to state the actual number of houses belonging to each class (as above defined) for which rents were collected, together with the aggregate rent so receivable ; and in this way mathematical exactness has been secured, and an equivocal practice, whereby reliance was placed on the judgment of individuals, eliminated.

In compiling the index numbers of rent the weights used are based on the number of houses of the various classes according to rooms, ascertained at the census of October, 1916.

It might be objected that inasmuch as a considerable portion of the householders in the community are not rentpayers the taking of house-rent as representative of housing-cost in the community is invalid. In this connection it is worth pointing out that householders may be broadly divided into four classes :—

(1.) Rentpayers, properly so-called ;

(2.) Persons living in homes which they are buying on some form or other of instalment plan ;

(3.) Persons owning the freehold subject to mortgage ;

(4.) Holders of the freehold unencumbered.

Persons who hold the freehold unencumbered must in most cases at some time or other have paid in hard cash or its equivalent for their homes, and as a result of having parted with this cash they are losing the interest which they might have derived therefrom had they not invested in a home. The amount of this interest, together with rates, allowances for depreciation, expenses of upkeep, &c., must necessarily be roughly equivalent to the rental value of that house, so that rents may in general be taken as approximately representative of the housing-cost of individuals holding the freehold of their homes unencumbered.

A little reflection will show that the same is true of the other classes of householders, especially when it is remembered, for example, that the payments for housing of persons belonging to the second class are made up partly of (1) interest charges, which, as we have already shown, are approximately equivalent to actual rent charges, and partly of (2) purchase-money, which is merely a form of saving, and which, inasmuch as it does not represent current expenditure, does not come within the scope of an investigation purporting to shed light on the cost of living.

Considering all the circumstances, it is therefore submitted that house-rent as arrived at by taking a large sample of actual payers gives the best measure of housing-cost it is practicable to obtain.

Clothing.—After food and housing, it will be found that clothing forms the largest item in the "cost of living" expenditure, but, owing to the influences of individual taste and fashion, the qualities and grades are very numerous. These are subject to constant changes from year to year, and it has so far been found impracticable to select a list of clothing commodities in regard to which comparable predominant prices could be obtained. Moreover, careful consideration of the expenditure on clothing leads to the conclusion that its omission from a "cost of living" inquiry, though serious, is not as material as the amount of expenditure on the item would indicate. Clothing is an admitted necessity, but a large proportion of the expenditure thereon may well be looked upon as a luxury, and it is this portion of the expenditure which varies and fluctuates most. The necessary expenditure on clothing normally does not vary greatly from year to year. Further, it will be found that with the average man of moderate income the expenditure on clothing depends to a great extent on what surplus of income is available after the needs of housing and food are satisfied. Food and housing must first be provided, and if economies must be exercised they are most likely to be effected in the expenditure on other commodities. Now, it has already been mentioned that it is a condition precedent to the application of the method of price-investigation here adopted that the regimen—*i.e.*, the articles enumerated, and the exact relative quantities thereof—should be approximately constant over the period covered by the investigation. Since, then, changes of price are especially apt to cause the majority of people to modify the extent of their purchases in the case of clothing, where this item is concerned the condition precedent to the application of the method is not fulfilled. For these reasons (which have earned the approval of the Australian, Canadian, and South African statistical authorities) articles of clothing are not included in the general inquiry. An attempt has, however, recently been made, per medium of statements obtained from representative soft-goods retailers, to arrive at a reasonably close approximation to the increase during the war and post-war period in the cost of clothing, on the questionable assumption of a fixed regimen.

Fuel and Light.—There are no difficulties in regard to obtaining predominant prices for the commodities which go to make up this group, but the consumption of these commodities varies greatly as between place and place. In some places wood is principally burned, and very little coal is used. Gas is used in some towns, electricity in others, while there are also towns with and without both. It would be impossible, therefore, to fix a mass-unit for these commodities which would be properly applicable to all towns for which retail price-index numbers are to be deduced. The group "fuel and light" has therefore to be omitted from the inquiry into the cost of living in the twenty-five towns, but the particulars have been and are being collected in connection with the four chief centres, and this group is made the subject of a special index number. It is important to bear in mind that "fuel and light" index numbers throughout the retail-prices investigation are based merely on the figures of the four chief centres.

Other Items. — There is good reason for believing that changes in the standard of living are mainly effected in respect of clothing and miscellaneous items of expenditure. Housing, food, fuel, and light must (with the inclusion of the essential portion of expenditure on clothing) be regarded as covering the bulk of the really necessary items of expenditure, while the remaining items partake rather of the nature of luxuries, or at any rate are for the most part such as might be dispensed with if need arose. The "other items" accordingly scarcely comply with the canons of the method here adopted, and are consequently (like clothing) excluded from the general investigation.

LIST OF COMMODITIES INCLUDED.

As indicated above, the main inquiry has been confined to food and housing, the former being divided into three groups—viz., groceries, dairy-produce, and meat. In all, fifty-nine commodities have from the commencement of the investigation been treated in the food groups, compared with forty-seven originally included in the Commonwealth index number, thirty in the Canadian index number, and twenty-three in the British Board of Trade retail index number. In addition to the food and housing inquiries, price-changes in connection with commodities coming under the head "Fuel and Light" have been investigated, but it has not been found possible to carry back this portion of the inquiry so far as in the case of the first four groups.

The division of groups used follows the lines of the Commonwealth inquiry; and it may be noticed here that the groceries group includes such items as starch, blue, soap, and tobacco, which in strictness cannot be classed as foods, but, not being important enough to form a separate class, were included here. The full list of commodities is as follows:—

Group I—Groceries.—Bread, flour, oatmeal, rice, sago, tapioca, tea, coffee, cocoa, sugar, salt, pepper, jam, honey, golden syrup, treacle, raisins, currants, apricots (tinned), peaches (tinned), pears (tinned), prunes (dried), apricots (dried), potatoes, onions, salmon (tinned), herrings (tinned), starch, blue, soap, tobacco.

Group II—Dairy-produce.—Milk, butter, cheese, eggs, bacon (shoulder), bacon (middle cut), ham.

Group III—Meat.—Beef: Sirloin, brisket, prime rib, rump steak, top side, stewing-steak, corned round, corned roll, corned brisket. Mutton: Leg, shoulder, loin, neck, chops. Pork: Leg, loin, belly, chops. Sausages: Beef, pork. Tripe.

Group IV—Housing.—House-rent.

Group V.—Fuel and Light.—Coal, coke, firewood, kerosene, gas (for lighting), electricity (for lighting), candles.

IMPORTANCE OF THESE COMMODITIES.

In a collection of household budgets carried out by the Labour Department in 1910–11 it was found that the average expenditure ranged thus:—

			Per Cent. of Total Expenditure.				Per Cent. of Total Expenditure.
Food	..	..	34·13	Fuel and light	..	..	5·22
Housing	..	..	20·31	Other items	..	..	26·45
Clothing	..	..	13·89	Total ..		..	100·00

A similar investigation was carried out by the Census and Statistics Office in 1919. As shown in Chapter VII, the results of the later investigation are not such as to call into question the essential validity of the figures above quoted.

In the 34·13 per cent. of the total expenditure shown above for food is included expenditure on certain items of fruit and vegetables not included in the present inquiry. Even if these are excluded the inquiry covers over 50 per cent. of the total expenditure, and if expenditure only on what may be considered absolute necessities is dealt with it will be found that the inquiry covers a much larger proportion of the total necessary expenditure of a normal family.

Not only do the commodities treated comprise the most necessary items of expenditure, amounting on the average to over half the total expenditure of an average family, but these commodities become more and more important in cases where the expenditure is limited below the average. Food and shelter are the primary needs which must be satisfied before all others; and Engel's law, which states that the proportion of income expended on food rapidly decreases as incomes rise, has a real importance here. In the cases where the increasing cost of living presses most harshly the commodities which have been treated assume greater importance than any others; while those commodities not treated are composed largely of items which differ in nature and importance very considerably from household to household.

"MASS-UNIT" OR WEIGHT.

In the construction of the index number allowance must be made for the fact that all commodities are not of equal importance, otherwise the results will be valueless. It will at once be seen that a variation in, say, the price of pepper of even 100 per cent. would not be appreciable in the total cost of the composite unit or regimen, on account of the small quantity of pepper required. But an increase of 5 or 10 per cent. in the price of bread would affect the total cost very considerably, since bread would bulk largely in the housewife's basket. In order, therefore, to assign to every commodity its proper importance in the index number, the price of each commodity is multiplied by a number representing its relative importance to the other commodities included. As the economic importance of a commodity consists in the extent of its usage in the community, obviously a number which represents this is the proper one to use. This number Mr. Knibbs calls the "mass-unit." The mass-unit for each of the commodities selected was ascertained by taking the average production of each commodity in New Zealand plus or less the difference between imports and exports, covering the average of the ten years 1904–13. The sales for one month of the various grocery items were obtained and considered, and in the case of meat the proportions of the animal cut into the various joints were obtained from several recognized experts. The relative expenditures as shown by the household budgets collected by the Department of Labour in 1911 (see Chapter VII) were also used to verify approximately the results.

As explained above, the proper economic importance of the commodities selected for this inquiry is determined by multiplying the price of each article by a number (the "mass-unit" or "weight") representing the extent of its usage in the community. Now, this weight is the usage or consumption of the commodity for a whole year, but we know that in the case of some commodities the consumption is greater at certain periods of the year than at others. Certain other commodities also regularly vary in price enormously at different seasons of the year, mainly on account of changes affecting their productions. Some of the commodities in question—as, for instance, milk, butter, potatoes, eggs, &c.—are of considerable economic importance, and even a small variation in their price is immediately reflected in the index number. It is not practicable in an investigation of this kind to differentiate between each quarter in the "weights" assigned each commodity, even if it were possible to ascertain accurately the variation in the consumption. In the index number for the year these seasonal variations are of course averaged, and one year is properly comparable with another. The fact, however, should be clearly grasped that quarterly index numbers, for the reasons stated, are not properly comparable with yearly index numbers, or with index numbers for immediately preceding or succeeding quarters. A comparison of quarterly index numbers may, however, properly be made between corresponding quarters of different years. The same remarks are true, perhaps in even greater degree, of monthly index numbers.

In later years, when more data have been accumulated, it may be possible to make an inquiry into the effect of seasonal changes as disclosed by the quarterly or monthly index numbers, with the object of discovering any cycle of variation that may exist.

The mass-units assigned to the various commodities are as shown below, the unit of measurement being also given in each case. The mass-unit represents the total consumption of the commodity in terms of the unit of measurement, the last five digits being omitted for convenience in working.

RETAIL-PRICES INQUIRY—UNIT OF MEASUREMENT AND MASS-UNIT.

No. of Item.	Item.	Unit of Measurement.	Mass-unit (less 00,000).
	Group I.—Groceries.		
1	Bread	2 lb. loaf	1,085
2	Flour	25 lb. bag	21
3	Oatmeal	Pound	85
4	Rice	,,	81
5	Sago	,,	19
6	Tapioca	,,	6
7	Tea	,,	75
8	Coffee	,,	4
9	Cocoa	¼ lb. tin	14
10	Sugar	56 lb. bag	20
11	Salt	Pound	122
12	Pepper	¼ lb.	6
13	Jam	Pound	195

RETAIL-PRICES INQUIRY—UNIT OF MEASUREMENT AND MASS-UNIT—*continued.*

No. of Item.	Item.	Unit of Measurement.	Mass-unit (less 00,000).
	Group I.—Groceries—continued.		
14	Honey	Pound	4
15	Golden syrup	2 lb. tin	10
16	Treacle	,,	2
17	Raisins	Pound	47
18	Currants	,,	26
19	Apricots (tinned)	2½ lb. tin	4
20	Peaches (tinned)	,,	4
21	Pears (tinned)	,,	2
22	Prunes (dried)	Pound	11
23	Apricots (dried)	,,	6
24	Potatoes	14 lb.	146
25	Onions	Pound	101
26	Salmon (tinned)	Pound tin	10
27	Herrings (tinned)	,,	10
28	Starch	Pound	11
29	Blue	,,	2
30	Soap	Bar (36 to hundredweight)	145
31	Tobacco	Pound	28
	Group II.—Dairy-produce.		
1	Milk	Quart	786
2	Butter	Pound	214
3	Cheese	,,	43
4	Eggs	Dozen	52
5	Bacon (shoulder)	Pound	28
6	,, (middle cut)	,,	71
7	Ham	,,	42
	Group III.—Meat.		
1	Beef—Sirloin	Pound	174
2	,, Brisket	,,	18
3	,, Prime rib	,,	169
4	,, Rump steak	,,	142
5	,, Top side	,,	105
6	,, Stewing-steak	,,	316
7	,, Corned round	,,	119
8	,, ,, roll	,,	112
9	,, ,, brisket	,,	10
10	Mutton—Leg	,,	313
11	,, Shoulder	,,	276
12	,, Loin	,,	92
13	,, Neck	,,	184
14	,, Chops	,,	184
15	Pork—Leg	,,	28
16	,, Loin	,,	22
17	,, Belly	,,	16
18	,, Chops	,,	20
19	Sausages—Beef	,,	70
20	,, Pork	,,	28
21	Tripe	,,	28

No. of Item.	Item.	Unit of Measurement.	Mass-unit (lesss 00,000.).

Group IV.—Housing.

1	House-rent	..	109·2

Group V.—Fuel and Light.

1	Coal	¼ ton	44
2	Coke	Hundredweight ..	8
3	Firewood	¼ cord.. ..	4
4	Kerosene	4-gallon tin	8
5	Gas (for lighting)	1,000 cubic feet ..	11
6	Electricity (for lighting)	Unit	60
7	Candles..	Pound	40

The aggregate expenditure in a group is obtained by multiplying the average price of each commodity in the group by its mass-unit and adding together the various products. The total aggregate expenditure is the sum of the aggregate expenditures of the five groups shown above.

The average weekly rent as obtained for the various centres in each of the twenty-nine years was multiplied by 109·2, the weight arrived at for house-rent. The aggregate expenditure thus ascertained is found to approximate very closely to the results obtained by the Labour Department in 1911 (see page 14).

In combining the groups to form a composite index number the same procedure is followed as was used in making up each group. The aggregate-expenditure method results in automatic weighting of each commodity and of each group, so that any change in the price of any article or group is given its proper economic importance.

COLLECTION OF DATA.

The primary consideration in any investigation of this nature must be the collection of accurate and reliable data; with inaccurate data the whole result is rendered worthless. If the index number is not a correct indication of the actual facts it is of no value whatever, and the labour expended is fruitless. For this reason care has been taken at every stage of this inquiry to exclude any mere expressions of personal opinion, and to base all conclusions on the solid foundation of actual transactions. In order to ensure as far as possible that the data for past years should be accurate and concrete, and extracted from actual records of past trans-actions, an officer of the Labour Department was specially deputed to visit each of the four chief centres and interview retailers. He was thus enabled to get into personal touch with those merchants who had actual records going back over a series of years, and by a full explanation of the nature and purpose of the inquiry was enabled to enlist the merchants' personal

interest in the compilation of an accurate return. The result was that the returns received, although not numerous, were very carefully and correctly made up.

The investigation, in so far as it relates to years prior to 1914, is based then on returns obtained in this way from merchants in the four centres. Each return has been compiled from actual records of sales, and is not merely the expression of opinion. The commodities treated cover, of course, many grades and qualities; but it has been possible in all cases to quote some predominant outstanding grade which covered the greatest proportion of sales. As in Australia, the whole inquiry is based on the predominant or most frequent prices of the predominant brands (thus using the conception of the *mode*, the case at which most instances occur). Tradesmen and others supplying returns have a definite instruction on this point, and it may be mentioned that special inquiries recently instituted have elicited the fact that the instruction has been universally complied with. Most of the returns showed quarterly variations in prices since 1891, and in every case the years are fully comparable, the only case in which the data are incomplete being in respect of the price of groceries in Christchurch from 1891 to 1898.

In the course of these inquiries also a considerable quantity of valuable data was obtained, such as the number of loaves delivered to each household over given periods (in some instances a week and in others a month) at different times during the year, and similarly milk-deliveries, &c., which were all considered in determining the number of the various mass-units. In all, fifty returns, involving 31,500 price-quotations, were received from retailers in the four centres in connection with this part of the retail-prices investigation.

As mentioned earlier in this report, the figures thus obtained have been continued on the basis of returns collected from twenty-five towns partly through the agency of Inspectors of Factories and partly direct from retailers, house agents, &c., themselves. Returns furnished by tradesmen and others are supplied in compliance with regulations under the Census and Statistics Act, 1910, which provides a penalty for refusal to supply information or for the furnishing of incorrect particulars.

CHAPTER II.—RULING RETAIL PRICES, 1891–1919.

The actual retail prices obtained as a result of the investigation, details of the method of which appear in the preceding chapter, are now quoted.

Two sets of tables appear in this connection. Of these the first shows for each commodity included in the investigation the average of the predominant retail prices in each of the four centres, and goes back as far as 1891. For a number of years the investigation was confined to the four centres, but in 1914 a beginning was made with the collection of similar data from twenty-one towns outside the four centres. The second set of tables gives the actual retail prices for the twenty-five towns covered by this more detailed inquiry, and shows quotations for each of the years 1914, 1916, 1918, and 1919, those for intermediate years being omitted on account of considerations of space.

RETAIL PRICES OF COMMODITIES IN THE FOUR PRINCIPAL TOWNS OF NEW ZEALAND FROM 1891 TO 1919.

BREAD, PER 2 LB. LOAF.

Year.	Auckland. (d.)	Wellington. (d.)	Christchurch. (d.)	Dunedin. (d.)
1891	3·00	3·00	..	2·62
1892	3·00	3·00	..	2·69
1893	3·50	3·50	..	2·44
1894	3·37	3·37	..	2·31
1895	3·00	3·00	..	2·52
1896	3·00	3·00	..	2·69
1897	3·37	3·00	..	3·06
1898	3·00	3·50	..	3·25
1899	3·00	3·00	3·16	2·31
1900	3·37	3·00	3·16	2·25
1901	3·50	3·12	3·00	2·59
1902	3·50	3·50	3·00	3·42
1903	3·50	3·75	2·87	3·31
1904	3·50	3·25	2·97	3·03
1905	4·00	3·00	3·12	3·00
1906	3·62	3·00	2·87	3·00
1907	3·50	3·50	3·00	3·33
1908	3·50	3·50	3·25	3·34
1909	3·87	3·56	3·03	3·48
1910	3·75	3·50	3·00	3·37
1911	3·50	3·50	2·94	3·25
1912	3·62	3·50	3·00	3·25
1913	4·00	3·67	3·12	3·50
1914	4·13	3·75	4·00	3·71
1915	4·85	4·71	4·65	4·75
1916	4·54	4·50	4·21	4·21
1917	5·00	5·42	4·65	4·17
1918	5·38	5·50	4·85	4·92
1919	5·50	5·50	5·00	5·00

FLOUR, PER 25 LB. BAG.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	40·00	39·95	..	39·90
1892	33·75	36·08	..	38·40
1893	30·00	30·00	..	30·19
1894	29·00	28·10	..	27·37
1895	31·50	34·00	..	28·50
1896	35·25	34·00	..	34·75
1897	39·00	35·25	..	39·00
1898	40·50	37·67	..	39·00
1899	30·00	26·40	24·00	28·00
1900	25·12	24·17	24·00	26·00
1901	25·50	33·00	29·25	26·75
1902	34·50	42·00	36·00	37·86
1903	38·37	37·00	34·50	38·50
1904	24·12	37·25	34·44	35·19
1905	32·50	34·00	32·00	36·62
1906	31·75	32·81	30·50	34·25
1907	37·50	43·62	36·75	38·09
1908	39·75	41·83	40·19	41·57
1909	39·75	42·50	40·81	39·75
1910	37·87	37·75	36·37	38·62
1911	37·50	33·25	31·25	34·25
1912	37·50	34·50	33·00	34·00
1913	39·00	35·00	34·50	35·50
1914	43·77	43·12	41·46	42·31
1915	57·56	56·60	55·28	53·98
1916	49·88	51·13	46·34	43·87
1917	57·50	58·15	53·50	52·96
1918	61·05	60·12	53·47	55·62
1919	60·10	58·83	54·00	54·29

OATMEAL, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	1·39	1·71	..	1·57
1892	1·43	1·71	..	1·60
1893	1·43	1·71	..	1·82
1894	1·39	1·71	..	1·71
1895	1·39	1·71	..	1·58
1896	1·46	1·71	..	1·70
1897	1·64	1·61	..	1·91
1898	1·68	1·71	..	1·96
1899	1·46	1·71	1·71	1·62
1900	1·50	1·71	1·71	1·84
1901	1·53	2·14	1·43	1·80
1902	1·96	2·00	1·96	1·95
1903	1·64	1·79	1·86	1·91
1904	1·43	1·61	1·43	1·68

OATMEAL, PER 1 LB.—continued.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1905	1·46	1·71	1·50	1·80
1906	1·79	1·98	1·71	1·66
1907	2·07	2·13	2·14	2·16
1908	2·00	2·13	2·04	2·05
1909	1·75	1·82	1·79	1·80
1910	2·00	1·77	1·86	1·77
1911	2·00	1·96	2·00	2·00
1912	2·11	2·16	2·00	2·07
1913	2·14	1·86	2·07	2·04
1914	2·31	2·12	2·24	1·96
1915	2·86	2·90	2·96	2·75
1916	2·99	2·85	2·63	2·47
1917	3·21	3·24	2·99	3·04
1918	4·21	3·93	3·80	3·56
1919	4·86	4·35	4·37	3·75

RICE, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	3·00	3·00	..	3·00
1892	2·62	2·81	..	3·00
1893	3·00	3·00	..	3·00
1894	2·75	2·58	..	2·75
1895	2·50	2·50	..	2·81
1896	2·50	2·00	..	2·72
1897	2·50	2·25	..	2·62
1898	3·00	2·97	..	2·94
1899	2·87	2·71	2·50	2·75
1900	2·50	2·61	2·62	2·59
1901	2·50	2·00	2·75	2·37
1902	2·25	2·00	2·00	2·34
1903	2·00	2·00	2·00	2·37
1904	2·37	2·50	2·50	2·44
1905	2·50	2·25	2·00	2·50
1906	2·50	2·00	2·00	2·62
1907	2·50	2·50	2·50	2·37
1908	2·62	2·50	2·50	2·12
1909	2·50	2·50	2·37	2·06
1910	2·50	2·50	2·00	2·25
1911	2·50	2·37	2·31	2·00
1912	2·50	2·75	2·50	2·50
1913	2·50	2·50	2·50	2·50
1914	2·47	2·19	2·63	2·19
1915	2·38	2·41	2·42	2·51
1916	2·37	2·64	2·51	2·49
1917	2·67	2·89	3·03	2·65
1918	3·34	3·23	3·08	2·97
1919	5·42	5·40	4·96	4·81

SAGO, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	2·87	2·94	..	3·00
1892	2·25	2·56	..	2·87
1893	2·00	2·27	..	2·59
1894	2·00	2·15	..	2·37
1895	2·00	2·10	..	1·87
1896	2·00	2·00	..	2·00
1897	1·87	1·75	..	2·00
1898	2·00	1·50	..	1·87
1899	2·00	2·00	2·00	2·00
1900	2·37	2·50	2·44	2·25
1901	2·37	2·25	2·37	2·31
1902	2·00	2·00	2·00	2·34
1903	1·87	2·00	2·00	1·91
1904	1·50	2·00	2·06	2·00
1905	1·62	2·00	2·00	2·00
1906	2·50	2·10	2·75	2·50
1907	3·00	3·00	3·00	3·00
1908	2·50	2·85	3·00	2·44
1909	2·50	2·62	2·75	2·25
1910	2·50	2·29	2·12	2·25
1911	2·62	2·54	3·31	2·59
1912	2·87	2·75	3·37	2·75
1913	2·62	2·50	2·62	2·72
1914	2·21	2·31	2·63	2·19
1915	2·50	2·47	2·40	2·55
1916	3·20	3·47	3·35	3·17
1917	3·89	3·95	4·11	4·04
1918	5·22	4·29	4·45	4·94
1919	5·33	4·50	5·03	4·85

RETAIL PRICES OF COMMODITIES—continued.

TAPIOCA, PER 1 LB.

Year.	Auckland. (d.)	Wellington. (d.)	Christchurch. (d.)	Dunedin. (d.)
1891	2·87	2·94	..	3·00
1892	2·25	2·43	..	2·87
1893	2·00	2·37	..	2·66
1894	2·00	2·41	..	2·31
1895	2·00	2·00	..	1·87
1896	2·00	2·00	..	2·00
1897	1·87	2·00	..	2·00
1898	2·00	1·50	..	1·87
1899	2·00	2·00	2·00	2·00
1900	2·37	2·50	2·44	2·25
1901	2·37	2·25	2·00	2·22
1902	2·00	2·00	3·00	2·47
1903	1·87	2·00	2·50	2·00
1904	1·50	2·00	2·06	2·00
1905	1·60	2·00	2·75	2·00
1906	2·50	2·10	3·00	2·50
1907	3·00	3·00	3·00	3·00
1908	2·50	2·85	3·00	2·87
1909	2·50	2·62	2·75	2·12
1910	2·50	2·29	2·12	2·12
1911	2·87	2·54	3·31	2·66
1912	3·00	2·75	3·37	2·75
1913	2·62	2·50	2·87	2·75
1914	2·49	2·31	2·69	2·19
1915	2·53	2·47	2·43	2·55
1916	3·04	3·40	3·33	3·16
1917	3·90	3·92	4·11	4·01
1918	5·26	4·43	4·49	4·94
1919	5·31	4·54	5·05	4·83

TEA, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	22·00	24·00	..	28·50
1892	22·00	24·00	..	28·50
1893	22·00	24·00	..	27·00
1894	22·00	21·00	..	27·00
1895	22·00	24·00	..	24·50
1896	22·00	24·00	..	24·50
1897	22·00	24·00	..	24·00
1898	22·00	24·00	..	23·50
1899	22·00	24·00	21·25	23·00
1900	21·50	24·00	20·00	22·25
1901	20·00	22·00	20·00	21·50
1902	20·00	23·00	20·00	21·50
1903	18·50	21·00	20·00	21·50
1904	18·00	21·00	20·00	20·50
1905	18·00	20·00	18·75	20·50
1906	18·00	20·00	20·00	20·50
1907	18·00	17·33	16·25	20·50
1908	18·00	17·11	15·00	20·50
1909	18·00	16·67	15·00	20·50
1910	18·00	16·67	15·62	20·50
1911	18·00	16·67	15·00	20·50
1912	18·00	16·00	15·00	20·50
1913	18·00	20·00	15·00	21·50
1914	17·67	19·98	18·00	20·10
1915	18·06	20·16	18·89	20·41
1916	19·75	20·33	19·14	20·38
1917	20·31	21·00	20·41	20·84
1918	21·90	23·24	23·17	23·28
1919	23·10	25·85	25·42	25·27

COFFEE, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	20·00	20·00	..	21·00
1892	20·00	20·00	..	21·00
1893	20·00	20·00	..	21·00
1894	20·00	20·00	..	21·00
1895	20·00	20·00	..	21·00
1896	20·00	20·00	..	21·00
1897	20·00	20·00	..	21·00
1898	20·00	20·00	..	21·00
1899	20·00	20·00	20·00	21·00
1900	20·00	20·00	17·75	21·00
1901	20·00	20·00	18·00	21·00
1902	18·00	19·00	18·00	21·00
1903	18·00	19·00	18·00	21·00
1904	18·00	19·00	18·00	21·00

COFFEE, PER 1 LB.—continued.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1905	18·00	19·00	17·75	21·00
1906	18·00	19·00	18·00	21·00
1907	18·00	19·33	18·00	21·00
1908	18·00	19·33	18·00	21·00
1909	18·00	19·33	18·00	21·00
1910	18·00	19·33	17·50	21·00
1911	18·00	19·33	17·50	21·00
1912	18·00	20·00	19·00	21·00
1913	18·00	20·00	20·00	21·00
1914	19·79	18·83	18·67	19·96
1915	19·08	19·54	19·41	19·75
1916	19·58	19·65	19·84	19·76
1917	20·17	19·80	20·23	19·92
1918	20·64	20·10	20·99	19·82
1919	21·38	21·69	23·03	20·38

COCOA, PER ¼ LB. TIN.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	10·50	9·75	..	11·12
1892	10·50	9·75	..	10·50
1893	10·50	9·75	..	11·25
1894	10·50	9·75	..	11·25
1895	10·50	9·75	..	10·75
1896	10·50	9·75	..	10·75
1897	10·50	9·75	..	11·25
1898	10·50	9·75	..	11·25
1899	10·50	9·75	9·75	10·75
1900	10·50	9·75	9·75	10·75
1901	10·00	9·75	9·75	10·75
1902	10·00	9·75	9·75	10·75
1903	10·00	9·75	9·75	10·75
1904	10·00	9·75	9·75	10·50
1905	10·00	9·75	9·75	10·50
1906	10·00	9·75	9·75	10·25
1907	10·00	9·75	9·75	10·37
1908	10·00	9·75	9·75	10·50
1909	10·00	9·75	9·75	10·37
1910	10·00	9·75	9·75	10·50
1911	10·00	9·75	9·75	10·50
1912	10·00	9·75	9·75	10·50
1913	10.00	9·75	9·75	11·00
1914	9·50	11·08	11·31	10·94
1915	9·40	11·08	11·53	10·71
1916	9·33	11·67	11·73	10·87
1917	9·88	11·89	12·64	11·67
1918	11·46	14·69	12·99	13·13
1919	12·03	13·38	13·04	11·65

SUGAR, PER 56 LB. BAG.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	151·50	159·75	..	168·00
1892	146·25	156·75	..	167·25
1893	145·50	153·87	..	162·50
1894	141·75	149·83	..	158·25
1895	127·50	126·00	..	146·75
1896	129·00	132·00	..	139·00
1897	124·50	135·00	..	139·00
1898	124·50	129·75	..	139·00
1899	124·50	129·67	125·50	139·00
1900	132·00	139·96	148·37	139·50
1901	130·87	135·00	147·00	151·75
1902	124·12	132·00	126·00	139·00
1903	125·25	129·75	126·00	138·50
1904	125·62	131·25	136·50	136·00
1905	138·75	145·50	138·25	148·37
1906	129·00	138·00	135·00	135·75
1907	117·75	116·50	126·00	123·00
1908	98·25	109·00	112·50	100·50
1909	101·75	105·42	111·00	102·00
1910	109·25	114·00	115·87	112·50
1911	108·75	111·50	120·75	112·25
1912	120·75	118·87	128·25	124·50
1913	129·00	113·25	123·75	126·37
1914	113·38	117·25	131·33	116·36
1915	137·52	139·84	149·00	141·80
1916	139·53	151·37	150·68	149·43
1917	140·80	161·56	155·22	156·40
1918	146·23	164·93	157·03	164·40
1919	151·84	169·82	166·85	172·93

RETAIL PRICES OF COMMODITIES—continued.

SALT, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
	d.	d.	d.	d.
1891	0·75	1·00	..	1·00
1892	0·75	1·00	..	1·00
1893	0·75	1·00	..	1·00
1894	0·75	1·00	..	0·87
1895	0·75	1·00	..	1·00
1896	0·75	1·00	..	1·00
1897	0·75	1·00	..	1·00
1898	0·75	1·00	..	1·00
1899	0·75	1·00	0·75	1·00
1900	0·75	1·00	0·62	1·00
1901	0·75	1·00	0·75	0·87
1902	0·75	1·00	0·75	0·87
1903	0·75	1·00	0·75	0·87
1904	0·75	1·00	0·75	0·87
1905	0·75	1·00	0·56	0·87
1906	0·75	1·00	0·75	0·87
1907	0·75	1·00	0·75	0·87
1908	0·75	1·00	0·75	0·87
1909	0·75	1·00	0·75	0·87
1910	0·75	1·00	0·56	0·87
1911	0·75	1·00	0·62	0·87
1912	0·75	1·00	1·00	0·87
1913	0·75	1·00	1·00	0·87
1914	0·58	1·00	1·00	0·94
1915	0·77	1·00	1·00	0·94
1916	0·94	1·10	0·99	0·96
1917	1·21	1·45	1·36	1·44
1918	2·42	2·79	2·29	2·55
1919	1·91	2·15	2·12	1·72

PEPPER, PER ¼ LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	5·00	4·00	..	5·25
1892	4·25	4·00	..	5·06
1893	4·00	4·00	..	5·00
1894	4·00	4·00	..	4·94
1895	4·00	4·00	..	4·75
1896	4·00	4·00	..	4·75
1897	4·00	3·50	..	4·50
1898	4·00	4·00	..	4·37
1899	4·00	4·00	4·00	4·50
1900	4·00	4·00	4·00	4·50
1901	4·00	4·87	4·00	1·62
1902	4·25	5·00	4·00	4·75
1903	4·62	4·69	4·00	4·75
1904	4·75	4·82	4·00	4·87
1905	4·37	5·00	4·00	5·00
1906	4·50	5·00	4·00	4·75
1907	4·00	4·67	4·00	4·75
1908	4·00	4·50	4·00	4·00
1909	4·00	4·50	4·00	4·00
1910	4·00	4·46	3·75	4·50
1911	4·00	4·33	3·75	4·50
1912	4·00	4·50	4·00	4·56
1913	4·00	5·00	4·25	4·25
1914	4·14	5·48	4·50	4·13
1915	4·31	4·88	4·50	4·27
1916	5·42	5·61	4·52	4·52
1917	5·58	6·07	5·04	4·96
1918	6·10	6·31	6·02	5·20
1919	6·45	6·78	6·56	5·83

JAM, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	5·00	4·00	..	6·25
1892	5·00	4·00	..	6·25
1893	5·00	4·00	..	5·75
1894	5·00	4·00	..	5·75
1895	5·00	4·00	..	5·75
1896	5·00	4·00	..	5·50
1897	5·00	4·25	..	5·50
1898	5·00	4·00	..	5·50
1899	5·00	4·00	5·00	5·50
1900	5·00	4·00	5·25	5·50
1901	5·00	4·00	5·00	5·50
1902	5·00	4·25	5·00	5·50
1903	5·00	4·25	5·00	5·50
1904	5·00	4·25	5·00	5·50

JAM, PER 1 LB.—continued.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
	d.	d.	d.	d.
1905	5·00	4·25	5·00	5·50
1906	5·00	4·25	5·00	5·50
1907	5·00	4·17	4·25	5·50
1908	5·00	4·17	4·00	5·50
1909	5·00	4·17	4·00	5·50
1910	5·00	4·25	4·50	5·75
1911	5·00	4·17	4·50	5·75
1912	5·00	4·00	4·00	5·75
1913	5·00	5·00	4·00	5·75
1914	5·00	5·08	5·50	6·54
1915	5·13	5·34	6·08	6·25
1916	5·71	5·72	6·46	6·33
1917	6·39	6·55	6·68	6·86
1918	7·28	7·68	7·43	7·42
1919	7·21	7·85	7·48	7·65

HONEY, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	4·00	6·00	..	6·00
1892	4·00	6·00	..	6·00
1893	4·00	6·00	..	6·00
1894	5·00	6·00	..	6·00
1895	5·00	6·00	..	6·00
1896	4·87	6·00	..	6·00
1897	4·50	6·00	..	6·00
1898	5·00	6·00	..	6·00
1899	4·75	6·00	6·00	6·00
1900	5·00	6·00	5·00	6·00
1901	5·25	6·00	8·00	6·00
1902	5·00	6·00	6·00	6·00
1903	5·00	6·00	6·00	6·00
1904	4·75	6·00	6·00	6·00
1905	4·50	6·00	5·50	6·00
1906	4·75	6·00	6·00	6·00
1907	5·00	6·00	6·00	6·00
1908	5·00	6·00	6·00	6·00
1909	4·75	6·00	6·00	6·00
1910	4·75	6·00	5·25	6·00
1911	4·75	6·00	5·25	6·00
1912	5·25	6·00	6·00	6·00
1913	5·00	6·00	6·00	6·00
1914	4·96	6·69	5·88	5·92
1915	5·72	6·49	6·28	6·63
1916	7·55	7·96	7·20	7·39
1917	8·85	8·46	7·72	7·71
1918	11·64	12·29	11·31	10·31
1919	12·34	13·41	11·92	10·87

GOLDEN SYRUP, PER 2 LB. TIN.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	7·00	7·00	..	8·00
1892	7·90	7·00	..	7·87
1893	6·75	7·00	..	7·72
1894	6·50	7·00	..	7·62
1895	6·50	7·00	..	7·00
1896	6·25	7·00	..	6·87
1897	6·00	6·50	..	7·00
1898	5·50	7·00	..	6·44
1899	5·50	7·00	7·00	6·00
1900	5·50	7·00	7·00	6·06
1901	5·50	6·00	6·75	6·00
1902	5·50	6·00	6·00	6·00
1903	5·50	6·00	6·00	6·00
1904	5·50	6·00	6·00	6·00
1905	5·50	6·00	6·00	6·00
1906	5·25	6·00	6·00	6·00
1907	5·50	6·00	6·00	6·00
1908	5·50	6·00	6·00	6·00
1909	5·50	6·00	6·00	6·00
1910	5·25	6·00	6·00	6·00
1911	5·50	6·00	6·00	6·00
1912	5·50	6·00	6·00	6·00
1913	5·50	6·00	6·00	6·00
1914	5·50	6·00	6·00	5·94
1915	5·66	5·99	6·00	5·95
1916	5·75	6·00	6·00	6·00
1917	5·90	6·56	7·00	6·24
1918	6·49	7·15	7·02	6·70
1919	7·23	7·51	7·46	7·86

RETAIL PRICES OF COMMODITIES—continued.

TREACLE, PER 2 LB. TIN.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
	d.	d.	d.	d.
1891	6·00	6·00	..	7·31
1892	6·00	6·00	..	7·25
1893	6·37	6·00	..	7·00
1894	6·50	6·00	..	6·87
1895	6·50	6·00	..	6·25
1896	6·25	6·00	..	6·06
1897	5·25	6·00	..	6·00
1898	5·00	6·00	..	5·50
1899	5·00	6·00	7·00	5·09
1900	5·00	6·00	7·00	5·06
1901	5·00	6·00	6·75	5·25
1902	5·00	6·00	6·00	5·12
1903	5·00	6·00	6·00	5·06
1904	5·00	6·00	6·00	5·00
1905	5·00	6·00	6·00	5·19
1906	5·00	6·00	6·00	5·00
1907	5·00	6·00	6·00	5·12
1908	5·00	6·00	6·00	5·00
1909	5·00	6·00	6·00	5·00
1910	5·00	6·00	6·00	5·00
1911	5·00	6·00	6·00	5·00
1912	5·00	6·00	6·00	5·06
1913	5·00	6·00	6·00	5·08
1914	5·00	6·00	6·00	5·09
1915	5·02	5·99	6·00	4·09
1916	5·00	6·00	6·52	5·09
1917	5·14	6·24	7·00	5·39
1918	5·58	6·58	6·91	5·78
1919	6·24	6·80	7·09	6·81

RAISINS, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	8·37	8·94	..	9·50
1892	6·50	7·11	..	7·72
1893	6·00	6·11	..	7·00
1894	6·00	5·63	..	5·91
1895	5·87	5·50	..	5·81
1896	6·00	6·00	..	5·44
1897	6·87	7·00	..	7·09
1898	7·00	8·00	..	7·06
1899	7·00	8·00	7·06	7·94
1900	7·50	7·19	6·81	7·79
1901	6·25	5·50	7·50	7·56
1902	6·25	7·00	6·75	7·28
1903	6·50	6·87	7·00	5·97
1904	6·75	6·00	6·00	5·69
1905	6·00	6·50	5·50	6·03
1906	6·25	7·00	5·12	5·81
1907	6·50	7·00	6·50	6·12
1908	6·12	6·83	6·25	5·62
1909	5·25	5·17	5·44	4·41
1910	4·25	5·00	5·00	4·50
1911	5·00	5·17	8·00	6·25
1912	5·25	4·75	7·00	6·47
1913	5·00	6·00	6·75	5·81
1914	4·67	5·98	6·15	5·21
1915	5·94	6·09	6·51	5·65
1916	6·15	6·25	6·95	6·17
1917	7·36	7·51	7·57	7·09
1918	8·24	8·70	7·77	8·00
1919	9·03	10·16	9·15	9·04

CURRANTS, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	6·00	5·99	..	5·97
1892	5·62	5·87	..	5·81
1893	5·50	5·61	..	5·72
1894	5·00	4·66	..	5·12
1895	5·00	4·00	..	4·53
1896	5·00	4·50	..	4·59
1897	5·25	4·75	..	4·91
1898	5·50	5·50	..	6·19
1899	5·37	5·00	5·00	6·56
1900	6·00	5·87	5·25	6·37
1901	6·87	4·25	6·50	7·28
1902	5·50	5·00	5·00	5·34
1903	5·00	3·82	4·50	4·19
1904	5·00	4·25	4·25	4·19

CURRANTS, PER 1 LB.—continued.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
	d.	d.	d.	d.
1905	5·00	4·25	4·25	4·50
1906	5·00	4·50	4·50	4·25
1907	4·75	4·50	5·50	4·50
1908	4·00	4·33	4·50	4·00
1909	4·00	4·33	4·25	3·25
1910	4·00	4·33	4·25	3·37
1911	5·00	4·50	4·62	4·25
1912	5·00	4·50	5·00	4·00
1913	4·75	4·00	4·00	4·06
1914	4·75	4·79	5·44	4·58
1915	5·58	5·36	5·39	4·70
1916	6·48	6·52	6·16	5·94
1917	8·17	8·38	7·78	7·75
1918	9·75	9·89	9·45	9·58
1919	10·06	11·01	10·86	10·12

APRICOTS, TINNED, PER 2½ LB. TIN.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	13·00	10·00	..	13·50
1892	11·75	10·00	..	13·00
1893	10·00	10·00	..	13·12
1894	10·75	10·00	..	11·75
1895	9·50	10·00	..	10·75
1896	8·87	10·00	..	10·50
1897	10·00	10·00	..	10·69
1898	10·00	10·00	..	10·00
1899	9·50	10·00	11·50	10·75
1900	8·75	10·00	12·00	11·25
1901	9·50	10·00	12·00	11·00
1902	9·00	10·00	12·00	10·75
1903	9·25	9·25	12·00	10·00
1904	9·75	9·50	11·00	10·00
1905	8·50	10·25	12·00	11·00
1906	8·50	10·50	12·00	10·12
1907	9·75	11·33	12·00	11·00
1908	11·00	11·33	12·00	10·87
1909	9·25	11·33	12·00	10·87
1910	10·00	11·33	12·00	10·37
1911	10·00	11·33	11·50	10·50
1912	10·00	11·00	12·00	10·25
1913	10·00	10·00	12·00	10·62
1914	11·08	11·69	11·83	11·04
1915	10·94	11·34	11·75	11·36
1916	10·94	11·43	11·95	11·52
1917	14·79	13·00	12·75	12·94
1918	16·60	16·45	15·84	16·40
1919	18·38	19·18	19·03	19·25

PEARS, TINNED, PER 2½ LB. TIN.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	13·50	10·00	..	13·50
1892	12·00	10·00	..	13·31
1893	11·00	10·00	..	13·50
1894	11·00	10·00	..	12·19
1895	10·75	10·00	..	11·44
1896	10·00	10·00	..	11·37
1897	10·00	10·00	..	11·94
1898	10·00	10·00	..	10·50
1899	9·25	10·00	11·50	11·12
1900	9·50	10·00	12·00	12·00
1901	11·75	10·00	12·00	11·00
1902	10·00	10·00	12·00	11·12
1903	10·00	9·25	12·00	10·62
1904	10·00	9·50	12·00	11·00
1905	10·00	10·25	12·00	11·37
1906	10·50	10·00	12·00	11·87
1907	10·50	11·33	12·00	11·62
1908	12·25	11·33	12·00	11·87
1909	12·00	11·33	12·00	11·87
1910	11·00	11·33	12·00	11·62
1911	10·75	11·33	12·00	11·50
1912	11·00	11·00	14·00	11·50
1913	12·00	10·00	14·00	11·62
1914	12·17	11·69	12·00	11·38
1915	11·90	11·34	11·95	12·00
1916	11·84	11·57	12·23	12·22
1917	14·27	13·57	13·65	14·41
1918	16·83	17·11	16·87	17·33
1919	18·73	19·26	19·06	19·37

RETAIL PRICES OF COMMODITIES—continued.

PEACHES, TINNED, PER 2½ LB. TIN.

Year.	Auck-land.	Wel-lington.	Christ-church.	Dun-edin.
	d.	d.	d.	d.
1891	11·50	10·00	..	13·25
1892	10·50	10·00	..	12·94
1893	9·00	10·00	..	13·00
1894	9·25	10·00	..	11·75
1895	9·62	10·00	..	10·75
1896	9·25	10·00	..	10·44
1897	10·25	10·00	..	10·75
1898	10·00	10·00	..	10·00
1899	9·75	10·00	11·50	10·00
1900	8·75	10·00	12·00	11·06
1901	11·00	10·00	12·00	11·00
1902	11·50	10·00	12·00	10·75
1903	8·87	9·25	12·00	10·37
1904	9·37	9·50	12·00	10·00
1905	10·00	10·25	12·00	10·75
1906	10·00	10·50	12·00	11·00
1907	10·00	11·33	12·00	11·00
1908	11·50	11·33	12·00	10·75
1909	11·75	11·33	12·00	11·00
1910	10·00	11·33	12·00	10·50
1911	10·00	11·33	12·00	10·62
1912	10·50	11·00	12·00	10·50
1913	10·00	19·00	12·00	10·62
1914	11·08	11·69	11·83	11·02
1915	10·94	11·34	11·77	11·41
1916	10·96	11·43	11·63	11·43
1917	13·56	12·99	12·81	13·09
1918	17·00	16·44	15·82	16·72
1919	18·42	19·94	19·90	19·50

PRUNES, DRIED PER 1 LB.

Year.	Auck-land.	Wel-lington.	Christ-church.	Dun-edin.
1891	8·50	9·37	..	10·25
1892	8·75	9·41	..	9·87
1893	8·25	9·53	..	10·81
1894	8·50	9·75	..	10·75
1895	8·00	8·66	..	9·50
1896	8·00	8·13	..	8·25
1897	8·00	8·50	..	9·00
1898	8·00	8·53	..	9·06
1899	8·00	8·00	8·00	7·87
1900	7·00	6·00	9·00	9·37
1901	7·00	6·00	8·00	9·75
1902	7·50	7·00	8·00	8·87
1903	7·25	6·12	8·00	8·12
1904	6·75	6·25	8·00	8·00
1905	6·50	5·50	8·00	8·00
1906	6·75	6·66	7·00	8·25
1907	6·25	6·00	6·00	7·12
1908	4·50	5·42	4·50	5·00
1909	4·00	4·83	4·50	5·62
1910	3·75	4·75	5·50	4·75
1911	5·25	5·58	5·12	5·25
1912	5·50	6·00	5·00	6·75
1913	5·00	5·50	6·00	5·75
1914	5·31	6·11	6·42	6·06
1915	5·58	5·69	6·08	6·02
1916	5·42	5·90	5·97	5·89
1917	6·92	7·71	6·72	7·34
1918	9·15	8·73	8·73	8·92
1919	8·51	9·44	9·31	9·19

APRICOTS, DRIED, PER 1 LB.

Year.	Auck-land.	Wel-lington.	Christ-church.	Dun-edin.
1891	10·00	11·00	..	12·00
1892	10·12	10·81	..	11·50
1893	11·25	11·37	..	11·50
1894	10·00	10·53	..	11·06
1895	9·37	9·62	..	10·25
1896	8·75	9·00	..	10·25
1897	9·00	9·50	..	10·25
1898	9·00	10·00	..	10·00
1899	9·75	11·00	11·00	9·75
1900	9·75	10·54	12·00	9·87
1901	8·25	9·00	9·42	10·75
1902	9·00	9·00	9·17	9·00
1903	9·00	8·37	10·00	9·00
1904	9·00	9·50	9·50	9·00

APRICOTS, DRIED, PER 1 LB.—continued.

Year.	Auck-land.	Wel-lington.	Christ-church.	Dun-edin.
	d.	d.	d.	d.
1905	9·00	10·00	9·00	9·50
1906	10·50	9·67	11·25	11·25
1907	13·00	10·00	14·00	13·87
1908	13·25	11·25	12·12	12·37
1909	8·00	9·08	8·50	9·00
1910	9·00	9·08	8·50	9·12
1911	10·00	9·50	9·87	9·75
1912	10·75	10·00	12·75	11·12
1913	10·75	9·50	11·00	10·00
1914	10·46	9·67	11·33	11·04
1915	9·83	8·85	10·88	9·58
1916	9·71	9·51	10·21	9·25
1917	13·56	13·52	12·56	10·78
1918	16·20	17·14	14·83	14·80
1919	16·42	18·10	16·18	15·90

POTATOES, PER 14 LB.

Year.	Auck-land.	Wel-lington.	Christ-church.	Dun-edin.
1891	8·12	7·59	..	6·06
1892	6·00	6·00	..	6·00
1893	9·00	9·37	..	9·75
1894	6·00	6·94	..	7·87
1895	6·25	11·50	..	6·06
1896	8·00	8·28	..	8·56
1897	8·50	8·00	..	8·25
1898	13·50	13·75	..	13·62
1899	6·12	5·81	5·81	5·50
1900	6·62	7·25	7·25	7·87
1901	8·25	9·00	9·00	9·75
1902	10·37	13·50	11·16	9·62
1903	8·25	7·62	8·21	8·75
1904	6·25	10·12	7·39	5·87
1905	15·37	16·50	16·94	16·12
1906	18·37	21·75	17·81	19·31
1907	15·75	12·08	12·65	10·12
1908	14·25	13·50	12·73	10·44
1909	10·12	11·29	10·24	9·31
1910	14·25	15·00	14·37	14·87
1911	10·75	12·25	10·59	8·75
1912	13·87	14·12	13·62	12·87
1913	11·62	11·50	10·96	9·62
1914	10·54	12·44	8·06	9·85
1915	14·15	17·26	13·71	15·31
1916	17·75	19·99	15·72	14·93
1917	15·00	18·62	14·82	13·91
1918	20·00	23·57	18·02	21·67
1919	20·55	23·43	20·14	20·50

ONIONS, PER 1 LB.

Year.	Auck-land.	Wel-lington.	Christ-church.	Dun-edin.
1891	2·00	1·63	..	1·25
1892	1·87	1·62	..	1·37
1893	1·62	1·39	..	1·16
1894	2·00	1·98	..	1·87
1895	1·37	1·31	..	1·09
1896	1·75	1·00	..	1·45
1897	1·62	1·61	..	1·59
1898	2·12	1·90	..	1·67
1899	1·12	1·26	1·26	1·19
1900	1·44	1·40	1·40	1·17
1901	1·87	1·94	1·94	1·75
1902	1·75	1·50	1·45	1·11
1903	1·62	1·12	1·24	1·00
1904	1·75	1·25	1·32	0·97
1905	2·00	2·42	2·27	2·50
1906	1·37	1·42	1·48	1·47
1907	1·62	1·82	1·50	1·06
1908	1·87	2·00	1·48	1·56
1909	1·62	1·67	1·50	1·12
1910	1·37	1·43	1·33	1·00
1911	1·25	1·42	1·20	0·91
1912	2·37	2·31	2·14	1·75
1913	1·75	1·75	1·67	1·53
1914	1·76	2·04	1·44	1·56
1915	1·55	1·72	2·02	1·36
1916	1·47	1·66	1·52	1·25
1917	2·79	3·12	3·03	2·64
1918	3·15	3·40	2·52	2·99
1919	2·74	3·29	2·83	2·89

RETAIL PRICES OF COMMODITIES—continued.

SALMON, TINNED, PER 1 LB. TIN.

Year.	Auck-land.	Wel-lington.	Christ-church.	Dun-edin.
	d.	d.	d.	d.
1891	10·00	10·00	..	10·12
1892	10·00	10·00	..	10·06
1893	10·25	10·00	..	10·37
1894	10·50	10·00	..	10·00
1895	10·00	10·75	..	10·00
1896	10·00	11·00	..	10·00
1897	10·00	10·50	..	9·62
1898	8·00	11·00	..	9·25
1899	9·25	11·00	10·75	9·31
1900	9·50	11·00	11·00	9·75
1901	10·75	10·00	10·00	10·31
1902	10·75	11·00	10·00	10·25
1903	11·25	11·00	12·00	10·50
1904	12·00	11·12	12·00	9·87
1905	11·00	11·50	12·00	10·25
1906	11·00	11·50	11·50	10·00
1907	10·00	9·67	10·00	10·75
1908	11·00	10·17	10·00	11·00
1909	11·00	10·16	12·00	11·00
1910	10·50	10·16	12·00	10·75
1911	11·00	10·17	12·00	11·75
1912	12·25	10·00	14·00	12·00
1913	14·00	13·00	14·50	12·75
1914	11·51	11·94	13·98	12·56
1915	11·31	12·42	15·55	12·89
1916	11·63	13·79	14·08	13·36
1917	13·62	16·04	14·89	16·25
1918	17·39	20·15	18·43	21·32
1919	16·93	19·74	19·32	21·69

HERRINGS, TINNED, PER 1 LB. TIN.

Year.	Auck-land.	Wel-lington.	Christ-church.	Dun-edin.
1891	7·00	7·00	..	10·25
1892	6·62	7·00	..	10·54
1893	6·75	7·00	..	10·03
1894	6·50	7·00	..	10·00
1895	6·50	7·00	..	9·44
1896	6·50	7·00	..	9·25
1897	6·50	7·00	..	9·16
1898	6·50	7·00	..	9·16
1899	6·37	7·00	7·00	8·44
1900	6·25	7·00	8·75	8·87
1901	6·75	7·00	6·50	8·87
1902	7·00	7·00	5·00	8·72
1903	7·00	6·71	5·00	8·75
1904	6·37	6·50	5·00	8·72
1905	6·50	6·50	7·00	8·59
1906	6·37	6·50	5·25	7·69
1907	6·25	6·67	5·75	7·72
1908	6·75	6·33	7·12	8·37
1909	7·00	6·33	6·87	7·62
1910	6·62	6·33	7·25	7·62
1911	6·50	6·33	7·25	7·53
1912	6·50	7·00	6·50	7·31
1913	6·50	7·00	6·87	7·53
1914	6·98	7·15	7·44	7·40
1915	8·03	7·79	8·02	8·45
1916	10·23	10·61	9·20	11·98
1917	11·50	12·81	12·68	12·35
1918	13·98	15·93	14·35	14·89
1919	14·77	15·99	14·62	15·39

STARCH, PER 1 LB.

Year.	Auck-land.	Wel-lington.	Christ-church.	Dun-edin.
1891	5·50	5·50	..	5·75
1892	5·50	5·50	..	5·75
1893	5·50	5·50	..	5·75
1894	5·50	5·50	..	5·75
1895	5·50	5·50	..	5·75
1896	5·50	5·50	..	5·75
1897	5·50	5·75	..	5·75
1898	5·50	5·50	..	5·75
1899	5·37	5·50	5·75	5·75
1900	5·00	5·50	5·70	5·75
1901	5·00	6·00	6·00	5·75
1902	5·00	6·00	6·00	5·75
1903	5·00	6·00	6·00	5·75
1904	5·00	6·00	6·00	5·75

STARCH, PER 1 LB.—continued.

Year.	Auck-land.	Wel-lington.	Christ-church.	Dun-edin.
	d.	d.	d.	d.
1905	5·00	6·00	5·25	5·75
1906	5·00	6·00	6·00	5·75
1907	5·00	5·83	6·00	5·75
1908	5·00	5·83	6·00	5·75
1909	5·00	5·83	6·00	5·78
1910	5·00	5·83	4·25	5·87
1911	5·00	5·83	5·25	5·87
1912	5·37	5·75	6·00	5·87
1913	5·00	6·00	6·00	6·00
1914	5·40	6·02	6·23	6·04
1915	6·08	6·08	6·55	5·94
1916	7·21	7·17	7·46	6·32
1917	7·64	7·79	7·91	7·11
1918	8·77	8·57	8·49	8·36
1919	10·72	10·33	9·63	9·11

BLUE, PER 1 LB.

Year.	Auck-land.	Wel-lington.	Christ-church.	Dun-edin.
1891	9·50	9·00	..	10·25
1892	9·50	9·00	..	10·25
1893	9·50	9·00	..	10·25
1894	9·50	9·00	..	9·75
1895	9·50	9·00	..	9·75
1896	9·50	9·00	..	9·75
1897	9·50	9·00	..	9·75
1898	9·50	9·00	..	9·75
1899	9·50	9·00	9·00	9·75
1900	9·50	9·00	9·00	9·75
1901	9·50	9·00	9·00	9·75
1902	9·50	9·00	9·00	9·75
1903	9·50	9·00	9·00	9·75
1904	9·50	9·00	9·00	9·75
1905	9·50	9·00	9·00	9·75
1906	9·50	9·00	9·00	9·75
1907	9·50	9·00	9·00	9·75
1908	9·50	9·00	9·00	9·75
1909	9·50	9·00	9·00	9·75
1910	9·50	9·00	9·00	9·75
1911	9·50	9·00	9·00	9·25
1912	9·50	9·00	9·00	9·25
1913	9·50	9·00	9·00	9·25
1914	9·00	9·06	9·42	9·02
1915	9·08	9·08	9·97	9·04
1916	9·56	9·89	10·11	9·56
1917	10·48	11·36	11·02	10·51
1918	13·48	15·54	13·25	13·93
1919	14·57	17·00	14·39	14·57

SOAP, PER BAR, 36 TO 1 CWT.

Year.	Auck-land.	Wel-lington.	Christ-church.	Dun-edin.
1891	8·00	10·00	..	8·44
1892	8·00	10·00	..	7·38
1893	8·00	10·00	..	7·53
1894	8·00	10·00	..	7·58
1895	8·00	10·00	..	7·78
1896	8·00	10·00	..	7·78
1897	8·00	9·50	..	7·78
1898	8·00	10·00	..	7·39
1899	8·00	10·00	9·00	7·19
1900	8·00	10·00	9·00	8·11
1901	8·00	10·00	9·00	7·69
1902	8·75	10·00	9·00	8·33
1903	9·00	10·00	9·00	8·33
1904	9·00	10·00	9·00	7·78
1905	9·00	10·00	9·00	7·78
1906	9·00	10·00	9·00	8·86
1907	10·00	9·33	10·00	9·10
1908	10·00	9·33	10·00	8·89
1909	10·00	9·33	10·00	8·89
1910	10·00	9·33	10·00	8·89
1911	10·00	9·66	10·00	9·78
1912	10·00	9·00	10·00	9·78
1913	10·00	10·00	10·00	9·78
1914	8·81	10·54	8·77	10·38
1915	8·10	9·27	8·44	9·57
1916	7·83	10·26	9·68	11·07
1917	10·77	11·62	10·85	12·25
1918	11·89	15·88	13·04	15·79
1919	13·32	16·81	14·31	17·02

RETAIL PRICES OF COMMODITIES—continued.

TOBACCO, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
	d.	d.	d.	d.
1891	64·00	66·87	..	63·75
1892	64·00	66·87	..	63·75
1893	64·00	66·87	..	63·75
1894	64·00	61·37	..	62·25
1895	64·00	60·00	..	61·50
1896	64·00	61·50	..	62·25
1897	64·00	63·00	..	61·50
1898	64·00	65·75	..	61·50
1899	60·00	62·75	63·00	61·50
1900	60·00	62·00	61·50	61·50
1901	63·00	56·00	63·60	61·50
1902	67·50	60·00	67·50	63·75
1903	67·50	67·50	67·50	63·75
1904	67·50	67·50	67·50	66·00
1905	67·50	67·50	61·50	66·75
1906	72·00	72·00	64·00	69·00
1907	72·00	70·50	64·00	69·00
1908	72·00	70·50	64·00	69·00
1909	72·00	70·50	64·00	69·00
1910	70·00	71·00	63·50	69·00
1911	64·00	71·00	63·50	69·00
1912	68·00	70·50	64·00	69·00
1913	69·00	72·00	66·00	71·25
1914	69·16	76·29	69·96	72·46
1915	69·21	73·42	71·03	71·42
1916	69·02	72·62	71·00	69·88
1917	71·56	73·76	73·29	70·37
1918	86·80	86·43	84·56	88·03
1919	100·00	98·45	98·50	99·67

MILK, PER QUART.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	3·00	3·08	3·50	3·50
1892	3·00	3·08	3·50	3·50
1893	3·00	3·08	3·50	3·50
1894	3·00	3·08	3·50	3·50
1895	3·00	3·11	3·50	3·50
1896	3·00	3·11	3·50	3·50
1897	3·00	3·11	3·50	3·50
1898	3·00	3·11	3·50	3·50
1899	3·00	3·11	3·50	3·50
1900	3·00	3·11	3·50	3·50
1901	3·00	3·11	3·50	3·50
1902	3·00	3·11	3·50	3·50
1903	3·00	3·11	3·50	3·50
1904	3·25	3·11	3·50	3·50
1905	3·25	3·33	3·50	3·50
1906	3·25	3·33	3·50	3·50
1907	3·37	3·68	4·00	3·75
1908	3·75	3·83	3·50	3·75
1909	3·87	3·71	3·50	3·75
1910	3·87	3·83	3·50	3·75
1911	3·75	3·98	3·50	3·75
1912	3·87	4·00	3·50	3·75
1913	4·00	4·36	3·50	3·75
1914	4·00	4·42	3·83	4·00
1915	4·00	4·40	4·00	4·00
1916	4·75	5·25	4·58	4·38
1917	5·00	5·42	4·67	4·67
1918	5·38	5·50	4·58	5·00
1919	5·88	5·88	5·25	5·75

BUTTER, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	9·00	10·62	10·62	12·50
1892	10·25	11·85	11·84	13·44
1893	9·75	11·41	10·31	12·87
1894	9·75	11·03	11·03	12·44
1895	9·75	12·00	11·37	12·37
1896	10·00	12·00	11·37	12·12
1897	10·75	11·67	11·91	12·44
1898	10·75	11·81	11·91	13·00
1899	11·75	12·14	13·00	11·69
1900	10·75	12·00	13·25	12·50
1901	10·75	13·50	12·50	13·37
1902	13·25	12·00	13·25	13·94
1903	12·00	11·50	13·00	12·75
1904	12·25	11·50	12·00	12·00

BUTTER, PER 1 LB.—continued.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
				d.
1905	12·00	12·00	13·00	12·75
1906	12·25	13·37	13·25	13·50
1907	12·50	13·00	13·00	13·19
1908	14·50	15·00	15·50	14·87
1909	13·25	12·92	12·75	12·87
1910	13·00	13·42	13·75	13·87
1911	14·25	14·50	14·75	14·75
1912	13·50	15·00	15·25	14·75
1913	14·00	15·00	15·00	14·75
1914	13·46	14·83	14·19	14·21
1915	17·73	17·60	17·35	17·22
1916	18·82	18·42	18·77	18·92
1917	19·33	19·36	19·28	19·55
1918	19·70	19·83	19·11	19·97
1919	19·33	19·90	19·47	20·00

CHEESE, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	6·00	8·00	6·81	6·44
1892	6·25	8·00	6·92	6·50
1893	6·25	8·00	7·10	7·06
1894	6·00	8·00	6·67	6·00
1895	6·00	8·00	6·67	6·00
1896	6·00	8·00	6·73	6·19
1897	6·00	7·00	6·35	6·06
1898	6·00	8·00	6·71	6·12
1899	6·00	8·00	6·25	6·00
1900	6·25	8·00	6·50	6·94
1901	7·25	8·00	6·62	6·75
1902	6·50	8·00	7·00	6·19
1903	7·25	8·00	7·00	7·94
1904	7·75	8·00	7·00	8·00
1905	7·00	8·00	7·00	7·37
1906	7·75	8·00	7·75	7·75
1907	7·75	8·00	8·00	9·00
1908	8·00	8·00	8·00	9·31
1909	8·00	8·08	9·00	9·00
1910	8·00	8·08	9·00	9·00
1911	8·00	8·25	8·50	9·00
1912	9·00	9·00	9·00	9·00
1913	8·00	9·00	9·00	8·62
1914	8·96	9·00	9·00	9·08
1915	10·02	10·18	10·41	10·74
1916	11·77	11·36	11·28	11·51
1917	13·65	12·89	12·68	12·16
1918	13·67	13·43	13·00	13·06
1919	14·67	13·75	13·17	13·99

EGGS, PER 1 DOZEN.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	12·75	13·60	13·60	13·66
1892	12·50	13·22	13·22	14·19
1893	12·50	13·56	13·06	14·62
1894	12·00	13·20	13·20	14·41
1895	12·25	20·00	15·97	15·28
1896	13·50	13·85	13·85	14·19
1897	12·75	14·20	14·20	15·75
1898	13·75	14·83	14·83	15·28
1899	12·00	13·22	12·00	15·41
1900	13·50	13·12	12·75	13·66
1901	13·75	23·00	13·75	16·84
1902	12·75	18·25	13·75	15·37
1903	14·50	16·50	15·50	17·56
1904	15·25	19·50	13·00	15·62
1905	14·25	15·00	13·50	14·91
1906	15·25	21·00	15·50	16·87
1907	17·00	18·00	18·50	15·97
1908	16·75	22·33	16·50	17·69
1909	16·25	20·08	17·25	16·91
1910	16·00	20·62	17·00	17·53
1911	16·00	16·47	16·25	16·84
1912	16·25	18·50	15·75	17·94
1913	18·25	19·50	17·00	16·62
1914	17·65	20·58	16·54	19·08
1915	19·15	20·64	17·95	18·53
1916	20·46	23·38	18·35	19·25
1917	22·10	25·84	19·72	20·89
1918	20·00	26·91	21·38	23·67
1919	29·13	31·10	23·94	25·48

RETAIL PRICES OF COMMODITIES—continued.

BACON, SHOULDER, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
	d.	d.	d.	d.
1891	6·25	5·00	6·23	7·44
1892	6·50	5·00	6·31	7·44
1893	7·00	5·00	6·50	7·50
1894	6·50	5·00	6·33	7·50
1895	6·00	5·00	6·02	7·06
1896	6·00	5·00	6·02	7·06
1897	6·50	5·25	6·67	7·50
1898	7·00	5·00	6·65	7·94
1899	7·00	5·00	4·50	8·00
1900	7·00	5·00	4·00	8·00
1901	6·00	7·00	4·25	8·00
1902	7·50	9·00	4·50	8·25
1903	8·25	8·75	4·75	9·87
1904	8·50	8·00	5·00	9·00
1905	7·00	6·69	4·50	9·00
1906	7·00	6·50	4·75	9·25
1907	7·50	7·50	5·87	10·31
1908	8·00	7·50	7·00	10·37
1909	8·00	6·92	5·50	9·56
1910	8·00	7·16	4·62	9·50
1911	7·75	6·75	5·62	9·81
1912	8·25	7·00	7·00	11·50
1913	8·00	6·44	7·00	11·75
1914	7·12	8·58	7·58	11·65
1915	7·62	8·20	8·23	11·29
1916	8·93	9·62	9·64	12·96
1917	9·59	10·44	10·87	15·10
1918	10·86	11·35	11·49	16·77
1919	12·04	12·32	11·90	17·66

BACON, MIDDLE CUT, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	8·50	8·75	8·75	8·44
1892	8·75	8·87	8·87	8·44
1893	9·50	9·25	9·87	8·50
1894	8·50	8·75	9·50	8·50
1895	8·00	10·00	9·33	8·06
1896	8·00	8·50	8·87	8·06
1897	8·25	7·00	8·50	8·25
1898	8·00	8·50	9·12	8·44
1899	8·00	8·33	8·00	8·50
1900	8·00	8·17	7·50	8·50
1901	8·00	9·00	8·00	8·50
1902	9·25	11·00	8·50	8·75
1903	10·50	10·87	8·50	10·37
1904	10·00	10·00	9·00	9·50
1905	9·00	9·46	7·62	9·50
1906	9·00	9·25	8·25	9·75
1907	9·50	10·42	9·25	10·81
1908	10·00	11·08	10·25	10·87
1909	10·00	10·66	9·00	10·06
1910	10·00	10·08	7·62	10·06
1911	10·00	10·50	8·12	10·31
1912	10·75	12·87	10·50	12·00
1913	11·00	14·50	10·87	12·25
1914	11·87	11·69	11·02	12·00
1915	11·81	13·01	11·52	11·86
1916	14·24	15·21	13·82	14·43
1917	15·75	16·64	15·95	15·92
1918	17·27	18·01	16·93	17·29
1919	17·69	18·45	18·24	18·10

HAM, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	9·00	9·50	9·50	10·00
1892	8·75	9·12	9·12	9·50
1893	10·75	10·37	10·37	10·00
1894	10·00	9·75	9·75	9·50
1895	9·00	10·00	9·50	9·50
1896	8·75	9·12	9·12	9·50
1897	9·50	7·50	9·12	9·50
1898	9·25	9·37	9·37	10·00
1899	9·50	9·50	9·00	10·00
1900	8·75	9·58	8·00	10·00
1901	10·00	10·00	8·50	10·00
1902	10·75	10·00	9·00	10·25
1903	12·00	11·00	9·00	12·00
1904	12·00	9·00	9·50	11·00

HAM, PER 1 LB.—continued.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
	d.	d.	d.	d.
1905	11·00	9·16	8·12	11·00
1906	9·75	9·00	8·75	11·12
1907	9·75	10·58	9·62	12·00
1908	10·25	11·00	10·00	12·12
1909	11·00	10·87	9·25	11·87
1910	10·75	10·37	8·62	11·25
1911	11·25	11·25	9·12	11·87
1912	12·25	12·75	11·00	13·00
1913	11·75	12·50	12·25	12·75
1914	11·54	12·08	12·75	12·15
1915	11·62	11·74	11·87	12·18
1916	13·98	14·48	13·38	14·42
1917	15·34	15·76	15·26	16·17
1918	16·68	16·57	15·54	17·81
1919	16·98	17·85	17·38	18·52

BEEF, SIRLOIN, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	5·00	5·42	6·12	5·00
1892	4·75	5·29	6·06	5·00
1893	5·75	5·42	5·87	5·00
1894	7·00	5·92	5·87	5·00
1895	5·50	5·42	5·94	5·00
1896	5·50	5·42	5·94	5·00
1897	5·00	5·25	5·87	5·00
1898	6·50	5·79	5·94	5·00
1899	6·00	5·54	5·81	5·00
1900	6·00	5·75	5·87	5·00
1901	6·00	6·00	6·00	5·50
1902	6·00	6·00	6·50	5·50
1903	6·00	6·37	6·75	5·50
1904	5·50	6·50	6·50	5·50
1905	6·00	7·00	6·50	5·50
1906	6·00	7·00	6·44	5·50
1907	6·00	7·25	6·50	5·00
1908	6·00	7·00	6·62	5·00
1909	5·50	7·25	6·25	5·00
1910	6·00	7·25	6·19	5·00
1911	5·75	7·25	6·56	5·50
1912	6·17	7·25	6·87	6·00
1913	6·83	7·50	6·62	6·00
1914	7·08	7·44	6·75	6·94
1915	7·32	7·99	7·34	7·24
1916	8·35	8·07	8·33	7·71
1917	8·93	8·53	8·74	8·11
1918	9·33	8·88	9·02	8·56
1919	9·33	8·96	9·28	8·97

BEEF, BRISKET, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	2·00	2·58	3·12	2·00
1892	2·00	3·42	2·87	2·00
1893	2·50	2·92	2·87	2·00
1894	3·50	2·92	2·87	2·00
1895	2·50	2·62	2·94	2·00
1896	2·50	2·92	2·87	2·00
1897	2·00	2·46	2·94	2·00
1898	3·00	2·79	2·94	2·00
1899	2·75	2·92	2·87	2·00
1900	2·50	2·75	2·87	2·50
1901	3·00	3·00	2·87	2·50
1902	3·00	3·00	3·06	2·50
1903	3·00	3·25	3·12	2·50
1904	2·25	3·50	2·87	3·00
1905	3·00	3·50	2·87	3·00
1906	3·00	3·50	2·87	3·00
1907	2·67	3·50	2·87	3·00
1908	2·50	3·50	2·81	3·00
1909	3·00	3·25	2·81	3·00
1910	3·00	3·50	2·87	3·00
1911	2·50	3·25	3·19	3·50
1912	2·83	3·50	3·19	4·00
1913	3·00	3·50	3·37	4·00
1914	3·62	3·81	4·00	4·25
1915	4·08	4·30	4·64	4·55
1916	4·47	4·51	5·76	5·25
1917	4·79	4·98	6·27	5·90
1918	5·10	6·12	6·67	6·52
1919	5·00	6·23	6·84	6·53

RETAIL PRICES OF COMMODITIES—continued.

BEEF, PRIME RIBS, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
	d.	d.	d.	d.
1891	4·00	4·42	5·12	4·00
1892	4·25	4·46	5·06	4·00
1893	4·75	4·58	5·00	4·00
1894	6·00	5·04	5·06	4·00
1895	4·50	4·62	5·19	4·00
1896	4·00	4·37	5·06	4·00
1897	4·00	4·33	5·00	4·00
1898	5·00	4·67	5·00	4·00
1899	5·00	4·67	5·00	4·00
1900	5·00	4·87	5·06	4·50
1901	5·00	5·00	5·50	4·50
1902	5·00	5·00	5·50	4·50
1903	5·00	5·00	5·75	4·50
1904	4·50	5·00	5·50	4·50
1905	5·00	5·00	5·50	4·50
1906	5·00	5·00	5·50	4·50
1907	5·00	5·25	5·50	4·50
1908	5·00	5·00	5·62	4·00
1909	4·50	5·25	5·25	4·00
1910	5·00	5·25	5·12	4·00
1911	4·75	5·25	5·87	5·00
1912	5·17	5·25	5·87	5·00
1913	5·50	6·00	5·62	5·00
1914	6·00	5·62	6·25	5·94
1915	6·37	6·22	6·59	6·26
1916	7·24	6·53	7·54	6·64
1917	7·86	7·27	7·83	7·11
1918	8·03	7·75	8·11	7·56
1919	8·14	7·85	8·36	7·98

BEEF, RUMP STEAK, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	8·00	7·17	7·25	6·00
1892	7·50	6·83	7·00	6·00
1893	8·50	7·17	7·00	6·00
1894	10·00	7·67	7·00	6·00
1895	9·00	7·50	7·25	6·00
1896	9·00	7·50	7·25	6·00
1897	8·00	7·17	7·25	6·00
1898	10·00	7·83	7·25	6·00
1899	9·50	7·58	7·12	6·00
1900	9·00	7·67	7·00	7·00
1901	9·00	7·00	7·87	7·00
1902	9·00	7·75	7·62	7·00
1903	9·00	8·00	7·87	7·00
1904	8·50	8·00	7·87	7·00
1905	9·00	8·00	8·00	7·00
1906	9·00	8·00	8·00	7·00
1907	9·33	8·00	8·00	7·00
1908	9·00	8·00	8·00	7·00
1909	9·00	8·00	8·00	7·00
1910	8·00	8·00	8·00	7·00
1911	9·50	8·00	8·00	8·00
1912	9·00	8·00	8·00	8·00
1913	9·00	9·00	8·00	8·00
1914	11·00	9·44	9·00	8·81
1915	11·15	9·90	9·34	9·40
1916	11·67	10·21	10·10	9·99
1917	11·67	11·02	10·68	10·48
1918	11·67	11·50	11·20	10·90
1919	11·83	11·50	12·11	11·52

BEEF, TOP SIDE, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	4·00	4·42	5·62	4·00
1892	4·50	4·54	5·56	4·00
1893	4·25	4·46	5·56	4·00
1894	5·50	4·92	5·62	4·00
1895	4·50	4·58	5·62	4·00
1896	5·00	4·75	5·62	4·00
1897	4·00	4·42	5·62	4·00
1898	5·00	4·67	5·50	4·00
1899	4·75	4·58	5·50	4·00
1900	4·50	4·67	5·50	5·00
1901	4·50	4·00	5·56	5·00
1902	4·50	4·00	5·56	5·00
1903	4·50	4·00	5·50	5·00
1904	4·25	4·75	5·50	5·00

BEEF, TOP SIDE, PER 1 LB.—continued.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
	d.	d.	d.	d.
1905	5·00	5·00	5·50	5·00
1906	5·00	4·50	5·50	5·00
1907	4·50	5·00	5·62	5·00
1908	4·50	5·00	5·50	5·00
1909	6·00	4·75	5·62	5·00
1910	4·50	5·00	5·62	5·00
1911	5·00	5·00	5·37	5·00
1912	4·67	5·00	5·68	5·00
1913	5·00	5·00	6·00	5·00
1914	6·25	5·62	5·75	6·81
1915	6·78	5·92	6·49	7·20
1916	7·33	6·22	7·66	7·92
1917	7·62	7·08	8·03	8·38
1918	8·33	7·50	8·18	8·85
1919	8·33	7·67	4·46	9·29

BEEF, STEWING-STEAK, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	5·00	4·67	4·50	4·00
1892	5·50	4·83	4·50	4·00
1893	6·00	5·08	4·62	4·00
1894	7·00	5·33	4·50	4·00
1895	6·00	5·00	4·50	4·00
1896	6·00	5·00	4·50	4·00
1897	5·00	4·67	4·50	4·00
1898	6·00	5·00	4·50	4·00
1899	6·00	5·00	4·50	4·00
1900	5·00	4·67	4·50	4·00
1901	5·00	4·00	5·00	4·00
1902	5·00	4·00	5·00	4·00
1903	5·00	4·00	5·00	4·00
1904	5·00	4·00	5·00	4·00
1905	6·00	4·00	5·00	4·00
1906	6·00	4·00	5·00	4·00
1907	5·67	5·00	5·00	4·00
1908	6·00	4·00	5·00	4·00
1909	7·00	5·00	4·50	4·00
1910	6·00	5·00	4·50	4·00
1911	6·00	5·00	4·50	4·00
1912	5·67	5·00	4·75	4·00
1913	6·00	6·00	5·00	4·00
1914	7·25	5·19	6·00	6·13
1915	7·50	6·23	6·31	6·42
1916	7·35	6·75	7·66	6·92
1917	7·83	7·18	7·39	7·53
1918	8·33	7·96	7·80	7·87
1919	8·00	7·77	7·93	8·21

BEEF, CORNED, ROUND, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	5·00	6·08	5·12	4·00
1892	5·50	4·87	5·06	4·00
1893	5·75	5·00	5·12	4·00
1894	6·00	5·00	5·50	4·00
1895	6·00	5·12	5·69	4·00
1896	5·00	5·08	5·12	4·00
1897	5·00	4·67	5·00	4·00
1898	6·00	5·17	5·25	4·00
1899	6·00	5·04	5·06	4·00
1900	6·00	5·17	5·00	4·50
1901	5·00	4·50	5·50	4·50
1902	5·00	4·50	5·56	5·00
1903	5·00	4·75	5·56	5·00
1904	5·50	5·00	5·50	5·00
1905	6·00	5·00	5·50	5·00
1906	6·00	5·25	5·50	5·00
1907	6·00	5·56	5·62	5·00
1908	6·00	5·62	5·81	5·00
1909	6·00	5·25	5·37	5·00
1910	6·00	5·25	6·00	5·00
1911	5·50	5·25	5·94	5·00
1912	5·67	5·25	5·94	5·00
1913	6·00	6·00	6·00	5·00
1914	6·13	5·62	6·25	6·75
1915	6·78	6·48	6·84	7·27
1916	7·67	7·05	7·94	8·00
1917	8·11	7·75	8·46	8·27
1918	8·67	8·15	8·87	8·78
1919	8·67	8·19	9·03	9·34

RETAIL PRICES OF COMMODITIES—continued.

BEEF, CORNED, ROLL, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
	d.	d.	d.	d.
1891	4·50	4·17	5·00	3·00
1892	4·50	4·17	5·00	3·00
1893	4·50	4·17	5·00	3·00
1894	5·00	4·33	5·50	3·00
1895	5·00	4·33	5·50	3·00
1896	4·00	4·00	5·00	3·00
1897	4·00	4·00	5·00	3·00
1898	5·00	4·33	5·00	3·00
1899	4·75	4·25	5·00	3·00
1900	4·00	4·17	5·00	3·50
1901	4·00	3·50	5·50	3·50
1902	4·00	3·50	5·50	3·50
1903	4·00	3·75	5·50	3·50
1904	4·25	4·00	5·50	3·50
1905	4·50	4·50	5·50	3·50
1906	4·50	4·50	5·50	3·50
1907	4·87	4·25	5·50	3·50
1908	4·50	4·37	5·56	3·50
1909	5·00	4·25	5·12	3·50
1910	4·50	4·37	5·50	3·50
1911	4·50	4·50	5·50	4·00
1912	4·67	4·50	5·50	4·00
1913	5·00	5·00	5·00	4·00
1914	5·12	4·81	5·75	5·75
1915	5·88	5·34	6·29	6·26
1916	6·83	5·95	7·34	7·00
1917	7·15	6·49	7·82	7·30
1918	7·83	6·98	7·95	7·78
1919	7·78	7·30	8·21	8·36

BEEF, CORNED, BRISKET, PER 1 LB

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	2·00	2·83	4·50	2·00
1892	2·00	2·83	4·50	2·00
1893	2·50	3·42	4·56	2·00
1894	3·50	3·33	4·50	2·00
1895	2·50	3·33	4·50	2·00
1896	2·50	3·04	4·56	2·00
1897	2·00	2·83	4·50	2·00
1898	3·00	3·17	4·50	2·00
1899	2·75	3·08	4·50	2·00
1900	2·50	3·17	4·50	2·50
1901	2·50	3·00	4·75	2·50
1902	2·50	3·00	4·75	2·50
1903	2·50	3·37	4·81	2·50
1904	2·25	3·50	4·75	3·00
1905	2·50	3·75	4·75	3·00
1906	2·50	3·50	4·75	3·00
1907	2·67	3·25	4·87	3·00
1908	2·50	3·87	5·00	3·00
1909	3·00	3·25	4·75	3·00
1910	2·50	3·25	5·00	3·00
1911	2·50	3·25	5·00	3·50
1912	2·83	3·25	5·12	3·50
1913	3·00	3·50	5·00	3·50
1914	3·63	4·00	5·75	4·25
1915	4·10	4·65	6·15	4·60
1916	4·46	5·20	7·57	5·18
1917	4·68	5·67	7·73	5·79
1918	5·28	6·06	8·01	6·27
1919	5·31	6·10	8·34	6·46

MUTTON, LEG, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	5·00	4·12	4·44	3·00
1892	5·75	4·29	4·31	3·00
1893	5·50	4·42	4·37	3·50
1894	6·00	4·58	4·37	3·50
1895	5·00	4·25	4·12	3·50
1896	5·00	4·25	4·06	3·50
1897	4·50	4·04	4·06	3·50
1898	5·50	4·54	4·25	4·00
1899	5·25	4·58	4·19	4·00
1900	5·00	4·79	4·12	4·00
1901	5·00	4·75	5·00	4·00
1902	5·00	5·00	5·00	4·00
1903	4·50	5·00	5·37	4·00
1904	5·25	4·62	5·37	4·00

MUTTON, LEG, PER 1 LB.—continued.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
	d.	d.	d.	d.
1905	6·00	5·00	5·44	4·00
1906	6·00	5·00	5·50	4·00
1907	5·83	5·25	5·25	4·00
1908	5·00	5·00	5·25	4·00
1909	5·00	5·25	5·00	4·00
1910	5·00	5·25	4·87	4·50
1911	5·50	5·25	5·00	5·00
1912	5·17	5·25	5·50	5·00
1913	5·67	6·00	5·25	5·00
1914	6·46	5·62	6·00	5·63
1915	6·33	6·13	6·30	5·88
1916	7·21	6·75	6·66	6·40
1917	7·95	7·48	7·65	7·43
1918	8·33	7·88	8·18	7·89
1919	8·39	7·96	8·70	8·27

MUTTON, SHOULDER, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	4·00	3·33	3·50	2·50
1892	4·75	3·50	3·37	2·50
1893	4·50	3·62	3·44	3·00
1894	5·00	3·79	3·44	3·00
1895	4·50	3·58	3·37	3·00
1896	4·50	3·58	3·37	3·00
1897	4·00	3·50	3·50	3·00
1898	4·50	3·79	3·44	3·50
1899	4·25	4·46	3·44	3·50
1900	4·00	3·33	3·50	3·50
1901	4·00	3·75	4·00	3·50
1902	4·00	3·50	4·00	3·50
1903	4·00	3·87	4·50	3·50
1904	4·25	3·62	4·50	3·50
1905	5·00	4·00	4·50	3·50
1906	5·00	4·00	4·25	3·50
1907	4·83	4·25	4·25	3·50
1908	4·50	4·00	4·62	3·50
1909	4·50	4·25	4·62	3·50
1910	4·50	4·25	4·50	3·50
1911	4·50	4·25	4·50	3·50
1912	4·25	4·25	4·50	3·50
1913	4·67	5·00	4·37	3·50
1914	5·50	4·81	4·50	4·50
1915	5·58	5·20	5·12	4·89
1916	6·21	5·65	5·67	5·18
1917	6·58	6·25	6·71	6·07
1918	6·83	6·72	7·07	6·48
1919	7·00	6·84	7·43	6·83

MUTTON, LOIN, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	5·50	4·25	4·12	3·00
1892	6·00	4·42	4·12	3·00
1893	5·75	4·25	4·12	3·50
1894	6·00	4·58	4·12	3·50
1895	6·00	4·58	4·12	3·50
1896	6·00	4·67	4·25	3·50
1897	5·00	4·29	4·19	3·50
1898	6·00	4·79	4·19	4·00
1899	5·25	3·38	4·06	4·00
1900	5·00	3·67	4·06	4·00
1901	4·00	4·50	4·50	4·00
1902	4·00	4·50	4·81	4·00
1903	4·00	4·25	4·75	4·00
1904	5·25	4·50	4·75	4·00
1905	5·50	4·87	4·94	4·00
1906	6·00	5·00	5·00	4·00
1907	6·00	5·25	4·81	4·00
1908	6·00	5·00	4·87	4·00
1909	6·00	5·25	4·50	4·00
1910	6·00	5·25	4·50	4·00
1911	5·50	5·25	4·50	4·50
1912	5·00	5·25	4·75	4·50
1913	5·33	6·00	4·87	4·50
1914	6·50	5·81	5·50	5·50
1915	6·46	6·04	5·70	5·63
1916	7·15	6·38	6·32	6·21
1917	7·95	6·98	7·18	7·17
1918	8·36	7·63	7·59	7·72
1919	8·33	7·60	8·18	8·06

RETAIL PRICES OF COMMODITIES—*continued.*

MUTTON, NECK, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
	d.	d.	d.	d.
1891	4·50	3·33	2·50	2·50
1892	4·75	3·42	2·50	2·50
1893	4·75	3·33	2·50	3·00
1894	5·00	3·67	2·50	3·00
1895	4·50	4·17	2·50	3·00
1896	4·50	3·50	2·50	3·00
1897	4·50	3·50	2·50	3·00
1898	4·50	3·50	2·50	3·00
1899	3·75	3·25	2·50	3·00
1900	4·00	3·33	2·50	3·00
1901	3·50	2·75	3·00	3·00
1902	3·50	3·00	3·00	3·00
1903	4·00	3·25	3·00	3·00
1904	3·50	3·50	3·00	3·00
1905	5·00	3·50	3·00	3·00
1906	5·00	3·50	3·00	3·00
1907	4·83	3·44	3·00	3·00
1908	4·50	3·25	3·00	3·00
1909	4·50	3·50	3·00	3·00
1910	4·50	3·37	2·87	3·00
1911	4·00	3·50	3·00	3·00
1912	4·00	3·50	3·00	3·00
1913	4·17	4·00	3·00	3·00
1914	4·50	4·00	3·50	4·37
1915	4·67	4·18	4·01	4·78
1916	5·60	4·34	4·24	4·98
1917	6·08	4·76	5·05	5·91
1918	6·28	5·37	5·66	6·50
1919	6·24	5·39	5·85	6·74

MUTTON, CHOPS, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	6·00	4·71	4·56	4·00
1892	7·00	5·04	4·06	4·00
1893	6·50	4·87	4·56	4·00
1894	7·00	5·08	4·12	4·00
1895	7·00	5·04	4·06	4·00
1896	7·00	5·17	4·25	4·00
1897	6·00	4·83	4·25	4·00
1898	7·00	5·17	4·25	4·00
1899	6·00	4·83	4·25	4·00
1900	6·00	4·87	4·31	4·00
1901	6·00	6·00	5·00	4·00
1902	6·00	6·00	5·50	4·00
1903	6·00	6·00	5·50	4·00
1904	6·00	6·00	5·50	4·00
1905	6·00	6·00	5·87	4·00
1906	6·00	6·00	6·00	4·00
1907	6·33	7·00	5·75	4·00
1908	7·00	6·00	6·00	4·00
1909	7·00	7·00	5·25	4·00
1910	7·00	7·00	5·12	5·00
1911	6·50	7·00	5·00	5·00
1912	6·00	6·00	5·62	5·00
1913	6·33	6·00	5·75	5·00
1914	7·98	7·00	6·00	5·50
1915	7·65	6·94	6·28	5·94
1916	8·20	7·12	6·65	6·44
1917	8·89	7·61	7·64	7·49
1918	9·01	8·08	8·37	8·02
1919	9·17	8·19	8·75	8·36

PORK, LEG, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	7·00	6·67	6·50	6·00
1892	7·00	6·42	6·12	6·00
1893	6·50	6·33	6·25	6·00
1894	7·00	6·33	6·00	6·00
1895	6·00	6·17	6·25	6·00
1896	6·50	6·50	6·50	6·00
1897	6·00	6·17	6·25	6·00
1898	7·00	6·17	6·12	6·00
1899	7·00	6·50	6·25	6·00
1900	7·00	6·92	6·37	7·00
1901	6·00	6·00	6·50	7·00
1902	6·00	6·00	6·25	7·00
1903	7·00	6·00	6·87	7·00
1904	6·00	6·00	6·94	7·00
1905	6·00	6·50	7·50	7·00
1906	6·00	7·00	8·00	7·00
1907	6·67	6·50	7·00	7·00
1908	7·00	7·00	7·87	7·00
1909	6·00	6·50	8·00	8·00
1910	6·00	6·50	7·62	8·00
1911	6·50	6·50	7·31	8·00
1912	6·67	7·37	7·75	8·00
1913	7·67	8·00	8·00	8·00
1914	7·75	8·31	8·00	8·25
1915	7·54	8·00	8·12	8·05
1916	8·33	8·50	8·84	9·18
1917	8·56	8·95	10·07	10·75
1918	10·68	10·70	11·68	11·71
1919	12·53	11·87	12·19	12·97

PORK, LOIN, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	8·00	7·00	6·50	6·00
1892	7·50	6·58	6·12	6·00
1893	7·50	6·50	6·25	6·00
1894	7·00	6·33	6·00	6·00
1895	7·00	6·50	6·25	6·00
1896	7·50	6·83	6·50	6·00
1897	7·00	6·67	6·50	6·00
1898	8·00	6·42	6·44	6·00
1899	8·00	7·00	6·50	6·00
1900	7·00	7·00	6·50	7·00
1901	7·00	6·00	6·75	7·00
1902	7·00	6·00	6·69	7·00
1903	8·00	6·50	7·19	7·00
1904	7·00	7·00	7·12	7·00
1905	6·00	7·00	7·50	7·00
1906	6·00	7·00	8·00	7·00
1907	7·33	6·75	7·00	7·00
1908	8·00	7·50	7·87	7·00
1909	6·00	6·50	8·00	8·00
1910	7·00	7·00	8·00	8·00
1911	7·00	7·37	7·56	8·00
1912	7·67	8·00	8·00	8·00
1913	8·67	9·00	8·00	8·00
1914	8·75	8·63	8·50	8·38
1915	8·28	8·58	8·43	8·22
1916	8·89	8·82	9·05	9·36
1917	9·43	9·35	10·23	10·91
1918	11·22	11·10	12·12	11·95
1919	12·75	12·50	12·82	13·12

PORK, BELLY, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	8·00	7·33	7·50	6·00
1892	7·50	6·92	7·12	6·00
1893	7·50	7·00	7·25	6·00
1894	7·00	6·67	7·00	6·00
1895	7·00	6·83	7·25	6·00
1896	7·50	6·83	7·00	6·00
1897	7·00	6·67	7·00	6·00
1898	8·00	7·00	7·00	6·00
1899	8·00	7·17	7·25	6·00
1900	7·00	7·08	7·12	7·00
1901	7·00	6·00	7·50	7·00
1902	7·00	6·00	7·50	7·00
1903	8·00	7·00	7·87	7·00
1904	7·00	7·00	7·94	7·00
1905	6·00	7·00	8·00	7·00
1906	6·00	7·00	8·00	7·00
1907	7·33	6·75	7·50	7·00
1908	8·00	7·50	8·37	7·00
1909	6·00	6·50	8·50	8·00
1910	7·00	7·50	8·50	8·00
1911	7·00	7·50	8·00	8·00
1912	7·67	8·00	8·50	8·00
1913	8·67	9·00	8·00	8·00
1914	8·75	8·69	8·50	8·25
1915	8·31	8·40	8·25	8·18
1916	9·00	8·83	8·99	9·42
1917	9·14	9·33	10·55	10·91
1918	11·20	10·92	12·13	11·92
1919	12·75	11·83	13·03	13·10

RETAIL PRICES OF COMMODITIES—*continued.*

PORK, CHOPS, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
	d.	d.	d.	d.
1891	9·00	7·67	7·00	6·00
1892	8·50	7·25	6·62	6·00
1893	8·50	7·17	6·50	6·00
1894	8·00	7·00	6·50	6·00
1895	7·00	6·83	6·75	6·00
1896	9·00	7·42	6·62	6·00
1897	7·00	7·00	7·00	6·00
1898	9·00	7·42	6·62	6·00
1899	9·00	7·67	7·00	6·00
1900	7·00	7·33	7·00	7·00
1901	7·00	6·00	7·00	7·00
1902	7·00	7·00	7·00	7·00
1903	8·00	8·00	7·50	7·00
1904	8·00	8·00	8·00	7·00
1905	6·00	8·00	8·50	7·00
1906	6·00	8·00	8·00	7·00
1907	8·00	8·25	7·50	7·00
1908	8·00	8·00	8·50	7·00
1909	7·00	8·25	8·37	8·00
1910	7·00	8·50	8·50	8·00
1911	8·00	8·50	8·06	8·00
1912	8·00	8·50	8·50	8·00
1913	9·67	10·00	8·00	8·00
1914	9·75	9·69	9·00	8·75
1915	9·18	9·29	9·00	8·57
1916	10·00	9·75	9·89	9·67
1917	9·98	10·15	11·02	11·28
1918	11·89	11·50	12·53	12·55
1919	14·28	12·94	13·10	13·75

TRIPE, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	6·00	6·33	6·00	6·00
1892	6·00	6·25	6·00	6·00
1893	6·00	5·67	5·50	6·00
1894	5·00	5·33	5·50	6·00
1895	4·00	5·00	5·50	6·00
1896	6·00	5·67	5·50	6·00
1897	5·00	5·33	5·50	6·00
1898	6·00	5·67	5·50	6·00
1899	6·00	5·67	5·50	6·00
1900	6·00	5·67	5·50	6·00
1901	6·00	4·00	6·00	6·00
1902	6·00	4·00	6·00	6·00
1903	6·00	4·50	6·00	6·00
1904	6·00	5·00	6·00	6·00
1905	6·00	5·00	6·00	6·00
1906	6·00	5·00	6·00	6·00
1907	6·00	5·00	6·00	6·00
1908	6·00	5·00	6·00	6·00
1909	6·00	5·00	6·00	6·00
1910	6·00	5·00	6·00	6·00
1911	6·00	5·00	6·00	6·00
1912	6·00	5·00	6·00	6·00
1913	6·00	5·00	6·00	6·00
1914	7·17	5·62	6·25	5·63
1915	6·85	5·67	6·12	6·75
1916	7·39	5·73	6·28	7·17
1917	7·64	5·85	6·75	7·56
1918	7·67	6·19	7·18	7·93
1919	7·75	6·00	7·44	8·42

SAUSAGES, BEEF, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	4·00	3·67	4·00	3·00
1892	4·00	3·67	4·00	3·00
1893	3·50	3·50	4·00	3·00
1894	4·00	3·67	4·00	3·00
1895	4·00	3·67	4·00	3·00
1896	4·00	3·67	4·00	3·00
1897	4·00	3·67	4·00	3·00
1898	4·00	3·67	4·00	3·00
1899	4·00	3·67	4·00	3·00
1900	4·00	3·67	4·00	3·00
1901	4·00	4·00	4·00	3·00
1902	4·00	4·00	4·00	3·00
1903	4·00	4·00	4·00	3·00
1904	3·50	4·00	4·00	3·00
1905	4·00	4·00	4·00	3·00
1906	4·00	4·00	4·00	3·00
1907	4·00	4·75	4·00	3·00
1908	4·00	5·00	4·00	3·00
1909	4·00	4·87	4·00	3·00
1910	4·00	4·87	4·00	3·00
1911	4·00	5·00	4·00	3·00
1912	4·67	5·00	4·00	3·75
1913	5·00	5·00	4·00	4·00
1914	6·00	4·81	4·00	4·13
1915	5·85	5·00	4·02	4·12
1916	6·00	4·98	4·19	4·38
1917	6·00	4·87	4·66	4·63
1918	6·11	5·35	5·17	4·67
1919	6·89	5·79	5·74	5·02

SAUSAGES, PORK, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	6·00	6·00	6·50	6·00
1892	6·00	6·00	6·37	6·00
1893	6·00	6·33	6·50	6·00
1894	6·00	6·33	6·50	6·00
1895	6·00	6·50	6·75	6·00
1896	7·00	6·67	6·50	6·00
1897	6·00	6·33	6·50	6·00
1898	6·00	6·33	6·50	6·00
1899	6·00	6·67	7·00	6·00
1900	5·00	6·67	7·00	6·00
1901	6·00	6·00	6·87	6·00
1902	6·00	6·00	6·87	6·00
1903	6·00	6·50	6·87	6·00
1904	6·00	7·00	7·00	6·00
1905	6·00	7·00	6·50	6·00
1906	6·00	7·00	7·00	6·00
1907	6·00	7·50	7·00	6·00
1908	6·00	7·00	7·00	6·00
1909	6·00	7·50	7·00	6·00
1910	6·00	7·50	6·62	6·00
1911	6·00	7·50	7·00	6·00
1912	6·00	7·50	7·00	6·00
1913	6·00	8·00	8·00	6·00
1914	7·17	7·25	6·50	5·62
1915	7·00	7·93	6·47	5·60
1916	7·00	7·70	6·60	5·60
1917	7·08	7·62	7·70	6·03
1918	7·22	7·90	8·27	6·38
1919	8·50	8·08	8·53	6·84

HOUSE-RENT, FOUR ROOMS.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	48·00	118·39	85·53	85·33
1892	48·00	118·39	88·12	85·33
1893	66·00	118·39	88·12	85·33
1894	66·00	118·39	88·12	85·33
1895	69·00	118·39	88·12	90·67
1896	78·00	118·39	88·12	90·67
1897	96·00	118·39	93·31	90·67
1898	96·00	118·39	93·31	93·33
1899	102·00	118·39	93·31	93·33
1900	102·00	138·97	115·34	96·00
1901	120·00	134·69	116·63	96·00
1902	126·00	140·69	121·82	98·67
1903	126·00	143·26	119·22	101·33
1904	126·00	150·98	117·93	104·00
1905	130·50	153·56	125·70	104·00
1906	135·00	157·85	138·66	104·00
1907	135·00	153·56	130·89	104·00
1908	138·00	154·42	130·89	106·67
1909	144·00	154·42	130·89	106·67
1910	150·00	150·13	124·41	106·67
1911	150·00	148·46	128·30	106·67
1912	156·00	150·13	127·00	106·67
1913	156·00	157·85	130·89	106·67
1914	156·00	166·43	133·48	106·67
1915	134·00	163·32	125·06	131·50
1916	134·77	169·04	126·89	128·14
1917	133·64	176·17	128·60	125·77
1918	135·22	176·65	132·40	132·47
1919	138·63	173·58	138·27	135·12

RETAIL PRICES OF COMMODITIES—*continued.*

HOUSE-RENT, FIVE ROOMS.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
	d.	d.	d.	d.
1891	60·00	137·53	132·66	137·64
1892	66·00	137·53	135·48	137·64
1893	102·00	137·53	135·48	137·64
1894	108·00	137·53	141·13	137·64
1895	123·00	137·53	141·13	140·39
1896	132·00	147·72	141·13	140·39
1897	136·00	147·72	141·13	140·39
1898	132·00	152·82	146·77	137·64
1899	138·00	152·82	152·26	137·64
1900	138·00	156·64	170·77	143·14
1901	162·00	165·55	172·18	143·14
1902	163·00	169·80	172·18	145·90
1903	165·00	174·89	169·35	145·90
1904	166·50	179·13	172·18	148·65
1905	174·00	183·38	175·00	148·65
1906	174·00	185·08	184·88	148·65
1907	174·00	185·08	177·82	148·65
1908	174·00	185·08	169·35	154·15
1909	177·00	185·08	170·77	154·15
1910	177·00	188·47	170·77	154·15
1911	177·00	185·08	166·53	154·15
1912	189·00	186·78	173·59	159·66
1913	180·00	196·96	176·41	159·66
1914	180·00	202·06	182·06	159·66
1915	188·00	202·99	180·65	173·24
1916	180·30	208·13	174·82	166·90
1917	179·10	211·57	179·38	163·55
1918	182·03	219·09	182·17	171·06
1919	194·48	228·25	184·05	173·55

HOUSE-RENT, SIX ROOMS.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	78·00	171·69	176·43	180·40
1892	96·00	171·69	176·43	180·40
1893	132·00	171·69	176·43	180·40
1894	144·00	171·69	181·95	180·40
1895	150·00	171·69	181·95	185·70
1896	156·00	171·69	181·95	185·70
1897	160·00	171·69	187·46	185·70
1898	162·00	182·09	187·46	185·70
1899	165·00	182·09	187·46	188·38
1900	165·00	189·90	195·73	193·66
1901	171·00	207·24	195·73	196·31
1902	174·00	210·71	198·47	198·97
1903	174·00	217·64	197·11	201·62
1904	180·00	224·58	197·11	212·23
1905	186·00	230·65	204·00	214·88
1906	186·00	237·59	216·41	214·88
1907	186·00	241·06	206·76	216·21
1908	196·00	242·79	205·38	217·54
1909	201·00	236·72	204·00	217·54
1910	201·00	237·59	202·62	217·54
1911	201·00	234·12	198·47	217·54
1912	219·00	234·99	191·59	217·54
1913	210·00	252·33	195·73	220·19
1914	210·00	249·73	199·86	222·84
1915	209·00	255·19	212·27	203·34
1916	209·99	260·95	203·82	213·77
1917	204·45	265·49	204·85	207·78
1918	213·37	284·78	215·99	217·83
1919	221·93	287·68	229·24	218·33

HOUSE-RENT, SEVEN ROOMS.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	132·00	213·22	201·82	258·00
1892	138·00	213·22	201·82	258·00
1893	150·00	213·22	201·82	258·00
1894	168·00	213·22	207·13	258·00
1895	180·00	213·22	212·33	264·00
1896	192·00	213·22	212·33	264·00
1897	228·00	224·75	212·33	270·00
1898	246·00	224·86	223·07	270·00
1899	255·00	236·38	223·07	270·00
1900	255·00	276·61	231·03	270·00
1901	258·00	280·45	231·03	270·00
1902	258·00	283·33	239·00	270·00
1903	249·00	294·86	236·34	270·00
1904	240·00	309·66	236·34	276·00

HOUSE RENT, SEVEN ROOMS—*continued.*

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
	d.	d.	d.	d.
1905	240·00	318·87	253·61	276·00
1906	255·00	319·83	265·56	276·00
1907	255·00	329·44	260·24	276·00
1908	255·00	332·32	249·62	282·00
1909	255·00	317·91	233·69	282·00
1910	258·00	308·31	233·69	288·00
1911	270·00	312·15	232·36	291·00
1912	285·00	308·31	225·72	294·00
1913	300·00	333·28	225·72	300·00
1914	300·00	320·79	233·69	306·00
1915	262·00	332·08	233·69	268·00
1916	251·42	339·52	238·86	259·60
1917	255·41	342·23	248·00	257·81
1918	266·79	358·60	266·48	259·54
1919	264·32	363·85	293·71	257·13

COAL, PER ½ TON.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	69·00	108·00	96·00	72·00
1892	69·00	108·00	96·00	72·00
1893	69·00	108·00	96·00	72·00
1894	72·00	108·00	102·00	72·00
1895	72·00	108·00	102·00	72·00
1896	75·00	108·00	102·00	72·00
1897	75·00	108·00	102·00	72·00
1898	75·00	108·00	102·00	72·00
1899	75·00	108·00	108·00	72·00
1900	78·00	108·00	108·00	73·50
1901	78·00	108·00	108·00	76·50
1902	81·00	117·00	108·00	78·00
1903	81·00	117·00	108·00	78·75
1904	81·00	117·00	108·00	83·25
1905	81·00	117·00	108·00	84·00
1906	84·00	117·00	108·00	85·50
1907	87·00	117·00	108·00	87·00
1908	93·00	117·00	108·00	87·00
1909	96·00	114·75	114·00	87·00
1910	96·00	108·00	114·00	87·00
1911	96·00	108·00	114·00	87·00
1912	99·00	113·25	120·00	90·75
1913	100·50	114·00	124·50	96·00
1914	110·50	126·00	126·00	92·13
1915	108·38	123·50	126·00	98·75
1916	121·13	125·13	134·00	112·75
1917	141·13	132·25	165·75	128·63
1918	147·13	139·75	175·50	139·50
1919	161·38	150·75	190·50	160·50

COKE, PER 1 CWT.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	18·00	15·00	21·00	24·00
1892	18·00	15·00	21·00	24·00
1893	18·00	15·00	21·00	21·00
1894	18·00	15·00	21·00	18·00
1895	18·00	15·00	21·00	18·00
1896	18·00	15·00	21·00	18·00
1897	18·00	15·00	21·00	18·00
1898	18·00	15·00	21·00	18·00
1899	18·00	15·00	21·00	18·00
1900	18·00	15·00	21·00	21·00
1901	18·00	15·00	21·00	21·75
1902	18·00	15·00	21·00	24·00
1903	18·00	15·00	21·00	24·00
1904	18·00	15·00	21·00	24·00
1905	18·00	15·00	21·00	24·00
1906	18·00	15·00	21·00	24·00
1907	18·00	15·00	21·00	24·00
1908	18·00	15·00	21·00	24·00
1909	21·00	15·00	21·00	24·00
1910	22·00	15·00	21·00	24·00
1911	22·00	15·00	21·00	24·00
1912	22·00	15·75	21·00	23·25
1913	22·00	18·00	21·00	21·00
1914	21·92	18·00	26·04	21·00
1915	20·58	17·25	23·53	21·00
1916	20·00	16·58	24·85	21·63
1917	25·42	20·92	21·00	25·13
1918	29·25	21·50	21·00	27·00
1919	32·50	26·75	27·00	28·25

RETAIL PRICES OF COMMODITIES—*continued.*

FIREWOOD, PER ¼ CORD.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
	d.	d.	d.	d.
1891	65·25	120·00	144·00	144·00
1892	65·25	120·00	144·00	144·00
1893	63·00	120·00	144·00	144·00
1894	63·00	120·00	144·00	144·00
1895	63·00	120·00	144·00	144·00
1896	63·00	120·00	144·00	126·00
1897	63·00	120·00	144·00	108·00
1898	65·25	120·00	144·00	108·00
1899	65·25	120·00	150·00	108·00
1900	65·25	120·00	150·00	126·00
1901	69·75	120·00	150·00	126·00
1902	69·75	132·00	120·00	108·00
1903	69·75	132·00	120·00	108·00
1904	69·75	132·00	120·00	112·50
1905	69·75	132·00	120·00	126·00
1906	69·75	132·00	120·00	117·00
1907	72·00	141·00	120·00	112·50
1908	72·00	144·00	120·00	144·00
1909	72·00	144·75	120·00	144·00
1910	72·00	147·00	120·00	144·00
1911	72·00	147·00	120·00	144·00
1912	72·00	153·00	120·00	148·50
1913	72·00	156·00	126·00	162·00
1914	57·10	150·00	126·00	138·00
1915	78·75	156·00	126·00	138·00
1916	96·75	167·50	126·00	124·50
1917	103·50	185·00	138·00	137·50
1918	120·38	204·00	154·00	157·50
1919	129·38	225·58	175·50	195·50

KEROSENE, PER 4-GALLON TIN.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	80·25	82·87	83·88	85·50
1892	66·00	70·50	70·50	75·75
1893	65·25	66·84	66·84	68·44
1894	68·25	69·25	69·00	70·50
1895	73·50	72·00	73·09	73·87
1896	71·25	66·00	69·25	71·25
1897	69·00	72·00	71·75	74·25
1898	70·12	71·56	71·56	71·62
1899	66·00	61·94	73·50	67·87
1900	64·25	68·31	70·50	70·69
1901	48·00	51·00	53·75	53·53
1902	42·00	43·21	42·00	45·62
1903	44·25	46·50	48·00	46·31
1904	47·62	45·00	48·00	51·62
1905	42·75	43·50	43·50	46·25
1906	45·00	48·00	45·75	47·41
1907	45·50	51·00	50·25	48·25
1908	49·00	52·17	55·50	51·00
1909	48·25	53·25	54·00	54·00
1910	49·50	52·50	49·50	54·00
1911	51·00	51·00	48·37	51·75
1912	51·75	51·37	52·50	52·50
1913	51·75	54·00	53·25	51·81
1914	55·00	54·38	54·31	49·02
1915	55·96	56·54	56·87	53·14
1916	61·75	76·29	79·03	69·82
1917	90·10	92·25	94·27	84·65
1918	107·69	110·25	106·12	101·75
1919	109·44	112·83	113·25	108·13

GAS, LIGHTING, PER 1,000 CUBIC FEET.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	80·00	90·00	90·00	90·00
1892	80·00	85·00	90·00	90·00
1893	80·00	85·00	90·00	90·00
1894	70·50	82·50	90·00	90·00
1895	63·00	75·00	90·00	90·00
1896	60·00	75·00	90·00	90·00
1897	60·00	75·00	90·00	90·00
1898	60·00	75·00	80·00	82·50
1899	60·00	75·00	80·00	75·00
1900	60·00	71·67	75·00	75·00
1901	60·00	70·00	75·00	75·00
1902	60·00	70·00	75·00	75·00
1903	60·00	70·00	75·00	75·00
1904	60·00	70·00	75·00	75·00

GAS, LIGHTING, PER 1,000 CUBIC FT.—*contd.*

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
	d.	d.	d.	d.
1905	60·00	68·75	69·00	75·00
1906	57·75	65·00	63·00	75·00
1907	57·00	65·00	63·00	70·00
1908	54·75	65·00	63·00	70·00
1909	54·00	65·00	67·50	60·00
1910	51·75	65·00	69·00	60·00
1911	51·00	65·00	69·00	60·00
1912	51·00	65·00	69·00	60·00
1913	51·00	65·00	69·00	60·00
1914	54·00	60·00	69·00	60·00
1915	54·00	60·00	69·00	60·00
1916	54·00	60·00	69·00	60·00
1917	59·00	80·00	72·58	60·83
1918	64·00	80·00	77·92	65·00
1919	74·00	86·00	84·17	70·50

ELECTRICITY, LIGHTING, PER 1 UNIT.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	..	..	..	..
1892	..	..	..	..
1893	..	..	11·00	..
1894	..	..	11·00	..
1895	..	..	11·00	..
1896	..	..	..	10·00
1897	..	..	..	10·00
1898	..	..	..	10·00
1899	..	..	..	10·00
1900	..	..	9·00	..
1901	..	..	9·00	..
1902	..	..	9·00	..
1903	..	..	9·00	10·00
1904	..	..	8·00	10·00
1905	..	..	8·00	10·00
1906	..	..	8·00	10·00
1907	5·50	7·50	10·00	..
1908	5·50	7·00	8·00	5·00
1909	5·50	7·00	6·00	5·00
1910	5·50	7·00	6·00	5·00
1911	5·50	7·00	8·00	5·00
1912	5·50	7·00	6·00	5·00
1913	5·50	7·00	6·00	5·00
1914	5·50	5·00	6·00	5·00
1915	5·50	6·00	6·00	5·00
1916	5·50	6·00	6·00	5·00
1917	5·50	6·00	6·00	5·00
1918	5·50	6·00	6·00	5·00
1919	5·50	6·00	6·00	5·00

CANDLES, PER 1 LB.

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.
1891	6·00	7·00	6·50	6·50
1892	6·00	7·00	6·46	6·37
1893	6·00	7·00	6·46	6·37
1894	6·00	7·00	7·50	6·37
1895	6·00	7·00	6·60	6·31
1896	6·00	7·00	6·36	6·12
1897	6·00	7·00	6·17	5·50
1898	6·00	7·00	6·12	5·41
1899	6·00	7·00	7·50	5·12
1900	6·00	7·00	7·37	5·69
1901	6·00	7·25	6·50	5·25
1902	6·00	7·00	6·50	5·25
1903	6·00	6·81	6·50	5·22
1904	6·00	6·75	6·50	5·37
1905	6·00	6·75	6·50	5·37
1906	6·00	6·75	7·00	5·37
1907	6·00	7·17	6·75	5·50
1908	6·00	7·33	7·00	5·50
1909	6·00	7·29	7·00	5·50
1910	6·00	7·25	6·75	5·50
1911	6·00	7·33	6·69	5·50
1912	6·00	7·25	6·75	5·50
1913	6·00	7·00	6·75	5·87
1914	6·00	7·33	6·00	5·50
1915	6·08	7·23	6·10	5·80
1916	8·12	8·78	8·11	6·95
1917	9·55	10·62	9·82	8·76
1918	11·67	12·39	11·19	10·53
1919	11·78	13·18	11·69	10·38

Average Retail Prices of Commodities in Twenty-five Centres in 1914, 1916, 1918, and 1919.

BREAD, PER 2 LB. LOAF.

Towns.	1914. d.	1916. d.	1918. d.	1919. d.
Auckland	4·13	4·54	5·38	5·50
Wellington	3·75	4·50	5·50	5·50
Christchurch	4·00	4·21	4·85	5·00
Dunedin	3·46	4·21	4·92	5·00
Whangarei	4·17	5·00	5·42	5·88
Hamilton	4·08	4·77	4·96	5·00
Rotorua	4·40	4·46	5·38	5·46
Waihi	4·08	4·92	5·21	5·00
Gisborne	4·17	4·75	5·96	6·00
Napier	4·13	4·96	5·13	5·00
Dannevirke	4·04	5·00	5·00	5·00
New Plymouth	4·13	4·75	5·04	5·00
Wanganui	3·54	4·08	5·00	5·25
Taihape	4·13	4·84	5·42	5·50
Palmerston N.	3·38	4·63	4·92	5·00
Masterton	3·75	4·54	5·00	5·00
Blenheim	3·71	4·50	4·83	5·17
Nelson	4·04	4·50	5·00	5·00
Greymouth	4·08	4·13	4·50	4·54
Ashburton	3·42	4·46	4·71	4·75
Timaru	3·75	4·50	5·04	5·00
Oamaru	3·50	4·19	5·00	5·00
Alexandra	4·21	4·42	5·00	5·00
Gore	3·83	4·13	4·88	5·00
Invercargill	3·79	3·79	5·00	5·02

RICE, PER 1 LB.

Towns.	1914. d.	1916. d.	1918. d.	1919. d.
Auckland	2·46	2·37	3·34	5·42
Wellington	2·19	2·62	3·23	5·40
Christchurch	2·63	2·51	3·08	4·96
Dunedin	2·19	2·49	2·97	4·81
Whangarei	2·56	2·84	3·72	5·68
Hamilton	2·77	3·00	4·28	6·10
Rotorua	2·81	2·99	3·88	6·07
Waihi	2·65	2·84	3·53	5·60
Gisborne	2·75	2·69	3·64	5·76
Napier	2·81	2·99	3·89	5·65
Dannevirke	3·00	2·71	3·50	5·25
New Plymouth	2·44	2·19	3·12	4·63
Wanganui	3·04	2·50	3·21	5·43
Taihape	3·00	3·00	3·50	4·83
Palmerston N.	2·79	2·58	3·36	5·15
Masterton	2·73	3·00	3·43	5·23
Blenheim	3·00	3·00	3·90	5·67
Nelson	2·98	2·99	3·22	5·11
Greymouth	3·00	3·02	3·75	5·40
Ashburton	2·56	2·50	3·47	5·21
Timaru	2·46	2·54	3·35	4·92
Oamaru	2·67	2·60	3·38	5·23
Alexandra	2·79	2·98	3·80	5·27
Gore	2·94	3·05	4·00	5·56
Invercargill	2·61	2·50	3·25	4·83

FLOUR, PER 25 LB. BAG.

Towns.	1914.	1916.	1918.	1919.
Auckland	43·77	49·88	61·05	60·10
Wellington	43·11	51·13	60·13	58·83
Christchurch	41·46	46·34	53·47	54·00
Dunedin	42·31	43·67	55·62	54·29
Whangarei	43·04	51·67	62·90	63·77
Hamilton	47·17	53·26	59·83	60·67
Rotorua	45·88	56·10	63·75	63·20
Waihi	44·19	52·53	59·75	61·33
Gisborne	43·67	51·13	61·44	60·71
Napier	45·61	49·63	64·10	62·00
Dannevirke	45·17	51·63	58·17	60·50
New Plymouth	44·29	47·88	57·50	57·72
Wanganui	41·92	48·78	56·83	55·67
Taihape	49·00	51·50	63·00	60·00
Palmerston N.	48·25	47·81	56·08	58·00
Masterton	47·67	54·40	63·20	65·05
Blenheim	50·13	52·13	62·96	61·63
Nelson	44·83	52·88	58·63	58·88
Greymouth	45·94	53·15	60·80	60·44
Ashburton	41·71	48·69	56·50	56·67
Timaru	40·94	48·25	57·63	56·13
Oamaru	41·75	48·75	58·88	58·25
Alexandra	43·38	52·25	59·38	59·63
Gore	48·38	51·80	62·94	60·81
Invercargill	48·56	48·56	58·88	57·50

SAGO, PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	2·21	3·20	5·22	5·33
Wellington	2·31	3·47	4·29	4·50
Christchurch	2·63	3·35	4·45	5·03
Dunedin	2·19	3·17	4·94	4·85
Whangarei	2·48	3·69	5·60	6·08
Hamilton	2·63	3·67	5·33	6·28
Rotorua	2·81	3·73	5·27	6·18
Waihi	2·65	3·47	5·33	5·81
Gisborne	2·75	3·42	5·62	6·43
Napier	2·88	3·47	5·33	5·64
Dannevirke	2·65	3·35	4·81	5·77
New Plymouth	2·44	3·21	4·25	4·72
Wanganui	2·33	3·37	4·72	4·82
Taihape	3·00	3·58	4·83	4·96
Palmerston N.	2·89	3·58	3·97	4·39
Masterton	2·71	3·47	4·13	4·50
Blenheim	3·00	3·67	4·46	4·67
Nelson	2·93	3·50	4·00	4·29
Greymouth	3·06	4·02	4·58	5·04
Ashburton	2·27	3·31	4·96	5·18
Timaru	2·21	3·21	4·75	5·13
Oamaru	2·71	3·83	5·29	5·50
Alexandra	3·38	4·17	5·46	5·96
Gore	3·00	3·68	5·94	6·31
Invercargill	2·61	2·92	5·29	5·08

OATMEAL, PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	2·32	2·99	4·21	4·86
Wellington	2·12	2·85	3·93	4·35
Christchurch	2·24	2·64	3·80	4·37
Dunedin	1·96	2·47	3·56	3·75
Whangarei	2·25	3·15	4·15	4·74
Hamilton	2·29	3·11	4·04	4·59
Rotorua	1·98	3·15	4·16	4·76
Waihi	2·21	2·99	3·95	4·77
Gisborne	2·38	2·84	3·98	4·54
Napier	2·16	3·00	4·01	4·11
Dannevirke	2·36	3·01	3·61	4·60
New Plymouth	2·14	2·76	3·78	4·80
Wanganui	2·07	2·71	3·51	4·27
Taihape	3·00	3·20	3·33	3·69
Palmerston N.	2·32	2·96	3·62	4·15
Masterton	2·13	3·17	3·82	1·47
Blenheim	3·00	2·81	4·27	4·71
Nelson	2·10	3·91	3·67	4·37
Greymouth	2·07	2·94	3·45	4·20
Ashburton	2·18	2·77	3·78	4·40
Timaru	1·82	2·82	3·57	4·11
Oamaru	2·05	2·72	3·80	4·65
Alexandra	2·68	2·95	3·96	4·39
Gore	2·40	3·08	4·16	4·88
Invercargill	2·33	2·71	3·76	4·57

TAPIOCA, PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	2·49	3·29	5·26	5·31
Wellington	2·31	3·43	4·43	4·54
Christchurch	2·63	3·33	4·49	5·05
Dunedin	2·19	3·16	4·94	4·83
Whangarei	2·48	3·69	5·60	6·02
Hamilton	2·63	3·70	5·56	6·19
Rotorua	2·81	3·75	5·42	6·32
Waihi	2·65	3·47	5·36	5·81
Gisborne	2·94	3·40	5·66	6·61
Napier	2·86	3·50	5·67	5·64
Dannevirke	3·00	3·23	4·77	5·27
New Plymouth	2·44	3·23	4·25	4·79
Wanganui	2·35	3·46	4·76	4·94
Taihape	3·00	3·58	4·83	4·96
Palmerston N.	2·89	3·58	4·22	4·67
Masterton	2·71	3·47	4·13	4·43
Blenheim	3·00	3·67	4·50	4·71
Nelson	3·01	3·52	4·00	4·56
Greymouth	3·06	4·02	4·57	5·04
Ashburton	2·27	3·31	4·91	5·32
Timaru	2·21	3·21	4·75	5·13
Oamaru	2·71	3·83	5·29	5·50
Alexandra	3·38	4·17	5·46	6·00
Gore	3·00	3·66	5·99	6·46
Invercargill	2·61	2·92	5·46	5·23

Average Retail Prices—continued.

TEA, PER 1 LB.

Towns.	1914. d.	1916. d.	1918. d.	1919. d.
Auckland	17·67	19·75	21·90	23·10
Wellington	19·98	20·33	23·21	25·85
Christchurch	18·00	19·14	23·17	25·42
Dunedin	20·10	20·38	23·28	25·27
Whangarei	18·00	21·60	24·00	25·98
Hamilton	17·31	18·92	21·28	24·08
Rotorua	19·77	21·28	24·40	27·08
Waihi	18·00	21·56	23·78	26·83
Gisborne	19·02	20·80	23·94	27·45
Napier	22·67	22·00	24·47	26·44
Dannevirke	21·54	22·83	25·63	26·27
New Plymouth	21·63	18·25	21·78	23·50
Wanganui	18·08	20·03	22·75	25·28
Taihape	24·00	22·17	20·66	25·17
Palmerston N.	19·21	20·41	21·66	23·11
Masterton	23·48	22·80	24·25	25·63
Blenheim	20·00	20·17	27·75	29·21
Nelson	19·32	20·83	21·80	26·13
Greymouth	18·00	20·21	23·50	24·83
Ashburton	18·75	19·33	22·00	24·67
Timaru	17·83	19·46	23·29	26·79
Oamaru	20·00	20·00	22·92	25·00
Alexandra	19·83	22·17	23·67	27·92
Gore	18·75	20·07	22·48	24·04
Invercargill	18·96	21·00	24·42	26·83

SUGAR, PER 56 LB. BAG.

Towns.	1914. d.	1916. d.	1918. d.	1919. d.
Auckland	113·38	139·53	146·23	151·34
Wellington	117·25	151·37	164·93	169·82
Christchurch	131·33	150·68	157·03	166·85
Dunedin	116·36	149·43	164·40	172·98
Whangarei	113·46	144·33	153·25	161·93
Hamilton	120·75	152·33	155·07	161·96
Rotorua	138·94	165·54	169·90	173·27
Waihi	116·83	144·00	150·32	157·85
Gisborne	118·83	143·53	152·77	160·46
Napier	127·52	143·54	160·60	165·14
Dannevirke	127·13	160·68	171·40	176·72
New Plymouth	116·00	137·25	148·63	155·36
Wanganui	114·17	143·54	151·80	157·07
Taihape	136·50	147·10	170·40	177·60
Palmerston N.	120·75	150·89	166·12	176·03
Masterton	130·21	162·44	169·35	170·87
Blenheim	126·63	153·00	167·88	181·00
Nelson	129·83	155·98	161·80	167·80
Greymouth	125·88	151·00	161·48	168·13
Ashburton	120·67	154·00	166·93	172·07
Timaru	122·58	144·13	157·10	160·15
Oamaru	126·83	150·15	165·60	173·20
Alexandra	134·00	172·55	178·40	185·20
Gore	129·63	154·05	165·31	171·88
Invercargill	120·38	146·85	164·90	172·20

COFFEE, PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	19·79	19·58	20·64	21·38
Wellington	18·78	19·67	20·10	21·69
Christchurch	18·67	19·84	20·99	23·03
Dunedin	19·96	19·76	19·82	20·38
Whangarei	19·29	19·61	20·78	21·02
Hamilton	17·00	17·25	18·17	20·42
Rotorua	19·77	19·42	21·37	23·45
Waihi	19·52	20·17	20·89	24·56
Gisborne	21·61	21·82	22·35	23·68
Napier	21·81	21·70	22·81	23·69
Dannevirke	22·00	22·50	20·92	21·33
New Plymouth	20·08	19·71	18·45	20·69
Wanganui	20·86	20·75	22·03	22·94
Taihape	24·00	22·00	24·50	26·50
Palmerston N.	22·56	21·75	22·50	22·47
Masterton	20·56	20·41	20·80	21·60
Blenheim	21·58	21·42	23·54	23·67
Nelson	20·62	20·46	20·83	22·96
Greymouth	19·02	20·42	21·54	22·19
Ashburton	22·56	21·11	22·28	24·00
Timaru	20·06	20·59	20·88	23·83
Oamaru	21·29	20·13	20·00	20·79
Alexandra	24·00	24·13	24·38	24·83
Gore	20·54	21·32	21·94	24·49
Invercargill	20·75	20·42	21·79	23·83

SALT, PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	0·58	0·94	2·42	1·91
Wellington	1·00	1·09	2·79	2·15
Christchurch	1·00	0·99	2·29	2·12
Dunedin	0·94	0·96	2·55	1·72
Whangarei	0·98	1·07	2·91	2·17
Hamilton	1·00	1·35	2·85	2·19
Rotorua	1·00	1·37	2·82	2·35
Waihi	1·00	1·00	2·56	1·44
Gisborne	1·00	1·05	2·88	2·79
Napier	1·00	1·04	2·92	2·64
Dannevirke	1·00	1·00	2·67	2·52
New Plymouth	1·00	1·00	2·61	2·31
Wanganui	1·00	0·98	2·69	1·93
Taihape	1·00	1·08	2·83	2·75
Palmerston N.	1·00	1·00	2·49	2·54
Masterton	1·00	1·03	2·79	2·73
Blenheim	1·00	1·00	2·94	2·48
Nelson	1·02	1·41	2·83	2·46
Greymouth	1·00	1·36	2·73	2·52
Ashburton	1·00	1·00	2·51	2·22
Timaru	1·00	1·00	2·60	2·08
Oamaru	1·00	1·06	2·70	2·06
Alexandra	1·23	1·50	2·98	2·52
Gore	1·00	1·23	3·00	2·33
Invercargill	1·00	1·27	3·00	2·46

COCOA, PER ½ LB. TIN.

Towns.	1914.	1916.	1918.	1919.
Auckland	9·50	9·33	11·46	12·03
Wellington	11·08	11·67	14·69	13·38
Christchurch	11·31	11·73	12·99	13·04
Dunedin	10·94	10·86	13·13	11·65
Whangarei	11·02	11·86	13·56	13·73
Hamilton	10·63	11·50	13·33	13·81
Rotorua	11·25	12·07	13·98	14·43
Waihi	11·00	11·56	13·29	12·92
Gisborne	10·67	11·63	13·71	14·74
Napier	11·00	11·71	13·44	13·89
Dannevirke	10·87	11·50	15·92	15·94
New Plymouth	10·59	11·21	11·90	11·69
Wanganui	10·83	11·00	11·86	10·90
Taihape	11·83	11·67	12·00	12·00
Palmerston N.	11·29	10·64	10·51	10·36
Masterton	11·21	11·36	13·76	13·48
Blenheim	11·21	11·58	18·13	18·38
Nelson	10·48	11·29	12·80	13·38
Greymouth	11·77	12·00	14·56	14·88
Ashburton	11·02	11·67	13·08	13·58
Timaru	11·31	12·00	14·50	15·50
Oamaru	11·00	11·63	11·04	10·92
Alexandra	10·92	11·83	15·67	11·63
Gore	10·23	11·45	16·65	16·75
Invercargill	11·00	11·63	12·00	12·00

PEPPER, PER ½ LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	4·14	5·42	6·10	6·45
Wellington	5·48	5·63	6·31	6·78
Christchurch	4·50	4·52	6·02	6·56
Dunedin	4·13	4·52	5·20	5·83
Whangarei	4·61	4·91	6·62	7·50
Hamilton	4·19	5·39	6·67	7·61
Rotorua	4·75	5·42	6·28	7·28
Waihi	4·11	4·96	6·11	6·89
Gisborne	4·92	5·43	6·11	7·83
Napier	5·67	5·73	6·92	7·61
Dannevirke	4·25	5·02	5·44	5·58
New Plymouth	4·83	4·54	4·93	5·83
Wanganui	4·42	5·22	6·03	6·69
Taihape	6·00	5·50	6·00	6·25
Palmerston N.	5·21	5·31	5·95	6·61
Masterton	5·00	5·51	6·55	6·52
Blenheim	4·88	6·00	6·17	6·50
Nelson	5·65	5·34	5·87	6·00
Greymouth	6·00	6·00	5·98	6·42
Ashburton	4·08	4·89	5·47	6·19
Timaru	5·02	5·00	5·69	6·17
Oamaru	5·04	5·69	6·33	6·88
Alexandra	4·56	6·04	6·67	7·13
Gore	5·00	5·10	6·64	7·89
Invercargill	4·79	4·75	6·68	7·50

AVERAGE RETAIL PRICES—continued.

JAM, PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
	d.	d.	d.	d.
Auckland	5·00	5·71	7·28	7·21
Wellington	5·08	5·72	7·68	7·85
Christchurch	5·50	6·46	7·43	7·48
Dunedin	6·54	6·34	7·42	7·65
Whangarei	5·67	6·07	8·21	8·19
Hamilton	5·75	6·55	8·33	8·33
Rotorua	5·29	6·53	8·46	8·34
Waihi	4·96	5·61	6·95	7·44
Gisborne	5·48	6·02	7·90	8·00
Napier	6·00	6·11	7·64	8·06
Dannevirke	5·45	5·75	6·67	7·72
New Plymouth	5·79	5·79	6·48	7·03
Wanganui	5·38	5·67	6·92	6·89
Taihape	6·00	6·17	8·00	8·00
Palmerston N.	5·69	6·28	7·67	7·72
Masterton	5·98	6·02	8·78	9·40
Blenheim	6·00	6·00	8·00	8·58
Nelson	6·00	6·00	7·87	8·13
Greymouth	5·08	5·94	7·58	7·56
Ashburton	5·25	5·83	7·18	8·11
Timaru	6·00	5·67	7·25	7·50
Oamaru	6·00	6·00	7·00	7·13
Alexandra	5·73	6·13	7·21	7·60
Gore	6·58	6·51	7·49	8·08
Invercargill	5·00	5·80	8·42	8·42

HONEY, PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	4·96	7·55	11·64	12·34
Wellington	6·69	7·96	12·29	13·41
Christchurch	5·88	7·20	11·31	11·92
Dunedin	5·98	7·51	10·31	10·87
Whangarei	6·73	7·86	12·27	13·26
Hamilton	6·17	7·70	11·77	12·89
Rotorua	7·63	7·98	12·64	14·23
Waihi	6·56	7·73	11·93	13·52
Gisborne	6·94	7·79	11·52	13·14
Napier	6·00	6·96	11·47	12·83
Dannevirke	6·00	7·50	10·96	12·71
New Plymouth	6·00	7·50	10·97	12·58
Wanganui	6·23	7·43	11·34	12·95
Taihape	6·17	8·79	13·54	14·00
Palmerston N.	5·98	7·52	12·11	13·75
Masterton	6·40	7·95	11·12	13·29
Blenheim	6·00	6·50	10·40	11·63
Nelson	6·44	7·52	10·88	12·38
Greymouth	6·00	7·59	9·04	11·51
Ashburton	3·92	5·89	9·89	9·92
Timaru	5·29	7·30	10·71	10·32
Oamaru	5·38	8·13	9·63	10·48
Alexandra	6·50	9·25	9·82	14·29
Gore	5·88	8·08	10·79	12·09
Invercargill	6·00	7·69	9·94	11·82

GOLDEN SYRUP, PER 2 LB. TIN.

Towns.	1914.	1916.	1918.	1919.
Auckland	5·50	5·75	6·49	7·23
Wellington	6·00	6·00	7·15	7·51
Christchurch	6·00	6·54	7·02	7·46
Dunedin	5·94	6·00	6·70	7·86
Whangarei	6·00	6·13	7·02	7·60
Hamilton	6·00	6·83	7·57	7·83
Rotorua	6·19	6·95	7·50	8·20
Waihi	5·63	6·00	6·31	7·17
Gisborne	6·75	6·67	7·49	8·31
Napier	7·08	7·42	8·00	8·00
Dannevirke	6·29	7·17	8·00	8·29
New Plymouth	6·00	6·00	6·33	6·92
Wanganui	6·00	6·08	6·44	7·03
Taihape	7·00	7·00	8·00	8·00
Palmerston N.	6·23	6·94	7·56	8·25
Masterton	6·94	6·81	7·53	7·88
Blenheim	7·00	6·92	8·63	9·00
Nelson	7·04	7·50	7·62	8·08
Greymouth	6·94	7·27	8·04	8·38
Ashburton	6·75	6·58	7·76	8·22
Timaru	6·21	6·67	7·25	7·58
Oamaru	6·67	7·00	7·00	7·46
Alexandra	7·00	7·92	9·50	9·63
Gore	6·98	7·03	8·34	9·00
Invercargill	6·00	6·50	7·57	8·79

TREACLE, PER 2 LB.

Towns.	1914.	1916.	1918.	1919.
	d.	d.	d.	d.
Auckland	5·00	5·00	5·58	6·24
Wellington	6·00	6·00	6·58	6·80
Christchurch	6·00	6·52	6·91	7·09
Dunedin	5·08	5·09	5·78	6·81
Whangarei	5·02	5·62	6·06	6·60
Hamilton	5·50	6·33	6·00	6·88
Rotorua	6·00	6·63	6·97	7·53
Waihi	5·04	5·69	6·12	6·97
Gisborne	6·00	6·00	6·71	7·51
Napier	6·25	6·44	7·00	7·00
Dannevirke	5·75	6·00	7·00	7·17
New Plymouth	6·00	6·04	5·98	6·50
Wanganui	5·98	6·00	6·44	6·78
Taihape	6·00	6·00	7·00	7·00
Palmerston N.	6·00	6·00	6·70	7·39
Masterton	6·84	6·32	6·93	7·23
Blenheim	6·96	6·54	7·71	8·00
Nelson	6·54	7·00	6·87	7·50
Greymouth	6·31	6·48	7·04	7·46
Ashburton	6·00	6·08	7·07	7·37
Timaru	5·81	5·75	6·21	6·58
Oamaru	6·00	6·00	6·00	6·54
Alexandra	6·00	6·94	8·50	8·63
Gore	5·98	6·15	8·08	8·54
Invercargill	6·00	5·96	7·08	8·08

RAISINS, PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	4·67	6·15	8·24	9·03
Wellington	6·00	6·25	8·70	10·16
Christchurch	6·15	6·95	7·77	9·15
Dunedin	5·21	6·17	8·00	9·04
Whangarei	5·75	6·64	9·23	9·44
Hamilton	5·79	6·78	9·33	9·83
Rotorua	5·96	7·52	10·22	10·88
Waihi	5·81	6·67	8·67	9·69
Gisborne	5·73	6·42	8·93	10·09
Napier	6·50	6·89	9·61	9·86
Dannevirke	5·44	6·27	8·65	9·96
New Plymouth	4·67	5·73	8·13	9·14
Wanganui	5·13	6·27	8·36	9·14
Taihape	6·33	6·17	9·00	9·75
Palmerston N.	5·96	6·75	8·44	9·04
Masterton	4·96	6·10	8·93	9·85
Blenheim	6·21	7·21	9·50	9·92
Nelson	5·19	6·38	8·42	9·58
Greymouth	5·86	7·35	9·38	10·10
Ashburton	5·65	6·68	8·43	9·53
Timaru	4·75	5·48	7·29	7·79
Oamaru	6·42	7·54	9·08	10·54
Alexandra	6·29	7·08	10·29	10·83
Gore	6·15	7·75	9·39	10·19
Invercargill	5·17	5·71	8·00	9·08

CURRANTS, PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	4·75	6·48	9·75	10·06
Wellington	4·79	6·52	9·89	11·01
Christchurch	5·44	6·16	9·45	10·86
Dunedin	4·58	5·94	9·58	10·12
Whangarei	5·38	6·78	10·60	11·23
Hamilton	5·15	6·79	10·11	11·10
Rotorua	5·48	7·40	11·18	11·83
Waihi	5·33	6·72	10·00	10·81
Gisborne	5·13	6·40	10·10	11·18
Napier	5·79	6·62	10·72	11·28
Dannevirke	5·27	6·39	10·41	11·06
New Plymouth	5·04	6·02	9·42	10·14
Wanganui	5·04	7·17	9·83	10·31
Taihape	5·92	6·84	10·58	12·33
Palmerston N.	5·06	6·33	9·36	9·72
Masterton	4·69	6·55	9·87	11·18
Blenheim	5·21	6·13	9·71	11·21
Nelson	5·03	6·71	9·46	10·04
Greymouth	5·63	7·10	10·29	11·44
Ashburton	4·65	5·86	9·78	10·44
Timaru	4·48	6·21	9·65	11·33
Oamaru	5·27	7·04	10·21	11·25
Alexandra	6·21	7·31	11·38	11·33
Gore	5·04	6·60	10·47	11·52
Invercargill	4·63	6·13	10·50	11·58

AVERAGE RETAIL PRICES—continued.

APRICOTS, PER 2½ LB. TIN.

Towns.	1914.	1916.	1918.	1919.
	d.	d.	d.	d.
Auckland	11·08	10·94	16·60	18·38
Wellington	11·69	11·43	16·45	19·18
Christchurch	11·44	11·95	15·84	19·03
Dunedin	11·04	11·52	16·40	19·25
Whangarei	10·77	12·04	17·40	19·92
Hamilton	10·48	11·53	17·54	19·01
Rotorua	12·00	12·46	18·08	20·98
Waihi	11·83	11·94	16·44	19·83
Gisborne	11·90	11·90	17·27	19·66
Napier	12·00	12·00	15·72	18·36
Dannevirke	11·46	11·75	15·46	16·73
New Plymouth	10·17	10·13	14·75	17·36
Wanganui	11·58	11·22	16·17	17·72
Taihape	12·00	11·58	20·00	20·50
Palmerston N.	11·98	12·11	17·07	17·92
Masterton	12·00	12·05	17·48	19·15
Blenheim	12·00	12·00	16·75	19·54
Nelson	11·98	11·92	16·50	17·58
Greymouth	11·06	11·29	16·27	18·54
Ashburton	11·86	12·00	17·00	19·89
Timaru	11·61	11·50	16·17	18·83
Oamaru	12·00	12·00	16·67	19·92
Alexandra	12·00	12·08	16·42	20·29
Gore	11·69	11·93	17·42	20·50
Invercargill	12·00	11·46	16·46	18·92

PEACHES, PER 2½ LB. TIN.

Towns.	1914.	1916.	1918.	1919.
Auckland	11·08	10·96	17·00	18·73
Wellington	11·69	11·43	16·44	19·26
Christchurch	11·44	11·63	15·83	19·06
Dunedin	11·02	11·43	16·72	19·37
Whangarei	11·23	12·25	17·40	19·88
Hamilton	10·61	11·86	16·63	19·18
Rotorua	12·00	12·59	18·40	21·10
Waihi	11·90	11·94	16·78	19·97
Gisborne	11·81	11·87	17·23	19·66
Napier	12·00	12·00	15·72	18·19
Dannevirke	11·92	12·00	15·33	16·73
New Plymouth	10·17	10·08	14·97	17·64
Wanganui	11·63	11·50	16·17	17·72
Taihape	12·00	11·67	20·00	20·50
Palmerston N.	11·71	12·25	17·11	17·78
Masterton	12·00	12·05	17·45	19·33
Blenheim	12·00	12·00	16·75	19·67
Nelson	12·00	12·17	16·50	17·58
Greymouth	11·06	11·29	16·25	18·58
Ashburton	11·86	12·00	17·00	19·89
Timaru	11·61	11·50	16·21	18·83
Oamaru	12·00	12·00	16·67	19·92
Alexandra	12·00	12·08	16·17	20·21
Gore	11·83	11·93	17·42	20·50
Invercargill	12·00	11·29	16·46	19·50

PEARS, PER 2½ LB. TIN.

Towns.	1914.	1916.	1918.	1919.
Auckland	12·17	11·84	16·83	18·42
Wellington	11·69	11·57	17·11	19·94
Christchurch	12·00	12·23	16·87	19·90
Dunedin	11·38	12·22	17·33	19·50
Whangarei	11·79	12·83	18·19	19·96
Hamilton	11·44	12·19	16·58	19·61
Rotorua	13·04	13·78	18·79	21·48
Waihi	12·00	12·50	17·25	20·03
Gisborne	12·11	12·38	17·86	20·40
Napier	12·96	12·96	16·22	19·22
Dannevirke	11·92	12·21	15·46	16·98
New Plymouth	12·00	11·94	15·31	17·61
Wanganui	12·81	13·00	16·69	18·53
Taihape	14·00	13·27	20·00	20·50
Palmerston N.	11·88	12·22	17·42	18·14
Masterton	12·00	12·55	18·45	20·23
Blenheim	12·00	12·00	17·66	19·67
Nelson	11·63	12·92	17·42	18·25
Greymouth	11·61	11·63	16·35	19·07
Ashburton	11·86	12·67	17·44	20·67
Timaru	12·17	12·38	16·92	19·75
Oamaru	12·00	12·00	17·75	19·92
Alexandra	12·58	13·25	16·92	20·67
Gore	11·96	12·10	18·54	20·85
Invercargill	12·00	12·08	18·00	20·39

PRUNES, DRIED, PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
	d.	d.	d.	d.
Auckland	5·31	5·42	9·15	8·51
Wellington	6·11	5·90	8·73	9·44
Christchurch	6·42	5·97	8·73	9·31
Dunedin	6·06	5·88	8·92	9·19
Whangarei	5·98	6·17	8·88	8·65
Hamilton	5·56	5·91	9·03	9·17
Rotorua	5·63	6·80	9·75	9·45
Waihi	5·36	6·01	8·75	9·44
Gisborne	5·75	6·42	8·87	9·76
Napier	7·04	7·07	9·11	9·00
Dannevirke	6·58	6·26	8·95	9·21
New Plymouth	4·83	5·27	8·69	8·78
Wanganui	6·44	6·10	9·11	10·42
Taihape	6·75	6·25	9·00	10·00
Palmerston N.	6·67	6·43	8·36	7·90
Masterton	5·48	6·68	9·43	9·38
Blenheim	7·21	7·00	9·75	9·71
Nelson	6·36	6·29	8·63	9·17
Greymouth	7·02	6·23	9·94	9·50
Ashburton	6·83	6·36	8·81	9·86
Timaru	6·52	5·88	7·88	8·71
Oamaru	6·83	6·21	9·54	9·88
Alexandra	8·54	8·56	9·00	9·79
Gore	6·92	7·82	9·63	10·35
Invercargill	6·42	6·29	9·83	9·88

APRICOTS, PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	10·46	9·71	16·20	16·42
Wellington	9·67	9·51	17·14	18·10
Christchurch	11·33	10·21	14·83	16·18
Dunedin	11·04	9·25	14·80	15·90
Whangarei	11·25	10·71	16·19	16·37
Hamilton	10·75	10·25	16·71	17·39
Rotorua	12·04	11·24	17·95	18·14
Waihi	11·54	10·22	16·10	16·24
Gisborne	11·83	10·94	16·85	18·11
Napier	11·83	10·84	17·83	17·25
Dannevirke	12·21	10·06	15·77	16·10
New Plymouth	10·08	9·13	15·84	15·00
Wanganui	11·58	10·75	16·83	18·28
Taihape	13·67	10·92	18·00	18·00
Palmerston N.	11·40	9·72	16·00	16·72
Masterton	11·77	9·90	17·03	17·76
Blenheim	10·21	10·75	14·50	15·88
Nelson	10·86	10·38	17·59	16·88
Greymouth	10·44	10·28	16·31	16·67
Ashburton	10·27	10·36	14·69	17·17
Timaru	11·73	10·29	13·17	14·17
Oamaru	12·04	10·88	14·96	15·58
Alexandra	12·00	13·75	14·00	18·00
Gore	11·71	11·37	16·39	17·44
Invercargill	11·92	10·00	15·08	17·17

POTATOES, PER 14 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	10·54	17·75	20·00	20·55
Wellington	12·44	19·99	23·57	23·43
Christchurch	8·08	15·72	18·02	20·14
Dunedin	9·83	14·92	21·67	20·50
Whangarei	11·23	18·93	23·65	22·33
Hamilton	13·71	19·21	21·03	21·96
Rotorua	13·17	20·30	21·65	23·30
Waihi	13·19	18·34	19·35	20·49
Gisborne	13·72	18·73	22·10	22·51
Napier	12·77	18·50	22·39	21·91
Dannevirke	12·75	17·53	19·31	25·40
New Plymouth	14·13	17·17	19·99	21·92
Wanganui	12·33	15·97	17·73	17·53
Taihape	13·58	18·83	23·00	25·75
Palmerston N.	14·77	15·61	19·22	21·78
Masterton	13·02	19·24	22·05	24·19
Blenheim	11·42	18·00	17·63	28·08
Nelson	12·46	17·96	20·88	21·92
Greymouth	12·06	18·48	20·94	22·27
Ashburton	8·54	16·25	14·38	20·54
Timaru	11·98	15·76	19·04	17·42
Oamaru	11·33	16·67	19·81	19·49
Alexandra	13·00	19·69	23·04	24·18
Gore	12·65	13·94	19·33	25·27
Invercargill	14·15	15·41	22·58	23·00

AVERAGE RETAIL PRICES—continued.

ONIONS, PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
	d.	d.	d.	d.
Auckland	1·76	1·47	3·15	2·74
Wellington	2·04	1·66	3·40	3·29
Christchurch	1·44	1·52	2·52	2·83
Dunedin	1·56	1·25	2·99	2·89
Whangarei	2·09	1·73	3·27	3·06
Hamilton	2·33	1·60	3·30	3·25
Rotorua	2·41	2·10	3·72	3·36
Waihi	2·06	1·62	3·09	3·04
Gisborne	2·23	2·12	3·91	4·22
Napier	2·46	2·18	4·65	3·83
Dannevirke	2·04	1·61	3·38	3·25
New Plymouth	1·88	1·56	2·94	3·03
Wanganui	1·81	1·33	2·95	2·81
Taihape	2·21	1·44	3·41	3·29
Palmerston N.	1·83	1·90	3·46	3·42
Masterton	2·21	1·72	3·73	3·70
Blenheim	1·98	1·56	3·10	3·21
Nelson	1·61	1·73	3·15	3·38
Greymouth	2·06	1·69	3·56	3·30
Ashburton	1·58	1·11	2·33	3·03
Timaru	1·50	1·25	2·66	2·39
Oamaru	2·77	1·47	2·94	2·96
Alexandra	2·21	1·93	2·85	3·60
Gore	2·04	1·68	3·41	3·14
Invercargill	1·50	1·27	2·73	2·63

STARCH, PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
	d.	d.	d.	d.
Auckland	5·40	7·21	8·77	10·72
Wellington	6·02	7·17	8·57	10·33
Christchurch	6·23	7·46	8·49	9·63
Dunedin	6·04	6·32	8·36	9·11
Whangarei	6·13	7·24	9·10	10·67
Hamilton	6·00	7·28	8·30	10·47
Rotorua	8·00	7·58	9·08	11·40
Waihi	5·65	6·86	7·86	9·53
Gisborne	6·04	6·61	8·75	11·11
Napier	6·00	6·81	8·97	10·53
Dannevirke	6·17	6·71	8·79	10·04
New Plymouth	6·00	6·58	7·59	8·92
Wanganui	6·00	6·84	8·64	9·97
Taihape	6·00	6·33	9·00	10·00
Palmerston N.	5·83	6·81	8·81	9·78
Masterton	5·96	7·26	9·28	10·27
Blenheim	6·00	7·50	9·50	9·54
Nelson	6·38	7·13	8·50	10·10
Greymouth	6·28	7·69	8·96	10·58
Ashburton	6·04	7·14	8·97	9·97
Timaru	6·00	7·00	8·50	10·83
Oamaru	6·00	6·79	8·04	9·38
Alexandra	7·25	8·58	9·71	10·92
Gore	6·23	8·02	9·73	10·88
Invercargill	6·21	6·13	8·71	9·42

SALMON, PER 1 LB. TIN.

Towns.	1914.	1916.	1918.	1919.
Auckland	11·54	11·63	15·39	16·93
Wellington	12·44	13·79	20·15	19·74
Christchurch	13·98	14·08	18·43	19·32
Dunedin	12·56	13·36	21·32	21·69
Whangarei	11·77	12·49	18·98	20·02
Hamilton	10·75	10·46	16·74	18·07
Rotorua	12·42	13·37	18·54	19·28
Waihi	10·98	12·08	16·83	16·76
Gisborne	13·11	12·90	18·13	19·82
Napier	13·40	15·19	19·92	18·00
Dannevirke	11·25	12·08	18·00	18·25
New Plymouth	10·19	10·25	15·28	16·86
Wanganui	11·54	11·44	16·36	17·06
Taihape	12·00	11·50	17·16	18·00
Palmerston N.	11·81	12·69	17·00	17·73
Masterton	12·08	12·63	16·35	18·88
Blenheim	12·42	12·00	18·33	19·00
Nelson	12·65	12·46	17·71	19·44
Greymouth	12·00	12·21	16·72	17·46
Ashburton	12·29	13·67	19·00	21·72
Timaru	13·00	14·59	20·04	22·42
Oamaru	13·83	12·88	20·25	20·63
Alexandra	15·21	15·29	20·08	24·88
Gore	13·67	15·08	22·15	23·94
Invercargill	13·50	13·13	19·25	20·00

BLUE, PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	9·00	9·56	13·48	14·57
Wellington	9·05	9·89	15·54	17·00
Christchurch	9·42	10·11	13·25	14·39
Dunedin	9·02	9·56	13·93	14·57
Whangarei	9·81	10·30	13·90	15·90
Hamilton	9·96	10·81	14·08	16·31
Rotorua	10·00	10·99	15·08	16·87
Waihi	9·86	10·53	13·86	16·00
Gisborne	11·08	11·21	14·51	16·61
Napier	10·50	10·71	15·22	16·89
Dannevirke	9·54	9·46	13·21	16·92
New Plymouth	10·00	9·60	12·63	14·11
Wanganui	10·00	9·94	14·92	16·18
Taihape	12·00	10·25	15·83	17·00
Palmerston N.	9·75	10·06	15·75	16·89
Masterton	10·73	9·82	14·67	16·52
Blenheim	12·00	11·59	14·54	15·63
Nelson	10·13	10·29	14·37	15·79
Greymouth	11·19	10·83	15·96	17·25
Ashburton	10·13	10·56	14·81	15·67
Timaru	9·27	9·29	12·29	14·17
Oamaru	10·17	11·67	14·25	15·00
Alexandra	9·54	11·83	14·46	16·42
Gore	10·15	11·29	15·50	17·50
Invercargill	9·21	9·71	13·71	15·00

HERRINGS, PER 1 LB. TIN.

Towns.	1914.	1916.	1918.	1919.
Auckland	6·98	10·23	13·98	14·77
Wellington	7·15	10·61	15·93	15·99
Christchurch	7·44	9·20	14·35	14·62
Dunedin	7·40	10·98	14·89	15·39
Whangarei	7·50	10·79	15·46	14·69
Hamilton	7·63	10·39	15·42	15·99
Rotorua	8·92	11·37	16·51	17·30
Waihi	6·61	11·15	15·72	16·28
Gisborne	8·88	10·39	16·01	16·93
Napier	8·86	11·13	16·45	15·50
Dannevirke	8·75	10·83	13·83	14·00
New Plymouth	8·00	10·37	14·33	15·36
Wanganui	8·13	12·03	16·19	15·56
Taihape	10·42	12·84	17·92	18·00
Palmerston N.	8·42	12·06	15·41	17·03
Masterton	8·13	11·05	16·35	17·03
Blenheim	8·42	11·00	13·04	13·58
Nelson	8·90	11·50	14·50	15·25
Greymouth	8·29	10·25	16·02	16·88
Ashburton	6·98	9·68	14·67	15·50
Timaru	7·35	9·50	16·08	17·58
Oamaru	9·50	10·50	15·67	15·17
Alexandra	9·29	13·50	17·33	17·54
Gore	8·77	12·15	17·75	17·54
Invercargill	7·79	11·08	16·75	17·00

SOAP, PER BAR (36 TO 1 CWT.).

Towns.	1914.	1916.	1918.	1919.
Auckland	8·81	7·83	11·89	13·32
Wellington	10·54	10·26	15·88	16·81
Christchurch	8·77	9·68	13·04	14·31
Dunedin	10·38	11·05	15·79	17·02
Whangarei	8·25	9·37	13·29	15·49
Hamilton	10·96	11·28	14·72	16·97
Rotorua	9·63	9·87	12·53	15·74
Waihi	10·98	9·47	11·99	14·06
Gisborne	10·17	10·61	14·43	16·30
Napier	9·56	9·84	13·64	14·56
Dannevirke	9·46	10·63	13·46	15·15
New Plymouth	9·79	9·71	13·46	15·25
Wanganui	8·33	9·70	13·50	15·25
Taihape	9·00	10·92	15·16	16·00
Palmerston N.	9·42	10·13	13·70	12·67
Masterton	9·08	8·83	14·12	16·03
Blenheim	10·00	11·25	15·83	16·17
Nelson	10·12	9·59	14·17	14·63
Greymouth	6·92	9·19	12·23	14·38
Ashburton	9·00	10·14	14·61	15·47
Timaru	7·86	9·93	14·00	15·13
Oamaru	10·92	11·24	15·71	16·95
Alexandra	10·96	13·38	19·93	18·10
Gore	8·38	10·29	13·45	15·92
Invercargill	10·58	10·32	13·52	14·54

AVERAGE RETAIL PRICES—continued.

TOBACCO, PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
	d.	d.	d.	d.
Auckland	69·16	69·02	86·80	100·00
Wellington	76·29	72·26	86·43	98·45
Christchurch	69·96	71·00	84·56	98·50
Dunedin	72·46	69·88	88·03	99·67
Whangarei	70·72	68·22	89·11	106·85
Hamilton	68·63	69·75	86·40	97·47
Rotorua	70·44	72·08	90·38	111·14
Waihi	70·79	70·88	86·75	100·94
Gisborne	71·67	71·64	86·38	102·75
Napier	73·50	71·51	89·09	99·00
Dannevirke	71·83	71·00	79·59	90·25
New Plymouth	68·17	69·88	76·25	93·44
Wanganui	69·17	70·67	82·17	95·28
Taihape	78·00	77·00	91·25	102·00
Palmerston N.	71·77	70·84	84·05	94·42
Masterton	73·40	76·42	88·52	101·00
Blenheim	78·33	74·00	91·83	99·25
Nelson	71·59	70·63	88·80	99·42
Greymouth	71·56	71·79	86·98	102·69
Ashburton	70·08	70·00	84·75	96·17
Timaru	68·00	69·08	86·08	99·00
Oamaru	72·00	72·28	85·25	100·46
Alexandra	72·00	72·50	89·00	101·04
Gore	73·17	72·63	90·88	108·65
Invercargill	69·63	70·50	88·79	117·63

CHEESE, PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
	d.	d.	d.	d.
Auckland	8·96	11·77	13·67	14·37
Wellington	9·00	11·36	13·43	13·75
Christchurch	9·00	11·28	13·06	13·17
Dunedin	9·08	11·51	13·06	13·99
Whangarei	8·31	11·74	14·00	14·54
Hamilton	8·63	12·09	13·75	14·50
Rotorua	9·00	12·08	14·05	14·92
Waihi	8·02	11·36	14·03	14·61
Gisborne	8·98	12·28	14·29	15·28
Napier	9·00	11·08	14·97	15·00
Dannevirke	8·17	10·50	13·09	13·42
New Plymouth	8·08	10·04	11·83	12·00
Wanganui	7·90	11·17	13·17	13·89
Taihape	9·00	12·00	14·00	14·00
Palmerston N.	8·25	10·64	12·80	12·64
Masterton	8·06	10·58	12·35	12·98
Blenheim	8·79	11·00	13·42	13·71
Nelson	9·00	11·92	13·54	14·13
Greymouth	8·88	11·67	15·51	13·38
Ashburton	8·75	11·06	13·31	13·83
Timaru	8·23	11·04	12·08	13·29
Oamaru	8·71	11·29	14·00	14·00
Alexandra	9·63	12·08	14·96	15·00
Gore	8·86	11·27	13·63	14·19
Invercargill	9·00	11·42	13·58	14·13

MILK, PER QUART.

Towns.	1914.	1916.	1918.	1919.
Auckland	4·00	4·75	5·38	5·88
Wellington	4·42	5·25	5·50	5·88
Christchurch	3·83	4·58	4·58	5·25
Dunedin	4·00	4·38	5·00	5·75
Whangarei	3·88	4·00	4·50	5·63
Hamilton	3·92	4·25	5·29	6·08
Rotorua	4·00	4·29	4·75	5·33
Waihi	4·00	4·42	5·00	5·67
Gisborne	4·00	4·83	5·00	5·67
Napier	4·00	4·00	5·00	5·67
Dannevirke	4·00	4·00	5·00	5·50
New Plymouth	3·92	4·08	5·42	6·00
Wanganui	4·00	4·75	5·00	5·63
Taihape	4·17	4·92	5·83	6·00
Palmerston N.	3·08	4·17	4·92	4·67
Masterton	3·75	4·00	5·00	5·42
Blenheim	4·00	4·50	4·90	5·67
Nelson	4·17	5·00	5·00	5·67
Greymouth	4·00	4·04	5·25	5·08
Ashburton	4·00	4·92	5·42	5·33
Timaru	4·00	4·84	4·42	5·58
Oamaru	3·75	4·84	5·00	5·50
Alexandra	4·50	5·00	5·00	5·00
Gore	4·00	4·75	5·25	5·83
Invercargill	3·83	4·42	4·63	5·75

EGGS, PER DOZEN.

Towns.	1914.	1916.	1918.	1919.
Auckland	17·65	20·46	24·67	29·13
Wellington	20·58	23·38	26·91	31·10
Christchurch	16·54	18·35	21·38	23·94
Dunedin	19·08	19·25	23·67	25·48
Whangarei	16·13	15·10	21·67	25·19
Hamilton	14·71	20·42	24·30	27·00
Rotorua	20·88	24·11	28·39	32·09
Waihi	16·69	20·44	23·03	26·25
Gisborne	19·75	21·46	24·56	28·84
Napier	20·21	22·02	26·39	29·81
Dannevirke	13·25	19·71	23·67	25·54
New Plymouth	18·08	19·92	23·11	25·31
Wanganui	18·00	20·97	24·53	27·44
Taihape	19·50	22·50	26·33	30·42
Palmerston N.	12·90	21·08	23·56	25·97
Masterton	17·63	20·30	25·95	26·77
Blenheim	14·67	17·58	20·38	22·92
Nelson	17·20	19·09	22·29	24·63
Greymouth	22·52	23·31	27·48	29·19
Ashburton	11·04	14·81	16·50	18·86
Timaru	13·71	17·13	19·92	22·00
Oamaru	11·92	16·46	18·79	21·21
Alexandra	15·50	19·34	22·54	23·54
Gore	14·88	16·03	19·42	21·98
Invercargill	15·75	18·29	21·33	24·50

BUTTER, PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	13·48	18·82	19·70	19·33
Wellington	14·83	18·42	19·83	19·90
Christchurch	14·19	18·77	19·11	19·47
Dunedin	14·21	18·92	19·97	20·00
Whangarei	14·23	18·82	20·00	19·96
Hamilton	14·75	18·92	19·30	19·33
Rotorua	14·69	18·53	19·70	19·37
Waihi	14·19	18·32	19·75	20·00
Gisborne	14·88	18·66	18·99	19·92
Napier	15·00	18·42	19·93	19·92
Dannevirke	14·29	18·65	18·96	19·50
New Plymouth	14·63	17·54	19·00	19·00
Wanganui	13·90	17·42	19·08	19·31
Taihape	15·00	17·92	19·00	19·42
Palmerston N.	13·73	17·61	19·78	19·42
Masterton	14·02	18·25	20·00	20·00
Blenheim	14·96	18·17	19·00	19·58
Nelson	14·28	18·53	19·60	20·00
Greymouth	14·21	18·46	19·37	19·83
Ashburton	14·52	18·67	20·00	20·00
Timaru	14·77	18·42	19·50	19·50
Oamaru	14·08	19·08	19·92	20·00
Alexandra	14·50	19·67	20·08	20·19
Gore	15·02	19·58	20·00	20·06
Invercargill	13·96	18·59	20·00	20·00

BACON (SHOULDER), PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	7·12	8·93	10·86	12·04
Wellington	8·58	9·62	11·35	12·32
Christchurch	7·58	9·64	11·49	11·90
Dunedin	11·65	12·96	16·77	17·66
Whangarei	8·75	10·48	11·96	13·04
Hamilton	6·92	9·08	10·32	10·14
Rotorua	11·71	10·79	13·98	14·73
Waihi	7·69	9·94	12·47	14·44
Gisborne	8·94	10·65	13·81	15·01
Napier	7·98	8·25	13·78	14·00
Dannevirke	10·61	11·98	13·79	13·79
New Plymouth	7·84	8·47	11·67	11·85
Wanganui	8·00	9·93	11·93	14·03
Taihape	10·00	11·08	15·00	15·00
Palmerston N.	9·22	10·29	11·98	11·82
Masterton	7·06	9·81	13·10	13·68
Blenheim	7·92	9·75	10·58	11·13
Nelson	9·00	10·25	12·46	15·04
Greymouth	9·98	11·46	15·08	16·95
Ashburton	11·25	13·07	16·46	16·72
Timaru	9·54	12·19	14·54	16·00
Oamaru	12·00	13·83	18·00	18·29
Alexandra	11·96	13·71	17·06	18·33
Gore	12·25	14·06	17·53	18·58
Invercargill	11·00	14·09	17·21	18·13

AVERAGE RETAIL PRICES—continued.

BACON (MIDDLE CUT), PER 1 LB.

Towns.	1914. d.	1916. d.	1918. d.	1919. d.
Auckland	11·87	14·24	17·27	17·69
Wellington	11·69	15·21	18·01	18·45
Christchurch	11·02	13·82	16·93	18·24
Dunedin	12·00	14·43	17·29	18·10
Whangarei	11·81	14·92	17·00	17·63
Hamilton	10·92	14·39	16·50	18·47
Rotorua	13·71	14·00	16·98	18·05
Waihi	10·98	13·25	16·54	17·42
Gisborne	12·69	14·84	18·43	19·66
Napier	13·77	14·15	18·44	18·76
Dannevirke	13·00	14·65	17·60	18·48
New Plymouth	10·67	11·15	15·68	16·57
Wanganui	11·04	13·45	15·67	17·26
Taihape	12·00	13·75	18·14	19·17
Palmerston N.	12·25	14·22	17·69	18·03
Masterton	12·17	14·79	17·85	18·61
Blenheim	13·79	14·21	18·75	20·17
Nelson	12·81	15·21	18·13	19·08
Greymouth	12·69	14·16	17·15	19·02
Ashburton	12·50	13·78	17·56	18·78
Timaru	11·71	14·04	16·79	17·58
Oamaru	12·04	13·83	17·96	18·29
Alexandra	12·17	15·02	18·00	18·83
Gore	12·27	14·19	17·53	18·54
Invercargill	11·21	14·09	16·94	17·88

BEEF (BRISKET), PER 1 LB.

Towns.	1914. d.	1916. d.	1918. d.	1919. d.
Auckland	3·63	4·47	5·10	5·00
Wellington	3·63	4·51	6·12	6·23
Christchurch	4·08	5·76	6·67	6·84
Dunedin	4·17	5·25	6·32	6·53
Whangarei	3·88	4·92	5·83	5·50
Hamilton	3·88	5·13	5·58	6·46
Rotorua	4·02	4·95	6·50	6·46
Waihi	4·00	6·33	6·10	6·54
Gisborne	4·96	8·08	8·13	8·00
Napier	4·33	6·21	7·87	8·00
Dannevirke	4·27	5·90	7·00	6·58
New Plymouth	4·17	5·46	6·00	6·25
Wanganui	4·36	6·77	8·00	8·14
Taihape	5·00	6·21	7·58	6·75
Palmerston N.	4·70	6·59	6·93	7·00
Masterton	4·29	5·71	6·48	6·96
Blenheim	5·00	6·42	8·06	8·56
Nelson	5·52	5·79	7·29	8·17
Greymouth	5·75	6·58	7·13	7·58
Ashburton	5·15	6·63	7·75	7·81
Timaru	4·27	6·14	7·67	7·89
Oamaru	4·58	6·25	6·71	7·21
Alexandra	5·33	6·00	7·00	7·00
Gore	4·79	6·37	7·14	7·58
Invercargill	4·29	6·67	7·96	7·90

HAM, PER 1 LB.

Towns.	1914. d.	1916. d.	1918. d.	1919. d.
Auckland	11·54	13·98	16·68	16·98
Wellington	12·02	14·48	16·57	17·85
Christchurch	12·75	13·38	15·54	17·38
Dunedin	12·15	14·42	17·81	18·52
Whangarei	11·48	14·36	16·04	17·22
Hamilton	13·06	15·48	17·36	18·28
Rotorua	13·48	14·33	16·80	18·15
Waihi	12·11	13·42	16·57	17·82
Gisborne	13·75	14·10	17·41	18·56
Napier	14·77	12·09	19·00	18·67
Dannevirke	11·96	13·55	15·85	16·73
New Plymouth	10·04	10·01	15·10	15·13
Wanganui	11·73	13·58	15·28	16·43
Taihape	14·00	12·42	18·00	18·00
Palmerston N.	12·13	14·47	16·38	17·17
Masterton	13·40	14·00	17·19	17·90
Blenheim	13·79	13·96	18·75	20·17
Nelson	13·38	14·17	18·38	19·54
Greymouth	13·00	14·13	16·64	18·33
Ashburton	11·81	13·20	16·72	17·72
Timaru	12·11	13·54	16·17	16·83
Oamaru	12·00	13·63	17·33	18·33
Alexandra	12·83	14·60	17·75	18·71
Gore	12·48	14·55	17·40	18·69
Invercargill	12·00	14·09	16·42	18·63

BEEF (PRIME RIBS), PER 1 LB.

Towns.	1914. d.	1916. d.	1918. d.	1919. d.
Auckland	6·00	7·24	8·03	8·14
Wellington	5·65	6·53	7·75	7·85
Christchurch	6·11	7·54	8·11	8·36
Dunedin	5·83	6·64	7·56	7·98
Whangarei	6·13	7·25	9·00	9·00
Hamilton	6·13	6·63	7·58	8·75
Rotorua	6·00	7·00	8·00	8·00
Waihi	5·00	7·33	8·50	7·92
Gisborne	5·04	7·88	8·19	8·00
Napier	6·33	7·04	8·00	8·08
Dannevirke	5·69	7·15	8·23	7·58
New Plymouth	6·17	7·08	8·00	8·25
Wanganui	5·29	6·96	8·03	8·14
Taihape	6·00	7·08	7·66	7·75
Palmerston N.	5·27	7·34	8·00	8·00
Masterton	5·17	7·06	8·00	8·04
Blenheim	6·00	6·92	8·06	8·56
Nelson	6·75	6·38	8·00	9·08
Greymouth	6·75	7·38	8·17	9·08
Ashburton	6·10	7·00	8·00	7·96
Timaru	6·25	7·64	8·33	8·33
Oamaru	6·71	7·71	8·54	8·75
Alexandra	6·33	7·00	8·00	8·00
Gore	6·25	7·00	8·06	8·33
Invercargill	5·96	7·00	7·67	8·17

BEEF (SIRLOIN), PER 1 LB.

Towns.	1914. d.	1916. d.	1918. d.	1919. d.
Auckland	7·08	8·53	9·33	9·33
Wellington	7·38	8·07	8·88	8·96
Christchurch	6·46	8·33	9·02	9·28
Dunedin	6·67	7·71	8·56	8·97
Whangarei	6·75	8·25	10·00	10·00
Hamilton	7·13	7·63	8·58	9·54
Rotorua	7·31	8·17	10·00	10·00
Waihi	6·00	8·33	9·63	9·67
Gisborne	6·04	8·88	9·19	9·00
Napier	7·33	8·00	9·00	9·08
Dannevirke	6·38	8·00	9·00	8·58
New Plymouth	7·17	8·17	9·00	9·25
Wanganui	5·83	7·85	9·00	9·11
Taihape	6·00	8·08	8·66	8·17
Palmerston N.	6·08	8·34	9·00	9·06
Masterton	6·19	8·14	8·75	8·75
Blenheim	6·00	6·92	8·06	8·56
Nelson	7·30	7·50	9·00	9·96
Greymouth	7·38	8·21	9·33	9·58
Ashburton	6·92	8·25	9·00	8·96
Timaru	7·25	8·56	9·33	9·37
Oamaru	7·31	8·96	9·54	9·75
Alexandra	7·00	7·08	8·00	8·00
Gore	7·25	8·00	9·14	9·33
Invercargill	6·29	8·00	9·00	9·39

BEEF (RUMP STEAK), PER 1 LB.

Towns.	1914. d.	1916. d.	1918. d.	1919. d.
Auckland	11·00	11·67	11·67	11·83
Wellington	9·38	10·21	11·50	11·50
Christchurch	8·38	10·10	11·20	12·11
Dunedin	8·65	9·99	10·90	11·52
Whangarei	9·25	11·00	12·00	12·00
Hamilton	8·88	10·00	10·42	12·00
Rotorua	9·25	11·20	12·00	12·00
Waihi	9·00	11·33	12·25	12·67
Gisborne	8·08	11·88	12·42	12·00
Napier	8·00	11·21	12·00	12·00
Dannevirke	7·38	9·08	10·00	9·88
New Plymouth	9·17	10·17	12·00	12·50
Wanganui	8·29	9·75	12·00	12·33
Taihape	8·00	9·75	10·66	10·71
Palmerston N.	7·55	10·28	12·00	12·06
Masterton	7·60	9·81	11·00	11·00
Blenheim	7·00	7·92	9·42	9·96
Nelson	7·92	8·50	10·04	11·50
Greymouth	8·92	9·46	10·33	11·54
Ashburton	9·42	11·00	12·00	12·25
Timaru	9·04	10·30	11·33	11·33
Oamaru	8·42	10·17	11·71	12·17
Alexandra	8·00	9·00	10·00	10·00
Gore	9·25	10·97	12·00	12·33
Invercargill	9·08	11·00	12·00	12·78

AVERAGE RETAIL PRICES—continued.

BEEF (TOP SIDE), PER 1 LB.

Towns.	1914. d.	1916. d.	1918. d.	1919. d.
Auckland	6·13	7·33	8·33	8·33
Wellington	5·58	6·22	7·50	7·67
Christchurch	5·11	7·66	8·18	8·46
Dunedin	6·83	7·92	8·85	9·29
Whangarei	6·13	7·38	9·00	9·00
Hamilton	5·79	6·63	7·71	9·04
Rotorua	5·00	6·14	8·00	8·00
Waihi	5·58	8·33	9·00	8·63
Gisborne	5·48	8·35	8·38	8·00
Napier	5·25	7·08	8·87	8·63
Dannevirke	6·21	7·19	8·54	8·08
New Plymouth	6·21	7·21	8·00	8·25
Wanganui	5·15	7·35	8·30	8·33
Taihape	6·00	7·50	7·92	7·54
Palmerston N.	5·12	7·79	8·78	8·97
Masterton	6·00	7·08	8·00	8·13
Blenheim	6·00	6·42	8·00	8·40
Nelson	6·28	6·38	8·50	9·38
Greymouth	6·96	7·96	8·67	9·08
Ashburton	7·00	9·00	9·75	9·78
Timaru	6·50	8·44	9·33	9·33
Oamaru	6·92	9·00	9·71	10·17
Alexandra	6·33	8·00	9·00	9·00
Gore	7·21	8·95	10·00	10·14
Invercargill	6·10	9·00	10·00	10·44

BEEF (CORNED ROLL), PER 1 LB.

Towns.	1914. d.	1916. d.	1918. d.	1919. d.
Auckland	5·13	6·83	7·83	7·78
Wellington	4·86	5·95	6·98	7·30
Christchurch	5·38	7·34	7·95	8·21
Dunedin	5·65	7·00	7·78	8·36
Whangarei	5·88	7·00	8·00	8·00
Hamilton	5·63	6·13	7·08	8·33
Rotorua	5·94	6·20	8·00	8·00
Waihi	4·50	6·38	8·00	7·67
Gisborne	5·04	7·88	8·00	8·00
Napier	5·33	7·63	8·00	8·08
Dannevirke	5·69	7·06	8·29	7·71
New Plymouth	6·08	6·75	7·92	8·08
Wanganui	4·69	6·67	8·00	8·17
Taihape	5·00	6·71	7·66	7·88
Palmerston N.	5·19	7·34	8·00	8·00
Masterton	4·94	6·25	7·17	7·71
Blenheim	6·00	6·42	8·00	8·40
Nelson	6·06	6·38	8·35	9·00
Greymouth	6·67	7·59	8·46	8·83
Ashburton	6·77	7·50	8·75	8·83
Timaru	6·25	7·58	9·00	8·97
Oamaru	5·71	8·00	8·71	9·17
Alexandra	5·42	6·75	7·75	8·00
Gore	6·25	8·00	7·00	8·50
Invercargill	5·23	7·00	8·00	8·71

BEEF (STEWING-STEAK), PER 1 LB.

Towns.	1914. d.	1916. d.	1918. d.	1919. d.
Auckland	7·25	7·35	8·33	8·00
Wellington	5·38	6·75	7·96	7·77
Christchurch	5·52	7·66	7·80	7·93
Dunedin	6·02	6·92	7·87	8·21
Whangarei	6·25	7·50	7·33	7·00
Hamilton	4·67	5·25	6·25	7·92
Rotorua	4·48	7·83	7·58	8·50
Waihi	5·00	7·33	8·00	7·67
Gisborne	5·83	8·79	9·25	9·00
Napier	5·17	7·29	8·00	8·17
Dannevirke	4·27	6·21	6·50	6·38
New Plymouth	5·88	6·71	8·37	8·46
Wanganui	5·29	7·36	8·39	8·03
Taihape	5·00	7·59	8·33	8·08
Palmerston N.	5·13	7·74	8·27	8·28
Masterton	5·88	6·89	8·50	8·33
Blenheim	5·00	6·42	8·00	8·40
Nelson	5·66	5·50	7·25	8·00
Greymouth	6·06	7·00	7·83	7·96
Ashburton	6·27	7·00	8·92	9·00
Timaru	6·06	6·61	8·68	8·31
Oamaru	6·63	8·46	8·71	8·29
Alexandra	6·00	7·00	8·00	8·00
Gore	6·52	8·00	9·00	9·81
Invercargill	6·08	8·00	9·00	9·47

BEEF (CORNED, BRISKET), PER 1 LB.

Towns.	1914. d.	1916. d.	1918. d.	1919. d.
Auckland	3·63	4·46	5·28	5·31
Wellington	4·00	5·20	6·06	6·10
Christchurch	5·44	7·57	8·01	8·34
Dunedin	4·17	5·18	6·27	6·46
Whangarei	3·88	4·65	6·00	5·71
Hamilton	5·63	6·13	6·67	7·75
Rotorua	4·37	5·14	6·50	6·50
Waihi	4·00	5·83	6·50	6·63
Gisborne	5·04	7·88	8·00	8·00
Napier	4·50	6·21	8·00	8·08
Dannevirke	4·19	5·90	6·92	6·63
New Plymouth	5·17	6·63	7·92	8·13
Wanganui	4·69	6·46	8·00	8·17
Taihape	5·17	6·79	7·58	6·96
Palmerston N.	5·21	6·99	7·87	8·00
Masterton	4·40	5·79	6·67	7·08
Blenheim	5·50	6·42	8·00	8·40
Nelson	5·70	6·09	7·48	8·46
Greymouth	5·75	6·58	6·83	7·58
Ashburton	5·15	6·50	7·00	7·92
Timaru	5·67	7·10	8·06	8·25
Oamaru	5·13	6·21	6·71	7·25
Alexandra	5·33	6·00	7·00	7·13
Gore	4·69	6·43	7·00	7·29
Invercargill	4·27	6·34	7·67	8·00

BEEF (CORNED, ROUND), PER 1 LB.

Towns.	1914. d.	1916. d.	1918. d.	1919. d.
Auckland	6·13	7·67	8·67	8·67
Wellington	5·67	7·05	8·15	8·19
Christchurch	6·06	7·94	8·87	9·03
Dunedin	6·61	8·00	8·78	9·34
Whangarei	6·13	7·50	9·00	9·00
Hamilton	6·13	6·63	7·72	8·75
Rotorua	5·94	6·20	8·00	8·00
Waihi	5·00	7·33	9·00	8·67
Gisborne	5·04	7·88	8·42	9·00
Napier	5·67	7·88	8·08	8·08
Dannevirke	5·69	7·21	8·23	7·69
New Plymouth	6·17	7·21	8·00	8·25
Wanganui	5·50	7·15	8·00	8·17
Taihape	6·00	6·88	7·66	7·88
Palmerston N.	5·19	7·34	8·00	8·03
Masterton	5·84	7·08	8·00	8·00
Blenheim	6·00	6·42	8·00	8·40
Nelson	6·08	6·33	8·50	9·00
Greymouth	6·56	7·83	8·54	8·83
Ashburton	6·79	8·00	9·00	9·08
Timaru	7·25	8·37	9·33	9·31
Oamaru	6·25	9·00	9·71	10·13
Alexandra	6·33	7·08	8·75	9·00
Gore	7·25	9·00	9·00	9·56
Invercargill	6·21	9·00	9·00	9·64

MUTTON (LEG), PER 1 LB.

Towns.	1914. d.	1916. d.	1918. d.	1919. d.
Auckland	6·46	7·21	8·33	8·39
Wellington	5·65	6·75	7·88	7·96
Christchurch	5·77	6·66	8·18	8·70
Dunedin	5·50	6·40	7·89	8·27
Whangarei	6·54	7·25	9·50	9·50
Hamilton	6·63	7·00	8·08	9·04
Rotorua	7·61	7·20	10·00	10·04
Waihi	7·00	8·33	9·25	9·58
Gisborne	5·92	7·13	7·50	7·50
Napier	5·33	6·33	8·00	8·08
Dannevirke	5·69	7·17	8·25	8·04
New Plymouth	7·17	8·17	9·00	9·25
Wanganui	5·65	7·60	8·19	8·50
Taihape	6·00	7·50	7·66	7·38
Palmerston N.	5·55	7·34	8·03	8·22
Masterton	6·10	7·21	8·00	8·00
Blenheim	5·04	5·87	8·00	8·33
Nelson	5·72	6·25	8·50	9·00
Greymouth	7·33	8·29	9·71	9·88
Ashburton	5·65	7·00	8·50	8·53
Timaru	5·96	6·42	8·01	8·18
Oamaru	5·42	7·08	8·00	8·25
Alexandra	5·83	6·75	8·33	9·00
Gore	6·56	7·50	8·67	8·89
Invercargill	6·21	7·50	8·50	8·82

Average Retail Prices—continued.

MUTTON (SHOULDER), PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
	d.	d.	d.	d.
Auckland	5·50	6·21	6·82	7·00
Wellington	4·83	5·65	6·72	6·84
Christchurch	4·40	5·67	7·07	7·43
Dunedin	4·40	5·18	6·48	6·83
Whangarei	5·50	6·25	8·17	7·71
Hamilton	5·63	6·25	7·58	8·38
Rotorua	5·00	6·17	9·00	9·04
Waihi	6·00	7·33	7·54	7·67
Gisborne	4·54	6·13	6·71	6·63
Napier	4·67	5·38	6·00	6·08
Dannevirke	4·69	6·15	7·17	6·88
New Plymouth	6·00	7·08	8·00	8·25
Wanganui	4·38	6·42	7·33	7·47
Taihape	5·00	6·50	6·16	6·83
Palmerston N.	4·28	6·34	7·03	7·22
Masterton	4·56	6·04	7·00	6·94
Blenheim	4·50	5·23	7·08	7·63
Nelson	5·04	5·29	7·50	8·00
Greymouth	6·44	7·04	8·88	8·46
Ashburton	5·00	6·00	8·00	7·96
Timaru	4·92	5·43	7·51	7·89
Oamaru	4·73	5·92	7·00	7·21
Alexandra	5·42	5·50	7·33	8·00
Gore	5·77	6·49	7·75	7·94
Invercargill	5·17	6·83	8·00	8·25

MUTTON (LOIN), PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	6·50	7·15	8·36	8·33
Wellington	5·83	6·38	7·63	7·60
Christchurch	5·08	6·32	7·59	8·18
Dunedin	5·25	6·21	7·72	8·06
Whangarei	5·50	6·75	9·00	9·00
Hamilton	5·88	7·00	7·58	8·38
Rotorua	6·49	6·20	9·00	9·13
Waihi	6·00	8·33	9·00	8·67
Gisborne	5·17	7·13	7·50	7·50
Napier	5·25	6·17	7·08	7·25
Dannevirke	5·38	7·17	8·00	7·58
New Plymouth	6·17	7·25	8·00	8·25
Wanganui	5·15	7·25	8·33	8·44
Taihape	6·00	7·50	7·66	7·46
Palmerston N.	5·21	7·36	8·03	8·15
Masterton	6·04	7·38	7·75	7·98
Blenheim	5·52	6·02	8·00	8·33
Nelson	5·43	5·88	7·92	8·50
Greymouth	7·00	8·04	8·88	9·46
Ashburton	5·13	6·00	8·00	8·33
Timaru	5·25	6·03	7·67	7·99
Oamaru	5·46	6·92	7·00	7·25
Alexandra	5·67	6·50	7·92	8·00
Gore	6·06	7·00	8·00	8·17
Invercargill	5·36	6·83	8·00	8·24

MUTTON (NECK), PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	4·50	5·60	6·28	6·24
Wellington	3·88	4·34	5·37	5·39
Christchurch	3·48	4·24	5·66	5·85
Dunedin	4·23	4·98	6·50	6·74
Whangarei	4·42	5·50	7·00	7·00
Hamilton	4·88	6·00	7·50	7·67
Rotorua	5·00	6·14	8·50	8·54
Waihi	5·00	6·33	7·00	6·67
Gisborne	3·38	4·08	4·69	4·88
Napier	4·08	4·38	5·00	5·08
Dannevirke	4·21	6·19	6·92	6·40
New Plymouth	4·58	5·67	6·00	6·13
Wanganui	4·19	6·02	7·30	7·50
Taihape	4·50	6·00	6·16	6·67
Palmerston N.	4·19	6·07	6·12	6·36
Masterton	4·73	5·30	5·96	5·92
Blenheim	4·75	4·85	7·00	7·50
Nelson	4·20	4·34	6·60	7·04
Greymouth	5·67	6·42	8·04	8·04
Ashburton	3·83	5·00	6·00	6·63
Timaru	3·65	4·37	6·33	6·61
Oamaru	4·54	5·88	6·50	6·81
Alexandra	5·13	5·71	7·33	8·00
Gore	5·33	6·46	7·50	7·57
Invercargill	4·40	6·00	7·50	7·72

MUTTON (CHOPS), PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
	d.	d.	d.	d.
Auckland	7·98	8·20	9·01	9·17
Wellington	6·61	7·12	8·08	8·19
Christchurch	5·46	6·65	8·37	8·75
Dunedin	5·36	6·44	8·02	8·36
Whangarei	6·42	7·75	7·00	10·00
Hamilton	6·88	8·00	8·00	8·67
Rotorua	6·33	8·17	10·00	10·13
Waihi	7·00	8·33	9·00	8·67
Gisborne	5·63	8·17	9·00	9·00
Napier	6·33	7·04	8·04	8·17
Dannevirke	6·38	8·13	8·92	8·88
New Plymouth	8·00	8·17	9·00	9·25
Wanganui	6·29	7·88	9·00	9·17
Taihape	6·00	6·08	9·66	9·17
Palmerston N.	5·60	8·27	9·00	9·00
Masterton	6·21	7·00	8·50	8·50
Blenheim	6·00	6·13	8·00	8·33
Nelson	6·00	6·29	8·50	9·00
Greymouth	7·25	8·25	9·04	9·92
Ashburton	6·09	8·00	9·00	9·25
Timaru	6·25	6·92	8·07	8·11
Oamaru	6·19	7·00	8·00	8·25
Alexandra	6·00	6·50	8·00	8·25
Gore	6·94	8·00	9·00	9·17
Invercargill	6·23	7·89	9·00	9·17

PORK (LEG), PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	7·75	8·33	10·68	12·53
Wellington	8·29	8·50	10·70	11·87
Christchurch	7·58	8·84	11·68	12·19
Dunedin	8·25	9·18	11·71	12·97
Whangarei	7·17	8·50	9·83	10·67
Hamilton	7·17	7·38	10·17	12·58
Rotorua	5·79	7·89	9·38	10·18
Waihi	7·00	8·33	10·25	11·00
Gisborne	8·00	9·00	9·42	10·67
Napier	8·67	9·50	11·00	11·88
Dannevirke	6·83	7·79	9·54	10·88
New Plymouth	7·58	8·41	10·00	11·58
Wanganui	8·29	8·77	9·78	12·50
Taihape	8·00	8·00	9·50	11·00
Palmerston N.	6·10	8·17	9·62	10·75
Masterton	7·44	8·51	10·12	11·29
Blenheim	7·00	7·33	9·42	10·96
Nelson	7·49	7·67	9·54	10·46
Greymouth	8·00	8·63	9·54	10·17
Ashburton	7·81	8·25	10·75	11·25
Timaru	7·98	8·78	10·56	10·86
Oamaru	7·54	8·79	11·08	12·13
Alexandra	7·00	7·00	..	..
Gore	8·00	8·45	10·44	11·39
Invercargill	8·00	8·08	10·00	11·78

PORK (LOIN), PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	8·75	8·89	11·22	12·75
Wellington	8·56	8·82	11·10	12·50
Christchurch	7·67	9·05	12·12	12·82
Dunedin	8·44	9·36	11·95	13·12
Whangarei	7·17	9·00	10·83	11·46
Hamilton	7·17	7·38	10·25	13·08
Rotorua	7·13	7·89	9·58	10·48
Waihi	7·00	8·33	10·25	11·00
Gisborne	8·00	9·00	9·42	10·67
Napier	8·33	9·54	11·00	11·88
Dannevirke	6·58	7·79	9·54	10·88
New Plymouth	8·00	8·41	10·00	11·58
Wanganui	8·29	8·77	9·78	12·50
Taihape	8·00	8·00	9·50	11·00
Palmerston N.	7·72	8·81	9·67	11·83
Masterton	6·77	8·17	9·62	10·75
Blenheim	7·00	7·38	9·42	10·94
Nelson	7·28	7·33	9·54	10·46
Greymouth	8·00	8·63	9·54	10·17
Ashburton	8·00	8·25	10·75	11·33
Timaru	8·00	8·78	10·50	10·86
Oamaru	7·54	8·79	11·08	12·13
Alexandra	7·00	7·00	..	..
Gore	8·00	8·45	10·44	11·11
Invercargill	8·00	8·47	10·00	12·00

Average Retail Prices—continued

PORK (BELLY), PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
	d.	d.	d.	
Auckland	8·75	9·00	11·20	12·75
Wellington	8·56	8·83	10·92	11·83
Christchurch	8·19	8·99	12·13	13·03
Dunedin	8·23	9·42	11·92	13·10
Whangarei	7·17	9·00	10·75	11·46
Hamilton	7·17	7·25	9·25	11·33
Rotorua	7·46	7·89	9·38	10·48
Waihi	7·00	8·33	10·25	11·00
Gisborne	7·50	9·00	9·42	10·67
Napier	8·00	9·00	11·00	11·88
Dannevirke	6·88	7·79	9·54	10·67
New Plymouth	8·00	8·41	10·00	11·58
Wanganui	8·29	8·77	9·78	12·50
Taihape	8·00	8·00	9·50	11·00
Palmerston N.	7·74	8·86	9·92	11·83
Masterton	7·27	8·17	9·62	10·75
Blenheim	7·00	7·38	9·42	10·94
Nelson	7·35	7·67	9·54	10·46
Greymouth	7·27	8·63	9·54	10·17
Ashburton	7·81	8·25	10·92	11·33
Timaru	7·69	8·61	9·94	10·53
Oamaru	6·83	8·79	11·08	12·13
Alexandra	7·08	7·00	..	..
Gore	8·00	8·42	10·44	11·11
Invercargill	7·21	8·64	9·33	10·51

PORK (CHOPS), PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	9·75	10·00	11·89	14·28
Wellington	9·56	9·75	11·50	12·94
Christchurch	8·40	9·89	12·53	13·10
Dunedin	8·75	9·67	12·55	13·75
Whangarei	7·17	10·50	11·41	12·42
Hamilton	8·17	8·50	11·42	14·58
Rotorua	7·61	8·33	9·96	10·88
Waihi	7·50	8·79	11·25	12·33
Gisborne	8·50	10·00	10·42	11·58
Napier	8·67	9·54	12·00	12·63
Dannevirke	7·29	8·00	10·33	11·42
New Plymouth	8·00	8·41	10·04	11·71
Wanganui	8·29	9·25	10·06	12·61
Taihape	8·00	8·00	9·92	11·75
Palmerston N.	8·00	9·45	10·69	12·42
Masterton	7·44	8·51	10·12	11·29
Blenheim	7·50	7·92	10·29	11·81
Nelson	8·00	8·21	9·54	10·58
Greymouth	8·63	9·00	10·38	11·17
Ashburton	8·19	9·00	11·25	12·25
Timaru	8·00	8·89	10·53	10·83
Oamaru	8·08	9·04	11·08	12·21
Alexandra	7·17	7·00	..	..
Gore	8·77	9·31	11·89	12·69
Invercargill	8·08	9·08	11·94	13·64

TRIPE, PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	7·17	7·39	7·69	7·75
Wellington	5·61	5·73	6·19	6·00
Christchurch	6·08	6·28	7·18	7·44
Dunedin	6·58	7·17	7·93	8·42
Whangarei	6·00	7·00	8·00	8·38
Hamilton	6·63	7·00	7·08	7·42
Rotorua	6·00	7·11	8·00	8·13
Waihi	6·00	6·29	7·25	8·00
Gisborne	6·00	7·79	7·42	8·00
Napier	6·00	6·46	7·13	7·17
Dannevirke	6·00	6·00	6·21	6·50
New Plymouth	6·00	6·00	7·17	8·00
Wanganui	6·00	6·13	6·49	7·28
Taihape	6·00	6·50	6·75	6·88
Palmerston N.	5·76	6·36	7·00	7·00
Masterton	5·75	6·08	6·00	6·67
Blenheim	6·50	6·50	7·71	8·54
Nelson	6·00	6·08	6·75	7·38
Greymouth	6·27	6·58	7·42	8·13
Ashburton	7·00	7·00	7·92	8·25
Timaru	6·50	8·00	8·00	8·00
Oamaru	6·00	7·25	8·13	8·54
Alexandra	6·92	6·33	..	..
Gore	6·79	8·06	8·11	8·92
Invercargill	6·38	7·54	8·11	9·00

SAUSAGES (BEEF), PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
				d.
Auckland	6·00	6·00	6·11	6·89
Wellington	4·86	4·98	5·35	5·79
Christchurch	3·96	4·19	5·17	5·74
Dunedin	4·13	4·38	4·67	5·02
Whangarei	5·25	6·50	6·00	6·38
Hamilton	5·25	6·00	6·25	7·17
Rotorua	4·50	6·00	6·00	6·75
Waihi	5·42	7·33	8·04	8·21
Gisborne	5·00	5·97	6·42	6·75
Napier	5·67	6·00	6·08	6·17
Dannevirke	5·00	6·00	6·42	6·58
New Plymouth	5·00	5·21	5·92	6·00
Wanganui	5·25	6·00	6·55	7·17
Taihape	6·00	6·00	7·33	6·71
Palmerston N.	4·43	6·00	6·00	6·00
Masterton	6·92	5·59	6·00	6·25
Blenheim	4·00	4·17	6·00	6·25
Nelson	5·39	5·50	6·37	7·00
Greymouth	6·13	6·04	6·73	7·28
Ashburton	5·27	6·25	6·00	6·25
Timaru	4·75	5·61	6·00	6·00
Oamaru	6·00	6·00	6·25	6·00
Alexandra	6·00	6·00	6·45	7·00
Gore	6·00	6·00	6·64	7·33
Invercargill	6·00	7·70	6·83	7·33

SAUSAGES (PORK), PER 1 LB.

Towns.	1914.	1916.	1918.	1919.
Auckland	7·08	7·00	7·22	8·50
Wellington	7·17	7·70	7·90	8·08
Christchurch	6·83	6·60	8·27	8·53
Dunedin	5·67	5·60	6·38	6·84
Whangarei	7·17	8·00	8·00	8·38
Hamilton	7·25	8·00	8·00	9·42
Rotorua	7·61	8·17	9·00	9·25
Waihi	7·00	8·54	9·75	10·67
Gisborne	7·38	8·13	8·00	8·00
Napier	9·33	8·38	8·00	8·17
Dannevirke	8·00	7·63	8·00	7·00
New Plymouth	8·00	8·29	8·67	9·08
Wanganui	8·29	8·25	9·00	9·67
Taihape	9·00	9·42	9·16	10·00
Palmerston N.	6·06	7·39	8·31	8·89
Masterton	6·83	7·17	8·00	8·04
Blenheim	6·00	6·17	8·00	8·17
Nelson	6·67	6·54	8·17	8·58
Greymouth	8·02	8·08	8·83	9·00
Ashburton	6·79	7·25	8·00	8·75
Timaru	6·25	7·90	8·00	8·00
Oamaru	7·88	9·42	12·00	11·67
Alexandra	6·58	7·00	7·00	..
Gore	8·02	8·25	8·38	9·13
Invercargill	7·06	6·44	8·75	9·25

Weekly House-rent for Four Rooms.

Towns.	1914.	1916.	1918.	1919.	Towns.	1914.	1916.	1918.	1919.
	d.	d.	d.	d.		d.	d.	d.	d.
Auckland	156·00	134·77	135·22	138·63	Taihape	168·00	182·25	197·22	170·07
Wellington	166·43	169·04	176·65	173·58	Palmerston N.	128·00	138·82	134·29	135·18
Christchurch	133·48	126·89	132·40	138·27	Masterton	110·00	114·13	121·03	134·90
Dunedin	106·67	128·14	132·47	135·12	Blenheim	96·00	99·32	108·57	106·16
Whangarei	126·00	130·69	136·72	143·82	Nelson	117·00	125·08	135·23	141·41
Hamilton	132·00	137·16	137·52	166·08	Greymouth	102·50	106·79	95·53	96·34
Rotorua	150·00	149·50	145·40	153·11	Ashburton	111·00	112·64	113·84	117·58
Waihi	84·00	91·50	80·28	81·21	Timaru	152·00	119·40	118·00	122·89
Gisborne	159·00	157·34	158·00	162·81	Oamaru	101·00	103·66	94·70	114·51
Napier	122·00	135·77	145·36	143·45	Alexandra	90·00	90·75	95·25	96·00
Dannevirke	96·00	94·42	94·42	105·68	Gore	102·00	99·46	106·74	109·89
New Plymouth	132·00	130·88	131·48	130·37	Invercargill	90·00	107·15	113·51	119·41
Wanganui	120·00	125·20	143·10	141·89					

Weekly House-rent for Five Rooms.

Towns.	1914.	1916.	1918.	1919.	Towns.	1914.	1916.	1918.	1919.
	d.	d.	d.	d.		d.	d.	d.	d.
Auckland	180·00	180·30	182·03	194·48	Taihape	204·00	220·67	207·97	204·87
Wellington	202·06	208·13	219·09	228·25	Palmerston N.	152·00	172·79	179·74	177·35
Christchurch	182·06	174·82	182·17	184·05	Masterton	131·00	142·75	145·07	163·18
Dunedin	159·66	166·90	171·06	173·55	Blenheim	126·00	132·42	139·87	145·61
Whangarei	153·00	157·26	171·94	173·76	Nelson	160·00	172·85	180·57	182·01
Hamilton	168·00	168·75	235·69	211·03	Greymouth	120·00	126·29	121·29	117·20
Rotorua	186·00	184·06	181·57	182·32	Ashburton	141·00	149·74	156·02	151·11
Waihi	105·00	117·50	98·99	111·32	Timaru	177·00	173·14	160·30	165·94
Gisborne	192·00	191·49	199·03	203·94	Oamaru	159·00	148·78	149·04	145·68
Napier	186·00	180·31	186·01	188·55	Alexandra	126·00	118·50	120·00	120·00
Dannevirke	120·00	121·14	116·37	125·15	Gore	138·00	136·33	143·78	143·87
New Plymouth	177·00	174·46	186·65	181·78	Invercargill	138·00	139·59	151·16	151·88
Wanganui	168·00	168·86	175·79	186·97					

Weekly House-rent for Six Rooms.

Towns.	1914.	1916.	1918.	1919.	Towns.	1914.	1916.	1918.	1919.
	d.	d.	d.	d.		d.	d.	d.	d.
Auckland	210·00	209·99	213·37	221·93	Taihape	240·00	261·00	247·50	274·34
Wellington	249·73	260·95	284·78	287·68	Palmerston N.	160·00	205·19	214·50	215·79
Christchurch	199·86	203·82	215·99	229·24	Masterton	166·00	180·30	188·19	207·92
Dunedin	222·84	213·77	217·83	218·33	Blenheim	171·00	163·91	179·19	178·90
Whangarei	180·00	182·10	173·25	193·52	Nelson	170·00	179·49	187·35	188·99
Hamilton	216·00	216·81	228·46	255·73	Greymouth	149·00	159·08	154·07	160·84
Rotorua	224·00	222·84	215·50	192·50	Ashburton	150·00	162·30	185·70	187·44
Waihi	144·00	150·00	121·15	126·65	Timaru	220·00	224·77	210·92	199·75
Gisborne	228·00	225·02	230·26	231·76	Oamaru	170·00	204·59	179·19	173·73
Napier	199·00	207·13	224·67	231·67	Alexandra	138·00	141·00	150·00	150·00
Dannevirke	144·00	163·61	166·98	175·12	Gore	164·00	165·05	172·92	179·89
New Plymouth	180·00	217·03	221·86	229·67	Invercargill	149·00	168·21	180·31	185·33
Wanganui	192·00	205·06	223·30	223·39					

Weekly House-rent for Seven Rooms.

Towns.	1914.	1916.	1918.	1919.	Towns.	1914.	1916.	1918.	1919.
	d.	d.	d.	d.		d.	d.	d.	d.
Auckland	300·00	251·42	266·79	264·32	Taihape	300·00	300·00	255·00	285·00
Wellington	320·79	339·52	358·60	363·85	Palmerston N.	210·00	248·18	244·77	269·25
Christchurch	233·69	238·86	268·17	293·71	Masterton	204·00	211·50	224·50	260·40
Dunedin	306·00	259·60	259·54	257·13	Blenheim	195·00	184·67	184·49	231·43
Whangarei	228·00	227·25	226·50	215·84	Nelson	216·00	197·25	199·09	210·50
Hamilton	252·00	267·00	271·31	309·43	Greymouth	185·00	196·93	196·00	197·42
Rotorua	261·00	255·00	210·00	234·00	Ashburton	174·00	231·65	240·00	236·42
Waihi	174·00	172·50	163·50	152·25	Timaru	245·00	256·07	194·92	227·10
Gisborne	254·50	252·21	252·30	254·87	Oamaru	240·00	261·00	234·00	243·00
Napier	300·00	303·28	289·82	291·63	Alexandra	120·00	147·00	168·00	168·00
Dannevirke	168·00	196·00	214·90	216·67	Gore	210·00	201·28	224·50	223·71
New Plymouth	228·00	247·20	264·63	246·57	Invercargill	190·00	204·08	192·88	216·52
Wanganui	240·00	242·25	274·46	297·26					

CHAPTER III.—INDEX NUMBERS, FOUR CHIEF CENTRES, 1891–1919.

In this chapter are given the index numbers of retail prices, which have been compiled from prices collected in the four chief centres, over the period 1891–1919. The annual average prices on which these index numbers are based have been quoted in the preceding chapter. The procedure followed in this section is to represent each of the three food groups separately, then to give a short discussion and analysis of these, and finally to combine the three groups so as to give an indication of the changes in food-prices.

The two remaining groups covered by the general investigation—housing, and fuel and light—are again discussed separately.

War movements in prices are accorded special treatment in Chapters V and VI.

GROUP I.—GROCERIES.

Index Numbers for Auckland, Wellington, Christchurch, Dunedin, and for Average of Four Centres, 1891–1919.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Year.		Auckland.	Wellington.	Christchurch.	Dunedin.	Average of Four Centres.
1891	.. ..	1002	1030	*	1036	*
1892	.. ..	957	999	*	1022	*
1893	.. ..	1010	1044	*	1009	*
1894	.. ..	968	998	*	967	*
1895	.. ..	924	984	*	931	*
1896	.. ..	949	962	*	963	*
1897	.. ..	981	973	*	992	*
1898	.. ..	1009	1073	*	1054	*
1899	.. ..	913	941	929	893	919
1900	.. ..	946	961	968	916	948
1901	.. ..	969	967	982	967	971
1902	.. ..	1003	1057	982	1022	1016
1903	.. ..	981	1006	944	999	983
1904	.. ..	957	999	953	938	962
1905	.. ..	1088	1059	1035	1066	1062
1906	.. ..	1085	1100	1027	1078	1072
1907	.. ..	1060	1016	979	1010	1016
1908	.. ..	1024	1017	971	985	999
1909	.. ..	1007	985	927	972	973
1910	.. ..	1036	1017	964	1039	1014
1911	.. ..	981	989	934	968	968
1912	.. ..	1050	1013	986	1039	1022
1913	.. ..	1064	1029	964	1036	1023
1914	.. ..	1035	1082	1046	1056	1055
1915	.. ..	1172	1228	1188	1219	1202
1916	.. ..	1196	1269	1197	1192	1214
1917	.. ..	1268	1395	1279	1248	1298
1918	.. ..	1461	1579	1417	1503	1490
1919	.. ..	1539	1644	1530	1560	1567

* No data available for Christchurch for these years.

Movement of Retail Prices of Groceries, 1891–1919.

Auckland - shown thus, ___ AK
Wellington - „ --- WN
Christchurch - „ ···· CH
Dunedin - „ ·-·- DN
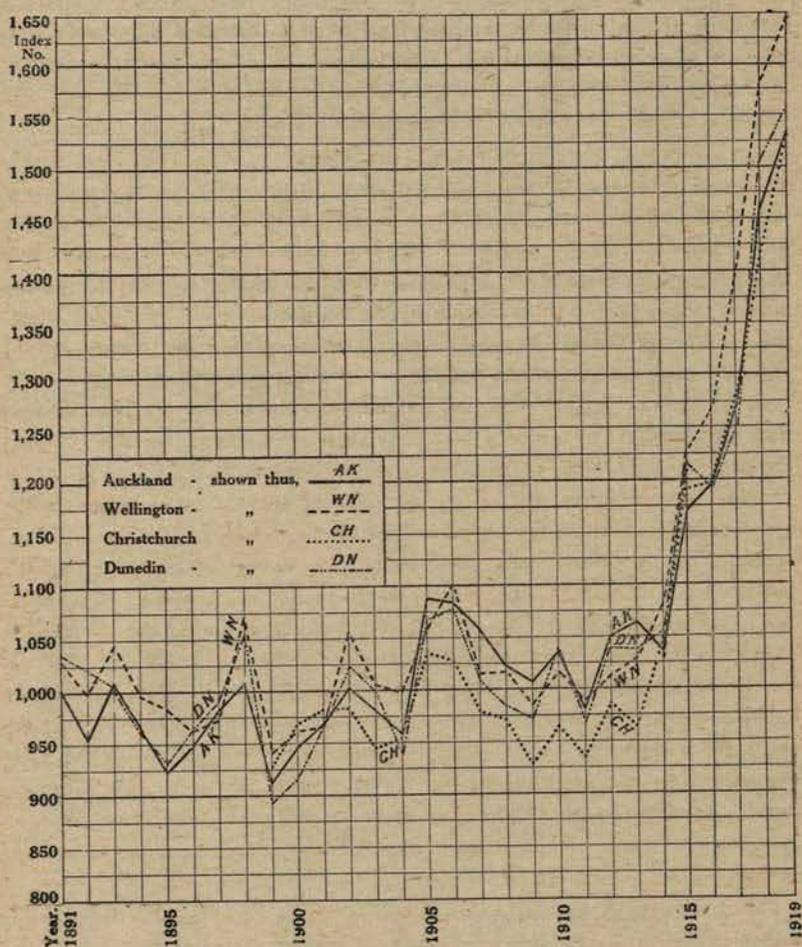
Explanation of Diagram.—The base of each small square represents a year's interval, and the vertical height differences of 25 in the index numbers.

This group, " Groceries, " is the largest and most varied group of any that have been treated in this inquiry, comprising thirty-one items, which in some instances are subject to different influences. Indeed, the fact of being retailed from the same kind of shop is in many cases the only point of connection in some of these groups of articles.

From the table the movement of prices is so confused as to defy any attempt to derive a general trend ; fluctuations are so heavy and apparently so irregular that there seems no general law governing them. Even in the graphical representation there is considerable confusion, with no definite tendency. Although there were peaks of high prices in 1893, 1898, 1902, 1906, 1910, and 1914, it is hardly possible to say whether or not prices were, up to the latter year, increasing on the average. Excluding consideration of the war period, the highest peaks are those in 1898, 1906, and 1914, and the recurrence of intervals of eight years is very noticeable. Intermediate peaks come in 1893, 1902, 1910, again at similar regular intervals, and intervening with the higher peaks. It would seem, therefore, that under normal conditions the prices in this group tend to run in four-yearly cycles, every second cycle being more pronounced. As pointed out below, these periodic fluctuations are mainly the result of the movements of prices of the five " home products "—bread, flour, oatmeal, potatoes, and onions.

The level of prices was on the up grade in 1912–13 in accordance with the regular cycle, when war prices accelerated the movement in 1914. In the normal sequence of the cycle prices could then have been expected to fall, but the effect of war conditions has been to inhibit this tendency, and, with one small exception in the case of Dunedin, every year during the war period shows a higher figure than the preceding year.

It is noticeable that the index numbers for the various cities have risen and fallen together, except in a few cases—as, for instance, in 1896, when the index numbers in Auckland and Dunedin rose fairly sharply after a fall extending over two years ; while that for Wellington, which had not fallen so low in the earlier years, continued to drop. In 1914, also, the index number in Auckland was lower than in 1913 ; the other three centres, however, showed considerable upward movement.

The averages of the index numbers for groceries in Auckland, Wellington, and Dunedin are found to be 1056, 1085, and 1059 respectively for the twenty-nine years dealt with. The averages for the twenty-one years 1899–1919 are : Auckland, 1087 ; Wellington, 1114 ; Christchurch, 1059 ; and Dunedin, 1083.

ANALYSIS OF GROUP.

The outstanding feature of the table showing the index numbers for groceries is, as previously stated, the number and extent of the fluctuations disclosed. From a scrutiny of the figures as published it is hardly possible

to state any regular motion or trend, and it is evident that there are conflicting tendencies at work.

The commodities included under the heading "Groceries" may be roughly divided into three groups. The first group consists of articles mainly imported, of a general nature, such as rice, tea, fruits (dried and tinned), tinned fish, soap, starch, blue, tobacco, the nature and production of which does not greatly vary from year to year. It is reasonable to expect that the prices of these articles would remain much more constant than appears from the published table.

The second group consists mainly of articles which are produced in New Zealand, and which are either themselves products of the soil or are mainly composed of such products. These articles are bread, flour, oatmeal, potatoes, and onions; and upon a scrutiny of the data it was at once evident that this group was responsible for the violent fluctuations of the index number for groceries. The distinction in the course of prices of imports and exports, or of imported products and home products, has been noticed before, notably by Dr. J. W. McIlraith, in his "Course of Prices in New Zealand," and by the Report of the Royal Commission on the Cost of Living in New Zealand, 1912. The distinction lies in the fact that New Zealand's exports, and home products generally, are primary products, while her imports are, in the main, secondary products.

The third group contains but one item, sugar. Most of the sugar used in New Zealand is refined in the Dominion, but supplies of raw material must be brought from overseas, so that it is not strictly correct to give it the designation of a product of New Zealand. Its importance in the groceries group is very great, since its heavy annual consumption has caused it to be weighted heavily. The movements in the price of sugar have therefore been of considerable importance, particularly as it is subject to special conditions. Sugar has attracted public attention at various times, and alterations of tariff have had great influence on its course of prices. For these reasons it has been deemed advisable to give a separate discussion to the retail price of sugar in New Zealand.

For the purpose of further examination, therefore, the groceries group has been divided into three separate groups, as follows :—

> Group 1A. — Groceries, excluding bread, flour, oatmeal, potatoes, onions, and sugar. This group consists of the following items : Rice, sago, tapioca, tea, coffee, cocoa, salt, pepper, jam, honey, golden syrup, treacle, raisins, currants ; tinned apricots, peaches, and pears ; dried prunes and apricots ; tinned salmon and herrings ; starch, blue, soap, and tobacco.
>
> Group 1B. — Five home products : Bread, flour, oatmeal, potatoes, and onions.
>
> Group 1c.—Sugar.

Group 1a.—Groceries : General Articles.

Index Numbers of the Retail Prices for Groceries, excluding Bread, Flour, Oatmeal, Potatoes, Onions, and Sugar, in the Four Chief Centres of New Zealand, 1891 to 1919.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13=1000.)

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.	Average of Four Centres.
1891	1038	1089	..	1176	..
1892	1015	1073	..	1139	..
1893	1013	1059	..	1109	..
1894	1009	1034	..	1086	..
1895	1002	1022	..	1052	..
1896	1001	1026	..	1043	..
1897	1008	1038	..	1046	..
1898	1013	1070	..	1039	..
1899	996	1056	1024	1031	1027
1900	991	1048	1016	1044	1025
1901	985	983	1020	1025	1003
1902	1009	1023	1015	1036	1021
1903	994	1023	1018	1021	1014
1904	993	1025	1015	1005	1009
1905	988	1018	968	1014	997
1906	1011	1038	993	1045	1022
1907	1035	994	972	1054	1014
1908	1030	990	945	1036	1000
1909	1018	971	936	1021	986
1910	1002	970	940	1049	990
1911	991	980	952	1045	992
1912	1013	957	964	1073	1002
1913	1014	1046	967	1089	1029
1914	994	1097	1047	1114	1063
1915	989	1066	1115	1132	1078
1916	1035	1121	1115	1132	1101
1917	1171	1227	1203	1219	1205
1918	1367	1493	1388	1459	1427
1919	1488	1624	1541	1590	1561

Movement of Retail Prices.—Group 1a : General Groceries.
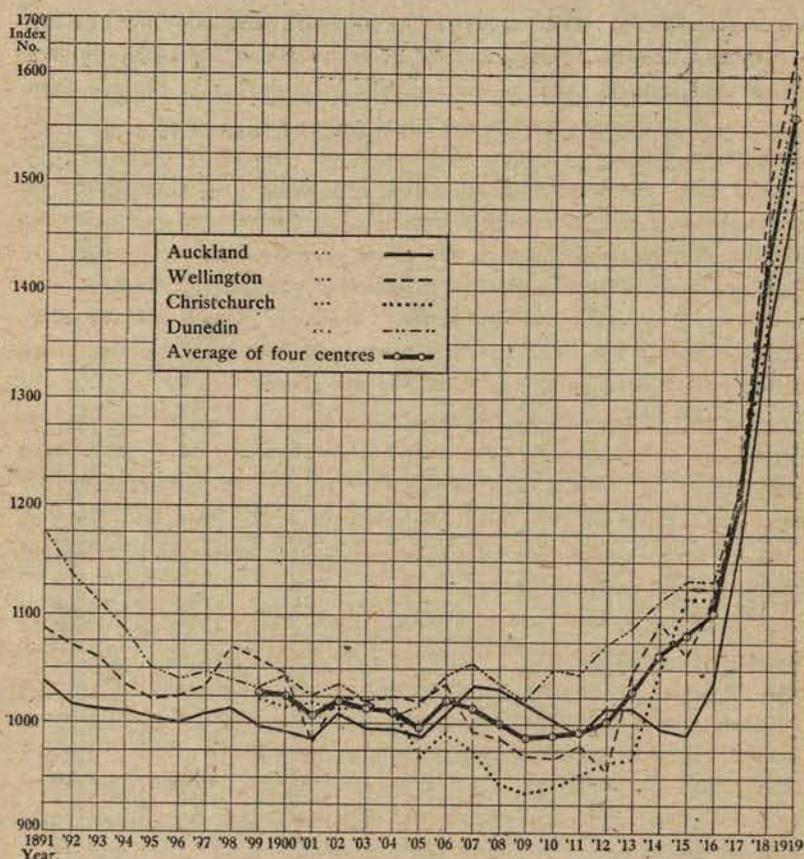
A consideration of the table and diagram above suggests at once that the retail prices for these general articles of groceries are, on the whole, much more stable than were the prices of the complete group dealt with above. There are some variations between the four cities, especially in the years immediately preceding and following on the outbreak of the war, partly explainable, no doubt, by the *vis inertia* of retail prices. One of the main difficulties in an investigation of this nature arises from the fact that a price is a *particular* instance of value, and therefore that prices, and retail prices especially, are local and temporary, and relative to particular qualities and types of commodities. Moreover, it has been proved in similar investigations that a wider range of prices is usual in retail than in wholesale lines, and that retail prices do not move with the same freedom as wholesale prices.

The general tendency as seen in the average index number for the four cities seems plainly marked. Excluding consideration of the war period, retail prices of general groceries seem on the whole to have dropped gradually and consistently, especially after the tariff revision of 1907. Since 1909, however, there has been a tendency towards a rise, a tendency which has been sharply accentuated during the war period.

The price-level in the different centres varies to some extent, though not greatly when it is considered that retail, not wholesale, prices are under review. The divergence is greatest in later years, where the fluctuations are also relatively greater. Dunedin prices seem to keep almost consistently above those of the other centres, though Wellington has taken the lead in the last three years. It will be obvious from the foregoing diagram that, as a general rule, the prices in the four centres rise or fall together, though not to the same extent.

GROUP 1B.—FIVE HOME PRODUCTS.

The course of prices of the five locally produced food commodities is different, as may be seen from the following table and chart :—

Index Numbers of Retail Prices of Five Home Products (Bread, Flour, Oatmeal, Potatoes, and Onions) in the Four Chief Centres of New Zealand from 1891 to 1919.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13=1000.)

Year.			Auckland.	Wellington.	Christchurch.	Dunedin.	Average of Four Centres.
1891	..	..	854	841	..	736	..
1892	..	..	785	793	..	743	..
1893	..	..	919	927	..	759	..
1894	..	..	833	855	..	696	..
1895	..	..	775	904	..	680	..
1896	..	..	833	827	..	791	..
1897	..	..	918	833	..	864	..
1898	..	..	981	1057	..	1017	..
1899	..	..	765	752	771	634	731
1900	..	..	827	779	805	674	771
1901	..	..	893	879	839	782	848
1902	..	..	973	1063	908	944	972
1903	..	..	932	947	811	906	899
1904	..	..	873	922	805	781	845
1905	..	..	1158	1034	1050	1044	1072
1906	..	..	1154	1133	1014	1080	1095
1907	..	..	1102	1043	947	943	1009
1908	..	..	1078	1072	999	969	1029
1909	..	..	1041	1026	906	951	981
1910	..	..	1106	1079	977	1051	1053
1911	..	..	984	1006	876	882	937
1912	..	..	1092	1067	964	987	1027
1913	..	..	1100	1026	923	957	1001
1914	..	..	1114	1173	1033	1074	1098
1915	..	..	1364	1408	1293	1356	1355
1916	..	..	1367	1416	1252	1220	1314
1917	..	..	1430	1588	1356	1249	1406
1918	..	..	1634	1733	1463	1567	1599
1919	..	..	1665	1727	1549	1551	1623
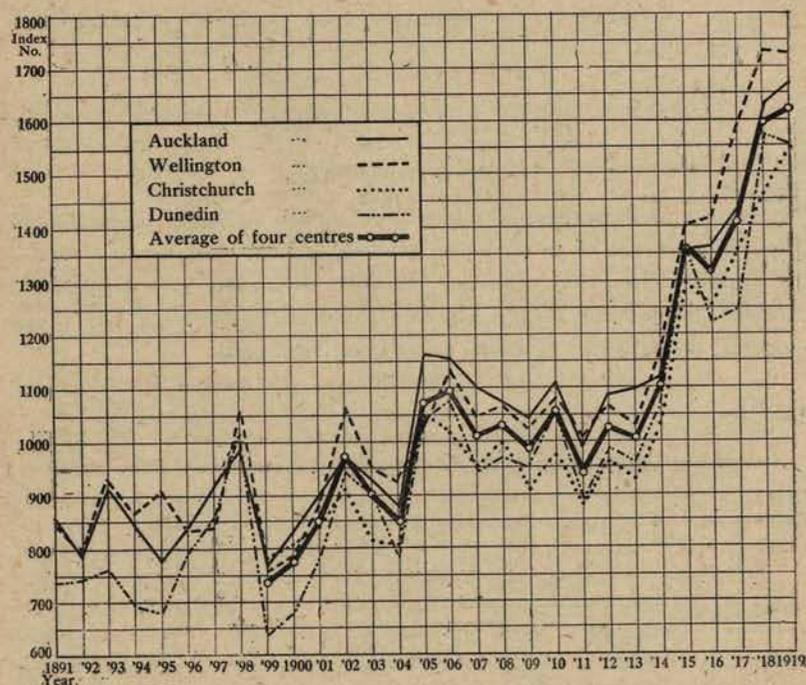
It is at once obvious that this group of commodities is largely responsible for the fluctuations in the index number previously given for the grocery group, and it is also evident that, in many ways, the course of prices of this group differs from the prices of general groceries. The fluctuations as revealed by the table and chart are wide and continuous, showing, however, two distinct tendencies.

It is very noticeable that prior to the war the four centres moved together not only as to direction, but largely as to the extent of the change in price. Allowing for the different levels of prices in the four towns, it will be seen that in practically every instance the rise or fall was similar, so that the curves ran almost parallel. This similarity of movement has, however, been considerably disturbed by the abnormal circumstances prevailing during the war period. The pre-war figures, however, point to the fact that the market for these five articles is more general and specialized than that for general grocery lines. There are not such great local variations of price, a fact which points to the existence of one general market for New Zealand instead of local markets.

It is also noticeable that Christchurch, which is the centre of wheat-production in New Zealand, generally shows the lowest level of prices.

QUINQUENNIAL AVERAGES.

The great fluctuations of this group show two conflicting tendencies—an upward movement of prices, which, however, is often obscured by a cyclical movement of temporary variation. In order to separate these tendencies a moving quinquennial average has been given, and a chart has been drawn showing the variations of annual prices from this average.

Annual and Quinquennial moving Average Retail Prices.—Five Home Products.
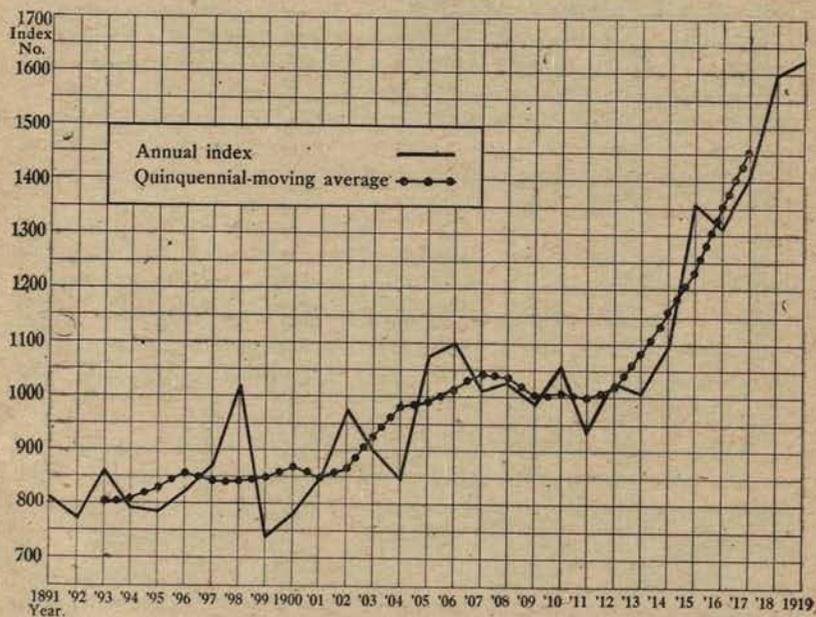
Annual and Quinquennial Index Numbers of Retail Prices of Five Home Products (Bread, Flour, Oatmeal, Potatoes, and Onions) in the Four Chief Centres of New Zealand, 1891 to 1919.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Year.			Annual Index.	Quinquennial Moving Average.	Deviations.	
					Plus.	Minus.
1891 ..	..	..	810	..	..	..
1892 ..	..	..	774	..	..	..
1893 ..	..	..	868	807	61	..
1894 ..	..	..	795	808	..	13
1895 ..	..	..	786	828	..	42
1896 ..	..	..	817	858	..	41
1897 ..	..	..	872	845	27	..
1898 ..	..	..	1018	842	176	..
1899 ..	..	..	731	848	..	117
1900 ..	..	..	771	868	..	97
1901 ..	..	..	848	844	4	..
1902 ..	..	..	972	867	105	..
1903 ..	..	..	899	927	..	28
1904 ..	..	..	845	977	..	132
1905 ..	..	..	1072	984	88	..
1906 ..	..	..	1095	1010	85	..
1907 ..	..	..	1009	1037	..	48
1908 ..	..	..	1029	1033	..	4
1909 ..	..	..	981	1002	..	21
1910 ..	..	..	1053	1005	48	..
1911 ..	..	..	937	1000	..	63
1912 ..	..	..	1027	1023	4	..
1913 ..	..	..	1001	1084	..	83
1914 ..	..	..	1098	1159	..	61
1915 ..	..	..	1355	1235	120	..
1916 ..	..	..	1314	1354	..	40
1917 ..	..	..	1406	1459	..	53
1918 ..	..	..	1599	..	..	..
1919 ..	..	..	1623	..	..	..

NOTE.—For the years 1891–98 the average has been compiled from the figures for Auckland, Wellington, and Dunedin only.

Where figures fluctuate as in Group 1B the general trend is not readily observed, and even in the chart illustrating the movement there is a great deal of apparently confused fluctuation, so that further analysis is desirable. Local variations of price were eliminated by taking the average over the four centres ; but there still remain temporary variations which obscure while they do not greatly affect the general tendency of the price-level. In order to eliminate these the device of moving averages has been used, and the diagram above shows the general trend of prices very plainly. Retail prices for Christchurch are missing for the years 1891–98, and the average for the other three centres only has been used to represent the years in question.

The chart shows the general trend unmistakably : the smooth line representing the moving quinquennial average price moves upwards almost continuously, especially since 1901. It is thus evident that the prices of these five foodstuffs have, even prior to the war, tended to rise very considerably.

Annual Deviation from Quinquennial.

Another interesting feature of the same chart is its illustration of the annual deviation from the moving average. The curve of annual prices fluctuates regularly round the curve of quinquennial prices—so regularly indeed as to suggest a cyclical movement. In order to make this cyclical movement more evident, in the following chart the deviations from the average have been plotted about a straight line which represents the quinquennial average.
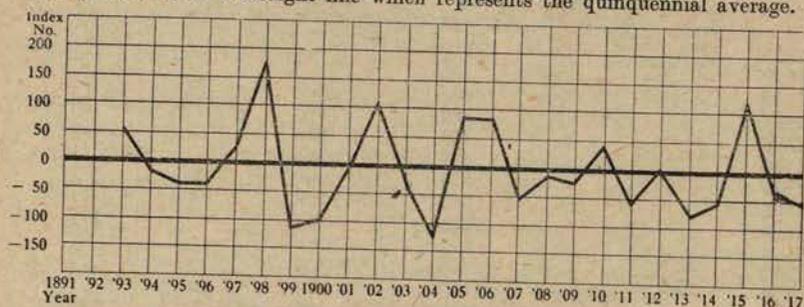
The result, especially in the earlier years, is a regular succession of troughs and crests, though in the later years the symmetry is marred by abnormal conditions. The first break occurs in 1908, when the commercial crisis which was in evidence, first in America and later in England in 1907, affected New Zealand prices. Similarly, the effects of the war have destroyed the regularity of movement in the last period. Roughly, these oscillations above and below the average represent variations in production from period to period, and the regularity with which periods of high and low prices alternate is so striking as to suggest some underlying cause or law, probably connected with production.

The four-yearly cycles of prices of agricultural produce would seem to support the conclusions reached by Professor W. S. Jevons, who has established the existence of cyclical periods of agricultural production, each period covering three to four years, and being largely dependent on weather conditions.

The influence of the Australian market on New Zealand prices is often commented upon, but the course of this inquiry leads to the conclusion that this influence has been exaggerated. There is no doubt of the periodic shortages in the Australian supply; but in the case of most groups of commodities such shortages do not appear to affect to any definite degree New Zealand prices. On the other hand, the existence of a well-marked cycle, which does not coincide with exports to Australia, would seem to suggest that the causes which influence prices are to be found nearer home in conditions affecting production.

Groups 1a and 1b contrasted.

The movements of the prices of the two groups just treated are so essentially different and at the same time are so informative that it is worth while to devote a little space to their study in contrast. In the following table and chart the annual and quinquennial index numbers for both groups are shown together.

Table comparing the Annual and Quinquennial Index Numbers of Retail Prices of the Groups 1a (General Groceries) and 1b (Bread, Flour, Oatmeal, Potatoes, and Onions) averaged over the Four Chief Centres of New Zealand, 1891 to 1919.

Year.	Annual Index Numbers.		Quinquennial Index Numbers.	
	General Groceries.	Bread, Flour, Oatmeal, Potatoes, and Onions.	General Groceries.	Bread, Flour, Oatmeal, Potatoes, and Onions.
1891	1101	810	..	..
1892	1076	774	..	..
1893	1060	868	1061	807
1894	1043	795	1045	808
1895	1025	786	1036	828
1896	1023	817	1033	858
1897	1031	872	1029	845
1898	1041	1018	1029	842
1899	1027	731	1027	848
1900	1025	771	1023	868
1901	1003	848	1018	844
1902	1021	972	1014	867
1903	1014	899	1009	927
1904	1009	845	1013	977
1905	997	1072	1011	984
1906	1022	1095	1008	1010
1907	1014	1009	1004	1037
1908	1000	1029	1002	1033
1909	986	981	996	1002
1910	990	1053	994	1005
1911	992	937	1000	1000
1912	1002	1027	1015	1023
1913	1029	1001	1033	1084
1914	1063	1098	1055	1159
1915	1078	1355	1095	1235
1916	1101	1314	1175	1354
1917	1205	1406	1274	1459
1918	1427	1599	..	..
1919	1561	1623	..	..

Note.—For the years 1891–98 the averages have been compiled from the figures for Auckland, Wellington, and Dunedin only.

Annual and Quinquennial Retail Prices.—Groups 1a and 1b.

General groceries:—	
Annual	... ————
Quinquennial	... –o–o–
Bread, flour, &c.:—	
Annual	... —·—·—
Quinquennial	... ··o··o··

Index No.

1600 1500 1400 1300 1200 1100 1000 900 800 700

1891 '92 '93 '94 '95 '96 '97 '98 '99 1900 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18 1919
Year
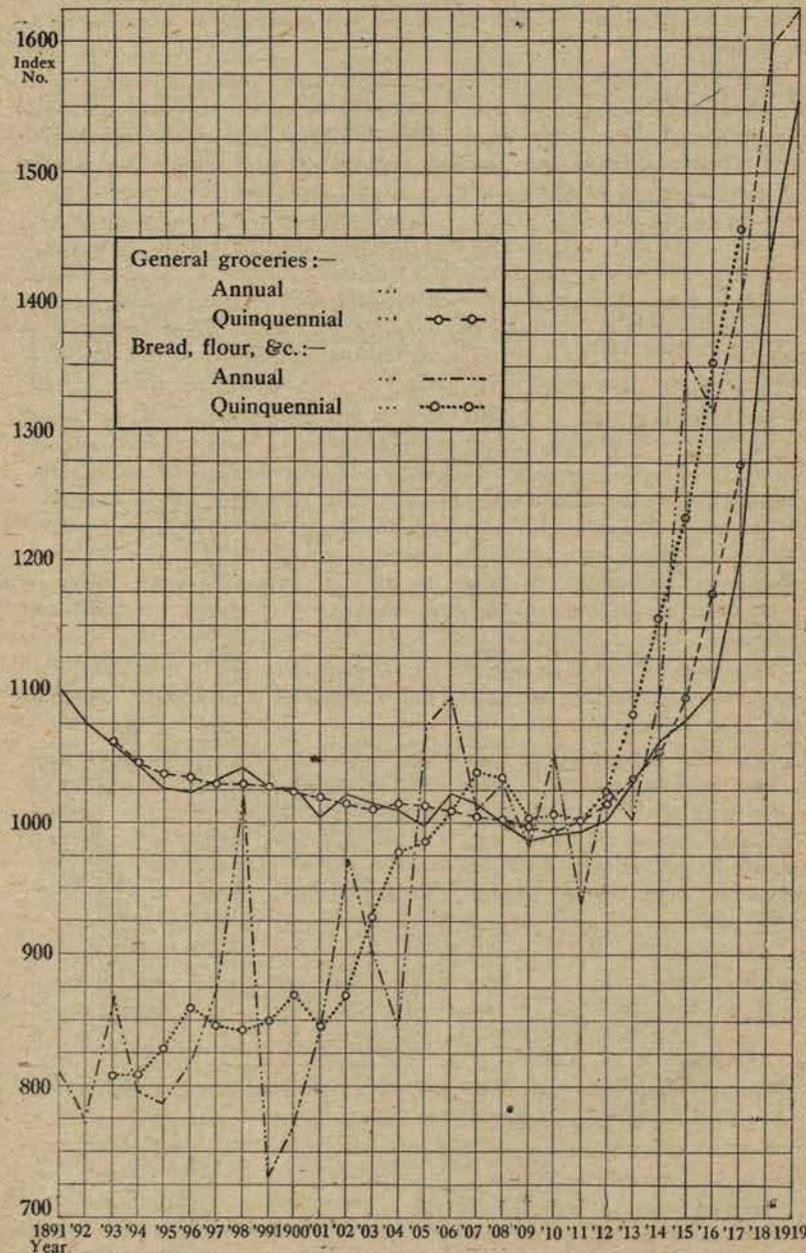
The contrast of the two groups of commodities is very evident from a glance at the diagram in which the annual and quinquennial index numbers are plotted.

Excluding consideration of the increase in prices during the war years, the first noticeable feature is the difference of fluctuation that is observable. The general groceries follow regular lines and the movement is exceedingly small. This is brought out especially by the striking way in which the quinquennial graph and the annual average cling closely together, showing little divergence over any period. On the other hand, the home products, plotted on the same scale, show very great fluctuations indeed, both absolutely and relatively. The graph is a succession of peaks and depressions with a constant upward tendency as revealed by the quinquennial moving average. It is obvious, therefore, that the food products of home origin fluctuate considerably more than do the imported manufactured groceries.

Not only are the fluctuations different, but the general trends of prices of the two sub-groups were, in pre-war years, in opposite directions. These trends are shown by the smoothed lines of quinquennial averages. In the case of general groceries a continuous though gradual fall, due, no doubt, to tariff remissions, is apparent right through the period, except for one small rise in the period 1902–6 and for a very definite rise in the last few years. The divergence between the price-levels in the two sub-groups is due to a radical difference in the articles, imported manufactured goods following a different course of prices from home products, which are mainly raw materials and foodstuffs.

The trend of the price-level of the home products is unmistakable : the moving average shows a rapid and almost continuous rise, with slight recessions after 1896, 1900, and 1907.

In regard to the point here illustrated as to the course of prices for groups 1A and 1B, it is to be noted that while the steady increase in the prices of agricultural products has been a material factor in increasing the cost of living, the increase in prices has been largely due to decreased production, and the Dominion as a whole has obtained no advantage from high export prices such as have been received for meat and dairy-produce.

A word of warning is necessary in regard to the appearance of the chart. It does not follow from the divergence between the curves that prices of imported articles were absolutely higher in 1891 than those of the home products ; but it does mean they were *relatively* higher. The whole appearance of a chart depends on the base selected. In this instance the average of the years 1909–13 is the base, and the two price-levels were equated in that period, the remaining years being worked out proportionately relative to the base. This being the case, the curves must naturally converge in that period, and actually the quinquennial averages must coincide at 1000 in 1911, the central year of the base period.

If the base had been the first period, 1891–95, the curves would have started from the same point and diverged, instead of converging to a point at the central year of the base period as they do now.

GROUP 1c.—SUGAR.

As already stated, it has been deemed advisable to treat the retail prices of sugar separately from those of other commodities, and a table is given below which shows the course of retail sugar-prices in New Zealand.

Index Numbers, showing the Variations in the Retail Prices of Sugar in the Four Chief Centres of New Zealand, 1891–1919.

(Base: Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Year.			Auckland.	Wellington.	Christ-church.	Dunedin.	Average of Four Centres.
1891	..	..	1312	1383	..	1454	..
1892	..	..	1266	1357	..	1448	..
1893	..	..	1260	1332	..	1407	..
1894	..	..	1227	1297	..	1370	..
1895	..	..	1104	1091	..	1270	..
1896	..	..	1117	1143	..	1203	..
1897	..	..	1078	1169	..	1203	..
1898	..	..	1078	1123	..	1203	..
1899	..	..	1078	1123	1086	1203	1122
1900	..	..	1143	1212	1284	1208	1212
1901	..	..	1133	1169	1273	1314	1222
1902	..	..	1075	1143	1091	1203	1128
1903	..	..	1084	1123	1091	1199	1124
1904	..	..	1087	1136	1182	1177	1145
1905	..	..	1201	1260	1197	1284	1235
1906	..	..	1117	1195	1169	1175	1179
1907	..	..	1019	1009	1091	1065	1046
1908	..	..	851	944	974	870	910
1909	..	..	881	913	961	883	910
1910	..	..	946	987	1003	974	978
1911	..	..	941	965	1045	972	981
1912	..	..	1045	1029	1115	1078	1092
1913	..	..	1117	980	1071	1094	1065
1914	..	..	983	1055	1145	1025	1052
1915	..	..	1191	1211	1290	1228	1230
1916	..	..	1208	1310	1304	1294	1279
1917	..	..	1219	1399	1344	1354	1329
1918	..	..	1266	1428	1359	1423	1369
1919	..	..	1314	1470	1444	1497	1431

As in the case of the prices of the five home products, retail prices of sugar show great fluctuations; but these fluctuations are of a rather different nature. Starting from a high level in 1891, prices dropped sharply till 1895, were on the whole stationary for about ten years, except for two peaks about 1901 and 1905, and then fell very considerably and continuously till 1908–9. A rise in prices in the years following 1909 has been accentuated and continued by war conditions.

The tendency for the price-levels in the four centres to coincide is even more evident in the price of sugar than in the prices of the home-products group. Not only do the curves of prices for the four centres run parallel,

but they run so closely parallel as to coincide very often. The explanation is not far to seek. Where a group consists of but one commodity the chances of movements in two centres coinciding are many times as great as in the case of a group comprising several commodities. Auckland, the only centre where sugar-refining is carried out in New Zealand, as would be expected, shows on the whole the lowest level of prices in the four towns.

The general tendency of prices is so marked and so little obscured by temporary fluctuations that it has not been necessary to plot a moving average. Especially since 1905 has the movement been clear and continuous.

In 1907 the duty on sugar was removed, and the removal of this tax of ½d. per pound was one of the causes of the great drop in prices which culminated in 1908–9.

Course of Retail Prices of Sugar in the Four Chief Centres of New Zealand, 1891–1919.
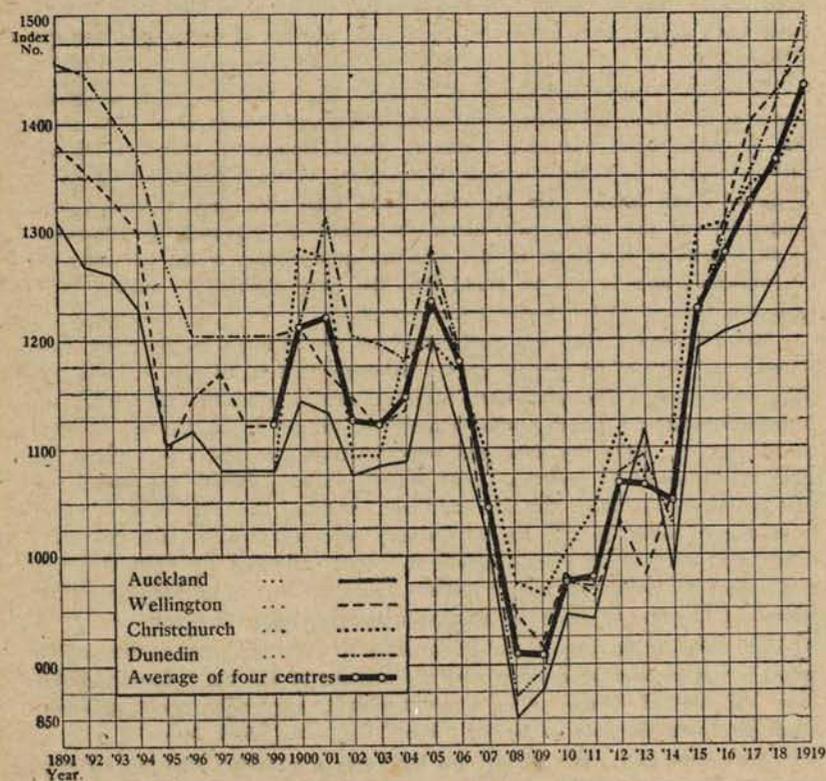
TARIFF CHANGES.

The groceries group differs materially from the other food groups in that it contains many imported items. All the items in the dairy-produce and meat groups are home products; the five items in the groceries subgroup 1 (b) are also home products; but there remain a great number of commodities, comprising the great bulk of the items in the groceries group, which must be brought from overseas.

We have seen that the tendency to rise, shown by the general level of prices since 1895, is counteracted in this group in two ways. It has been demonstrated that raw foodstuffs and materials, typical of New Zealand products, have been increasing in price far more rapidly than imported manufactured products, where the economies of machinery and specialization tend to lower prices. The different conditions governing the extraction of primary products from the soil, and the production of utilities by manufacture, need no comment.

A second factor of particular importance here is that all these commodities which are imported have at one time or another come within the scope of the Customs tariff. In New Zealand the scope of this tariff is very wide, and import duties are levied on a great number of items of all classes of goods.

In earlier times the number of dutiable items was not so great as at present; but there has been a well-defined tariff movement since 1895. On the one hand there has been a steady trend towards a reduction of the duties levied on imported foodstuffs, a tendency which is shown by the table of duties given below. On the other hand there has been extension and subdivision of the tariff, particularly in regard to imported manufactured goods. Most of the items in the groceries group come under the category of foodstuffs, and it will be found that the duty payable on almost every item was reduced in the period under review.

The revision of 1895 was responsible for two changes in the items considered, the duty of 6d. per lb. on tea being reduced to 4d. per lb., and salt being made free. The year 1900, however, saw considerable remissions, tea being reduced to 2d. per lb., coffee (roasted) to 3d. per lb., raisins and currants to 1d. per lb., while the duty was removed from rice and raw coffee. In 1903 the principle of preference was introduced, and British tea was made free of duty. In 1907, the last thorough revision, the duty was removed from sugar, golden syrup, treacle, raisins, currants, prunes, and unground spices, and reduced on ground spices and blue. During the war-period the rates of duty levied on certain articles, notably tea, have been raised or reimposed in order to meet the extraordinary expenses of the war.

The effect of an import tax is normally to raise the price of the article taxed by an amount somewhere near the amount of the tax. Import duties raise the cost of living within a country and, conversely, their reduction tends to lower the cost of living. From the table given below it will be seen that since 1891, prior to the war, there was a constant tendency towards the reduction of duties on the main foodstuffs, and the diagram following will illustrate the action of this reduction upon the level of prices.

Import Duties.

Commodity.	1891.	1895.	1900.	1903. British.	1903. Foreign.	1907. British.	1907. Foreign.
Rice, per cwt.	6s.	6s.	Free	Free	Free	Free	Free
Sago	Free	Free	Free	Free	Free	Free	Free
Tapioca	Free	Free	Free	Free	Free	Free	Free
Tea, under 1 lb.	6d.	4d.	2d.	2d.	2d.	2d.	2$\frac{2}{3}$d.
„ 1 lb. and under 5 lb.	6d.	4d.	2d.	Free	2d.	2d.	2$\frac{2}{3}$d.
„ 5 lb. and over	6d.	4d.	2d.	Free	2d.	Free	2d.
Coffee, raw, per lb.	3d.	2d.	Free	Free	Free	Free	Free
„ roasted, per lb.	5d.	5d.	3d.	3d.	3d.	3d.	3$\frac{3}{8}$d.
Cocoa, pr lb.	3d.	3d.	3d.	3d.	3d.	3d.	3$\frac{3}{8}$d.
Sugar, per lb.	$\frac{1}{2}$d.	$\frac{1}{2}$d.	$\frac{1}{2}$d.	$\frac{1}{2}$d.	$\frac{1}{2}$d.	Free	Free
Salt, per ton	10s.	Free	Free	Free	Free	Free	Free
Pepper (unground) per lb.	2d.	2d.	2d.	2d.	2d.	Free	Free
„ (ground) per lb.	4d.	4d.	4d.	4d.	4d.	2d.	2$\frac{2}{3}$d.
Jam, per lb.	2d.	2d.	2d.	2d.	2d.	2d.	2$\frac{2}{3}$d.
Honey, per lb.	2d.	2d.	2d.	2d.	2d.	2d.	2d.
Golden syrup, per lb.	$\frac{1}{2}$d.	$\frac{1}{2}$d.	$\frac{1}{2}$d.	$\frac{1}{2}$d.	$\frac{1}{2}$d.	Free	Free
Treacle, per lb.	$\frac{1}{2}$d.	$\frac{1}{2}$d.	$\frac{1}{2}$d.	$\frac{1}{2}$d.	$\frac{1}{2}$d.	Free	Free
Raisins, per lb.	2d.	2d.	1d.	1d.	1d.	Free	Free
Currants (dried), per lb.	2d.	2d.	1d.	1d.	1d.	Free	Free
Apricots, tinned							
Pears, tinned	20%	25%	25%	25%	25%	25%	37$\frac{1}{2}$%
Peaches, tinned							
Prunes, dried, per lb.	2d.	2d.	2d.	2d.	2d.	Free	Free
Apricots, dried, per lb.	2d.	2d.	2d.	2d.	2d.	2d.	2d.
Salmon, tinned, per lb.	2d.	2d.	2d.	2d.	3d.	2d.	3d.
Herrings, tinned, per lb.	2d.	2d.	2d.	2d.	3d.	2d.	3d.
Starch, per lb.	2d.	2d.	2d.	2d.	2d.	2d.	2$\frac{2}{3}$d.
Blue, per lb.	2d.	2d.	2d.	2d.	2d.	1d.	1d.
Soap, common, per cwt.	5s.	5s.	5s.	5s.	5s.	5s.	6s.
Tobacco, per lb.	3s. 6d.	3s. 6d.	3s. 6d.	3s. 6d.	3s. 6d.	3s. 6d.	3s. 6d.

The only one of the above items affected by the alterations of 1917 is tea, the duty on which is now, for packages under 5 lb., 5d. British, 7d. foreign; for tea in bulk (5 lb. and over), 3d. and 5d. respectively.

The following chart has been plotted in order to illustrate the relation between the retail prices of this group and the import duties levied upon the articles comprised therein. The import duties have been calculated in the same way as the prices—the rates of duty being applied to the weights in order to arrive at an aggregate expenditure from which an index number may be computed.

Perhaps a better illustration might be furnished by adding to the prices, all through the period, the duties which were levied at the beginning of the period, in an attempt to show what the course of prices might have been were it not for tariff alterations. But such an attempt is open to many

dangers, principally because a reduction of duty, leading to lower price, may have very important effects in changing the nature or extent of consumption. To take only one instance, the preferential tariff on tea largely diverted the consumption from China tea to Ceylon. In any case, such an attempt would provide merely a doubtful estimate as to what the price might have been were it not for reductions in the tariff.

This method has therefore been discarded, and the diagram represents the changes in duties compared with retail prices.

It has not been considered necessary to attempt to carry the comparison any further than 1914. The tariff revision of 1907 substantially completed the process of eliminating import duties on foodstuffs. The only important item the supply of which is wholly drawn from outside the Dominion and which is at the present time subject to the payment of duty is tea. The slight amendments to the duties on foods which have been brought into force since the commencement of the war can have had so small an influence upon food prices generally that their effect would be wholly obscured in the violent price-movement which has taken place since 1914. Further than this, although it has been possible to prove the existence of a causal relation between duties and prices, the precise extent to which prices have been influenced by the imposition or removal of duties is a matter impossible of determination.

Index Numbers of Import Duties and Retail Prices of the Commodities comprised in Group 1a—General Groceries—the Average of the Four Chief Centres, 1891–1914.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

—	Import Duties.	Retail Prices.	—	Import Duties.	Retail Prices.
1891 ..	1358	1101	1903 ..	1062	1014
1892 ..	1358	1076	1904 ..	1062	1009
1893 ..	1358	1060	1905 ..	1062	997
1894 ..	1358	1043	1906 ..	1062	1022
1895 ..	1285	1025	1907 ..	1000	1014
1896 ..	1285	1023	1908 ..	1000	1000
1897 ..	1285	1031	1909 ..	1000	986
1898 ..	1285	1041	1910 ..	1000	990
1899 ..	1285	1027	1911 ..	1000	992
1900 ..	1140	1025	1912 ..	1000	1002
1901 ..	1140	1003	1913 ..	1000	1029
1902 ..	1140	1021	1914 ..	1000	1063
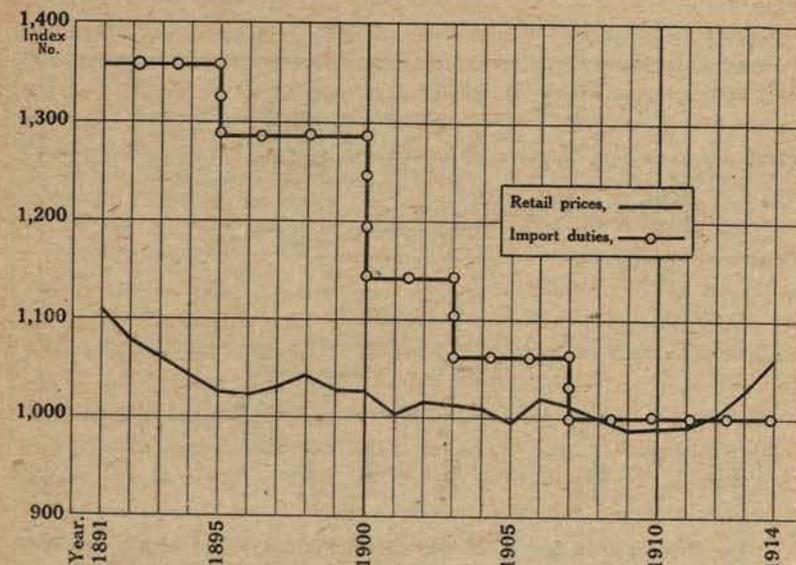
In the preceding chart the figures have been based on the average of the years 1909–13, in accordance with the procedure followed throughout this inquiry; but for the purpose of illustrating the connection between retail prices and import duties in this period it will be found more useful to consider a chart based on 1891. The levels of prices and import duties represented by the following diagram are therefore equated to 1000 in that year, and starting from a common point it is easier to trace the connection and divergence over the period.

Index Numbers of Import Duties and Retail Prices of the Commodities comprised in Group 1a—General Groceries—in the Average of the Four Chief Centres, 1891–1914.

(Base : Average annual aggregate expenditure, four chief centres, 1891–14 = 1000.)

Year.	Import Duties.	Retail Prices.	Year.	Import Duties.	Retail Prices.
1891 ..	1000	1000	1903 ..	782	921
1892 ..	1000	977	1904 ..	782	916
1893 ..	1000	963	1905 ..	782	906
1894 ..	1000	947	1906 ..	782	928
1895 ..	946	931	1907 ..	736	921
1896 ..	946	929	1908 ..	736	908
1897 ..	946	936	1909 ..	736	896
1898 ..	946	946	1910 ..	736	899
1899 ..	946	933	1911 ..	736	901
1900 ..	839	931	1912 ..	736	910
1901 ..	839	911	1913 ..	736	935
1902 ..	839	927	1914 ..	736	965

3—Prices.
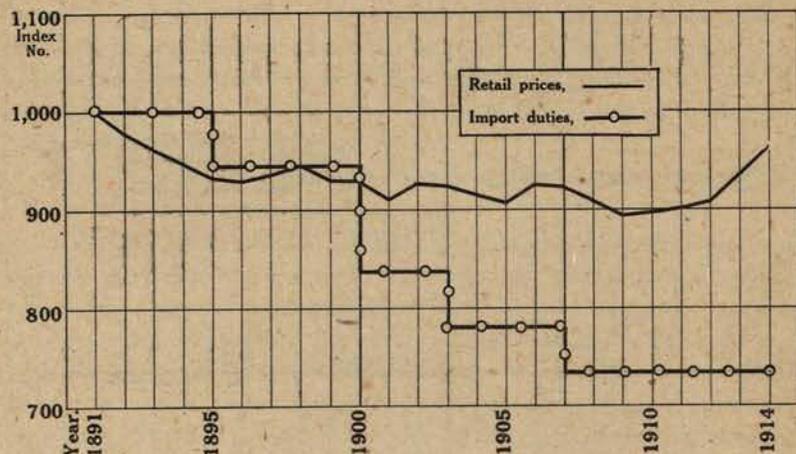
The first obvious feature of the diagram given above is the consistent downward tendency of import duties. Since 1891 every revision of the tariff has been in the direction of removing the import taxes on foodstuffs, a fact which is well illustrated here. In addition, the duty has been removed from sugar and kerosene, remissions which, though not strictly applicable here, affect very important commodities.

A comparison of the two curves is very illuminating. Taking the curve of prices, it will be found that in accordance with the general level of prices the curve drops from 1891–95. A reduction in the tariff of 1895 is followed by a slight drop in prices in 1896; but this is succeeded by an immediate tendency to rise. Thereafter it is very noticeable that the prices are generally tending upward; but successive tariff reductions cause declines in the price-level. When the tariff remains unchanged for any length of time prices soon begin to rise, and this is especially evident in later pre-war years.

It would seem, then, that the reduction of duties upon foods, by lowering the artificially high level of prices resulting from such taxation, has constantly tended to counteract a rising price-level.

GROUP II.—DAIRY-PRODUCE.

We have seen that the various commodities going to make up the groceries group are by no means homogeneous, but fall naturally into three distinct sub-groups, manifesting very different tendencies according as the goods are primarily imported groceries (1A), home products (1B), or goods manufactured locally from imported raw materials (1C).

Dairy-products consist wholly of the produce of New Zealand, and this group is therefore much more homogeneous than the first. It is especially interesting in its relation to New Zealand from the fact that it touches both producers and consumers. There are two chief commodities—milk and butter—which between them usually represent about 70 per cent. of the total expenditure of the group, and are themselves of approximately equal importance. The other commodities are eggs, cheese, bacon, and ham.

Index Numbers for Auckland, Wellington, Christchurch, Dunedin, and for Average of Four Centres, 1891–1919.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13=1000.)

Year.			Auckland.	Wellington.	Christchurch.	Dunedin.	Average of Four Centres.
1891	..	..	732	795	819	879	806
1892	..	...	764	822	847	905	835
1893	..	..	769	822	824	898	828
1894	..	..	752	803	834	878	817
1895	..	..	743	882	867	877	842
1896	..	..	755	829	849	865	825
1897	..	..	776	799	861	885	830
1898	..	..	781	831	873	901	847
1899	..	..	796	829	863	870	840
1900	..	..	778	824	864	884	838
1901	..	..	787	935	859	923	876
1902	..	..	858	893	887	930	892
1903	..	..	860	873	904	949	897
1904	..	..	892	872	860	905	882
1905	..	..	859	869	868	916	878
1906	..	..	868	936	899	951	914
1907	..	..	902	961	973	984	955
1908	..	..	993	1057	991	1038	1020
1909	..	..	974	975	912	972	958
1910	..	..	965	996	920	997	970
1911	..	..	986	1018	948	1021	993
1912	..	..	998	1076	992	1052	1029
1913	..	..	1028	1124	1003	1044	1050
1914	..	..	1019	1114	1016	1065	1054
1915	..	..	1140	1196	1127	1146	1152
1916	..	..	1289	1350	1251	1263	1288
1917	..	..	1362	1425	1318	1346	1363
1918	..	..	1443	1476	1328	1432	1420
1919	..	..	1518	1553	1434	1529	1508

Movement of Retail Prices of Dairy-produce, 1891–1919.

Auckland	shown thus	AK
Wellington	,,	WN
Christchurch	,,	CH
Dunedin	,,	DN
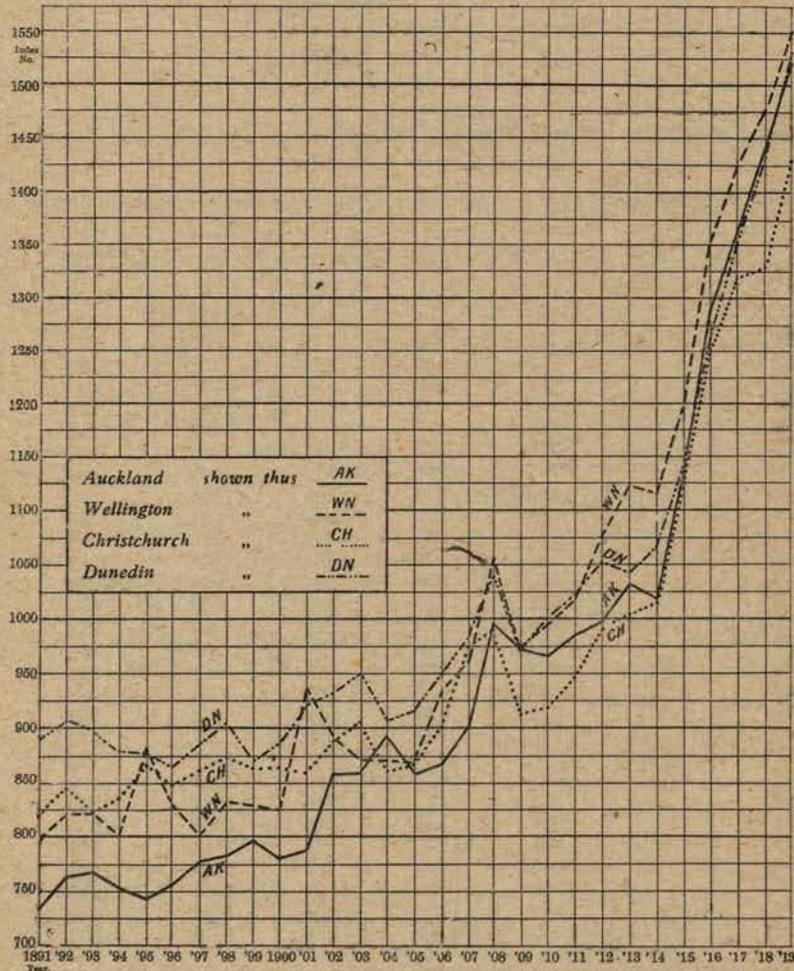
A comparison of this group with the previous group shows that the course of prices is different in a great many respects. There does not seem the same tendency for the price-levels of the four centres to run together, though their general direction is, of course, similar. It will be noticed that the graph-lines, sharply rising as they are since 1914, would appear to indicate greater uniformity in prices as between the four centres since the outbreak of war. The impression thus created, however, is not justified by actual facts, and the "bunched" appearance of the graph lines is due to the speed with which prices have increased during recent years.

The averages of the index numbers for the twenty-four years 1891–1914 are—Auckland, 860; Christchurch, 897; Wellington, 914: and Dunedin, 941. Auckland, therefore, shows the cheapest prices of dairy-produce in this period, the difference probably being due to the different system of marketing. The position, however, has changed to some extent in recent years. This is evidenced by the averages of the index numbers for the years 1914–19, which are as follows: Christchurch, 1246; Auckland, 1295; Dunedin, 1297; Wellington, 1352.

It is natural to expect that the prices of dairy-products would rise consistently over this period, and the diagram given above shows a general tendency in this direction. The feature of the chart, other than the war movement, is the very high peak in 1908, followed by a big drop in 1909.

In order to make the general tendency clearer a moving average has been plotted on the same chart as an annual average of the four centres. The annual line eliminates local variations, and the quinquennial line eliminates both local and temporary fluctuations. The result is a very smooth curve which shows quite clearly the steady and rapid rise in prices especially since 1898. The annual curve fluctuates irregularly in the early years; but from 1900 to 1914 the fluctuations round the average assume a much more regular form.

Annual and Quinquennial Index Numbers of Retail Prices of Dairy-produce in the Average of the Four Chief Centres, 1891 to 1919.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Year.	Annual.	Quinquennial.	Year.	Annual.	Quinquennial.
1891 ..	806	..	1906 ..	914	930
1892 ..	835	..	1907 ..	955	945
1893 ..	828	826	1908 ..	1020	963
1894 ..	817	829	1909 ..	958	979
1895 ..	842	828	1910 ..	970	994
1896 ..	825	832	1911 ..	993	1000
1897 ..	830	837	1912 ..	1029	1019
1898 ..	847	836	1913 ..	1050	1056
1899 ..	840	846	1914 ..	1054	1115
1900 ..	838	859	1915 ..	1154	1182
1901 ..	876	869	1916 ..	1288	1256
1902 ..	892	877	1917 ..	1364	1347
1903 ..	897	885	1918 ..	1420	..
1904 ..	882	893	1919 ..	1508	..
1905 ..	878	905			

Annual and Quinquennial Index Numbers of Retail Prices of Dairy-produce, in the Average, of the Four Chief Centres, 1891 to 1919.
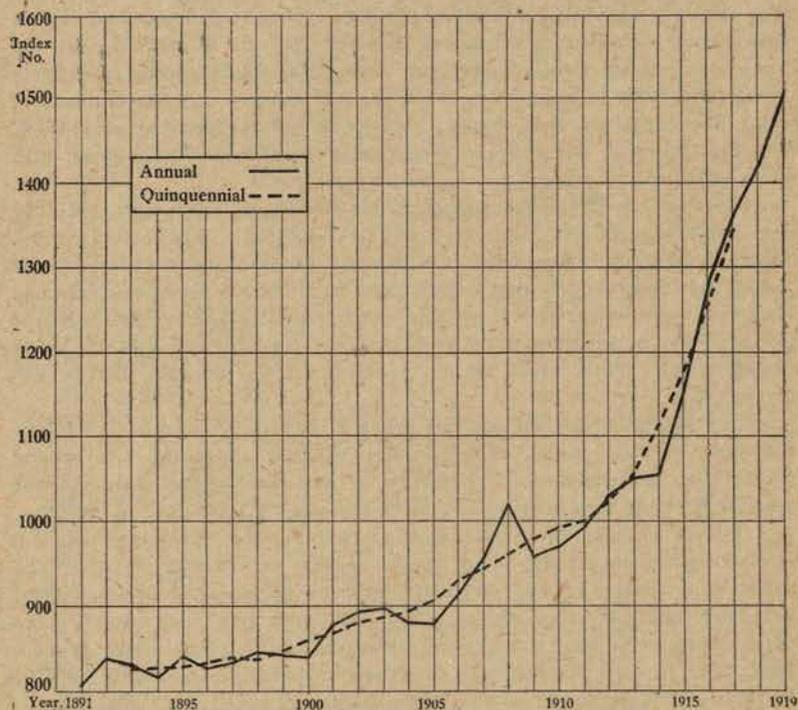
EXPORTS AND RETAIL PRICES.

It is interesting at this stage of the inquiry to notice the connection between prices of dairy-produce and the exports of butter and cheese from the Dominion. It is a commonplace that the price in the Dominion for New-Zealand-grown foodstuffs is largely regulated by the prices obtained for our exports in the London market. This has been the case ever since refrigeration opened to New Zealand a world market, and caused prices to go beyond local control. Since 1895 prices in the world market have been steadily rising, and New Zealand retail prices follow the general tendency. But London is not the sole market for New Zealand's dairy-produce. Australia, although it produces similar commodities to New Zealand in almost every respect, yet has at different times taken from the Dominion fairly large quantities of butter. The explanation lies in the fact that while the annual production in New Zealand is remarkably steady and very little affected by adverse seasons, Australia is peculiarly liable to periodical fluctuations of industry, and in particular to droughts. When, for any cause of this kind, the supply of butter runs short in Australia it is natural that the Dominion

should take advantage of the high prices offering and export some of her produce to Australia. It was shown in the first edition of this report that the effect of such exports of butter to Australia is normally to raise the prices of dairy-produce in New Zealand.

GROUP III.—MEAT.

The third food group, meat, is still more homogeneous than the second group, dairy-produce, and it has been noticeable in working up the data that increases or decreases in price are spread very uniformly over the different items. Nine cuts of beef are included, with a total weight of 1165 assigned to them, and five cuts of mutton, with a total weight of 949. Though New Zealand is so essentially a sheep-growing country, it has been found that the annual consumption of beef is greater than that of mutton, and the prices are weighted accordingly. These two groups cover the bulk of the expenditure on meat. There are, besides, four cuts of pork weighted at 86, two kinds of sausages weighted at 98, and tripe with a weight of 28.

Index Numbers for Auckland, Wellington, Christchurch, Dunedin, and for Average of Four Chief Centres, 1891–1919.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13=1000.)

Year.			Auckland.	Wellington.	Christchurch.	Dunedin.	Average of Four Centres.
1891	..	..	960	879	901	715	864
1892	..	..	1029	881	838	715	866
1893	..	..	1050	894	889	749	896
1894	..	..	1179	941	888	749	939
1895	..	..	1044	910	889	749	898
1896	..	..	1036	901	880	749	892
1897	..	..	929	862	879	749	855
1898	..	..	1106	928	884	775	923
1899	..	..	1046	919	879	775	905
1900	..	..	989	903	879	825	899
1901	..	..	966	878	966	825	909
1902	..	..	966	893	987	830	919
1903	..	..	961	921	1019	830	933
1904	..	..	970	928	1012	831	935
1905	..	..	1083	963	1024	831	975
1906	..	..	1086	963	1027	831	977
1907	..	..	1083	1030	1013	831	989
1908	..	..	1064	973	1031	817	971
1909	..	..	1084	1026	984	824	980
1910	..	..	1047	1029	980	851	977
1911	..	..	1052	1034	995	900	995
1912	..	..	1033	1024	1034	915	1001
1913	..	..	1104	1139	1027	917	1047
1914	..	..	1266	1112	1061	1103	1136
1915	..	..	1293	1202	1193	1188	1219
1916	..	..	1413	1274	1313	1283	1321
1917	..	..	1500	1380	1449	1417	1437
1918	..	..	1575	1476	1540	1507	1525
1919	..	..	1596	1504	1607	1588	1574

Movement of Retail Prices of Meat, 1891–1919.
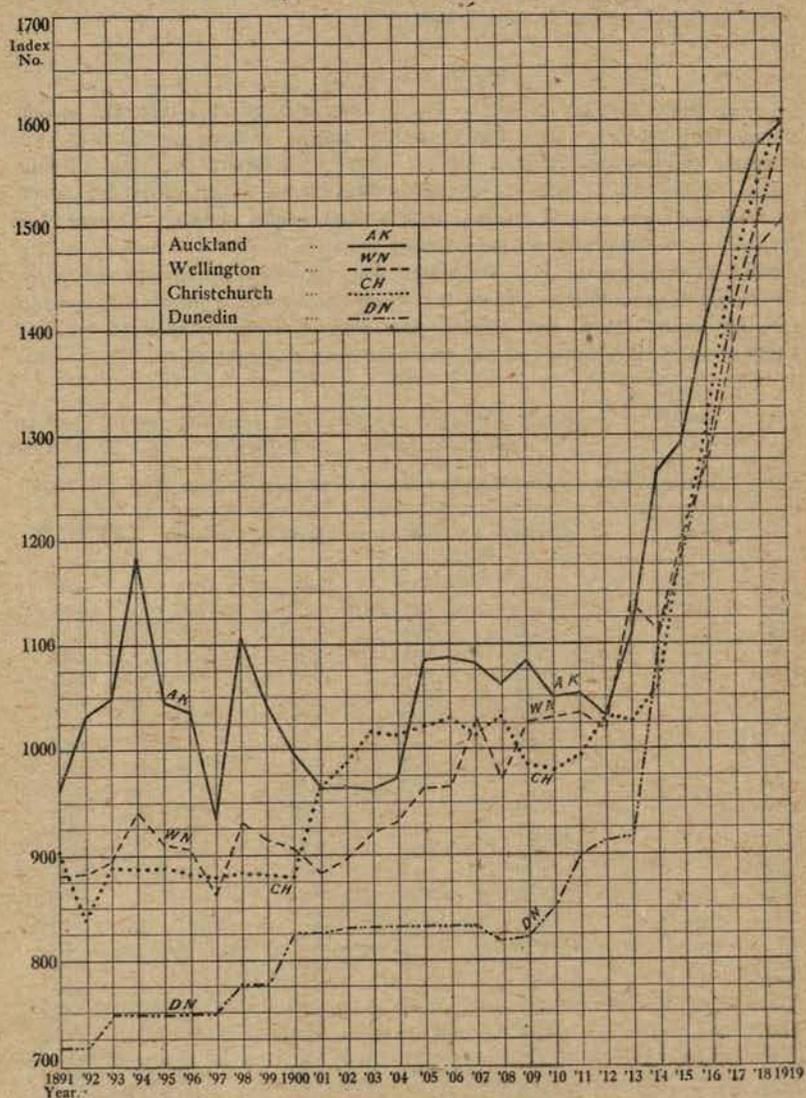
While in the case of the dairy-produce group Dunedin was, prior to the war, fairly consistently above and Auckland below the other centres, the positions in the case of the meat group are almost exactly reversed. Whereas, moreover, in the case of the first two food groups, the level of prices as between the different centres did not greatly vary, a striking feature of the diagram showing relative prices of meat in the four centres is the great disparity shown in the price-levels. Auckland is almost consistently considerably above the other centres, and Dunedin was until 1914 quite as far below. The averages of the four centres for the twenty-four years 1891 to 1914 are—Auckland 1,047, Wellington 955, Christchurch 956, and Dunedin 820; and the divergence is very noticeable. Auckland prices are also marked by very considerable fluctuations all through the period, fluctuations which are reflected in a minor degree by the Wellington prices: Dunedin and Christchurch prices on the other hand fluctuate but little, and for the most part in sympathy with each other.

In order to show the general trend of prices it is advisable to plot curves showing the annual and quinquennial averages of the four centres.

Annual and Quinquennial Index Numbers of Retail Prices of Meat in the Average of the Four Chief Centres, 1891 to 1919.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Year.		Annual.	Quinquennial.	Year.		Annual.	Quinquennial.
1891	..	864	..	1906	..	977	969
1892	..	866	..	1907	..	989	978
1893	..	896	893	1908	..	971	979
1894	..	939	898	1909	..	980	982
1895	..	898	896	1910	..	977	985
1896	..	892	901	1911	..	995	1000
1897	..	855	895	1912	..	1001	1031
1898	..	923	895	1913	..	1047	1080
1899	..	905	898	1914	..	1136	1155
1900	..	899	911	1915	..	1219	1232
1901	..	909	913	1916	..	1321	1328
1902	..	919	919	1917	..	1437	1415
1903	..	933	935	1918	..	1525	..
1904	..	935	948	1919	..	1574	..
1905	..	975	962				

A consideration of the average prices in the four chief centres, by eliminating local fluctuations, brings out more clearly the general trend of prices over the whole period. It will be seen that there is considerable fluctuation in the early years of the period, and it is notorious that these years saw a great disturbance of industry in the Dominion.

As in the case of butter and cheese, there has been a continuous and rapid rise in prices since 1895. This rise in retail prices is, of course, in sympathy with the inflation of export values, due to a rise in the world price of meat. Especially noticeable is the very great rise in prices since 1912, particularly during the war period, a rise which is in evidence in each of the four cities.

Annual and Quinquennial Index Numbers of Retail Prices of Meat in the Average of the Four Chief Centres, 1891–1919.
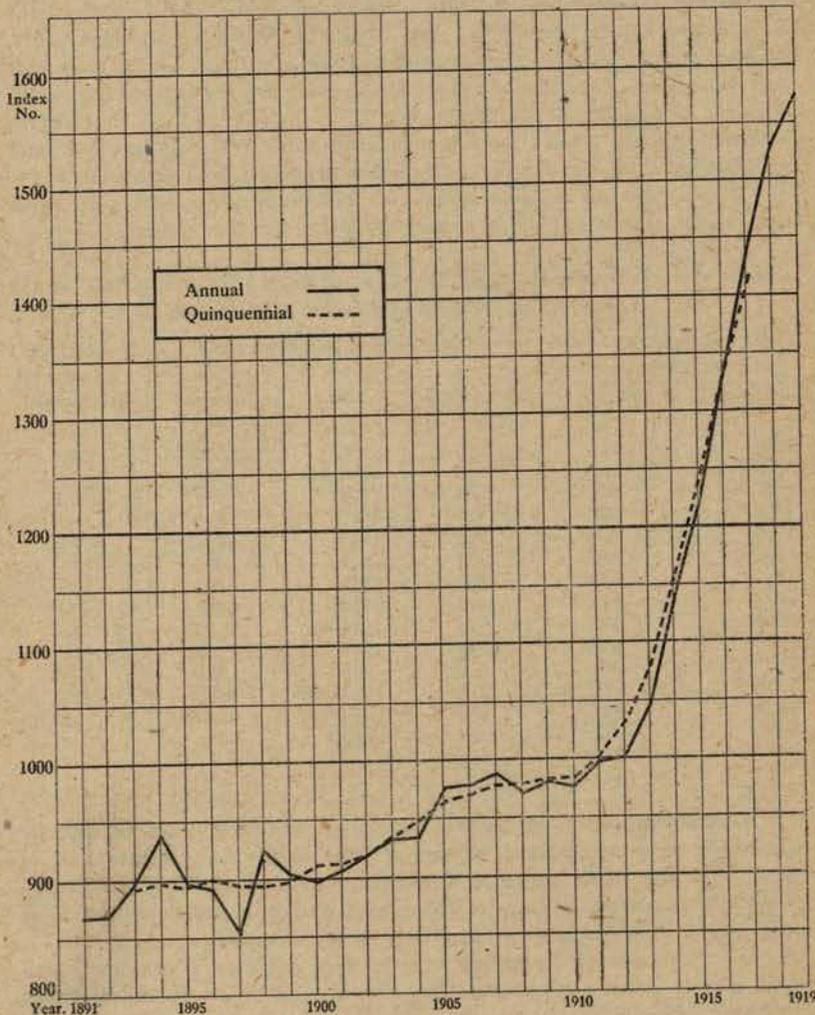
It will be shown later in this report that disorganization of shipping checked rising prices in the early months of 1915; but a very marked opposite tendency has since reasserted itself.

It is known that all over the world there is a comparative scarcity of live-stock—that the numbers of animals have not increased in proportion to the demand for them; and, apart from the war, this has been the chief factor in raising the price of meat and of wool and other animal products so considerably of late years. This tendency to rising prices of animal products has been very beneficial to New Zealand as a producing country; but it carries with it, too, a tendency to increase retail prices and the cost of living.

THREE FOOD GROUPS.

The articles which have been considered so far in this inquiry have been grouped under the headings of Groceries, Dairy-produce, and Meat; but the first group really consists of three sub-groups following different laws. It is well, therefore, to consider these five kinds of commodities in contrast before combining them, to obtain an indication of the general level of prices of food-stuffs. Especially as regards markets, the differences exhibited by these five groups—imported groceries, local agricultural products, sugar, dairy-products, and meat—are very interesting and instructive.

This discussion will for the moment be mainly confined to the period 1891–1914. Consideration of price movements during the war period is accorded full treatment in Chapter VI.

Imported Groceries.

In this group (1A) alone, is the supply dependent on imports from over-seas, a fact which naturally renders its course of prices subject to different influences. The supply is gathered from various sources all over the world—tea from Ceylon, rice, sago, and tapioca from the Eastern countries, manu-factures from the markets of Europe and America; and, whatever the source, New Zealand buyers have to compete in what is practically a world-market, so that the import price into New Zealand is determined largely by influences outside the control of the Dominion.

Most of the importing is done by wholesale merchants who normally carry large stocks and supply to the smaller retailers. Some of the bigger grocery establishments import direct; but generally the returns of prices received show little divergence between these bigger shops and the smaller retailers. The retail price, which has been the subject of this portion of the inquiry, must not, therefore, be confused either with the import price or with the wholesale price in the Dominion.

The fact of supplies being brought from overseas, too, inevitably brings in the factor of Customs duties, and it has been shown that continual reductions in tariff have operated to retard the upward tendency of the level of prices of these commodities.

Five Home Products.

Group 1B consists of five items of agricultural produce, or foods directly made up from agricultural products, and all the five items — bread, flour, oatmeal, potatoes, and onions—are produced in the Dominion.

Early in the history of the Dominion the agricultural industry was of far greater relative importance than now, and the export of grain and potatoes represented a very considerable proportion of the total exports; but the proportion of this export has steadily decreased, till at the present time New Zealand has a surplus for export in exceptionally good years only. Prior to the war, however, the supply of these products normally came wholly from the soil of the Dominion, and imports were never a serious factor. The market, too, was usually confined to the Dominion, and exports, it has been shown, did not usually influence prices. The demand as well as the supply was self-contained. It follows that prices depended normally upon conditions of demand and supply in the Dominion itself. Latterly, however, the wheat-production of the Dominion has fallen somewhat below local requirements, probably owing to the fact that New Zealand farmers found pastoral pursuits more profitable, especially in view of the enhanced prices in the world's markets since the outbreak of the war ruling for meat and dairy-produce. It has accordingly been necessary in recent years from time to time to import wheat from abroad, so that it is no longer correct to say, with regard to bread and flour, that prices are determined solely by local conditions, although such a statement is still substantially true as regards oatmeal, potatoes, and onions.

Sugar.

The sugar used in New Zealand consists almost wholly of the local product manufactured from raw material derived from Fiji cane—the amount of cane-sugar from Java or Mauritius or of beet-sugar from Europe is quite negligible. Approximately one and a quarter million hundredweights of raw sugar are imported each year from Fiji and refined in the local refinery at Auckland. Practically the whole of this quantity is consumed in the Dominion, since the exports are quite small from year to year.

Dairy-produce and Meat.

The dairy-produce and meat groups may be taken together, since they follow similar conditions in respect to production and consumption. Both groups are produced almost entirely in the Dominion itself; imports, such as they are, are usually either returned exports or speculative purchases.

The production of these groups, however, is not merely for a small local market, as in the case of agricultural products, but there is a continual surplus for export.

MARKETS.

In the present inquiry retail prices are under consideration, and therefore information has been obtained from retail dealers in the commodities specified. Most of the commodities comprised in the first two groups—

groceries and dairy-produce—reach the consumer through the hands of the retail grocer, and therefore the prices of these commodities have been obtained from this source. Bread and milk are usually retailed direct to the consumer, and the prices of these commodities, together with those for the fuel-and-light group, have been ascertained by the Inspectors of Factories and forwarded by them to the Census and Statistics Office. The prices of meat have been obtained from retail butchers in the various centres.

Though it is impossible within the limits of this report to enter fully into a discussion of the systems of marketing the various commodities, since the practice differs with different commodities and in the various centres; yet the following general remarks may serve to indicate the usual course of the commodities from producer to consumer.

Imported groceries usually reach the retail grocers through the wholesale general merchant, who carries large stocks from which the retailers draw supplies. Some of the larger grocers, however, in the big centres especially, import direct. A great many commodities, too, are indented by commission merchants on behalf of the retailers, or are sold " to arrive."

Flour is often supplied by the mills direct to grocers and bakers, but a large quantity is sold on commission through agents in the various centres. Potatoes and onions are sometimes sold direct to the consumer by the grower, and sometimes the retailers deal direct with the growers, but usually the supply comes through wholesale merchants.

Two-thirds of the butter and a much higher proportion of the cheese produced in the Dominion is normally exported. The co-operative factories, with their skimming-stations, are a feature of the dairying industry, and the suppliers usually share in the management and control of the business. In some centres the factories market their own proprietary brands of butter direct to the retailers, while in others the retailers obtain their supplies through the wholesale merchants.

The retail price of meat is also affected by the fact that a large proportion of the Dominion's production (more particularly of mutton) is exported. The connection between the prices for export and for home consumption is seen in the live-stock market. The meat is exported frozen, and the exporting firms send their representatives over the countryside and buy up, on the hoof, the majority of the stock out of the paddocks. On occasion these firms also compete at the local auction sales of live-stock, which are held periodically.

In some centres the exporting companies also enter into the retail trade and maintain shops in the local towns.

THREE FOOD GROUPS COMBINED.

In combining the groups discussed above care has been taken to give each group its proper economic importance. The method used is a continuation of the aggregate-expenditure method followed in making up the index numbers for each group. The aggregate expenditures, not the index numbers, have been combined, so that the result is weighted automatically.

Index Numbers for Auckland, Wellington, Christchurch, Dunedin, and for Average of Four Centres, 1891–1919.*

(Base : Average annual aggregate expenditure, four chief centres, 1909–13=1000.)

Year.			Auckland.	Wellington.	Christchurch.	Dunedin.	Average of Four Centres.
1891	..	..	925	924	*	890	*
1892	..	..	937	918	*	890	*
1893	..	..	968	941	*	894	*
1894	..	..	990	933	*	872	*
1895	..	..	923	935	*	856	*
1896	..	..	934	910	*	867	*
1897	..	..	916	895	*	885	*
1898	..	..	989	967	*	923	*
1899	..	..	931	907	897	848	896
1900	..	..	921	910	914	878	906
1901	..	..	926	930	948	909	928
1902	..	..	957	963	962	935	954
1903	..	..	946	946	960	930	946
1904	..	..	947	945	952	894	935
1905	..	..	1033	982	992	951	990
1906	..	..	1036	1015	997	965	1003
1907	..	..	1031	1008	989	943	993
1908	..	..	1030	1011	996	940	994
1909	..	..	1026	997	943	922	972
1910	..	..	1023	1016	960	965	991
1911	..	..	1006	1011	958	957	983
1912	..	..	1032	1031	1004	1000	1017
1913	..	..	1069	1089	995	997	1037
1914	..	..	1110	1100	1044	1074	1082
1915	..	..	1206	1212	1175	1192	1196
1916	..	..	1292	1289	1249	1239	1267
1917	..	..	1369	1397	1346	1328	1360
1918	..	..	1496	1521	1438	1488	1486
1919	..	..	1552	1575	1531	1563	1555

* Groceries figures not available for Christchurch prior to 1899.

Movement of Retail Prices of the Three Food Groups, in combination, 1891–1919.
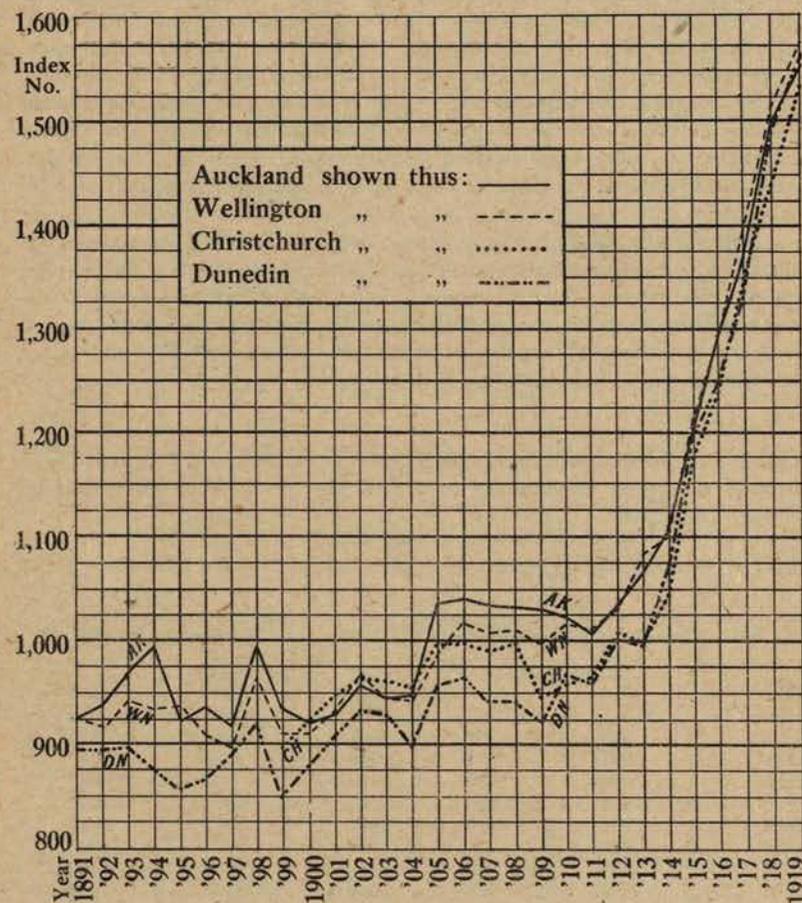
The main feature of the diagram representing the relative prices of the three food groups in combination is the striking uniformity of movement displayed in the four centres. In nearly every change of price-level the direction of the movement is similar, though the extent, of course, varies fairly considerably. There is a distinct reflection of the cyclical movement which was noticed in the agricultural products.

Excluding consideration of the war period, the cost of foodstuffs seems generally to be least in Dunedin throughout the period, and greatest in Auckland. The averages of the index numbers in Auckland, Wellington, and Dunedin for the twenty-four years 1891–1914 are 984, 970, and 924. For the sixteen years commencing with 1899 the averages are—Auckland 1002, Wellington 991, Christchurch 969, and Dunedin 944. Both Auckland and Dunedin owe their positions to the relative prices of meat. It will be remembered that Christchurch has normally been cheapest for imported groceries and for the five agricultural products, Auckland for sugar and for dairy-products, and Dunedin for meat.

Following the same practice as in the groups separately treated above, an annual and quinquennial index number has been compiled to show the average course of food-prices in the four centres. In compiling this index number it has been necessary, as in the case of groceries, to leave Christchurch prices of that group out of consideration in the period 1891–99, but prices of meat and dairy-products are the complete average of the four centres.

Annual and Quinquennial Index Numbers of Retail Prices of Foodstuffs (three Food Groups in combination) in the Average of the Four Chief Centres, 1891–1919.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Year.	Annual.	Quinquennial.	Year.	Annual.	Quinquennial.
1891 ..	918	..	1906 ..	1000	982
1892 ..	913	..	1907 ..	993	990
1893 ..	934	920	1908 ..	994	990
1894 ..	927	917	1909 ..	972	987
1895 ..	906	915	1910 ..	991	991
1896 ..	904	920	1911 ..	983	1000
1897 ..	904	914	1912 ..	1017	1022
1898 ..	958	914	1913 ..	1037	1063
1899 ..	896	918	1914 ..	1082	1120
1900 ..	906	928	1915 ..	1196	1188
1901 ..	928	926	1916 ..	1267	1278
1902 ..	954	934	1917 ..	1360	1373
1903 ..	946	951	1918 ..	1486	..
1904 ..	935	965	1919 ..	1555	..
1905 ..	990	973			

NOTE.—From 1891–98, inclusive, the index shown is the average of Auckland, Wellington, and Dunedin, in groceries.

Annual and Quinquennial Index Numbers of Retail Prices of Foodstuffs in the average of the Four Chief Centres, 1891–1919.
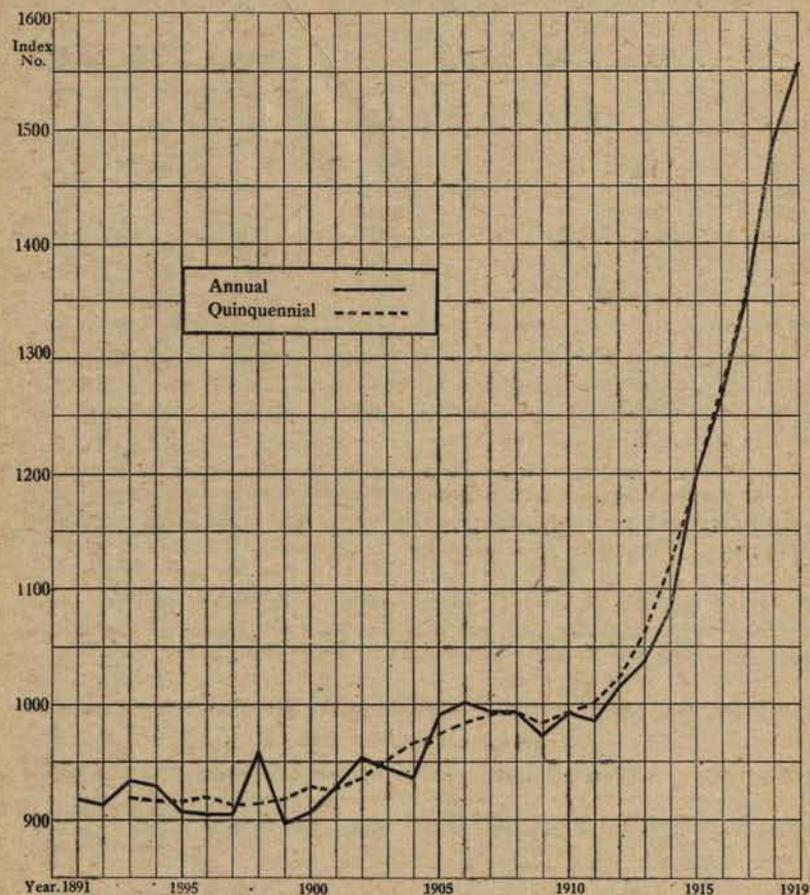
It will be seen that the price-level of foodstuffs was falling till 1897; but since then a steady rise is apparent. From 1907 till 1911 there was a decided check in the rise, mainly reflected in the drop of 1909. Since 1911, however, there has been a considerable rise, especially during the war period. From 1891 to 1911 the price of food rose on the average about 7 per cent., by 1914 the increase was nearly 18 per cent., while the war period has seen an increase out of all proportion, the figure for 1919 being close on 70 per cent. in advance of that for 1891.

For purposes of comparison a table is added showing the index number for each year, taking the previous year as base, and thus showing the increase or decrease per cent. from year to year.

Index Numbers of Retail Prices of Foodstuffs in the Four Chief Centres of New Zealand from 1891–1919, basing the Index Number of Prices for each Year upon the Previous Year.

Year.	Index.	Increase per Cent.	Decrease per Cent.	Year.	Index.	Increase per Cent.	Decrease per Cent.
1891 ..	1000	—	—	1906 ..	1010	1·0	..
1892 ..	995	..	0·5	1907 ..	993	..	0·7
1893 ..	1023	2·3	..	1908 ..	1001	0·1	..
1894 ..	993	..	0·7	1909 ..	978	..	2·2
1895 ..	977	..	2·3	1910 ..	1020	2·0	..
1896 ..	998	..	0·2	1911 ..	992	..	0·8
1897 ..	1000	—	—	1912 ..	1035	3·5	..
1898 ..	1060	6·0	..	1913 ..	1020	2·0	..
1899 ..	935	..	6·5	1914 ..	1043	4·3	..
1900 ..	1011	1·1	..	1915 ..	1105	10·5	..
1901 ..	1024	2·4	..	1916 ..	1059	5·9	..
1902 ..	1028	2·8	..	1917 ..	1073	7·3	..
1903 ..	992	..	0·8	1918 ..	1093	9·3	..
1904 ..	988	..	1·2	1919 ..	1046	4·6	..
1905 ..	1059	5·9	..				

In the table just given the percentage increase or decrease is based only on the previous year, and the resultant figures are perhaps apt to appear misleading. When there is a succession of increases or decreases it must be remembered that the effect is cumulative, or comparable with increases at compound interest. However, a table is given below which bases the index numbers on the prices for 1891, and thus shows the percentage increase of each year over 1891.

Index Numbers of Retail Prices of Foodstuffs in the Four Chief Centres of New Zealand, 1891–1919.

(Base : Average **annual** aggregate expenditure, four chief centres, 1891 = 1000.)

Year.	Index. Number.	Increase per Cent. over 1891.	Decrease per Cent. over 1891.	Year.	Index Number.	Increase per Cent. over 1891.	Decrease per Cent. over 1891.
1891 ..	1000	—	—	1906 ..	1089	8·9	..
1892 ..	995	..	0·5	1907 ..	1082	8·2	..
1893 ..	1017	1·7	..	1908 ..	1083	8·3	..
1894 ..	1010	1·0	..	1909 ..	1059	5·9	..
1895 ..	987	..	1·3	1910 ..	1080	8·0	..
1896 ..	985	..	1·5	1911 ..	1071	7·1	..
1897 ..	985	..	1·5	1912 ..	1108	10·8	..
1898 ..	1044	4·4	..	1913 ..	1130	13·0	..
1899 ..	976	..	2·4	1914 ..	1179	17·9	..
1900 ..	987	..	1·3	1915 ..	1303	30·3	..
1901 ..	1011	1·1	..	1916 ..	1380	38·0	..
1902 ..	1039	3·9	..	1917 ..	1481	48·1	..
1903 ..	1031	3·1	..	1918 ..	1619	61·9	..
1904 ..	1019	1·9	..	1919 ..	1694	69·4	..
1905 ..	1078	7·8	..				

GROUP IV.—HOUSE-RENT.

The item of housing in family expenditure is so important that no prices investigation which omits it can be considered as approaching a complete treatment of the subject. But house accommodation is by no means so easy of measurement as are definite commodities, such as the grocery items, and any measurement must be an average.

It has already been shown on page 12 that house-rent may under normal conditions, though, as shown on page 127, not to the same extent in abnormal times, be taken as typical of housing-cost in general not only for persons actually paying rent, but for the great and increasing number of all classes of people in New Zealand who own their own homes, to whom house-rent is now resolved rather into the cost of upkeep, rates, and interest on mortgages owing. The tendency in this direction has been helped on by State action in lending money at low rates of interest and on easy terms under various categories. This has been especially the case during the war period.

Statistics of house-rent were collected from house agents in the four centres for each year from 1891 to 1914. As in every inquiry into retail prices, difficulty was at first experienced in the collection of reliable data ; but the information obtained under the original method has been sufficient to establish a definite tendency over the whole period, though comparisons of short periods may not be so reliable. The first essential is to classify the houses according to the number of rooms. Then the question of conveniences arises : for example, at least during the early portion of the period covered by this investigation the question of the existence or not of a bathroom or scullery is highly relevant. Variations of rent between city and suburban houses, and according to advantages of site, to the possession or lack of a garden—these variations are infinite and impossible to measure. In one town there seem to be two definite classes of houses—old buildings, and new houses in a recently settled suburb. The high rents of Wellington are paid for houses with less ground attached, a fact which emphasizes the disparity in house-rents between this and other towns.

Very many tenants, again, do not bargain for weekly rents, but lease their homes for a year or a term of years at a fixed rent, which, though paid weekly or monthly, does not change over the period of the lease. Both these factors of ownership and leasehold tend to make the effect of temporary changes in rent less direct.

Even among those who rent their homes on a weekly tenancy the influence of custom tends to keep the movement of rent conservative and slow. There is a big customary element, and rents are adjusted rather on the changes of tenancy than during occupation. At the present time the exceptional demand for housing-accommodation accompanied by recent restrictive legislation against advancement of house-rents has caused a wide disparity between the rentals of houses which have been let for some time and the rents charged to the new occupants of houses being now relet. In so far as the number of " relettings " is relatively small, there has not been

the substantial advance in house-rents during the past few years which might be gathered from an inspection of the price charged for the occupancy of houses now falling vacant.

But over a long period of years such as is considered here such temporary influences are largely eliminated, and it may fairly be claimed that, by taking average rents of average houses in the method previously explained over a sufficiently long period, a reliable indication may be gained of the general tendency of housing-cost over the period.

Commencing with August, 1916, a new system of collection of information with regard to rentals has been instituted, persons or firms collecting rents being required to state the actual number of houses of each class (according to the number of rooms) for which rents are collected, and the aggregate rent receivable from such houses. Previously house agents were asked to state what was in their opinion the predominating rent for each class of house, and while the information thus obtained was no doubt approximately correct, it did not possess the mathematical exactness of the new system, for there was an undoubted tendency to base statements on the rentals at which houses had recently been let or relet, thus ignoring the great majority of existing rentals.

As a result of the adoption of the new method, information is now received each half-year showing the actual rentals paid for approximately 12,000 houses, and on such information reliable figures can be compiled from year to year.

This improvement in the system of collection of information, however, has since been supplemented by an improvement in the system of computing index numbers to record the movements in house-rent. Index numbers published until recently have been based upon the average rentals as ascertained for the following classes of houses: Houses having three rooms or under, four rooms, five rooms, six rooms, seven rooms, eight rooms, and nine rooms and over. It was found, however, that the inclusion of the first and the last two classes sometimes resulted in the index numbers being materially altered by changes in the particular houses covered by the returns. In other words, the limited number of large and small houses which were included in the returns made it possible for the average rental for the large and small houses to fluctuate to a fictitious extent. It was considered advisable, therefore, to use in the index numbers the information relative to houses of four, five, six, and seven rooms only. Such houses comprise the great majority of the dwellings in the Dominion, and consequently the "field" covered by the index numbers has not been materially reduced by the exclusion of houses of less than four or more than seven rooms.

On account of these alterations in methods of collection and tabulation of information relative to rents, a totally new series of index numbers of house-rent has been computed, and figures given hereafter are comparable over the whole period of the retail-prices investigation. The results of the investigation are now quoted.

Index Numbers of House-rent Four Chief Centres, 1891–1919.

Base: Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Year.			Auckland.	Wellington.	Christchurch.	Dunedin.	Average of Four Centres.
1891	..	..	375	804	752	802	**683**
1892	..	..	417	804	761	802	**696**
1893	..	..	570	804	761	802	**734**
1894	..	..	610	804	783	802	**750**
1895	..	..	658	804	786	826	**769**
1896	..	..	703	823	786	826	**785**
1897	..	..	763	830	801	829	**806**
1898	..	..	770	855	818	828	**818**
1899	..	..	799	863	828	832	**831**
1900	..	..	799	934	909	854	**874**
1901	..	..	877	973	913	858	**905**
1902	..	..	892	996	929	871	**922**
1903	..	..	890	1027	917	878	**928**
1904	..	..	896	1058	920	907	**945**
1905	..	..	925	1091	957	911	**971**
1906	..	..	941	1111	1019	911	**996**
1907	..	..	941	1117	977	913	**987**
1908	..	..	961	1122	953	932	**992**
1909	..	..	981	1104	944	932	**990**
1910	..	..	991	1100	933	936	**990**
1911	..	..	998	1088	923	938	**987**
1912	..	..	1065	1093	920	950	**1007**
1913	..	..	1044	1164	937	958	**1026**
1914	..	..	1044	1173	961	965	**1036**
1915	..	..	1005	1186	967	970	**1032**
1916	..	..	987	1216	949	965	**1029**
1917	..	..	977	1240	967	945	**1032**
1918	..	..	1005	1295	1007	984	**1073**
1919	..	..	1044	1315	1054	992	**1101**

Movement of Weekly Rents, 1891–1919.
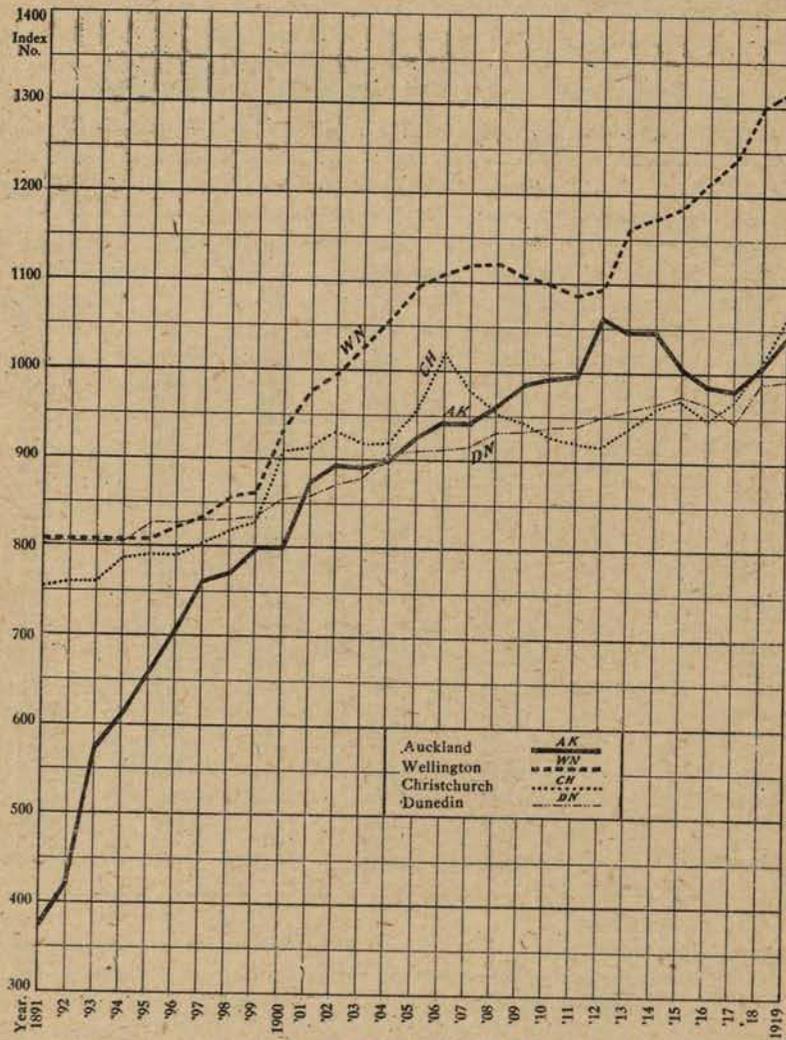
The great pre-war increase in house-rent in each of the four centres is unmistakably represented in the chart just given. How far this increase represents the improvement in the style of houses, better building, more conveniences, greater ornament, and how far it represents an increase of site-values due to increasing population it is impossible to determine.

Auckland and Wellington, it is interesting to notice, have shown the greatest and the most continuous increases ; and these are the towns which have increased most in population. Dunedin, which has increased least in population, shows the steadiest movement of rent, while Christchurch seems to have had a boom in 1906, with falling figures thereafter till 1912. House-rent in Wellington is for obvious reasons considerably above the level of the other centres.

The following figures show the increases in population and house-rent from 1891 to 1919 :—

	Population.			Index Number of House-rent.		
—	1891.	1914.	1919.	1891.	1914.	1919.
Auckland and suburbs..	51,287	114,284	144,646	375	1,044	1,044
Wellington and suburbs	34,190	75,143	100,898	804	1,173	1,315
Christchurch and suburbs	47,846	86,410	101,747	752	961	1,054
Dunedin and suburbs ..	45,869	69,057	72,048	802	965	992

Index Numbers of House-rent in the Average of the Four Centres, 1891–1919.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Year.	Index Number.	Increase per Cent. over 1891.	Year.	Index Number.	Increase per Cent. over 1891.
1891 ..	683	..	1906 ..	996	45·83
1892 ..	696	1·90	1907 ..	987	44·51
1893 ..	734	7·47	1908 ..	992	45·24
1894 ..	750	9·81	1909 ..	990	44·95
1895 ..	769	12·59	1910 ..	990	44·95
1896 ..	785	14·93	1911 ..	987	44·51
1897 ..	806	18·01	1912 ..	1007	47·44
1898 ..	818	19·77	1913 ..	1026	50·22
1899 ..	831	21·67	1914 ..	1036	51·68
1900 ..	874	27·96	1915 ..	1032	51·10
1901 ..	905	32·50	1916 ..	1029	50·66
1902 ..	922	34·99	1917 ..	1032	51·10
1903 ..	928	35·87	1918 ..	1073	57·10
1904 ..	945	38·36	1919 ..	1101	61·20
1905 ..	971	42·17			

Movement of Weekly Rent in the Average of the Four Chief Centres, 1891–1919.
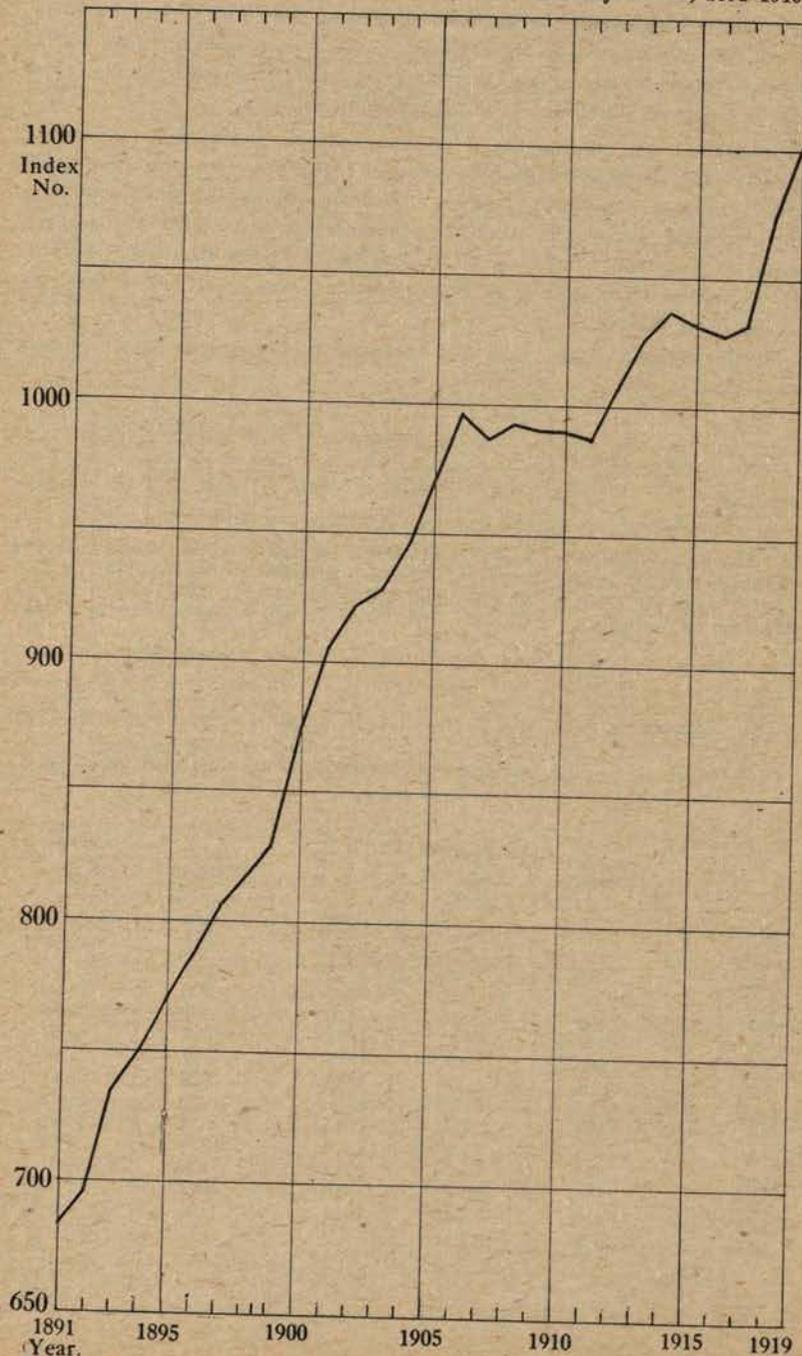
GROUP V.—FUEL AND LIGHT.

In most investigations into the cost of living the group fuel and light occupies an important place as one of the primary necessaries of life; but in New Zealand its importance seems to be less than in the older countries; perhaps because of the relatively greater income of the people. It has been ascertained by means of the household budget that on the average the expenditure on fuel and light is a little over 5 per cent. of the total income of the families rendering returns.

It has been impossible to settle on any group of commodities which were used in this period in the four towns in anything approaching comparable proportions. In Wellington electric light has been largely used for a number of years, in other towns its use was until very recently somewhat restricted. Similarly, the comparative usages of gas, kerosene, and candles vary greatly even in the four centres, and the variation is greater still between town and country.

It was impossible, then, to gain information for all the four towns over the whole period; but a small group of seven items has been selected, and prices have been collected for these items as far back as possible. These items are coal, coke, firewood, kerosene, electricity, and candles.

A further difficulty exists in that items coming within this group are ones which are in large degree subject to variation in grade from centre to centre. A commodity, more or less chemically pure, such as sugar, for example, is doubtless of the same grade throughout the Dominion, especially seeing that there is only one refinery, which is practically the sole source of supply in the country. Firewood, coal, &c., on the other hand, differ so much from locality to locality as to defy accurate attempts to base comparisons on physical standards. For want of a better plan, a quarter of a ton of coal and a quarter of a ton of firewood of the kind and quality most frequently sold in each centre is taken as the standard for that centre; obviously, therefore, standards may vary considerably from place to place.

The differences of consumption during the period and between town and town have, moreover, rendered difficult the adoption of weights. As before, the annual consumption of each item in 1914 has been taken as the mass-unit or weight, and this annual consumption is assumed not to have changed over the period. This assumption is in this instance arbitrary and unreal, and results, no doubt, in minimizing any tendency there may be for prices to rise, since a small consumption of high-priced electricity is weighted too heavily in early years. But the complete figures have been gathered from 1907 only, and therefore this objection loses a great deal of its force.

Index numbers can be computed for each year since 1893 in the case of Wellington, but only from 1903 for Christchurch, and from 1907 for Auckland and Dunedin. These index numbers are given herewith.

Index Numbers for Auckland, Wellington, Christchurch, and Dunedin, with Average of Four Centres for each Year for which particulars are obtainable, 1893 to 1919.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Year.			Auckland.	Wellington.	Christchurch.	Dunedin.	Average of Four Centres.
1893	..	..	..	1120	..	..	..
1894	..	..	..	1119	..	..	..
1895	..	..	..	1110	..	..	..
1896	..	..	..	1095	..	..	..
1897	..	..	..	1102	..	..	..
1898	..	..	..	1101	..	..	..
1899	..	..	..	1090	..	..	..
1900	..	..	..	1084	..	..	..
1901	..	..	..	1062	..	..	..
1902	..	..	..	1116	..	..	..
1903	..	..	..	1119	1078	..	..
1904	..	..	..	1108	1078	..	..
1905	..	..	..	1104	1063	..	..
1906	..	..	..	1103	1059	..	..
1907	..	..	840	1110	1063	887	975
1908	..	..	879	1110	1053	908	988
1909	..	..	899	1097	1079	896	993
1910	..	..	898	1054	1075	896	981
1911	..	..	899	1053	1074	893	980
1912	..	..	919	1091	1117	920	1012
1913	..	..	928	1101	1150	960	1035
1914	..	..	991	1151	1162	925	1057
1915	..	..	991	1146	1163	965	1066
1916	..	..	1103	1197	1252	1073	1156
1917	..	..	1286	1306	1490	1214	1324
1918	..	..	1378	1408	1591	1333	1428
1919	..	..	1497	1514	1727	1504	1561

Coal has normally been much cheaper in Dunedin than in any of the other centres, and the same is true as regards charges for electricity for lighting purposes. As the expenditure on these two items averages more than half the total expenditure on fuel and light, it is not surprising that Dunedin has usually ranked as the cheapest city for this group, as well as for food and rent.

Though it has not been possible to gain complete information in respect of the whole group of commodities included in Fuel and Light, owing to the increased use of electricity and to the variations in the use of the various lighting agents, yet one of the most important commodities—coal—has been used universally in every centre over the whole period. Since coal is such a primary necessity and its price is so important to the consumer, it has been thought worth while to give a separate index number to illustrate the variations in its retail price.

Index Numbers of Retail Prices of Coal in the Four Centres of New Zealand, 1891–1919.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Year.			Auckland.	Wellington.	Christchurch.	Dunedin.	Average of Four Centres.
1891	..	..	664	1039	923	692	830
1892	..	..	664	1039	923	692	830
1893	..	..	664	1039	923	692	830
1894	..	..	692	1039	981	692	851
1895	..	..	692	1039	981	692	851
1896	..	..	721	1039	981	692	858
1897	..	..	721	1039	981	692	858
1898	..	..	721	1039	981	692	858
1899	..	..	721	1039	1039	692	873
1900	..	..	750	1039	1039	707	884
1901	..	..	750	1039	1039	736	891
1902	..	..	779	1125	1039	750	923
1903	..	..	779	1125	1039	757	925
1904	..	..	779	1125	1039	801	936
1905	..	..	779	1125	1039	808	938
1906	..	..	808	1125	1039	822	949
1907	..	..	837	1125	1039	837	960
1908	..	..	894	1125	1039	837	974
1909	..	..	923	1103	1096	837	990
1910	..	..	923	1039	1096	837	974
1911	..	..	923	1039	1096	837	974
1912	..	..	952	1089	1154	873	1017
1913	..	..	966	1096	1197	923	1046
1914	..	..	1063	1212	1212	886	1093
1915	..	..	1042	1188	1212	950	1098
1916	..	..	1165	1203	1289	1084	1185
1917	..	..	1357	1272	1594	1237	1365
1918	..	..	1415	1344	1688	1342	1447
1919	..	..	1552	1450	1832	1543	1594

Auckland shown thus: _____
Wellington   ,,   ,,   - - - -
Christchurch   ,,   ,, ...
Dunedin   ,,   ,,   -·-·-·
Average   ,,   ,,   o—o—o
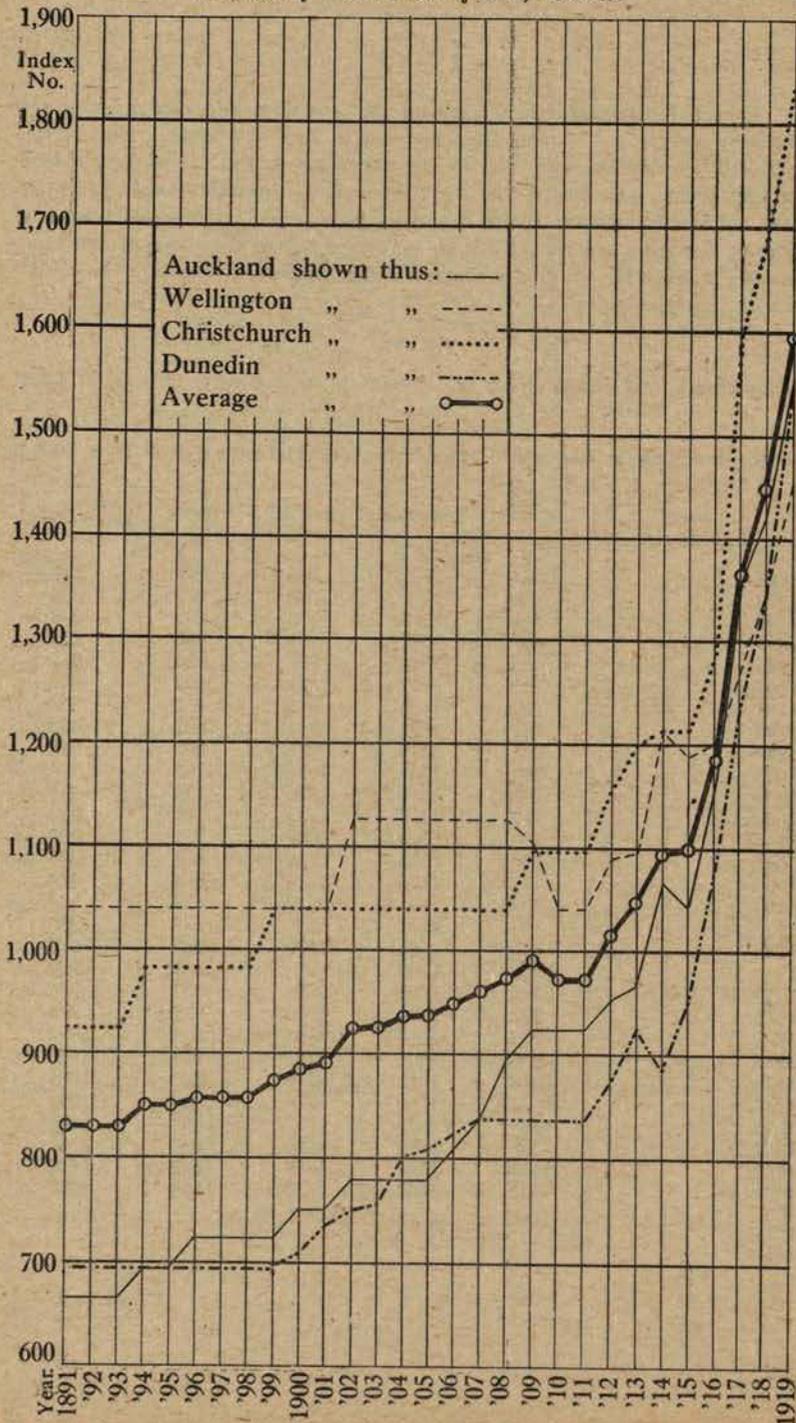
Though coal is largely used all over the Dominion, the varieties of coal in different localities vary greatly. Following the method used throughout this investigation, the retail prices considered have been the prices of the quality or grade most usually sold—*i.e.*, the predominant or most frequent price. Where the predominant qualities vary greatly from one locality to another this method necessarily affects the comparability of the prices viewed merely as prices; but the measurement of the cost of living is not affected, since it is a primary object of the inquiry to ascertain what is actually paid for the goods actually used.

It will be very noticeable that Auckland and Dunedin prices of coal were prior to 1917 very considerably lower than those of Christchurch and Wellington. The explanation seems to have been the use of local coals—Taupiri in Auckland, and Kaitangata and Green Island in Dunedin. These local brown coals considerably cheapen the expense of fuel.

Christchurch and Wellington, on the other hand, have used the more expensive coals from the west coast of the South Island, and from Newcastle and Greta in Australia. These sea-borne coals are necessarily more expensive, especially when, as on the West Coast, bar harbours hinder shipping. In Christchurch, too, a heavy tunnel rate must be paid on all sea-borne goods. During the war period, although the price of coal has remained remarkably high in Christchurch, as compared with the other centres Wellington has greatly improved its relative position.

The general tendency of prices has been markedly upward, and very steady except for a drop in prices in 1910, and a rapid rise in the rate of increase under the influence of war conditions.

ALL GROUPS.

The following index numbers, covering 50 to 60 per cent. of normal household expenditure, and that the most necessary part, were probably a very fair index of the cost of living prior to the outbreak of war. Since 1914, however, the prices of clothing have notoriously risen out of all proportion to those of other commodities, and it is shown in Chapter VI that the increase in the three food groups alone is more in accord with the actual increases in the "cost of living," in so far as the latter part of the war period is concerned, than is the index number for the food groups in combination with rent and fuel and light.

The explanation is a simple one, and is found in the fact that while the prices of clothing, &c., have soared phenomenally since 1914, rents have not risen greatly during that period. The net result on combining rent, fuel and light, clothing, &c., in their proper proportions is to show a war increase for these three groups, taken in conjunction, such that it is closely approximate to that shown by the three food groups; although by adding rent and fuel and light to the three food groups the effect is to cover a wider range of expenditure, yet we are at the same time introducing elements which have varied during the war period in a manner different from the general level of retail prices, and to that extent we are jeopardizing the validity of the figures as a criterion to the cost of living.

FOOD GROUPS AND RENT, 1891–1919.

Index Numbers for Auckland, Wellington, Christchurch, Dunedin, and for Average of Four Centres, 1891–1919.*

(Base : Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Year.			Auckland.	Wellington.	Christchurch.	Dunedin.	Average of Four Centres.
1891	..	..	730	881	*	859	*
1892	..	..	753	878	*	859	*
1893	..	..	827	893	*	862	*
1894	..	..	855	888	*	847	*
1895	..	..	829	889	*	846	*
1896	..	..	852	879	*	852	*
1897	..	..	862	872	*	865	*
1898	..	..	911	928	*	890	*
1899	..	..	884	892	872	842	873
1900	..	..	878	918	912	869	894
1901	..	..	908	945	936	891	920
1902	..	..	934	975	950	912	943
1903	..	..	926	975	945	912	940
1904	...	..	929	985	941	899	939
1905	..	..	995	1021	980	937	983
1906	..	..	1002	1049	1005	946	1001
1907	..	..	999	1046	985	932	991
1908	..	..	1006	1050	981	937	994
1909	..	..	1010	1035	943	926	979
1910	..	..	1012	1046	950	955	991
1911	..	..	1004	1038	946	950	985
1912	..	..	1044	1053	974	982	1013
1913	..	..	1061	1115	974	983	1033
1914	..	..	1087	1125	1015	1035	1066
1915	..	..	1135	1201	1101	1114	1138
1916	..	..	1186	1262	1144	1140	1183
1917	..	..	1231	1339	1210	1194	1244
1918	..	..	1320	1439	1281	1306	1337
1919	..	..	1370	1482	1363	1360	1394

* Groceries figures not available for Christchurch prior to 1899.

The influence of house-rent on the general level of retail prices was evidently, prior to the war, in the direction of greatly increasing the expenditure of the average household. A comparison of the graph on page 95 with that on page 87 clearly establishes the connection, as, for instance, in Christchurch in 1906.

Movement of Retail Prices of Food and Rent, in combination, 1891–1919.
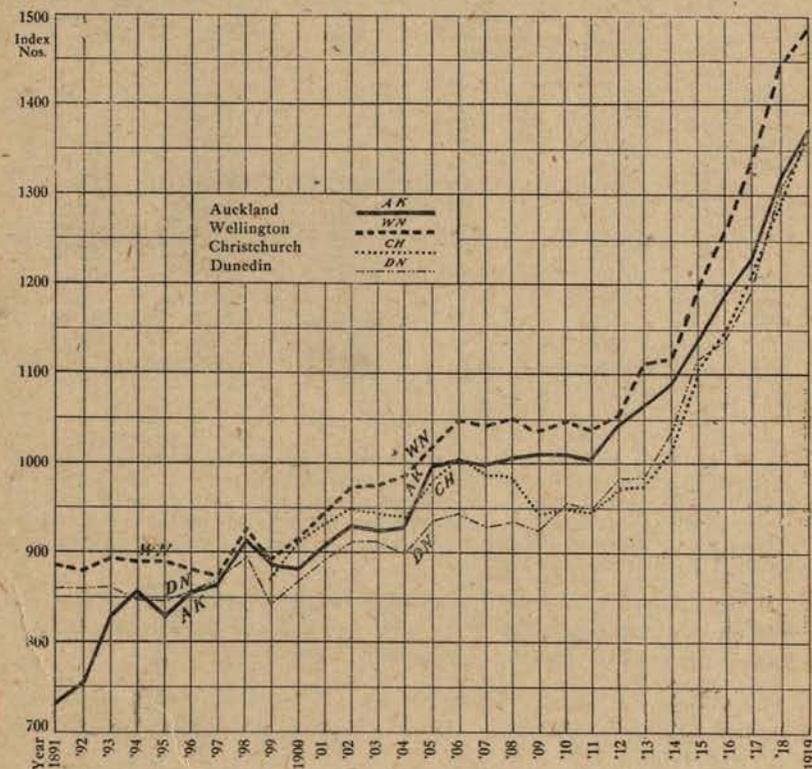
It will be noticed that the relative positions of the towns have been altered by the inclusion of the rent-factor. Dunedin is still the least expensive town, but Wellington has leaped to the position of the most expensive.

The general tendency of prices of food and house-rent was undoubtedly upward even before the war, and the increase was until 1914 very uniform and very real. The following table shows index numbers for the three food groups and house-rent since 1891, using the first year, 1891, as base, so as to obtain the percentage increase for each succeeding year over the prices of 1891.

Index Numbers of Retail Prices of Food and Rent in the Average of the Four Centres of New Zealand, 1891–1919.

(Base : Average annual aggregate expenditure, four chief centres, 1891 = 1000.)

Year.	Index Number.	Percentage Increase over 1891.	Year.	Index Number.	Percentage Increase over 1891.
1891 ..	1000	..	1906 ..	1199	19·90
1892 ..	1001	0·10	1907 ..	1187	18·70
1893 ..	1034	3·40	1908 ..	1190	19·00
1894 ..	1035	3·50	1909 ..	1171	17·10
1895 ..	1026	2·60	1910 ..	1187	18·70
1896 ..	1032	3·20	1911 ..	1180	18·00
1897 ..	1041	4·10	1912 ..	1213	21·30
1898 ..	1087	8·70	1913 ..	1237	23·70
1899 ..	1046	4·60	1914 ..	1277	27·70
1900 ..	1071	7·10	1915 ..	1363	36·30
1901 ..	1102	10·20	1916 ..	1417	41·70
1902 ..	1129	12·90	1917 ..	1490	49·00
1903 ..	1126	12·60	1918 ..	1601	60·10
1904 ..	1125	12·50	1919 ..	1669	66·90
1905 ..	1177	17·70			

NOTE.—In the foregoing table the expenditure on groceries, 1891-98, is the average of Auckland, Wellington, and Dunedin, Christchurch prices not being available. The four centres are averaged for the other groups, and the completeness given to the table justifies the expedient used, especially as calculations for succeeding years show that the difference between the results obtained and the complete average of the four centres is so small as to be negligible, amounting usually to one unit in the index number.

The inclusion of the fifth group—fuel and light—which is possible from 1907, enables index numbers to be computed covering approximately three-fifths of the average household expenditure.

Index Numbers of Retail Prices of Groceries, Dairy-produce, Meat, House-rent, and Fuel and Light Groups in the Four Chief Centres of New Zealand, 1907–1919.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Year.			Auckland.	Wellington.	Christchurch.	Dunedin.	Average of Four Centres.
1907	..	..	982	1053	993	927	989
1908	..	..	992	1057	989	934	993
1909	..	..	998	1041	958	922	980
1910	..	..	1000	1047	964	949	990
1911	..	..	992	1040	959	944	984
1912	..	..	1031	1057	989	975	1013
1913	..	..	1046	1114	994	981	1034
1914	..	..	1077	1128	1031	1024	1065
1915	..	..	1120	1195	1108	1098	1130
1916	..	..	1177	1255	1155	1133	1180
1917	..	..	1236	1323	1240	1196	1249
1918	..	..	1326	1436	1314	1309	1346
1919	..	..	1383	1485	1402	1375	1411

Movement of Retail Prices of Food, Rent, and Fuel and Light, in combination, 1891–1919.
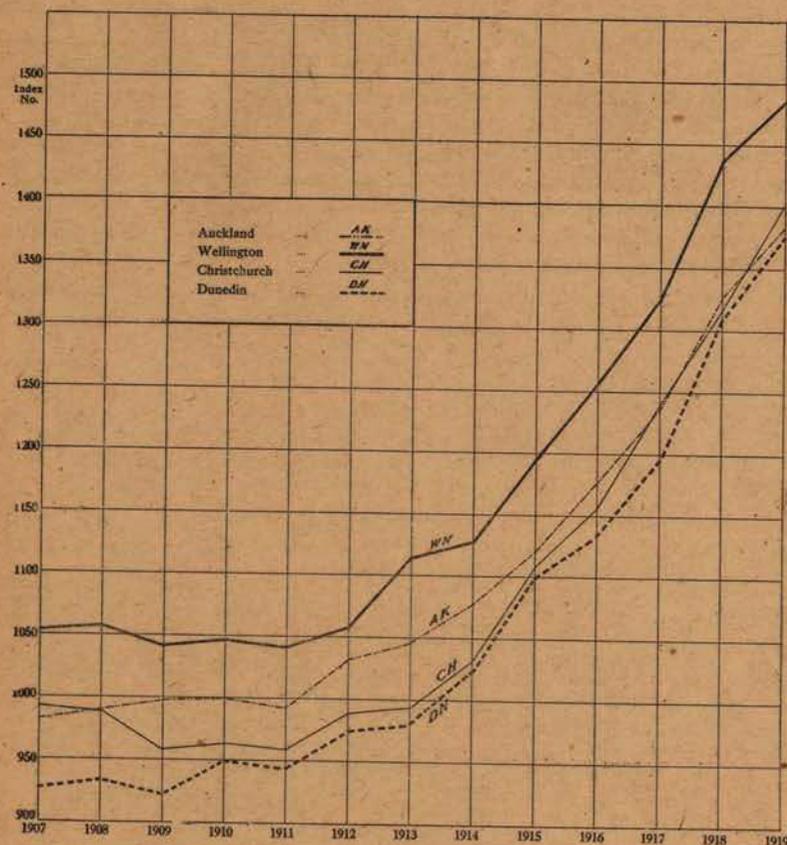
The inclusion of fuel and light, which amounts only to 10 per cent. of the aggregate expenditure (excluding expenditure falling within the clothing and miscellaneous classes), and which normally moves mainly in the same direction as the other groups, did not prior to the war greatly affect the index number. It has been shown, however, on page 93 that the movement of this group, like the rent group, has not since the outbreak of war been strictly in accord with the movement of the general level of prices, and it is therefore not surprising to find that its inclusion does in recent years appreciably affect the index number.

The diagram illustrates the relative price-levels in each centre, and brings out clearly the tendency for prices to rise higher in recent years, since 1914 especially.

4—Prices.

RELATIVE EXPENDITURE ON EACH GROUP.

It has been explained on page 5 of this report that throughout the inquiry a constant "regimen" was assumed. That is, it was necessary to assume that the relative annual consumptions of the various commodities had not changed between 1891 and 1919, and the whole system of weighting was based on this assumption. The fact that some prices rose more than others is, however, reflected in the varying proportions of aggregate expenditure on the different groups as displayed by the following table. Rent having risen in price most and groceries least, prior to the war, accounts for a change in relative aggregate expenditures. Since 1914, however, groceries and the other food groups have risen to a far greater extent than rent, and this is reflected in the greatly altered percentages of expenditure in 1919.

In order to show the relative importance given to each group the following table summarizes the relative proportions of the total expenditure covered by each group.

Aggregate Expenditure on each Group expressed as a Percentage of the Total Aggregate Expenditure on Food, Rent, and Fuel and Light Groups in the Average of the Four Centres, 1891 to 1919.

Group.		1891.	1901.	1911.	1914.	1919.
Groceries ..	..	34·27*	29·14	27·13	27·32	31·05
Dairy-produce	..	14·59*	14·27	15·11	14·80	16·22
Meat ..	..	22·72*	21·71	22·22	23·42	24·82
Rent ..	..	28·42*	34·88	35·54	34·46	27·91
Total ..		100·00	100·00	100·00	100·00	100·00

* Average of three centres, Auckland, Wellington, and Dunedin.

Including fuel and light the proportions are,—

Group.		1911.	1914.	1919
Groceries ..	..	24·25	24·52	27·39
Dairy-produce	..	13·51	13·24	14·31
Meat ..	..	19·86	20·94	21·89
Rent ..	..	31·76	30·81	24·62
Fuel and light	..	10·62	10·59	11·79
Total ..	..	100·00	100·00	100·00

The relative aggregate expenditure between the groups is just as important a question of weighting as the adjustment of commodities within each group. Throughout this inquiry the utmost care has been taken to give each commodity

and each group its proper economic weight. It is interesting, therefore, to compare the results given above with the proportions of expenditure given by the Labour Department's investigation of 1910 into household budgets. Fuller details as to this investigation will be found in Chapter VII.

This present inquiry covers only about 60 per cent. of the total expenditure as ascertained by the budgets; but within this percentage the relative proportions are in close agreement.

The results are summarized below :—

Group.				Household Budget Inquiry of Labour Department, 1910.	Retail Prices, of Present Investigation (Base Period).
				Per Cent.	Per Cent.
Food ..	..	..	..	57·20	57·67
Rent..	..	..	..	34·04	31·66
Fuel and light	..	..	..	8·76	10·67
Total	..	..	..	100·00	100·00

SUMMARY OF INDEX NUMBERS.

It is convenient at this stage to summarize the results so far obtained by the following table giving index numbers for the average of the four centres, for each group and the five groups combined, as far as it is possible to calculate them. The average of the four centres is the best approximation available for years prior to 1914 to a Dominion index number of the general level of retail prices, and though it necessarily leaves out of account the distinction between town and country, this, it has been proved by experiment, makes little difference in the index numbers except in the case of rent, which is well known to be lowest outside the four centres. In any case, over a third of the population of the Dominion live in these four centres.

No attempt has been made at weighting for population, but the four centres are sufficiently alike to make weighting unnecessary. It has been proved by experiment, and is demonstrable on theoretical grounds (see page 6), that systems of weighting make only an infinitesimal difference in the index numbers.

It will be very apparent from the table on page 100 and the chart on page 101 that the combination with the food groups of the rent group, either alone or in conjunction with the fuel and light group, made no marked difference in the index numbers prior to 1914. Since that date, however, rent and fuel and light have not risen in price so rapidly as food, whence it follows that the effect of including these two additional groups is to lower appreciably the value of the index number. It was shown on page 93, and will be further apparent in Chapter VI, that clothing has risen out of all proportion to the other groups, very approximately neutralizing the effects of the slower rate of increase in the rent and fuel and light groups, so that the best index

4*

of the war increase in the whole range of commodities forming part of the expenditure of the average household happens to be *at present* given by the three food groups alone, without combining therewith the rent and fuel and light groups.

Since 1914 it has been possible to compute index numbers to cover twenty-five centres throughout New Zealand, and full details of this investigation will be found in subsequent chapters of this portion of the report.

Index Numbers of Retail Prices of the various Groups of Commodities, singly and in combination, in the Average of the Four Chief Centres, 1891 to 1919.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Year.	Group I: Groceries.	Group II: Dairy-products.	Group III: Meat.	Groups I–III: Food Groups.	Group IV: Rent.	Groups I–IV: Food and Rent.	Group V: Fuel and Light.	Groups I–V: Food, Rent, and Fuel and Light.
1891	..	..	806	864	..	683	..	..	..
1892	..	..	835	866	..	696	..	..	..
1893	..	..	828	896	..	734	..	..	..
1894	..	..	817	939	..	750	..	..	..
1895	..	..	842	898	..	769	..	..	..
1896	..	..	825	892	..	785	..	..	..
1897	..	..	830	855	..	806	..	..	..
1898	..	..	847	923	..	818	..	..	..
1899	..	919	840	905	896	831	873	..	..
1900	..	948	838	899	906	874	894	..	..
1901	..	971	876	909	928	905	920	..	..
1902	..	1016	892	919	954	922	943	..	..
1903	..	983	897	933	946	928	940	..	..
1904	..	962	882	935	935	945	939	..	..
1905	..	1062	878	975	990	971	983	..	..
1906	..	1072	914	977	1003	996	1001	..	..
1907	..	1016	955	989	993	987	991	975	989
1908	..	999	1020	971	994	992	994	988	993
1909	..	973	958	980	972	990	978	993	980
1910	..	1014	970	977	991	990	991	981	990
1911	..	968	993	995	983	987	985	980	984
1912	..	1022	1029	1001	1017	1007	1013	1012	1013
1913	..	1023	1050	1047	1037	1026	1033	1035	1034
1914	..	1055	1054	1136	1082	1036	1066	1057	1065
1915	..	1202	1152	1219	1196	1032	1138	1066	1130
1916	..	1214	1288	1321	1267	1029	1183	1156	1180
1917	..	1298	1363	1437	1360	1032	1244	1324	1249
1918	..	1490	1420	1525	1486	1073	1337	1428	1346
1919	..	1567	1508	1574	1555	1101	1394	1561	1411

NOTE.—This table is comparable vertically but not horizontally, since the different groups have different bases.

This table and the diagram following summarize the information contained in the general tables previously given.

Movement of Retail Prices (Average of Four Centres) for each Group and Combined Groups, 1891–1919.
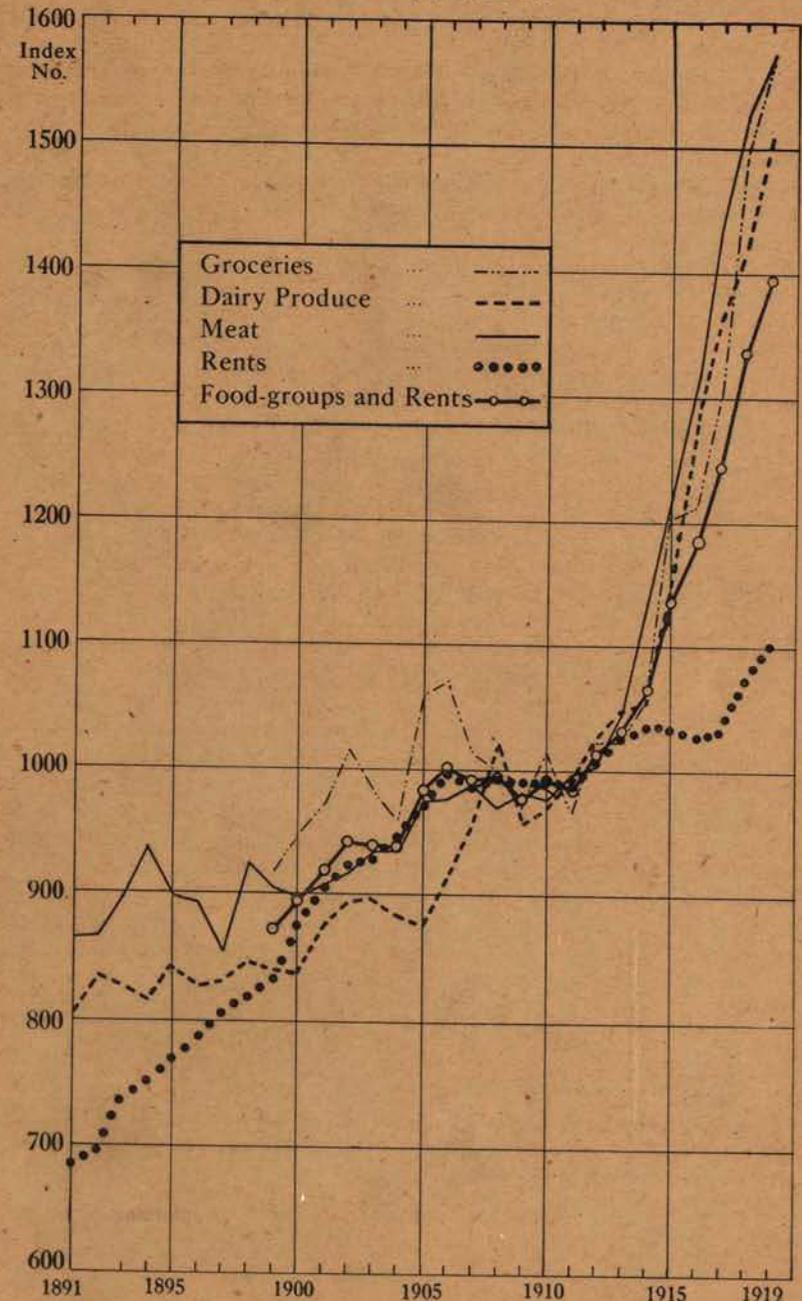
CHAPTER IV.—THE PURCHASING-POWER OF MONEY, FOUR CHIEF CENTRES, 1891–1919.

A. "THE SHRINKING SOVEREIGN."

The phrase "purchasing-power of money" has a definite technical meaning in economics as the inverse of the general level of prices; but, expressing as it does in scientific terms a fact of everyday life, the phrase is used more loosely in a popular sense simply to direct attention to the fact that the value of money in relation to goods is a variable quantity. It is a commonplace that twenty shillings to-day are not worth as much as they were four or five years ago, nor were they worth four or five years ago as much as they were worth twenty years before that; but the sovereign four or five years ago contained just as much and just as fine gold as it did twenty-five years ago. What did change was the amount of commodities which the sovereign would purchase. The popular expression that a sovereign is worth less at one time than at another, though not strictly scientific and accurate, yet is commonly used and contains some truth.

The value of any article is fixed jointly by demand and supply, and merely represents its power in exchange compared with the power of other commodities. For instance, a sack of wheat may be worth two and a half sacks of oats at a particular time, and a year later may be worth more or less. But no one, except in primitive places, quotes wheat in terms of oats, or *vice versa*; it has been more convenient to fix on a definite article which shall be the standard of value, and, besides this function, shall also perform the services of a medium of exchange. By process of evolution gold has now become under normal conditions the definite standard of value over the civilized world, and all goods are normally bought and sold in terms of gold.

But gold has an intrinsic value apart from its use as currency, and in former days much inconvenience was caused by changes in the ratio between the value of gold as coin and as bullion. In England the difficulty was met in 1816 by the Coinage Act, which definitely settled this ratio once for all by enacting that 20 lb. of standard gold should be coined into 934½ sovereigns; or, in other words, that an ounce of standard bullion should be the equivalent of £3 17s. 10½d. in coins. In this way the relation of coined to uncoined gold is fixed by Act of Parliament.

Although the price of gold is fixed, its value changes in relation to other commodities, either as a result of changes in the supply or demand of gold, or from similar variations in the case of commodities, and this change can be expressed only by the prices of those commodities increasing or decreasing, since by hypothesis the price of gold cannot vary. As prices rise, the pound necessarily commands less goods, and *vice versa*. If the purchasing-power of the golden sovereign is thus liable to variation, even though the amount of gold it contains is never altered, how much more will the value of the "pound" tend to vary when (as at the time of writing) it is merely a piece of paper of almost infinitesimal intrinsic value but passing current as of so much exchange value simply on account of the fact that such paper has been issued in quantities not unlimited and of a legislative decree whereby (unless the currency of the Act is meantime extended or its provisions are otherwise modified) such paper is declared to be redeemable at the bank of issue at its face value in gold after the 31st December, 1922.

The phrase "worth of the sovereign" has become fixed in the popular mind, but it should be remembered that when in 1920 the "worth of a sovereign" is spoken of, what is really meant is the "purchasing-power of a pound note" or of twenty shillings, as the sovereign is not in general circulation, and, even when it is, in many cases it admittedly commands a premium. The table given below is intended to give some definite data on which to base comparisons of the purchasing-power of a pound at different times, though the foregoing cautions must not be forgotten. In the following table these figures are for convenience shown in terms of shillings and pence, so that a figure may be obtained which will give expression to the statement which is being illustrated.

TABLE A.

Relative Worth in Terms of General Commodities (but stated for Convenience in Terms of Money) represented by Twenty Shillings during the Years 1891–1919, taking the average "Worth" in the Years 1909–13 as Base = 20s.

Year.	Group I: Groceries.		Group II: Dairy-produce.		Group III: Meat.		Groups I–III: Food Groups.		Group IV: Rent.		Groups I–IV: Food and Rent.
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s. d.
1891 ..	..		24	9¾	23	1½	..		29	3½	..
1892 ..	..		23	11½	23	1½	..		28	8¾	..
1893 ..	..		24	1½	22	3¾	..		27	3	..
1894 ..	..		24	5¾	21	3½	..		26	8	..
1895 ..	..		23	9	22	3½			26	0	..
1896 ..	..		24	3	22	5			25	5¾	..
1897 ..	..		24	1½	23	4¾	..		24	9¾	..
1898 ..	..		23	7½	21	8	..		24	5½	..
1899 ..	21	9¼	23	9¾	22	1½	22	3¾	24	0¾	22 11
1900 ..	21	1½	23	10½	22	3	22	1	22	10½	22 4½
1901 ..	20	7¼	22	10	22	0	21	6¼	22	1½	21 8¾
1902 ..	19	8¼	22	5	21	9¼	20	11½	21	8¼	21 2¾
1903 ..	20	4¼	22	3½	21	5¼	21	1½	21	6½	21 3¼
1904 ..	20	9½	22	8	21	4¼	21	4¼	21	2	21 3½
1905 ..	18	10	22	9¼	20	6¼	20	2½	20	7¼	20 4¼
1906 ..	18	8	21	10½	20	5¾	19	11½	20	1	19 11½
1907 ..	19	8¼	20	11½	20	2¾	20	1¾	20	3¼	20 2¾
1908 ..	20	0¼	19	7½	20	7¼	20	1½	20	2	20 1½
1909 ..	20	6¾	20	10½	20	5	20	7	20	2½	20 5½
1910 ..	19	8½	20	7½	20	5¾	20	2½	20	2½	20 2½
1911 ..	20	8	20	1½	20	1¼	20	4½	20	3½	20 3¾
1912 ..	19	6¾	19	5½	19	11¾	19	8	19	10¼	19 9
1913 ..	19	6¼	19	0½	19	1½	19	3¼	19	6	19 4¼
1914 ..	18	11½	18	11½	17	7½	18	5½	19	3½	18 9¼
1915 ..	16	7¾	17	4¼	16	5	16	8¼	19	4¼	17 7
1916 ..	16	5¾	15	6½	15	1¾	15	9½	19	5¼	16 10¾
1917 ..	15	5	14	8	13	11	14	8½	19	4¼	16 1
1918 ..	13	5	14	1¼	13	1¼	13	5¼	18	7¾	14 11½
1919 ..	12	9¼	13	3¾	12	8½	12	10¼	18	2	14 4¼

NOTE.—These figures are comparable vertically, but not horizontally.

Since the purchasing-power of money is the inverse of the general level of prices—in other words, since high prices mean low purchasing-power for money and low prices high purchasing-power, the correspondence of a high figure in the foregoing table with a low index number and of a low figure above with a high index number is what one is led naturally to expect. The above figures for any one group in a given year have been arrived at, by multiplying 20s. by the reciprocal of the proportion the corresponding index number bears to 1000 (the index number for the base period). Thus the index number for the Meat group in 1891 was 864. The proportion this number bears to 1000 is $\frac{864}{1000} = \frac{108}{125}$, and the reciprocal of this is $\frac{125}{108}$. Multiplying by 20s. we have 20s. $\times \frac{125}{108} =$ 23s. 1¾d. This means that, whereas in 1891 20s. would buy that quantity of meat which at the average prices of the years 1909–13 would have cost 23s. 1¾d., in 1914 the same sum would buy only as much as 17s. 7¼d., and in 1919 as much as 12s. 8¼d., would have bought had prices remained as they were during the average of the years 1909–13. Similarly, while in 1891 a pound would buy that quantity of dairy-produce which at the average prices of the years 1909–13 would have cost 24s. 9¾d., it would buy only as much of those products in 1914 as 18s. 11¾d., and in 1919 as 13s. 3¼d., would have bought if prices had remained at the average of the base years 1909–13. It will be seen from the table that great changes have taken place in the worth of the pound since 1891.

The figures of the table, therefore, represent goods, but as goods vary so much amongst themselves as regards nature and the manner in which they are sold (whether by number, weight, value, &c.), goods assessed at the mean prices ruling in the four chief centres during the average of the years 1909–13 are taken as the standard, and the quantity of goods purchasable by the monetary unit from year to year has for convenience been expressed in terms of goods assessed at these standard prices.

B. THE PRICES-LEVEL.

It is advisable to illustrate the changing level of prices in the opposite way from the last section by focussing attention on the amount of money required to purchase a given quantity of goods, instead of on the quantity of goods which can be purchased with a stated amount of money, in this case twenty shillings.

The following table, therefore, is opposite in movement to the one last given and similar in this respect to the tables of index numbers quoted in the last chapter. Indeed, this table is computed directly from the table of index numbers: instead of the base (the average annual aggregate expenditure of the four centres during 1909–13) being taken as 1000 it is taken as 20s., and the figures thus computed, constituting the first four columns of the table, show the amounts that would have to be paid in each year to purchase that amount of food which would have cost 20s. in the base years 1909–13 (in the average of the four centres). In the same way the table shows the amount required to purchase from time to time that amount of house accommodation which would, on the average of the four centres for the years 1909–13, have cost 20s.

TABLE B.

Table showing for each Year 1891–1919 the Amount necessary on the Average to purchase the same Quantity of Foodstuffs and House Accommodation as could have been purchased for Twenty Shillings in the Average of the Four Centres during the Years 1909–13.

Base of table : Average annual aggregate expenditure, four chief centres, 1909–13 = 20s.)

Year.	Group I: Groceries.	Group II: Dairy-produce.	Group III: Meat.	Groups I–III: Food Groups.	Group IV: Rent.	Groups I–IV: Food and Rent.
	s. d.	s. d	s. d.	s. d.	s. d.	s. d.
1891 ..	..	16 1½	17 3¼	..	13 8	..
1892 ..	..	16 8½	17 3¾	..	13 11	..
1893 ..	..	16 6¾	17 11	..	14 8¼	..
1894 ..	..	16 4	18 9¼	..	15 0	..
1895 ..	..	16 10	17 11½	..	15 4½	..
1896 ..	..	16 6	17 10	..	15 8½	..
1897 ..	..	16 7¼	17 1¼	..	16 1½	..
1898 ..	..	16 11½	18 5½	..	16 4½	..
1899 ..	18 4½	16 9½	18 1¼	17 11	16 7½	17 5¼
1900 ..	18 11½	16 9	17 11¾	18 1¼	17 5½	17 10¼
1901 ..	19 5	17 6¼	18 2¼	18 6¾	18 1¼	18 4¼
1902 ..	20 3¾	17 10	18 4½	19 1	18 5¼	18 10¼
1903 ..	19 8	17 11½	18 8	18 11	18 6¾	18 9¼
1904 ..	19 3	17 7¾	18 8¼	18 8½	18 10¾	18 9¼
1905 ..	21 3	17 6¾	19 6	19 9½	19 5	19 8
1906 ..	21 5¼	18 3¼	19 6½	20 0¾	19 11	20 0¼
1907 ..	20 3¾	19 1½	19 9¼	19 10¼	19 9	19 9¾
1908 ..	19 11¾	20 4¾	19 5	19 10½	19 10	19 10¼
1909 ..	19 5½	19 2	19 7½	19 5¼	19 9¼	19 7
1910 ..	20 3¼	19 4¾	19 6¼	19 9½	19 9½	19 9¼
1911 ..	19 4¼	19 10¼	19 10¾	19 8	19 9	19 8½
1912 ..	20 5¼	20 7	20 0¼	20 4	20 1¾	20 3
1913 ..	20 5½	21 0	20 11¼	20 9	20 6¼	20 8
1914 ..	21 1¼	21 1	22 8½	21 7¾	20 8½	21 3¾
1915 ..	24 0½	23 0½	24 4½	23 11¼	20 7¾	22 9
1916 ..	24 3¼	25 9	26 5	25 4½	20 7	23 8
1917 ..	25 11¼	27 3¼	28 9	27 2½	20 7¾	24 10¼
1918 ..	29 9½	28 4½	30 5¾	29 9	21 5½	26 8¼
1919 ..	31 4	30 2	31 5¾	31 1¼	22 0¼	27 10¼

NOTE.—These figures are comparable vertically, but not horizontally.

CHAPTER V.—INDEX NUMBERS, ETC., TWENTY-FIVE TOWNS, 1914–19.

DOMINION INDEX NUMBERS, 1914–19.

To obtain a general estimate of the course of prices for the whole Dominion it is clearly insufficient to collect data merely from the four chief centres. This was early recognized, and from the beginning of the year 1914 particulars of retail prices have been obtained for each month in twenty-five different towns of New Zealand. The twenty-five towns were selected as representative of New Zealand as a whole; they cover both Islands, from Whangarei to Invercargill, and represent coastal and inland districts and large and small centres. The data on which the index numbers are based are collected each month by the local Inspectors of Factories from representative retailers, and the index numbers are computed in the Census and Statistics Office. The average prices for each town, together with the index numbers computed therefrom, are published in the "Monthly Abstract of Statistics." Index numbers are also computed monthly and published in the Abstract, along with quarterly and six-monthly price-indexes based on the average prices of the several months comprised in the period, and therefore differing materially from the prices current at the end of those periods. In comparing such periods regard must be paid to the influence of seasonal fluctuations in price and consumption of certain commodities, notably milk, butter, potatoes, and eggs.

The fact must not be lost sight of that an element of artificiality is introduced because the weights are calculated on an annual average consumption, while actually consumption varies with price. When prices are high it is, in normal circumstances, a *prima facie* indication that supplies are short and therefore that consumption is lessened, and when prices fall it is usually through an increase in supply, so that, for example, the high price of potatoes in December and March quarters tends to have an undue influence on the index numbers for those periods.

To obtain a general estimate of the course of prices for the whole Dominion it has been necessary to obtain a weighted average of the index numbers for each town. It is obvious that it would not be strictly correct to obtain a simple average of the prices in Alexandra, with a population at the census of 1916 of 679, and in Auckland, with a population of over 130,000. So each town has been weighted according to its population, and a composite index number has been obtained, which, though artificial, represents the average level of prices in the Dominion.

It will be seen that the twenty-five towns considered have a total population of approximately half the population of New Zealand, so that they are representative of the Dominion. The four centres, which include a third of the Dominion's population, account for about 70 per cent. of the population of the twenty-five towns, so that their influence in the Dominion index number is naturally preponderating. This, however, is actually the case, because the centres not only comprise a great part of the people of the Dominion, but the standard set in them is followed by the whole countryside. The population of the towns is shown as enumerated at the census of October, 1916.

Town.	Population.	Town.	Population.	Town.	Population.
Auckland ..	133,712	Napier ..	15,131	Greymouth..	4,863
Wellington ..	95,235	Dannevirke	3,336	Ashburton ..	3,109
Christchurch	92,733	New Plymouth	9,795	Timaru ..	13,716
Dunedin ..	68,716	Wanganui ..	19,517	Oamaru ..	5,140
Whangarei ..	3,294	Taihape ..	1,927	Alexandra ..	679
Hamilton ..	7,538	Palmerston N.	14,006	Gore ..	3,551
Rotorua ..	2,845	Masterton ..	5,894	Invercargill..	17,862
Waihi ..	4,774	Blenheim ..	3,822		
Gisborne ..	12,660	Nelson ..	9,962	Total ..	553,817

In order to make the index numbers for these towns comparable in every respect, and also comparable with the index numbers previously given for the four chief centres since 1891, the same base has been retained—viz., the average annual aggregate expenditure in the four chief centres in the five years 1909–13.

The yearly Dominion weighted index numbers thus obtained (hereinafter commonly referred to as "the Dominion weighted average" in contradistinction to the "average of the four chief centres," on which the figures quoted in Chapter III are based), are shown in the table below:—

Group.	1914.	1915.	1916.	1917.	1918.	1919.
Groceries	1064	1206	1219	1305	1488	1570
Dairy-produce ..	1045	1153	1274	1353	1415	1504
Meat	1142	1235	1348	1463	1545	1591
Three food groups ..	1087	1203	1276	1370	1491	1561
Rent	984	995	987	1005	1033	1062
Food and rent ..	1050	1125	1173	1240	1326	1383

For the period 1891–1914 it was possible to get returns only from the four chief centres, so that any comparison of a Dominion index number with the index number previously published is not strictly accurate. It is possible only to compare the average of the four chief centres, which, especially in rent, differ materially from the Dominion weighted average. A table of comparison is given below:—

DIFFERENCE BETWEEN INDEX NUMBERS OF FOUR CHIEF CENTRES AND THOSE OF TWENTY-FIVE TOWNS, 1914–19.

Group.	1914.	1915.	1916.	1917.	1918.	1919.
Groceries	— 9	— 4	— 5	— 7	+ 2	— 3
Dairy-produce ..	+ 9	— 1	+14	+10	+ 5	+ 5
Meat	— 6	—16	—27	—26	—20	—17
Three food groups ..	— 5	— 7	— 9	—10	— 5	— 6
Rent	+52	+37	+42	+27	+40	+39
Food and rent ..	+16	+13	+10	+ 4	+11	+11

NOTE.—The sign (+) denotes an excess of the index number of the four chief centres over that of the twenty-five towns. The sign (—) denotes an excess of the index number of the twenty-five towns over that of the four chief centres.

From this table it may be seen that groceries and meat are both more expensive in the smaller towns than in the centres, though the difference is not usually very great, and is more than counterbalanced by the cheaper dairy-produce and rents, especially the latter, in the smaller towns.

The tables now given are comparable both horizontally and vertically, since each column has the same base. Horizontally they show variations in time, vertically variations according to locality.

GROUP I.—GROCERIES.—TWENTY-FIVE REPRESENTATIVE TOWNS.

Index Numbers, 1914–19, for Twenty-five Representative Towns in New Zealand.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13＝1000.)

Town.	1914.	1915.	1916.	1917.	1918.	1919.
Auckland	1035	1172	1196	1268	1461	1535
Wellington	1082	1228	1269	1395	1579	1644
Christchurch	1046	1188	1197	1279	1417	1530
Dunedin	1056	1219	1192	1248	1503	1560
Whangarei	1064	1239	1285	1340	1552	1666
Hamilton	1115	1242	1298	1314	1496	1593
Rotorua	1154	1303	1320	1416	1574	1693
Waihi	1098	1238	1271	1311	1456	1545
Gisborne	1123	1264	1277	1386	1585	1693
Napier	1151	1325	1293	1404	1552	1589
Dannevirke	1115	1276	1306	1427	1475	1612
New Plymouth	1113	1185	1208	1267	1414	1520
Wanganui	1025	1158	1177	1271	1412	1506
Taihape	1190	1395	1309	1381	1577	1680
Palmerston North	1081	1212	1239	1323	1441	1533
Masterton	1122	1315	1297	1383	1548	1648
Blenheim	1115	1274	1274	1372	1530	1710
Nelson	1119	1227	1262	1341	1491	1576
Greymouth	1074	1223	1235	1289	1456	1550
Ashburton	997	1177	1219	1268	1402	1547
Timaru	1037	1158	1198	1276	1457	1512
Oamaru	1091	1233	1227	1295	1491	1567
Alexandra	1179	1349	1353	1414	1617	1674
Gore	1096	1244	1218	1328	1503	1655
Invercargill	1093	1191	1166	1279	1529	1608
Dominion weighted average	1064	1206	1219	1305	1488	1570

A general marked tendency to an increase in the price of groceries is observable over the six years. This tendency was least from 1915 to 1916, and greatest from 1917 to 1918 (in the latter case the annual increase being approximately 14 per cent.). The next greatest increase was that from 1914 to 1915 (nearly 13½ per cent.).

It is notable that, except from 1915 to 1916, each town, without exception, showed an increase. Dunedin, Napier, Taihape, Masterton, Oamaru, Gore, and Invercargill all showed a lower index number for 1916 than for 1915.

It is interesting to observe that groceries were cheapest in 1914 in Ashburton, with Wanganui not far behind. In 1919 Wanganui has become cheapest, and Timaru, which was but fourth in 1914, is now second.

Taihape was the dearest town for groceries in 1914, and Blenheim in 1919. Of the four centres Wellington was, as far as this group of commodities is concerned, uniformly the dearest.

GROUP II.—DAIRY-PRODUCE.—TWENTY-FIVE REPRESENTATIVE TOWNS.

Index Numbers, 1914–19, for Twenty-five Representative Towns in New Zealand.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13＝1000.)

Town.	1914.	1915.	1916.	1917.	1918.	1919.
Auckland	1019	1140	1289	1362	1443	1518
Wellington	1114	1196	1350	1425	1476	1553
Christchurch	1016	1127	1251	1318	1328	1434
Dunedin	1065	1146	1263	1346	1432	1529
Whangarei	1021	1142	1215	1263	1354	1492
Hamilton	1023	1136	1254	1334	1420	1531
Rotorua	1107	1236	1266	1330	1419	1508
Waihi	1024	1176	1234	1322	1401	1509
Gisborne	1090	1192	1308	1368	1410	1550
Napier	1106	1169	1203	1361	1462	1544
Dannevirke	1032	1149	1203	1313	1391	1473
New Plymouth	1024	1082	1137	1265	1394	1468
Wanganui	1024	1180	1247	1338	1374	1483
Taihape	1105	1241	1289	1364	1506	1564
Palmerston North	923	1094	1208	1301	1307	1387
Masterton	1017	1128	1205	1309	1426	1489
Blenheim	1066	1203	1229	1306	1382	1498
Nelson	1075	1230	1307	1335	1412	1521
Greymouth	1081	1166	1238	1321	1452	1488
Ashburton	1024	1128	1266	1344	1426	1449
Timaru	1033	1127	1267	1234	1321	1459
Oamaru	995	1178	1285	1358	1413	1483
Alexandra	1102	1261	1348	1400	1442	1468
Gore	1065	1157	1294	1363	1434	1525
Invercargill	1014	1171	1252	1371	1378	1524
Dominion weighted average	1045	1153	1274	1353	1415	1504

The six years reviewed show an uninterrupted increase in the price of commodities falling within this group, and the same is true of each of the twenty-five towns, except that Timaru shows a slight fall from 1916 to 1917.

In 1914 Palmerston North was easily the cheapest town for dairy-produce, and, although this position was lost during the intermediate period, it was regained in 1919.

Wellington was dearest in 1914, but in 1919 it had fallen to second place, and Taihape, which was fourth dearest in 1914, now showed a higher index number than Wellington. Of the four centres Christchurch was throughout the cheapest for dairy-produce.

GROUP III.—MEAT.—TWENTY-FIVE REPRESENTATIVE TOWNS.

Index Numbers, 1914–19, for Twenty-five Representative Towns in New Zealand.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13=1000.)

Town.	1914.	1915.	1916.	1917.	1918.	1919.
Auckland ..	1266	1293	1413	1500	1575	1596
Wellington ..	1112	1202	1274	1380	1476	1504
Christchurch	1061	1193	1313	1449	1540	1607
Dunedin ..	1103	1188	1283	1417	1507	1588
Whangarei ..	1181	1289	1402	1610	1681	1662
Hamilton ..	1163	1271	1292	1390	1476	1681
Rotorua ..	1157	1284	1380	1599	1696	1736
Waihi ..	1137	1232	1491	1638	1659	1649
Gisborne ..	1053	1208	1470	1517	1552	1551
Napier ..	1096	1218	1338	1488	1505	1524
Dannevirke ..	1051	1212	1349	1444	1515	1468
New Plymouth ..	1242	1346	1406	1552	1597	1651
Wanganui ..	1055	1183	1394	1575	1593	1634
Taihape ..	1105	1207	1403	1631	1521	1514
Palmerston North ..	1018	1251	1426	1546	1559	1591
Masterton ..	1099	1217	1329	1498	1518	1532
Blenheim ..	1046	1086	1177	1383	1505	1596
Nelson ..	1135	1139	1173	1331	1538	1672
Greymouth ..	1305	1427	1463	1548	1673	1729
Ashburton ..	1167	1284	1385	1483	1638	1667
Timaru ..	1160	1240	1331	1478	1587	1613
Oamaru ..	1173	1311	1456	1620	1611	1655
Alexandra ..	1160	1222	1284	1433	1537	1587
Gore ..	1266	1385	1475	1520	1669	1730
Invercargill ..	1152	1332	1455	1491	1657	1743
Dominion weighted average	1142	1235	1348	1463	1545	1591

The price of meat, which had been rising continuously from 1891, jumped ahead very rapidly from 1912, till in 1914 it was at a very high level. The increase was general, but in Auckland it was especially noticeable. Consequently, when the war came in the middle of 1914 meat-prices were already at a high level. Like practically all other New Zealand products, meat immediately commenced to rise in price ; but a shortage of shipping-space disorganized the trade, and prices fell again, notably in Auckland and Christchurch. The tendency to fall continued till the second quarter of 1915, but was only a temporary set-back. It was succeeded by a sharp upward movement, and prices have, on the Dominion average, continued to rise during the war period.

There has been, however, a slight tendency to a fall in the prices of commodities belonging to this group either in 1918 or in 1919 in the case of Whangarei, Waihi, Gisborne, Dannevirke, Taihape, and Oamaru.

In 1914 Palmerston North was the cheapest of the twenty-five towns in respect of meat, though this town early in the war lost its position, and in 1919 Dannevirke was easily the cheapest.

Greymouth, which was dearest in 1914, had fallen to fourth by 1919, its index number being lower than those of Invercargill, Rotorua, and Gore.

Of the four chief centres Auckland was dearest right up to 1918, but in 1919 the Christchurch index number, which had been the lowest of the four centres in 1914, rose suddenly, surpassing that of Auckland.

THREE FOOD GROUPS.—TWENTY-FIVE REPRESENTATIVE TOWNS.

Index Numbers, 1914–19, for Twenty-five Representative Towns in New Zealand.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Town.	1914.	1915.	1916.	1917.	1918.	1919.
Auckland ..	1110	1206	1292	1369	1496	1552
Wellington ..	1100	1212	1289	1397	1521	1575
Christchurch	1044	1175	1249	1346	1438	1531
Dunedin ..	1074	1192	1239	1328	1488	1563
Whangarei ..	1094	1234	1309	1414	1550	1624
Hamilton ..	1110	1227	1286	1344	1472	1609
Rotorua ..	1144	1281	1328	1458	1579	1664
Waihi ..	1094	1221	1338	1425	1512	1572
Gisborne ..	1091	1228	1350	1426	1533	1611
Napier ..	1122	1252	1288	1423	1515	1557
Dannevirke ..	1074	1225	1297	1406	1469	1531
New Plymouth ..	1136	1216	1259	1364	1472	1553
Wanganui ..	1035	1172	1267	1390	1465	1544
Taihape ..	1141	1295	1337	1462	1541	1596
Palmerston North ..	1023	1198	1296	1394	1466	1518
Masterton ..	1090	1239	1287	1405	1510	1572
Blenheim ..	1080	1193	1230	1361	1487	1622
Nelson ..	1114	1198	1242	1336	1489	1596
Greymouth ..	1154	1279	1313	1384	1529	1597
Ashburton ..	1061	1201	1286	1359	1488	1565
Timaru ..	1078	1178	1259	1335	1470	1534
Oamaru ..	1096	1247	1319	1420	1514	1577
Alexandra ..	1154	1285	1328	1417	1549	1596
Gore ..	1147	1272	1323	1402	1544	1650
Invercargill ..	1095	1234	1285	1372	1537	1634
Dominion weighted average	1087	1203	1276	1370	1491	1561

By combining the food groups an index number representing the cost of foodstuffs is obtained, and, being a weighted average of the three groups, this index number gives the mean of their variations.

General increases are observable over all the towns, without exception, throughout the whole period.

Palmerston North was, both in 1914 and 1919, though not consistently during the intermediate period, the cheapest town in respect of food-prices, while Christchurch was the cheapest of the four centres, except in 1916 and 1917, when Dunedin showed a lower combined index number.

At the other end of the scale come a group of smaller towns—it is noticeable that the larger towns show prices relatively low compared with the smaller centres. Alexandra, Greymouth, Taihape, Rotorua, and Gore are all considerably more expensive than the average.

Group IV.—Rent.

Figures relating to rent are not collected monthly as are the other data, but half-yearly. Changes in rent, as was stated previously, are relatively infrequent, and there is danger in trying to measure changes over short periods, from the fact that for many tenants the rent remains the same, though changes may take place in the value of houses. Leases, infrequent changes of residence, the difficulty of departing from customary rents, all militate against any effort to measure changes over short periods.

Rent.—Twenty-five Representative Towns.

Index Numbers, 1914–19, for House-rent in Twenty-five Representative Towns in New Zealand.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Town.	1914.	1915.	1916.	1917.	1918.	1919.
Auckland	1044	1005	987	977	1005	1044
Wellington	1173	1186	1216	1240	1295	1315
Christchurch ..	961	967	949	967	1007	1054
Dunedin	965	970	965	945	984	992
Whangarei	865	867	882	864	902	940
Hamilton	970	910	989	1177	1132	1191
Rotorua	1045	1045	1035	997	986	977
Waihi	633	661	674	568	575	600
Gisborne	1070	1054	1061	1062	1084	1103
Napier	993	1012	1016	1059	1058	1074
Dannevirke	672	721	720	751	728	773
New Plymouth ..	916	973	980	992	1024	1011
Wanganui	910	910	940	1007	1025	1058
Taihape	1150	1203	1221	1189	1181	1199
Palmerston North ..	823	916	969	968	988	1002
Masterton	767	802	821	879	855	958
Blenheim	741	745	740	817	790	825
Nelson	842	890	880	915	921	941
Greymouth	699	748	739	741	707	712
Ashburton	743	810	816	851	870	867
Timaru	1015	939	979	961	895	914
Oamaru	834	836	886	843	819	836
Alexandra	636	635	645	662	680	681
Gore	770	757	760	786	809	824
Invercargill	718	742	783	815	824	853
Dominion weighted average	984	995	987	1005	1033	1062

The results disclosed by the table are somewhat doubtful; but the main feature disclosed is the great local variation and the almost universal increase. Rents in Alexandra are only about half the level of Wellington rents, and even in the large centres Wellington is, roughly, 30 per cent. higher than Christchurch or Dunedin.

The same variation is shown in the movements of rent, which seem to be governed almost wholly by local causes.

It will be seen that Auckland is the only one of the four big centres in which rents have not risen. Among the smaller towns Rotorua, Timaru, and

Waihi alone show falls. On the other hand, some of the more progressive towns, notably Hamilton, Palmerston North, Masterton, and Invercargill, show large increases. In the case of each of these towns the percentage increase is greater than in Wellington. There seems to be good reason for believing that rents have risen most in those places where population has most rapidly increased. Following on the semi-stagnation in the building trade resulting from the war, houses in these towns have acquired high scarcity values. In less progressive places, on the other hand, the pinch of the housing problem has not been felt in the same way, so that there has been no opportunity for a sympathetic rise in rents.

Food Groups and Rent.—Twenty-five Representative Towns.

Index Numbers, 1914–19, for Twenty-five Representative Towns in New Zealand.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Town.	1914.	1915.	1916.	1917.	1918.	1919.
Auckland	1087	1135	1186	1231	1320	1370
Wellington	1125	1201	1262	1339	1439	1482
Christchurch ..	1015	1101	1144	1210	1281	1363
Dunedin	1035	1114	1140	1194	1306	1360
Whangarei	1013	1103	1156	1221	1320	1376
Hamilton	1059	1118	1174	1276	1353	1454
Rotorua	1109	1196	1226	1295	1371	1421
Waihi	931	1021	1102	1127	1180	1224
Gisborne	1084	1168	1245	1298	1372	1430
Napier	1076	1166	1192	1292	1351	1385
Dannevirke	932	1042	1089	1174	1203	1261
New Plymouth ..	1058	1126	1160	1231	1310	1361
Wanganui	991	1079	1148	1253	1307	1370
Taihape	1145	1257	1300	1364	1417	1455
Palmerston North ..	952	1093	1176	1244	1295	1335
Masterton	975	1082	1118	1219	1276	1346
Blenheim	960	1034	1057	1161	1243	1336
Nelson	1018	1085	1117	1182	1287	1363
Greymouth	993	1089	1108	1156	1240	1285
Ashburton	949	1063	1115	1174	1268	1318
Timaru	1056	1097	1158	1207	1268	1313
Oamaru	1003	1101	1162	1217	1272	1310
Alexandra	971	1055	1085	1149	1240	1272
Gore	1013	1090	1123	1182	1282	1339
Invercargill	961	1059	1101	1176	1284	1356
Dominion weighted average	1050	1125	1173	1240	1326	1383

The inclusion of rent materially alters the relative positions of a great many towns, especially taking away the advantage held by the bigger centres in the three food groups. The most expensive towns in New Zealand, when rent is taken into consideration, are Taihape and Wellington. The lowest index numbers are shown by Waihi, Dannevirke, and Alexandra, and, especially in the cases of Waihi and Alexandra, it is rent which determines the position on the scale. The relative positions from time to time of the twenty-five towns is shown on the thermometers on page 115.

PURCHASING-POWER OF MONEY, 1914–19.

The following is included simply as an illustration of the different levels of prices in each of the twenty-five towns considered. Similar figures may easily be compiled for the various quarters by working from the index numbers and equating 1,000 to 20s.

AMOUNT REQUIRED TO PURCHASE IN TWENTY-FIVE REPRESENTATIVE TOWNS, FOR EACH YEAR, 1914–19, THAT AMOUNT OF FOOD AND RENT WHICH WOULD HAVE COST 20s. IN THE AVERAGE OF THE FOUR CHIEF CENTRES, 1909–13.

Town.	1914.		1915.		1916.		1917.		1918.		1919.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Auckland	21	9	22	8¼	23	8¾	24	7¼	26	4¾	27	4¼
Wellington	22	6	24	0¼	25	3	26	9¼	28	9¼	29	7¾
Christchurch	20	3½	22	0¼	22	10½	24	2½	25	7½	27	3
Dunedin	20	8½	22	3½	22	9½	23	10½	26	1½	27	2¼
Whangarei	20	3	22	0¾	23	1½	24	5	26	4¼	27	6¼
Hamilton	21	2¼	22	4¼	23	5¾	25	6¼	27	0¾	29	1
Rotorua	22	2¼	23	11	24	6¼	25	10¾	27	5	28	5
Waihi	18	7½	20	5	22	0½	22	6½	23	7¼	24	5¼
Gisborne	21	8¼	23	4¼	24	10¾	25	11¼	27	5¼	28	7¼
Napier	21	6¼	23	3¾	23	10	25	10	27	0¼	27	8¼
Dannevirke	18	7¾	20	10	21	9½	23	5¼	24	0¾	25	2¾
New Plymouth	21	2	22	6¼	23	2½	24	7¼	26	2¼	27	2¼
Wanganui	19	9¼	21	7	22	11¼	25	0¾	26	1¾	27	4¼
Taihape	22	10¾	25	1¾	26	0	27	3¼	28	4	29	1¼
Palmerston North	19	0¼	21	10¼	23	6¼	24	10½	25	10¾	26	8¼
Masterton	19	6	21	7¾	22	4¼	24	4½	25	6¼	26	11
Blenheim	19	2¼	20	8¼	21	1¾	23	2¾	24	10¼	26	8¼
Nelson	20	4¼	21	8½	22	4	23	7¾	25	9	27	3
Greymouth	19	10¼	21	9¼	22	2	23	1½	24	9¼	25	8¼
Ashburton	18	11¼	21	3	22	3½	23	5¾	25	4¼	26	4¼
Timaru	21	1¼	21	11¼	23	2	24	1¼	25	4¼	26	3
Oamaru	20	0¾	22	0¼	23	3	24	4	25	5¼	26	2½
Alexandra	19	5	21	1¼	21	8¼	22	11¾	24	9¼	25	5¼
Gore	20	3	21	9¼	22	5½	23	7¾	25	7¾	26	9¼
Invercargill	19	2¾	21	2¼	22	0¼	23	6¼	25	8¼	27	1½
Dominion weighted average	21	0	22	6	23	5½	24	9½	26	6¼	27	8

NOTE.—These figures are comparable vertically, but not horizontally.

RETAIL PRICE-LEVEL THERMOMETERS, 1914–19.

In all the foregoing tables giving information concerning prices in the twenty-five towns the four chief centres are shown at the top of the list, the other towns following in geographical order. To see at a glance the position occupied by the various towns in order of the general level of prices for goods and rent prevailing, a diagram (see following page) is now given in the form of what may be called "retail price-level" thermometers, whereon each town is shown opposite a point corresponding to its index number in the table referring to expenditure on all food groups and rent combined for 1914, 1917, and 1919. The thermometers not only show the relative positions of the towns from the point of view of higher or lower "retail price-levels," but also give a good indication of the actual increases in each town throughout the war period.
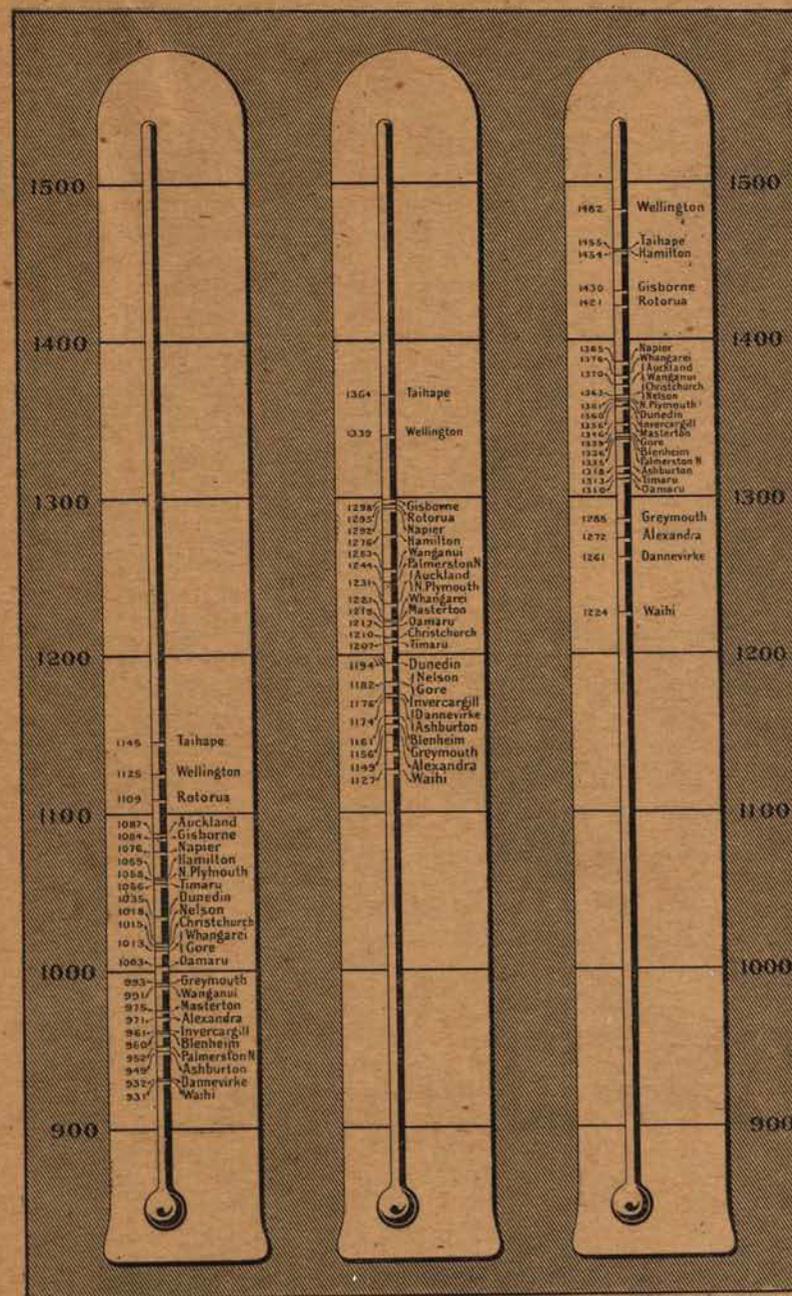
CHAPTER VI.—WAR INCREASES.

It is of public interest at this present time to ascertain just how far retail prices have risen since the war began. This report will have shown that prices rose continuously but slowly from 1896 to about 1911, and that in the subsequent two or three years the tendency to increase was rather sharply accentuated, so that the price-level in 1914 was already abnormally high. The preceding chapters have shown clearly that since the outbreak of war prices have risen very much higher above the already high level of 1914.

It is perhaps advisable to state again that throughout the inquiry into retail prices the utmost care has been taken to give each commodity its proper weight in the index number. The whole method (as explained previously) is based on the relative annual consumptions of the different items in each group. The index number for the three food groups in combination is also obtained by allotting to each group its proper weight, based, as before, on relative annual consumption. In compiling the Dominion index number, too, each town has been weighted according to its population. Finally, it must be emphasized that the prices used are obtained from representative retail merchants in the twenty-five towns, and are the predominant or most usual prices of the commodities in common use. It may therefore be claimed with confidence that the figures quoted below show accurately the changes in the cost of foodstuffs so far as they affect the mass of the community.

JULY COMPARISONS.

The aggregate-expenditure method by which the index numbers of prices are obtained is primarily intended for the production of annual index numbers, such as have already been quoted for the war period in Chapters III and V. The effect of weighting is obtained by fixing the mass-unit at the amount of the annual consumption of each commodity. But the consumption varies at different seasons of the year, especially as regards certain commodities, and the compilation of an index number for shorter periods than a year is rendered somewhat artificial by this defect.

In some of the tables given below the seasonal fluctuation just referred to is in evidence, and the tables should be read subject to the recognition of such fluctuations. It is possible to trace price-changes month by month and to eliminate the influence of the seasonal commodities by comparing corresponding months of successive years throughout the war period. Either in this way or by averaging the monthly or quarterly index numbers over a whole year it is possible to obtain a bird's-eye view of the increases since the beginning of the war.

Index numbers have been compiled showing the level of prices in each town at monthly periods from July, 1914, onwards, and a series of tables relating to each succeeding July during the war period is first given, the percentage increases in each case (1) over the level of the preceding July, and (2) over that of July, 1914, being also shown.

The various groups into which the household expenditure is for statistical purposes divided are accorded separate treatment both in the tables and in the discussion which follows them.

GROUP I.—GROCERIES.

Index Numbers and Increases as at July of each Year 1914–19.

Town.	1914. Index.	1915. Index.	1915. Increase per Cent. over 1914.	1916. Index.	1916. Increase per Cent. over 1915.	1916. Increase per Cent. over 1914.	1917. Index.	1917. Increase per Cent. over 1916.	1917. Increase per Cent. over 1914.	1918. Index.	1918. Increase per Cent. over 1917.	1918. Increase per Cent. over 1914.	1919. Index.	1919. Increase per Cent. over 1918.	1919. Increase per Cent. over 1914.
Auckland	1001	1175	17·38	1195	1·70	19·38	1253	4·85	25·17	1481	18·20	47·95	1497	1·08	49·56
Wellington	1033	1256	21·59	1266	0·80	22·56	1387	9·56	34·27	1550	11·75	50·05	1606	3·61	55·47
Christchurch	1046	1210	15·68	1153	—4·71	10·23	1245	7·98	19·03	1398	12·29	33·65	1482	6·01	41·68
Dunedin	1014	1226	20·91	1171	—4·49	15·48	1223	4·44	20·61	1481	21·10	46·06	1479	0·14	45·86
Whangarei	1029	1237	20·21	1283	3·72	24·68	1335	4·05	29·74	1539	15·28	49·56	1648	7·08	60·16
Hamilton	1102	1264	14·70	1301	2·93	18·06	1262	—3·00	14·52	1489	17·99	35·12	1545	3·76	40·20
Rotorua	1136	1313	15·58	1318	0·38	16·02	1425	8·12	25·44	1565	9·82	37·76	1661	6·13	46·21
Waihi	1065	1253	17·65	1270	1·36	19·35	1314	3·46	23·38	1467	11·64	37·75	1500	2·25	40·85
Gisborne	1079	1266	17·33	1273	0·55	17·98	1371	7·70	27·06	1584	15·54	46·80	1677	5·87	55·42
Napier	1117	1334	19·43	1279	—4·12	14·50	1352	5·71	21·04	1526	12·88	36·62	1518	—0·52	35·90
Dannevirke	1110	1265	13·96	1294	2·29	16·58	1410	8·96	27·03	1435	1·77	29·27	1571	9·48	41·53
New Plymouth	1087	1193	9·75	1229	3·02	13·06	1226	—0·24	12·79	1379	12·48	26·86	1471	6·67	35·33
Wanganui	995	1198	20·40	1163	—2·92	16·88	1260	8·34	26·63	1398	10·95	40·50	1480	5·87	48·74
Taihape	1153	1396	21·08	1282	—8·17	11·19	1378	7·49	19·51	1533	11·25	32·96	1650	7·63	43·10
Palmerston North	1034	1204	16·44	1210	0·50	17·02	1313	8·51	26·98	1434	9·22	38·68	1516	5·72	46·62
Masterton	1081	1333	23·31	1281	—3·90	18·50	1360	6·17	25·81	1531	12·57	41·63	1613	5·36	49·21
Blenheim	1070	1259	17·66	1265	0·48	18·22	1340	5·93	25·23	1544	15·22	44·30	1686	9·20	57·57
Nelson	1092	1251	14·56	1250	—0·40	14·56	1302	6·63	19·23	1499	15·13	37·27	1525	1·73	39·65
Greymouth	1051	1250	18·93	1207	—3·44	14·84	1272	5·39	21·03	1415	11·24	34·63	1495	5·65	42·25
Ashburton	944	1178	24·79	1192	1·19	26·27	1223	2·60	29·56	1374	12·35	45·55	1467	6·77	55·40
Timaru	1031	1149	11·45	1175	2·26	13·97	1288	9·62	24·93	1419	10·17	37·63	1480	4·30	43·55
Oamaru	1079	1208	11·96	1168	—3·31	8·25	1265	8·30	17·24	1438	13·52	33·09	1500	4·46	39·02
Alexandra	1167	1308	12·08	1345	2·83	15·25	1397	3·87	19·71	1636	17·11	40·19	1616	—1·22	38·47
Gore	1063	1257	18·25	1189	—5·41	11·85	1337	12·45	25·78	1514	13·24	42·43	1577	4·16	48·35
Invercargill	1034	1206	16·63	1132	—6·14	9·48	1259	11·22	21·76	1503	19·38	45·36	1541	2·53	49·03
Average of four chief centres	1024	1217	18·85	1196	—1·73	16·80	1277	6·77	24·71	1478	15·74	44·34	1516	2·57	48·05
Dominion weighted average	1033	1219	18·01	1202	—1·39	16·36	1286	6·99	24·49	1477	14·85	42·98	1523	3·11	47·43

The minus sign (—) signifies a decrease.

GROUP II.—DAIRY-PRODUCE.

Index Numbers and Increases as at July of each Year 1914-19.

Town.	1914. Index.	1915. Index.	1915. Increase per Cent. over 1914.	1916. Index.	1916. Increase per Cent. over 1915.	1916. Increase per Cent. over 1914.	1917. Index.	1917. Increase per Cent. over 1916.	1917. Increase per Cent. over 1914.	1918. Index.	1918. Increase per Cent. over 1917.	1918. Increase per Cent. over 1914.	1919. Index.	1919. Increase per Cent. over 1918.	1919. Increase per Cent. over 1914.
Auckland	1008	1203	19·35	1328	10·39	31·75	1381	3·99	37·00	1476	6·88	46·43	1541	4·40	52·88
Wellington	1163	1322	13·67	1422	7·56	22·27	1436	0·98	23·47	1490	3·76	28·12	1575	5·70	35·43
Christchurch	1024	1178	15·04	1284	9·00	25·39	1338	4·21	30·66	1380	3·14	34·77	1528	10·72	49·22
Dunedin	1075	1209	12·47	1282	6·04	19·26	1335	4·13	24·19	1447	8·39	34·60	1569	8·43	45·95
Whangarei	1031	1217	18·04	1227	0·82	19·01	1294	5·46	25·51	1376	6·34	33·46	1555	13·01	50·82
Hamilton	1032	1196	15·89	1336	11·71	29·46	1365	2·17	32·27	1434	5·05	38·95	1589	10·81	53·97
Rotorua	1114	1317	18·22	1315	−0·15	18·04	1391	5·78	24·87	1474	5·97	32·32	1554	5·43	39·50
Waihi	1044	1301	24·62	1324	1·31	22·99	1347	4·91	29·02	1428	6·01	36·78	1555	8·89	48·95
Gisborne	1089	1266	16·25	1333	5·29	22·41	1409	5·70	29·38	1406	−0·21	29·17	1587	12·87	45·73
Napier	1088	1266	16·36	1239	2·13	13·88	1377	11·14	26·56	1470	6·75	35·11	1546	5·17	42·10
Dannevirke	1075	1241	15·44	1266	1·85	13·30	1340	10·02	24·65	1410	5·22	31·16	1547	9·72	43·91
New Plymouth	1018	1129	10·90	1151	1·95	13·06	1284	11·56	21·13	1405	9·42	37·99	1502	6·90	47·54
Wanganui	1022	1274	24·66	1269	−0·39	24·17	1361	7·25	33·17	1387	1·91	35·71	1536	10·74	50·29
Taihape	1184	1341	13·26	1318	−1·72	11·32	1363	3·41	15·12	1542	13·13	30·24	1574	2·08	32·94
Palmerston North	918	1093	19·06	1223	11·89	33·22	1315	7·52	43·25	1395	6·08	51·96	1434	2·80	56·21
Masterton	1040	1224	17·69	1219	−0·41	17·21	1320	8·29	26·92	1449	9·77	39·33	1549	6·90	48·94
Blenheim	1088	1287	18·29	1285	−0·16	18·11	1359	5·76	24·91	1437	5·74	32·08	1550	7·86	42·46
Nelson	1165	1276	9·53	1329	4·15	14·08	1354	1·88	16·22	1421	4·95	21·97	1548	8·94	32·88
Greymouth	1098	1207	9·93	1309	8·45	19·22	1392	6·34	26·78	1541	10·70	40·35	1471	4·54	33·97
Ashburton	1028	1170	13·81	1274	8·89	23·93	1342	5·34	30·54	1440	7·30	40·08	1484	3·06	44·36
Timaru	1039	1193	14·82	1308	9·64	25·89	1237	5·43	19·06	1312	6·06	26·28	1516	15·55	45·91
Oamaru	1033	1296	25·46	1303	0·54	26·14	1361	4·45	31·75	1401	2·94	35·62	1549	10·56	49·95
Alexandra	1164	1370	17·70	1369	−0·08	17·61	1409	2·92	21·05	1471	4·40	26·37	1511	2·72	29·81
Gore	1083	1230	13·57	1326	7·80	22·44	1358	2·41	25·39	1487	9·50	37·30	1555	4·57	43·58
Invercargill	1042	1308	25·53	1262	−3·52	21·11	1452	15·06	39·35	1424	−1·93	36·66	1551	8·92	48·85
Average of four chief centres	1068	1228	14·98	1329	8·22	24·44	1373	3·31	28·56	1448	5·46	35·58	1553	7·25	45·41
Dominion weighted average	1057	1228	16·18	1312	6·84	24·12	1370	4·42	29·61	1441	5·18	36·33	1546	7·29	46·26

The minus sign (−) signifies a decrease.

GROUP III.—MEAT.

Index Numbers and Increases as at July of each Year 1914-19.

Town.	1914. Index.	1915. Index.	1915. Increase per Cent. over 1914.	1916. Index.	1916. Increase per Cent. over 1915.	1916. Increase per Cent. over 1914.	1917. Index.	1917. Increase per Cent. over 1916.	1917. Increase per Cent. over 1914.	1918. Index.	1918. Increase per Cent. over 1917.	1918. Increase per Cent. over 1914.	1919. Index.	1919. Increase per Cent. over 1918.	1919. Increase per Cent. over 1914.
Auckland	1258	1218	−3·18	1423	16·83	13·12	1460	2·60	16·06	1570	7·53	24·80	1584	0·89	25·91
Wellington	1090	1172	7·52	1267	8·11	16·24	1352	6·71	24·04	1486	9·91	36·33	1490	0·27	36·70
Christchurch	1070	1053	−1·59	1280	21·56	19·63	1420	10·94	32·71	1539	8·38	43·83	1542	0·19	44·11
Dunedin	1056	1097	3·88	1279	16·59	21·12	1404	9·77	32·95	1514	7·83	43·37	1509	0·33	42·90
Whangarei	1164	1260	9·02	1491	17·49	28·09	1601	7·38	37·54	1661	3·75	42·70	1654	−0·42	42·10
Hamilton	1123	1271	13·18	1271		13·18	1388	9·21	23·60	1450	4·47	29·12	1628	12·28	44·97
Rotorua	1146	1258	9·77	1359	8·03	18·59	1574	15·82	37·35	1692	7·50	47·64	1745	3·13	52·27
Waihi	1137	1246	9·59	1429	14·69	25·68	1616	13·09	42·13	1640	1·49	44·24	1514	−7·68	33·16
Gisborne	1055	1061	0·57	1474	38·93	39·72	1501	1·83	42·27	1516	1·00	43·70	1555	2·57	47·39
Napier	1043	1208	15·82	1397	15·65	33·94	1495	7·02	43·34	1503	0·54	44·10	1511	0·53	44·87
Dannevirke	1208	1143	13·17	1332	16·54	31·88	1426	7·06	41·19	1515	6·24	50·00	1460	−3·63	44·55
New Plymouth	1228	1355	10·34	1386	3·03	13·68	1562	11·89	27·20	1597	2·24	30·05	1612	0·94	37·27
Wanganui	1080	1109	2·69	1384	24·80	28·15	1569	11·89	45·28	1599	1·91	48·06	1606	0·44	48·70
Taihape	1105	1130	2·26	1358	20·18	22·90	1600	13·37	44·80	1596	−0·25	44·43	1465	8·21	32·58
Palmerston North	985	1201	21·93	1465	21·98	48·73	1557	17·82	58·07	1553	−0·26	57·67	1587	2·19	61·12
Masterton	1080	1169	8·24	1321	13·00	22·31	1501	6·28	38·98	1516	1·00	40·37	1531	0·99	41·76
Blenheim	1045	1084	3·73	1121	3·41	7·27	1359	13·63	30·05	1502	10·52	43·73	1555	3·53	48·80
Nelson	1136	1128	−0·70	1151	2·04	1·32	1343	21·23	18·22	1537	14·45	35·30	1587	3·25	39·70
Greymouth	1361	1378	1·25	1438	4·35	5·66	1531	16·68	12·49	1583	3·40	16·31	1620	2·34	19·03
Ashburton	1141	1255	9·99	1379	9·88	20·86	1435	6·47	25·77	1647	14·77	44·35	1573	−4·48	37·86
Timaru	1115	1630	20·07	1341	26·51	20·27	1422	4·06	27·53	1577	10·90	41·43	1599	1·40	43·41
Oamaru	1132	1285	13·52	1459	13·54	28·89	1630	6·04	43·99	1617	−0·80	42·84	1601	−0·99	41·43
Alexandra	1136	1170	2·99	1316	12·48	15·85	1444	11·72	27·11	1523	5·47	34·07	1583	3·94	42·84
Gore	1240	1359	9·60	1474	8·46	18·87	1501	9·73	21·05	1668	11·13	34·52	1684	0·96	35·81
Invercargill	1118	1276	14·13	1458	14·26	30·41	1453	1·83	21·05	1656	13·97	48·12	1669	0·79	49·28
Average of four chief centres	1119	1135	1·42	1312	15·59	17·25	1409	7·39	25·92	1527	8·37	36·46	1531	0·26	36·82
Dominion weighted average	1127	1158	2·75	1344	16·06	19·25	1439	7·07	27·68	1544	7·30	37·00	1554	0·65	37·89

The minus sign (−) signifies a decrease.

GROUPS I–III.—FOOD GROUPS.

Index Numbers and Increases as at July of each Year 1914–19.

Town	1914 Index	1915 Index	1915 Incr. p.c. over 1914	1916 Index	1916 Incr. p.c. over 1915	1916 Incr. p.c. over 1914	1917 Index	1917 Incr. p.c. over 1916	1917 Incr. p.c. over 1914	1918 Index	1918 Incr. p.c. over 1917	1918 Incr. p.c. over 1914	1919 Index	1919 Incr. p.c. over 1918	1919 Incr. p.c. over 1914
Auckland	1090	1196	9·72	1303	8·95	19·54	1353	3·84	24·13	1510	11·60	38·53	1537	1·79	41·00
Wellington	1083	1243	14·77	1303	4·83	20·31	1387	6·45	28·07	1515	9·23	39·89	1559	2·90	43·95
Christchurch	1049	1149	9·53	1227	6·79	16·97	1326	8·07	26·41	1442	8·75	37·46	1513	4·92	44·23
Dunedin	1042	1178	13·05	1234	4·75	18·43	1310	6·16	25·72	1484	13·28	42·42	1510	1·75	44·91
Whangarei	1075	1244	15·72	1341	7·80	24·74	1416	5·59	31·72	1543	8·97	43·53	1628	5·51	51·44
Hamilton	1093	1251	14·46	1299	3·84	18·85	1329	2·31	21·59	1463	10·08	33·85	1584	8·27	44·92
Rotorua	1135	1295	14·10	1331	2·78	17·27	1468	10·29	29·34	1587	8·11	39·82	1664	4·85	46·61
Waihi	1085	1262	16·31	1328	5·23	22·40	1425	7·30	31·34	1517	6·46	39·82	1517		39·82
Gisborne	1073	1196	11·46	1355	13·29	26·28	1424	5·09	32·71	1520	6·74	39·82	1615	6·25	50·51
Napier	1085	1275	17·51	1310	2·75	20·74	1407	7·40	29·68	1505	6·97	41·66	1522	1·13	40·28
Dannevirke	1068	1218	14·04	1289	5·83	20·69	1400	8·61	31·74	1456	4·00	38·71	1528	4·95	43·07
New Plymouth	1119	1233	10·19	1268	2·84	13·32	1354	6·78	21·00	1459	7·75	36·33	1526	4·59	36·37
Wanganui	1030	1185	15·05	1263	6·58	22·62	1389	9·98	34·85	1464	5·40	30·38	1536	4·92	49·13
Taihape	1144	1293	13·02	1316	1·78	15·03	1450	10·18	26·75	1556	7·31	42·14	1570	0·90	37·24
Palmerston North	990	1177	18·89	1300	10·45	31·31	1397	7·46	41·11	1465	4·87	36·01	1521	3·82	53·64
Masterton	1071	1252	16·90	1280	2·24	19·51	1399	9·30	30·63	1507	7·72	47·98	1571	4·25	46·69
Blenheim	1066	1206	13·13	1221	1·24	14·54	1351	10·65	26·74	1505	11·40	40·71	1610	6·98	51·03
Nelson	1124	1215	8·10	1222	0·58	8·72	1328	8·67	18·15	1494	12·50	41·18	1532	3·88	38·08
Greymouth	1167	1284	10·03	1309	1·95	12·17	1388	6·04	18·94	1502	8·21	32·92	1532	2·00	31·28
Ashburton	1030	1202	16·70	1274	5·99	23·69	1323	3·85	28·45	1483	12·09	28·71	1507	1·62	46·31
Timaru	1061	1129	6·41	1262	11·78	18·94	1322	4·75	24·60	1448	9·53	43·98	1529	5·59	44·11
Oamaru	1086	1254	15·47	1298	3·51	19·52	1412	8·78	30·02	1489	5·45	36·48	1546	3·83	42·36
Alexandra	1156	1275	10·29	1341	5·18	16·00	1416	5·59	22·49	1559	10·10	37·11	1581	1·41	36·76
Gore	1128	1285	13·92	1318	2·57	16·84	1398	6·07	23·94	1560	11·59	34·86	1609	3·14	42·64
Invercargill	1064	1254	17·86	1273	1·52	19·64	1370	7·62	28·76	1537	12·19	38·30	1587	3·25	49·15
Average of four chief centres	1066	1192	11·82	1267	6·29	18·86	1344	6·08	26·08	1488	10·71	39·59	1530	2·82	43·53
Dominion weighted average	1070	1200	12·15	1276	6·33	19·25	1357	6·35	26·82	1491	9·87	39·35	1539	3·22	43·83

GROUPS I–IV.—FOOD AND RENT.

Index Numbers and Increases as at July of each Year 1914–19.

Town	1914 Index	1915 Index	1915 Incr. p.c. over 1914	1916 Index	1916 Incr. p.c. over 1915	1916 Incr. p.c. over 1914	1917 Index	1917 Incr. p.c. over 1916	1917 Incr. p.c. over 1914	1918 Index	1918 Incr. p.c. over 1917	1918 Incr. p.c. over 1914	1919 Index	1919 Incr. p.c. over 1918	1919 Incr. p.c. over 1914
Auckland	1074	1118	4·10	1189	6·35	10·71	1217	2·35	13·31	1327	9·04	23·56	1358	2·34	26·44
Wellington	1115	1219	9·33	1272	4·35	14·08	1329	4·48	19·19	1436	8·05	28·79	1470	2·37	31·84
Christchurch	1018	1084	6·48	1129	4·15	10·90	1199	6·20	17·78	1276	6·42	25·34	1349	5·72	32·51
Dunedin	1015	1113	9·66	1137	2·16	12·02	1181	3·87	16·35	1303	10·33	28·37	1321	1·38	30·15
Whangarei	1001	1109	10·79	1172	5·68	17·08	1216	3·75	21·48	1321	8·63	31·97	1370	3·71	36·86
Hamilton	1049	1126	7·34	1175	4·35	12·05	1272	8·26	21·26	1340	5·35	27·74	1422	6·12	35·56
Rotorua	1103	1203	9·07	1231	2·33	11·60	1296	5·28	17·50	1378	6·33	24·93	1426	3·48	29·28
Waihi	925	1046	13·08	1095	4·68	18·38	1121	2·37	21·19	1184	5·62	28·00	1182	−0·17	27·78
Gisborne	1072	1150	7·28	1243	8·09	15·95	1293	4·02	20·62	1358	5·03	26·68	1433	5·52	33·68
Napier	1052	1184	12·55	1213	2·45	15·30	1295	6·76	23·00	1343	3·71	27·66	1363	1·49	29·56
Dannevirke	928	1036	11·64	1080	4·25	16·38	1175	8·80	26·62	1183	0·68	27·48	1257	6·26	35·45
New Plymouth	1047	1137	8·60	1166	2·55	11·37	1226	5·15	17·10	1302	6·20	24·36	1339	2·84	27·89
Wanganui	987	1088	10·23	1138	4·60	15·30	1257	10·46	27·36	1306	3·90	32·32	1365	4·52	38·30
Taihape	1146	1242	8·38	1295	4·27	13·00	1364	5·33	19·02	1440	5·57	25·65	1455	1·04	26·96
Palmerston North	931	1094	16·86	1182	8·64	26·96	1245	5·33	33·73	1293	3·86	38·88	1333	3·09	43·18
Masterton	963	1094	13·60	1105	1·01	14·75	1231	11·40	27·83	1274	3·49	32·30	1342	5·34	39·36
Blenheim	951	1041	9·46	1053	1·15	10·73	1150	9·21	20·93	1247	8·43	31·13	1321	5·93	38·91
Nelson	1024	1092	6·64	1112	1·83	8·59	1179	6·03	15·14	1289	9·33	25·88	1337	3·72	30·57
Greymouth	1001	1091	9·99	1102	0·09	10·10	1153	4·63	15·18	1218	5·64	21·68	1254	2·96	25·27
Ashburton	929	1085	16·79	1111	2·40	19·59	1157	3·78	24·11	1263	9·54	35·95	1279	1·27	37·67
Timaru	1045	1054	0·86	1158	9·87	10·81	1204	3·97	15·22	1252	3·99	19·81	1310	4·63	25·36
Oamaru	997	1105	10·83	1153	4·34	15·65	1207	4·68	21·06	1266	4·89	26·98	1290	1·90	29·39
Alexandra	972	1049	7·92	1091	4·00	12·24	1149	5·32	18·21	1247	8·53	28·29	1262	1·20	29·84
Gore	1001	1099	9·79	1118	1·73	11·69	1180	5·54	17·88	1294	9·66	29·27	1325	2·40	32·37
Invercargill	942	1074	14·01	1084	0·93	15·07	1176	8·49	24·84	1283	9·10	36·20	1326	3·35	40·76
Average of four chief centres	1056	1134	7·39	1182	4·23	11·93	1232	4·23	16·67	1336	8·44	26·52	1375	2·92	30·21
Dominion weighted average	1040	1122	7·88	1172	4·46	12·69	1232	5·12	18·46	1325	7·55	27·40	1366	3·09	31·35

The minus mark (—) signifies a decrease.

GROUPS I–V.—FOOD, RENT, AND FUEL, AND LIGHT.
Index Numbers and Increases as at July of each Year 1914-19.

Town.	1914.	1915.		1916.			1917.			1918.			1919.		
	Index.	Index.	Increase per Cent. over 1914.	Index.	Increase per Cent. over 1915.	Increase per Cent. over 1914.	Index.	Increase per Cent. over 1916.	Increase per Cent. over 1914.	Index.	Increase per Cent. over 1917.	Increase per Cent. over 1914.	Index.	Increase per Cent. over 1918.	Increase per Cent. over 1914.
Auckland	1063	1104	3·86	1188	7·61	11·76	1218	2·53	14·58	1328	9·03	24·93	1373	3·39	29·16
Wellington	1119	1213	8·40	1268	4·53	13·32	1335	5·28	19·30	1437	7·64	28·42	1476	2·71	31·90
Christchurch	1033	1092	5·71	1141	4·49	10·45	1228	7·62	18·88	1309	6·60	26·72	1393	6·42	34·85
Dunedin	1002	1098	9·58	1129	2·82	12·68	1188	5·23	18·56	1307	10·02	30·44	1342	2·68	33·63
Average of four centres	1054	1127	6·93	1182	4·88	12·14	1242	5·08	17·84	1345	8·29	27·61	1396	3·79	32·45
Dominion weighted average*	1041	1117	7·30	1173	5·01	12·68	1240	5·71	19·12	1335	7·66	28·24	1388	3·97	33·33

* To obtain a Dominion weighted average index number for Groups I–V, the average of the four centres for fuel and light has been taken as representing a Dominion average, and has accordingly been combined, in its proper proportion, with the Dominion weighted average for food and rent.

The main features revealed by the foregoing tables are now briefly referred to.

Group I.—Groceries.

The first group, groceries, composed really of the three distinct sub-groups referred to in earlier chapters, showed on the average a very considerable increase of prices, amounting to about 47½ per cent. between July, 1914, and July, 1919. Each July except that of 1916 showed an increase over the preceding July in so far as the figures for the whole Dominion are concerned, though there were manifold local variations. In the case of no town, however, did the figures for July, 1915, or July, 1918, show a fall as compared with those of the preceding July.

The various towns show a considerable divergence from the average, the highest increases being in Whangarei, Blenheim, Wellington, Gisborne, and Ashburton, the lowest in New Plymouth, Napier, and Alexandra. The four centres moved about equally with the other towns, Christchurch showing the smallest and Wellington the largest increase.

It should be understood throughout this chapter that in computing war increases for the various towns the comparison has been made between the index number of the town concerned (not the Dominion index number) for July, 1914, and that for the later month.

The fall in July, 1916, as compared with the preceding July was due almost wholly to a marked drop in the prices of the five home products. In connection with the other sub-groups the only other fall was a remarkably small one shown by Auckland in respect of sugar.

Although the increase of the July, 1915, figures as compared with those of the preceding July was very marked, the increase was confined to the five home products and sugar. As regards general groceries, each of the four centres, save Auckland, actually showed a fall during the first year of war.

The way in which the groceries group is affected by the sub-groups composing it will be clearer from a perusal of the tables now quoted, which deal with the four chief centres only. It will be seen that the various centres differ in a fairly marked degree amongst themselves. The rate of increase per cent. as regards Group IA (general groceries) was greatest in Auckland, with Christchurch a very close second, and smallest in Dunedin. As regards Group IB (five home products), the rate of increase was smallest in Christchurch and greatest in Wellington, the same also being true of Group IC (sugar).

GROUPS Iₐ, I_b, AND I_c.

Index Numbers and Increases as at July of each Year 1914-19 (Four Chief Centres only).

Town.	1914. Index.	1915. Index.	1915. Increase per Cent. over 1914.	1916. Index.	1916. Increase per Cent. over 1915.	1916. Increase per Cent. over 1914.	1917. Index.	1917. Increase per Cent. over 1916.	1917. Increase per Cent. over 1914.	1918. Index.	1918. Increase per Cent. over 1917.	1918. Increase per Cent. over 1914.	1919. Index.	1919. Increase per Cent. over 1918.	1919. Increase per Cent. over 1914.
Group Iₐ.—General Groceries.															
Auckland	978	985	0·72	1049	6·50	7·26	1104	5·24	12·88	1417	28·35	44·89	1433	1·13	46·52
Wellington	1103	1079	—2·18	1131	4·82	2·54	1234	9·11	11·88	1510	22·37	36·90	1599	5·89	44·97
Christchurch	1057	1050	—0·66	1122	8·86	6·15	1180	5·17	11·64	1421	20·42	34·44	1544	8·66	46·07
Dunedin	1116	1100	—1·43	1124	2·18	0·72	1213	7·92	8·69	1499	23·58	34·32	1519	1·33	36·11
Average of four centres	1064	1054	—0·94	1107	5·03	4·04	1183	6·87	11·18	1462	23·58	37·41	1524	4·24	43·23
Group I_b.—Five Home Products.															
Auckland	1067	1365	27·93	1348	—1·25	26·34	1423	5·56	33·36	1614	13·42	51·27	1617	0·19	51·55
Wellington	1011	1437	42·14	1385	—3·62	36·99	1534	10·76	51·73	1636	6·65	61·82	1643	0·43	62·51
Christchurch	1019	1352	32·68	1133	—16·20	11·19	1274	12·44	25·02	1370	7·54	34·45	1423	3·87	39·65
Dunedin	925	1355	46·49	1160	—14·39	25·41	1175	1·29	27·03	1475	25·53	59·46	1424	—3·46	53·95
Average of four centres	1006	1377	36·88	1257	—8·71	24·95	1352	7·56	34·39	1524	12·72	51·49	1527	0·20	51·79
Group I_c.—Sugar.															
Auckland	883	1221	38·28	1214	—0·57	37·49	1228	1·15	39·07	1304	6·19	47·68	1355	3·91	53·45
Wellington	883	1290	46·09	1344	4·19	52·21	1446	7·59	63·76	1430	—1·11	61·95	1521	6·36	72·25
Christchurch	1091	1299	19·07	1305	0·46	19·62	1368	4·83	25·39	1406	2·78	28·87	1458	3·70	33·64
Dunedin	948	1250	31·86	1348	7·84	42·19	1391	3·19	46·73	1444	3·81	52·32	1510	4·57	59·28
Average of four centres	951	1265	33·02	1303	3·00	37·01	1358	4·22	42·80	1396	2·80	46·79	1461	4·66	53·63

The minus sign (—) signifies a decrease.

Group II.—Dairy-produce.

Two commodities, milk and butter, have a dominating influence in this group, and account on the average for about 70 per cent. of the total expenditure, each being, roughly, of the same importance. The supply of each is very much affected by the seasons, and in normal years there is usually a considerable difference between winter and summer prices.

In this connection it is of interest to note that in July, 1914, these commodities were naturally at their high winter level, and with the opening of the season prices declined, notwithstanding the war. This decline continued steadily till the end of October, by which time average prices were about 6 per cent. lower than in July. From November onward prices rose greatly, but it was not till the end of January, 1915, that they were higher than in July, 1914. April saw another big jump, and prices continued at a high level, till twelve months after the outbreak of war they were over 16 per cent. above the former level. These facts illustrate the importance of eliminating seasonal fluctuations when investigating price-changes, and show clearly that if July, 1914, is taken as the pre-war standard, then the proper term of comparison can only be another July. The effect of comparing prices during another month of a subsequent year with those prevailing in July, 1914, will be, in the majority of instances, slightly to underestimate war increases in the general level of prices.

The increases in prices are more or less uniform over the whole country, the highest, however, being shown by Palmerston North, Hamilton, and Auckland, and the lowest by Alexandra, Nelson, and Taihape.

In no case did the Dominion weighted average for this group show a fall in one July as compared with the preceding July, although there were a number of cases where local variations produced a fall in particular towns. The Dominion percentage increase for this group was greatest from July, 1914, to July, 1915, and least from July, 1916, to July, 1917.

Group III.—Meat.

The price of meat has been subject to influences quite peculiar to this group, and its movement is quite distinct from the other groups treated. The total increase to July, 1919, was roughly only three-quarters of the increases shown by each of Groups I and II, which were approximately equal.

Since 1891 the price of meat had been advancing steadily; but in 1912 began a great advance in prices in all the centres, and by 1914. the increase in three years was as great as in the twenty years preceding. In Auckland especially prices in 1914 were at a very high level, a fact which is reflected by the table just given, and all over the Dominion prices were high.

At the beginning of the war prices began to rise steadily, and in November were over 8½ per cent. higher than in July, a rise at least proportionate to the rises shown by the other groups. For two or three months prices were then checked, and in the early months of 1915, as

the shortage of shipping-space became more pressing, prices steadily declined till July. Even here, however, they were still $2\frac{3}{4}$ per cent. above the prices ruling before the war, and the average level of meat-prices in the Dominion has never fallen below the level of July, 1914.

In August, 1915, a great rise became evident, and prices have since increased rapidly, especially from July, 1915, to July, 1916. The percentage increase shown by prices in July, 1919, over those of the preceding July is, on the other hand, small indeed.

The increase in most towns has been fairly uniform with the Dominion increase, but a few show unusually great increases. Palmerston North, for instance, which had the lowest index number for all towns in July, 1914, shows the remarkable increase of 61·12 per cent. to July, 1919, as compared with the Dominion increase of 37·89 per cent.

The increase, on the other hand, has been remarkably small in Greymouth, which, unlike many of the towns which show greater total increases, has, curiously enough, shown an uninterrupted increase from each July to the next.

Groups I–III.—Three Food Groups.

The next table summarizes the results disclosed by the three which precede it. Before discussing this table it is well to note once more that in combining the three groups care has been taken to give each its proper weight. It is evident that the increase is fairly uniform over most of the towns. The highest increase in food-prices between July, 1914, and July, 1919, has been in Palmerston North, 54 per cent.; the lowest in Greymouth, 31 per cent.; while the Dominion weighted average shows close on 44 per cent. Of the four chief centres Dunedin shows the greatest increase and Auckland the least. The variations between the different centres are, however, remarkably small.

The percentage increase in the level of prices of commodities comprised in the three food groups was most rapid from July, 1914, to July, 1915, and least rapid from July, 1918, to July, 1919.

Groups I–IV.—Three Food Groups and Rent.

It will be noticed that this present chapter has so far been confined to the three food groups, and that no mention has been made of rent. Since the outbreak of the war rent has not increased as rapidly as the prices of most commodities; and if this item of rent is added to the food groups it bulks so largely that the "cost of living" does not appear to have risen nearly so greatly as is really the case. At this stage it should be mentioned that caution is desirable in all cases where rent index numbers during the latter part of the war period are under consideration. It will be remembered that the rents from which the index numbers are compiled are in respect of such houses of from four to seven rooms as are occupied by tenants at the time of collection. These houses may have been occupied by the present tenant in many cases for five, ten, or even twenty years, and the averages do not represent or purport to represent the rate at which a house would be let if it became unoccupied. A further point that should be taken into consideration when dealing with rent index numbers during the war period, or

any figures involving these, is the probability that, in the main, such of the houses as were formerly rented but have been bought during the war period as one result of the scarcity of houses resulting from the war are the newer and better-class dwellings. Clearly, the purchasing of dwellings of the better class operates in the direction of reducing the average quality of rented houses, and tends to keep down the average rental.

In respect of the fact that Palmerston North shows the greatest war increase and Greymouth the least, the inclusion of rent does not alter the results disclosed by the table relating to the three food groups only. As regards the four chief centres, however, Christchurch now shows the greatest increase and Auckland the least.

Groups I–V.—Three Food Groups, Rent, and Fuel and Light.

As already referred to, information as to fuel and light has been collected from the four chief centres only, and accordingly a table relating to the three food groups, rent, and fuel and light can apply only to four of the twenty-five towns considered in other portions of the investigation.

It will be noted that the inclusion of fuel and light does not alter the relative positions shown by the four chief centres as for the three food groups and rent.

All Groups.

It has been shown on pages 11–14 of this report that household expenditure can for statistical purposes be classed under five heads, covering, in addition to the three already dealt with (food, rent, and fuel and light), clothing and miscellaneous, representing respectively 14 and 27 per cent. of the expenditure of the average household. The reasons for the non-inclusion of these items may again be briefly referred to.

Retail prices of clothing are not capable of thoroughly accurate statistical measurement on account of the insuperable obstacles that here exist in the way of selecting a reasonably constant regimen. These obstacles are mainly the result of frequent changes of quality and grade brought about by the influences of fashion or the exigencies of the times. Hence no comprehensive system of collection and tabulation has been attempted, but the Census and Statistics Office has collected sufficient reliable information on the subject to enable a reasonably close approximation being arrived at as to the increase in the price of clothing and drapery since the commencement of the war. It may be said here that a comparison of prices of clothing between July, 1914, and July, 1919, shows the increase to be approximately 140 per cent.

The miscellaneous class may be referred to as the "impossible" class, as it is clearly not feasible to compile a reliable index number covering this group, with its multitude of items, including not only goods but services. Miscellaneous expenditure covers such a variety of matters as postages, train and tram fares, medical and dental fees, insurance rates, local-body rates, income-tax, amusements, subscriptions to football and cricket clubs, church offerings, toys, confectionery, school-books, fines, &c. A moment's consideration will show that many of the more important items would be quite incapable of statistical measurement, even if there were not the further insuperable difficulty of allotting weights to the various items in proportion to their relative

importance in the expenditure of the average household. How to measure, for instance, the *amount* of legal advice consumed by the average household, how even to arrive at an average household expenditure which could be taken as applicable in the main to an ordinary household, are problems which will at once appear to be incapable of solution when one reflects how widely and irreconcilably expenditure on the various items differs as between household and household according to health, tastes, pursuits, sex and age distribution, &c.

In view of the impossibility of compiling reliable index numbers for the clothing and miscellaneous groups, it might be concluded that composite index numbers covering food, rent, and fuel and light, representing three-fifths of the average household expenditure, would give the closest approximation attainable as to the increase in the "cost of living." This was probably the case prior to the war, although conditions have since changed, and it happens that for the last three years (at least) of the war the increase in food-prices alone has given the truest indication of the general increase in retail prices and the cost of living.

While, as stated above, retail prices of the miscellaneous class are not capable of statistical measurement, the indications are that the increase in this class is somewhat less than the average, several important items (for instance, local-body rates, medical and legal fees, telephone and telegraph charges, train and tram fares) having shown comparatively small increases—in some cases, indeed, none at all. If we assume for the miscellaneous class an arbitrary increase of 40 per cent. between July, 1914, and July, 1919, with corresponding lower increases of 30 and 20 per cent. as at July, 1918 and 1917, and combine in the proper proportions these arbitrary increases and the roughly approximate increases ascertained for clothing, with the increases for food, rent, and fuel and light already quoted, we arrive at the following percentage increases in prices for the months shown as compared with prices prevailing in July, 1914 :—

Month.	Increase per Cent. over July, 1914.		
	Food only.	Food, Rent, and Fuel and Light.	All Groups.
July, 1917 ..	27	18	26
July, 1918 ..	39	28	40
July, 1919 ..	44	33	49

A similar calculation worked out for still more recent months has further established and confirmed the validity of this process for present purposes.

Were it possible to ascertain the actual increases for the clothing and miscellaneous groups it might be found that the differences between the food column and the "all groups" column are somewhat greater, but the figures are near enough to prove that in the absence of complete statistics the increase in food-prices gives for the latter part of the war period and at least for some time thereafter a truer idea of the general increase in prices than does the combined increase for food, rent, and fuel and light. Hence it is suggested that the "three food groups" portion of the tables published in this chapter and continued from month to month in the "Monthly Abstract of

Statistics" gives the closest approximation available *at present* to the increase in the cost of living between July, 1914, and later dates.

In view of the great social and economic import of recent fluctuations in retail prices, the war-period increases are now treated in some detail.

MOVING SIX-MONTHLY AVERAGE INDEX NUMBERS.

The tables now to be quoted in this connection are based on information collected from twenty-five towns, except in so far as they relate to fuel and light, figures for which are based on information collected in the four chief centres only.

MOVING SIX-MONTHLY AVERAGE INDEX NUMBERS FOR (1) FOOD, (2) FOOD AND RENT, AND (3) FOOD, RENT, AND FUEL AND LIGHT, COMMENCING WITH THE SIX MONTHS ENDED JULY, 1914, TOGETHER WITH THE PERCENTAGE INCREASE OF EACH SIX-MONTHLY INDEX NUMBER OVER THE NUMBER FOR THE SIX MONTHS ENDED JULY, 1914.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13=1000.)

Six Months ended	Food.		Food and Rent.		Food, Rent, and Fuel and Light.	
	Index Number.	Increase per Cent. over Six Months ended July, 1914.	Index Number.	Increase per Cent. over Six Months ended July, 1914.	Index Number.	Increase per Cent. over Six Months ended July, 1914.
1914.						
July	1070	..	1040	..	1040	..
August	1071	0·09	1041	0·10	1041	0·10
September ..	1076	0·56	1043	0·29	1044	0·38
October	1079	0·84	1046	0·58	1047	0·67
November ..	1088	1·68	1051	1·06	1053	1·25
December ..	1104	3·18	1061	2·02	1063	2·21
1915.						
January	1121	4·77	1073	3·17	1073	3·17
February ..	1141	6·64	1086	4·42	1085	4·33
March	1158	8·22	1096	5·38	1094	5·19
April	1175	9·81	1107	6·44	1103	6·06
May	1186	10·84	1114	7·12	1109	6·63
June	1189	11·12	1116	7·31	1110	6·73
July	1193	11·50	1118	7·50	1112	6·92
August	1196	11·78	1120	7·69	1114	7·12
September ..	1197	11·87	1121	7·79	1115	7·21
October	1198	11·96	1122	7·88	1116	7·31
November ..	1208	12·90	1129	8·56	1123	7·98
December ..	1218	13·83	1135	9·13	1128	8·46
1916.						
January	1224	14·39	1140	9·62	1132	8·85
February ..	1229	14·86	1144	10·00	1136	9·23
March	1237	15·61	1149	10·48	1141	9·71
April	1247	16·54	1155	11·06	1147	10·29
May	1249	16·73	1156	11·15	1149	10·48
June	1255	17·29	1159	11·44	1153	10·87
July	1262	17·94	1163	11·83	1159	11·44

5—Prices.

TABLE SHOWING SIX-MONTHLY AVERAGE INDEX NUMBERS FOR FOOD, ETC.—*continued.*

Six Months ended	Food.		Food and Rent.		Food, Rent, and Fuel and Light.	
	Index Number.	Increase per Cent. over Six Months ended July, 1914.	Index Number.	Increase per Cent. over Six Months ended July, 1914.	Index Number.	Increase per Cent. over Six Months ended July, 1914.
1916—continued.						
August ..	1268	18·50	1167	12·21	1165	12·02
September ..	1275	19·16	1172	12·69	1171	12·60
October ..	1280	19·63	1176	13·08	1176	13·08
November ..	1287	20·28	1181	13·56	1183	13·75
December ..	1297	21·21	1188	14·23	1190	14·42
1917.						
January ..	1310	22·43	1198	15·19	1200	15·38
February ..	1321	23·46	1206	15·96	1207	16·06
March ..	1331	24·39	1213	16·63	1215	16·83
April ..	1342	25·42	1221	17·40	1223	17·60
May ..	1351	26·26	1227	17·98	1229	18·17
June ..	1357	26·82	1231	18·37	1235	18·75
July ..	1356	26·73	1231	18·37	1236	18·85
August ..	1359	27·01	1233	18·56	1240	19·23
September ..	1364	27·48	1236	18·85	1245	19·71
October ..	1370	28·04	1240	19·23	1250	20·19
November ..	1375	28·50	1244	19·62	1256	20·77
December ..	1384	29·35	1250	20·19	1264	21·54
1918.						
January ..	1395	30·37	1258	20·96	1272	22·31
February ..	1406	31·40	1265	21·63	1280	23·08
March ..	1416	32·34	1272	22·31	1287	23·75
April ..	1428	33·46	1281	23·17	1296	24·62
May ..	1443	34·86	1291	24·13	1305	25·48
June ..	1454	35·89	1299	24·90	1312	26·15
July ..	1465	36·92	1307	25·67	1319	26·83
August ..	1478	38·13	1316	26·54	1327	27·60
September ..	1490	39·25	1325	27·40	1335	28·37
October ..	1498	40·00	1332	28·08	1342	29·04
November ..	1507	40·84	1339	28·75	1349	29·71
December ..	1527	42·71	1353	30·10	1362	30·96
1919.						
January ..	1537	43·64	1361	30·87	1369	31·63
February ..	1540	43·93	1364	31·15	1373	32·02
March ..	1539	43·83	1364	31·15	1375	32·21
April ..	1539	43·83	1365	31·25	1376	32·31
May ..	1537	43·64	1364	31·15	1376	32·31
June ..	1525	42·52	1357	30·48	1371	31·83
July ..	1522	42·24	1356	30·38	1372	31·92
August ..	1530	42·99	1361	30·87	1379	32·60
September ..	1543	44·21	1370	31·73	1390	33·65
October ..	1558	45·61	1381	32·79	1402	34·81
November ..	1576	47·29	1394	34·04	1416	36·15
December ..	1599	49·44	1409	35·48	1432	37·69

NOTE. — The information relative to fuel and light is based upon the four chief centres only, otherwise the figures are in respect of prices in twenty-five towns of the Dominion.

MOVING SIX-MONTHLY AVERAGE INDEX NUMBERS FOR FOOD, RENT, AND FUEL AND LIGHT, AND FOR THESE GROUPS COMBINED, COMMENCING WITH THE SIX MONTHS ENDED JUNE, 1914.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13=1000.)

Six Months ended	Food.	Rent.	Fuel and Light.	Food, Rent, and Fuel and Light.	Six Months ended	Food.	Rent.	Fuel and Light.	Food, Rent, and Fuel and Light.
1914.					**1917.**				
June ..	1069	984	1045	1039	March ..	1331	994	1230	1215
July ..	1070	984	1045	1040	April ..	1342	995	1240	1223
August ..	1071	984	1045	1041	May ..	1351	997	1250	1229
September	1076	984	1053	1044	June ..	1357	999	1268	1235
October ..	1079	984	1061	1047	July ..	1356	1000	1281	1236
November	1088	984	1066	1053	August ..	1359	1002	1300	1240
December	1104	984	1071	1063	September	1364	1003	1317	1245
1915.					October ..	1370	1004	1335	1250
January..	1121	984	1075	1073	November	1375	1005	1359	1256
February	1141	984	1076	1085	December	1384	1006	1379	1264
March ..	1158	985	1071	1094					
April ..	1175	986	1067	1103	**1918.**				
May ..	1186	987	1067	1109	January..	1395	1007	1395	1272
June ..	1189	988	1066	1110	February	1406	1008	1406	1280
July ..	1193	989	1066	1112	March ..	1416	1010	1414	1287
August ..	1196	990	1069	1114	April ..	1428	1013	1421	1296
September	1197	992	1069	1115	May ..	1443	1015	1420	1305
October ..	1198	993	1068	1116	June ..	1454	1017	1420	1312
November	1208	995	1066	1123	July ..	1465	1020	1422	1319
December	1218	997	1067	1128	August ..	1478	1022	1421	1327
1916.					September	1490	1026	1418	1335
January..	1224	998	1064	1132	October ..	1498	1029	1423	1342
February	1229	1000	1067	1136	November	1507	1033	1430	1349
March ..	1237	997	1075	1141	December	1527	1037	1435	1362
April ..	1247	994	1082	1147					
May ..	1249	991	1092	1149	**1919.**				
June ..	1255	988	1104	1153	January..	1537	1040	1443	1369
July ..	1262	985	1125	1159	February	1540	1044	1454	1373
August ..	1268	982	1147	1165	March ..	1539	1046	1467	1375
September	1275	983	1166	1171	April ..	1539	1047	1472	1376
October ..	1280	985	1184	1176	May ..	1537	1049	1480	1376
November	1287	987	1200	1183	June ..	1525	1050	1496	1371
December	1297	989	1208	1190	July ..	1522	1052	1514	1372
1917.					August ..	1530	1053	1530	1379
January..	1310	990	1217	1200	September	1543	1056	1553	1390
February	1321	992	1221	1207	October ..	1558	1059	1579	1402
					November	1576	1062	1605	1416
					December	1599	1064	1625	1432

NOTE. — The information relative to fuel and light is based upon the four chief centres only, otherwise the figures are in respect of prices in twenty-five towns of the Dominion.

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To illustrate the significance of these tables let us take in the second of them the figure 1039, the June, 1914, index number for the five groups combined: this means that the simple arithmetic average of the combined index numbers for each of the six months of 1914 ended 30th June was 1039. The next figure (1040) represents the average of the index numbers for each of the six months ended 31st July, 1914, and so on. The plan of adopting a moving average is a suitable one whenever it is desired to reduce to a minimum the effects of fortuitous temporary variations. The effect of this plan is at the same time to show a much more regular increase in the general level of retail prices than would be shown by the monthly index numbers themselves, and it will be seen from the table that in only one period (that ended 30th June, 1919) does any six-monthly period show a lower moving average index number for all groups combined than its predecessor. The fall in this case is wholly to be accounted for by the automatic elimination in June of the index number for the preceding December, which was high on account of the phenomenal price of potatoes at that time prevailing. Although the general index number, with the solitary exception mentioned, shows a continuous rise, the index numbers for the individual groups manifest some fluctuations, fuel and light actually showing a net fall during 1915, and rent during 1916. The increase in the index number for the food groups is, however, relatively constant.

Although the effect of adopting a moving average is to eliminate temporary fluctuations, the degree to which fluctuations are eliminated depends directly on the period over which the moving average is taken (here, six months), and inversely on the duration and magnitude of such fluctuations. Now, it is obvious that seasonal fluctuations are not sufficiently ephemeral in nature to be eliminated by merely a six-monthly moving average, and in consequence it is not surprising to find that this table shows in general that the rate of increase in the moving average index numbers has been by no means uniform even for six-monthly periods.

QUARTERLY INDEX NUMBERS.

Index numbers of retail prices are next quoted for each quarter from the beginning of 1914 to the end of 1919, the figures being again (except as regards fuel and light) based on returns collected from the twenty-five towns, and not merely the four chief centres.

It should be understood that wherever the index number for the March quarter of a year is referred to, what is in mind is the average of the index numbers for the three months ended the 31st March of that year; similarly the index number for a June quarter is the average of the index numbers for the three months ended the 30th June, and so on.

WAR INCREASES IN RETAIL PRICES.—QUARTERLY INDEX NUMBERS (WEIGHTED AVERAGE), 1914–19, ACCORDING TO GROUPS.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13=1000.)

Quarter ended	Group I.: Groceries.	Group II.: Dairy-produce.	Group III.: Meat.	Groups I.–III.: Three Food Groups.	Group IV.: Rent.	Groups I.–IV.: Food and Rent.	Group V.: Fuel and Light.	Groups I.–V.: Food, Rent, and Fuel and Light.
1914—March ..	1038	1042	1105	1062	984	1034	1045	1035
June	1036	1087	1115	1075	984	1043	1045	1043
September ..	1050	1034	1139	1078	984	1044	1061	1046
December ..	1133	1015	1207	1131	984	1079	1082	1079
1915—March ..	1210	1100	1212	1185	990	1114	1061	1108
June	1201	1212	1171	1193	990	1117	1071	1112
September ..	1205	1170	1221	1202	1000	1124	1067	1118
December ..	1208	1130	1334	1233	1000	1146	1066	1137
1916—March ..	1209	1187	1321	1242	982	1152	1084	1145
June	1184	1330	1330	1268	982	1166	1125	1162
September ..	1212	1304	1353	1282	992	1176	1207	1179
December ..	1270	1276	1389	1312	992	1198	1208	1199
1917—March ..	1314	1312	1422	1350	1002	1227	1252	1230
June	1277	1413	1435	1362	1002	1235	1285	1240
September ..	1297	1350	1461	1365	1008	1237	1349	1249
December ..	1333	1335	1534	1402	1008	1262	1410	1278
1918—March ..	1373	1380	1535	1430	1022	1282	1419	1297
June	1440	1459	1537	1478	1022	1315	1420	1326
September ..	1512	1417	1549	1503	1044	1335	1416	1344
December ..	1626	1402	1559	1551	1044	1371	1454	1380
1919—March ..	1554	1431	1558	1527	1053	1356	1480	1369
June	1489	1558	1541	1520	1053	1356	1512	1373
September ..	1570	1512	1589	1563	1070	1384	1593	1406
December ..	1666	1516	1674	1634	1070	1434	1656	1457

NOTE.—The information relative to fuel and light is based on the average of the four chief centres only, otherwise the figures are in respect of prices in twenty-five towns of the Dominion.

It is true that the figures for the September quarter of 1914 are the first which could in any way have been affected by war conditions, but in order to allow duly for the effects of the seasonal fluctuations it would be desirable to have index numbers covering at least four pre-war quarters. Unfortunately, however, the quarterly data are not available prior to 1914, and accordingly figures can be supplied in connection with two pre-war quarters only (the first two of 1914).

Less than two-thirds of the September quarter of 1914, however, fell within the war period, and in view of this it is not surprising to find that the increase in the index number for that quarter as compared with the preceding quarter is negligible. Indeed, there is reason to believe that the effect of

the war, operating through the shortage of shipping-space it brought about, was in the first instance to lower the price of such of the produce of New Zealand as is of a fairly perishable nature and finds its market abroad, and temporary drops early in the war period in the case both of dairy-produce and of meat are more likely the outcome of this fact than of seasonal fluctuations or of any other cause.

The December quarter of 1914 was accordingly the first to show a considerable rise, and the increase which then began in the index number for the three food groups and rent has continued without any set-back since.

The index numbers for the individual groups are more clearly the result not only of the general upward tendency of prices but also of seasonal fluctuations: for example, despite the effects of the war in raising prices, the index number of dairy-produce for the June quarter in each year has, without exception, been higher than that for the September quarter of the same year, this being wholly due to seasonal rises in the prices of the commodities going to make up this group. In strictness, however, the index number for the June quarter of one year is comparable only with that for the same quarter of another year; similarly, the September quarter of one year is comparable only with the September quarter of another year and so on; this fact should not be lost sight of in considering the tables.

The careful reader will perhaps be struck by the remarkable coincidence that in each year the index number of rent is the same for the June quarter as for the March quarter of the same year, while a similar relationship also holds between the rent figures for September and December quarters; in 1914 the rent index number was the same throughout the year. The key to the situation, however, lies in the statement already made to the effect that returns of rent are collected only half-yearly, in February and August, while in 1914 there was only one collection. In times of rapidly rising rents the effect of this method of collection would tend to stultify the whole table, and it would be necessary for the Statistical Office to undertake more frequent collections. As before mentioned, however, of all the groups investigated rent is that which for various reasons has risen least during the war period. Indeed, as will be obvious from the table, it was not until war had been in progress two years that rents really began seriously to rise.

MONTHLY INDEX NUMBERS.

Because of the above-mentioned characteristic of the rent index number it has been wholly excluded in the table now to be quoted, which shows the war increases month by month from July, 1914, and which is, like the two preceding tables, based on data collected in the twenty-five towns. Fuel and light have also been excluded.

War Increases in Retail Prices.—Monthly Index Numbers of Groups I, II, III, and I–III (Dominion Weighted Average), together with the Percentage Increase of the Monthly Index Numbers for the Three Food Groups over that for July, 1914, from July, 1914, to December, 1919.

(Base: Average annual aggregate expenditure, four chief centres, 1909–13=1000.)

Month.	Group I: Groceries.	Group II: Dairy-produce.	Group III: Meat.	Groups I–III: Food Groups.		Month.	Group I: Groceries.	Group II: Dairy-produce.	Group III: Meat.	Groups I–III: Food Groups.	
				Index.	Increase per Cent. over July, 1914.					Index.	Increase per Cent. over July, 1914.
1914.						**1917.**					
July ..	1033	1057	1127	1070	..	January..	1362	1284	1407	1359	27·01
August ..	1048	1032	1127	1071	0·09	February	1297	1307	1434	1346	25·79
September	1069	1013	1163	1088	1·68	March ..	1284	1344	1426	1346	25·79
October ..	1079	997	1186	1096	2·43	April ..	1273	1395	1435	1357	26·82
November	1117	1008	1223	1128	5·42	May ..	1281	1420	1435	1367	27·76
December	1201	1040	1214	1168	9·16	June ..	1277	1425	1435	1365	27·57
						July ..	1286	1370	1439	1357	26·82
						August ..	1296	1347	1459	1363	27·38
						September	1311	1333	1486	1376	28·60
						October ..	1321	1331	1524	1392	30·09
1915.						November	1322	1329	1536	1396	30·47
January..	1203	1069	1216	1177	10·00	December	1356	1345	1543	1417	32·43
February	1221	1102	1214	1191	11·31						
March ..	1207	1131	1206	1189	11·12						
April ..	1198	1210	1188	1198	11·96	**1918.**					
May ..	1197	1223	1166	1192	11·40	January..	1377	1358	1538	1427	33·27
June ..	1209	1202	1159	1186	10·84	February	1369	1382	1535	1430	33·64
July ..	1219	1228	1158	1200	12·15	March ..	1374	1400	1535	1434	34·11
August ..	1210	1178	1237	1212	13·27	April ..	1413	1451	1536	1464	36·82
September	1188	1102	1266	1195	11·68	May ..	1451	1470	1536	1484	38·69
October ..	1177	1112	1298	1203	12·43	June ..	1457	1458	1539	1485	38·79
November	1234	1135	1360	1254	17·20	July ..	1477	1441	1544	1491	39·35
December	1213	1144	1343	1241	15·98	August ..	1519	1423	1548	1507	40·84
						September	1539	1388	1555	1509	41·03
						October ..	1548	1392	1555	1514	41·50
						November	1587	1403	1561	1537	43·64
						December	1742	1410	1562	1603	49·81
1916.						**1919.**					
January..	1217	1145	1323	1236	15·51	January..	1620	1415	1561	1553	45·14
February	1215	1184	1319	1243	16·17	February	1543	1433	1558	1522	42·24
March ..	1197	1233	1321	1247	16·54	March ..	1499	1445	1555	1505	40·65
April ..	1183	1303	1323	1258	17·57	April ..	1489	1529	1542	1516	41·68
May ..	1181	1337	1331	1269	18·60	May ..	1490	1561	1541	1524	42·43
June ..	1187	1352	1336	1276	19·25	June ..	1488	1585	1539	1528	42·80
July ..	1202	1312	1344	1276	19·25	July ..	1523	1546	1554	1539	43·83
August ..	1213	1320	1351	1284	20·00	August ..	1574	1513	1590	1565	46·26
September	1221	1282	1365	1284	20·00	September	1613	1476	1624	1585	48·13
October ..	1221	1282	1379	1289	20·47	October ..	1628	1494	1653	1605	50·00
November	1276	1268	1391	1314	22·80	November	1665	1511	1681	1635	52·80
December	1312	1276	1397	1332	24·49	December	1704	1542	1688	1662	55·33

This table, like its predecessor, shows well the effect of seasonal fluctuations, each autumn, for example, showing with but one exception a fall in the meat group. As the period covered by each index number is one-third of that in the case of the quarterly index numbers, this table is liable to be considerably more affected by temporary price-changes.

CHANGES IN THE PURCHASING-POWER OF MONEY.

A further table is now appended showing quarter by quarter during the war period the successive declines in the purchasing-power of the monetary unit.

WAR INCREASES IN RETAIL PRICES.—RELATIVE WORTH OF "THE POUND."

Relative Worth in Terms of Commodities (but stated for Convenience in Terms of Money) represented by Twenty Shillings during the Years 1914–19, (a) taking the Average "Worth" in the Years 1909–13 as Base = 20s.; (b) taking the Average "Worth" in July, 1914, as Base = 20s. (Based on the Dominion Weighted Average.)

(a.) Average "Worth" in 1909–13 = 20s.

Quarter ended	Group I: Groceries.	Group II: Dairy-produce.	Group III: Meat.	Groups I–III: Three Food Groups.
	s. d.	s. d.	s. d.	s. d.
1914—March..	19 3¼	19 2¼	18 1¼	18 10
June ..	19 3¾	18 4¾	17 11½	18 7¼
September	19 0½	19 4	17 6¾	18 6¾
December	17 7¾	19 8½	16 6¼	17 8¼
1915—March..	16 6½	18 2¼	16 6	16 10½
June ..	16 7¾	16 6	17 1	16 9¼
September	16 7¼	17 1¼	16 4½	16 7¾
December	16 6¾	17 8½	15 0	16 3½
1916—March..	16 6½	16 10¼	15 1¾	16 1¼
June ..	16 10¾	15 0½	15 0½	15 9¼
September	16 6	15 4	14 9¼	15 7¼
December	15 9	15 8	14 4¾	15 3
1917—March..	15 2¾	15 3	14 0¾	14 9¼
June ..	15 8	14 2	13 11½	14 8¼
September	15 5	14 9¾	13 8¼	14 7¾
December	15 0½	14 11¾	12 4¾	14 3¾
1918—March..	14 6¾	14 6	13 0¼	13 11¾
June ..	13 10¾	13 8½	13 0¼	13 6¼
September	13 2¾	14 1¼	12 11	13 3¾
December	12 3½	14 3¼	12 10	12 10¾
1919—March..	12 10½	13 11¾	12 10	13 1¼
June ..	13 5½	12 10	12 11¾	13 2
September	12 8¾	13 2¾	12 7	12 9½
December	12 0	13 2¼	11 11¼	12 3

(b.) Average "Worth" in July, 1914 = 20s.

Quarter ended	Group I: Groceries.	Group II: Dairy-produce.	Group III: Meat.	Groups I–III: Three Food Groups.
	s. d.	s. d.	s. d.	s. d.
1914—March..	19 10¾	20 3½	20 4¼	20 1¾
June ..	19 11¼	19 5¼	20 2¼	19 11
September	19 8	20 5¼	19 9¼	19 10¼
December	18 2¾	20 10	18 8	18 11
1915—March..	17 1	19 2¼	18 7	18 0¾
June ..	17 2½	17 5¼	19 2¾	17 11¼
September	17 1¼	18 0¾	18 5¼	17 9¾
December	17 1¼	18 8½	16 10½	17 4¼
1916—March..	17 1	17 9¾	17 0¼	17 2¾
June ..	17 5½	15 10¼	16 11¼	16 10½
September	17 0½	16 2¼	16 7¾	16 8¼
December	16 3¼	16 6¾	16 2½	16 3¾
1917—March..	15 8¾	16 1¼	15 10	15 10¼
June ..	16 2¼	14 11½	15 8¼	15 8½
September	15 11¼	15 8	15 5	15 8¼
December	15 6	15 10	14 8¼	15 3¼
1918—March..	15 0½	15 3¾	14 8	14 11½
June ..	14 4¼	14 5¼	14 7¼	14 5¼
September	13 8	14 11	14 6¼	14 2¼
December	12 8½	15 1	14 5½	13 9½
1919—March..	13 3¼	14 9¼	14 5½	14 0¼
June ..	13 10½	13 6¾	14 7¼	14 1
September	13 2	13 11¾	14 2	13 8¼
December	12 4¾	13 11¼	13 5½	13 1¼

CHAPTER VII.—HOUSEHOLD BUDGET INQUIRIES.

NEW ZEALAND AND AUSTRALIAN INVESTIGATIONS OF 1910–11.

It was mentioned in Chapter I that the weights employed in the compilation of the index numbers of retail prices were based on the results of an investigation carried out by the Labour Department in 1910–11. This investigation was launched on lines similar to those adopted in an inquiry carried out at about the same time by the Commonwealth Statistician in Australia, who courteously supplied the New Zealand authorities with full information concerning the method there being employed.

In Australia copies of a small account-book providing for weekly entries of income and expenditure under specified headings, and covering a period of twelve months, were employed. The books were freely distributed throughout Australia, but only 14 per cent. were eventually returned completed to the Bureau of Census and Statistics in Melbourne; and in the course of his

report the Commonwealth Statistician placed on record his conviction that the period covered would require to be considerably curtailed in future investigations in order to increase the number of budgets available for analysis, his experience having shown that very few householders possessed the perseverance and inclination to keep a faithful record of income and outgo over a protracted period.

The New Zealand inquiry was limited to the four chief centres, and as far as possible to *bona fide* workers, the agents of the Labour Department in the centres being instructed to eliminate as far as possible from the inquiry households where boarders were kept or where occupants other than the head were breadwinners; likewise households free of rent, or in receipt of an annual income in excess of £250 per annum, were to be excluded.

Two thousand account-books providing for weekly entries of receipts and expenditure were printed, but despite the publicity given to the inquiry, and the hearty assurances of support received from workers generally, not to mention the efforts of the local agents of the Labour Department, fewer than 1,800 were distributed. Every care was taken to ensure the reliability and accuracy of the returns; full instructions were printed and issued with each book, and a specimen page properly filled up was incorporated therewith. Yet of all the account-books distributed only sixty-nine that were deemed of any practical use were received when the books were called up in 1911.

These were classified on the basis of annual income into three divisions :—

Annual Income.	Number of Cases of more than Four Members.	Number of Cases of Four Members or Fewer.	Number of Families.
Under £143	10	10	20
£143 and not over £169 ..	4	16	20
Over £169	12	17	29
	26	43	69

The detailed results of the New Zealand investigation were published in a special report of the Labour Department in 1912, and the following table, showing a comparison of the New Zealand and Australian results, is compiled, and the following comments are quoted therefrom :—

PERCENTAGE OF MAIN ITEMS TO TOTAL EXPENDITURE.

Income.	Members of Families.	Housing.	Food.	Clothing.	Fuel and Light.	Other Items.	Total.
Over £169 ..	Over four ..	16·37	34·80	14·75	4·81	29·27	100
	Four and under	22·68	29·50	14·00	4·88	28·94	100
Between £169 and £143	Over four ..	14·05	38·52	16·87	6·17	24·39	100
	Four and under	19·91	35·68	13·77	5·01	25·63	100
Under £143 ..	Over four ..	22·49	39·00	14·88	5·34	18·29	100
	Four and under	23·54	34·21	11·54	6·49	24·22	100
General average	New Zealand investigation	20·31	34·13	13·89	5·22	26·45	100
	Australian investigation	15·55	35·31	12·67	3·97	32·50	100

" Excluding the expenditure on ' other items,' the New Zealand returns show, as do the Australian, that the cost of food is by far the most important factor, amounting to just over 34 per cent. of the total expenditure. Next comes housing, 20·31 ; then clothing, 13·89 ; and fuel and light, 5·22. It would appear from this comparison that, with the exception of ' other items ' and food, the expenditure of Australian citizens was proportionately less than that of New-Zealanders. It should be borne in mind, however, that the comparison, although based on a common-income standard, goes no further. In New Zealand, town workers only were dealt with ; in Australia the returns were taken from all classes living in large and small towns, and from dwellers in remote country places. In the 113 Australian returns dealt with sixty-two related to dwellers in metropolitan areas and fifty-one in rural districts.

" The expenditure on food in the three New Zealand income groups is remarkably close, any material difference being accounted for by the number of persons concerned, the expenditure, of course, being higher in the larger families. The general average expenditure on food for families in the three sections containing over four members is 37 per cent. on total expenditure, and in the small-family groups (four and under) 32·9."

NEW ZEALAND INVESTIGATION OF 1919.

With a view to examining what changes had taken place in the relative household expenditure on the various groups of items, the Census and Statistics Office, with the co-operation of a Christchurch firm, undertook in 1919 another investigation on similar lines. Profiting by the experience of Australia and New Zealand in 1910–11, and of a further Australian investigation in 1913, the period to be covered by the return was reduced to six months, and in order to encourage householders to furnish returns a pecuniary inducement in the shape of prizes for the most accurately compiled returns was offered. Again the results were disappointing : although several thousand books were printed, only 109 returns which could be considered of any practical value were received.

A feature of the results worthy of mention was that the class of person who filled in the return was clearly representative of the more thrifty part of the population, and thus not truly representative of the whole. This, however, was natural, since the qualities which would induce a householder to enter a competition such as that of 1919, requiring as it did carefulness, application, and perseverance, were not such as one would expect to find amongst the more or less improvident sections of the community.

In presenting the results a distinction is drawn between households in receipt of under £4 10s. per week and those in receipt of £4 10s. per week and over. Most weight should be attached to the figures relating to households with the smaller incomes, since from the nature of the case such families are nearer the margin of subsistence, and will therefore spend less on luxuries.

HOUSEHOLD BUDGET INQUIRY, 1919.

Expenditure on and Relative Importance of Various Items according to Number in Household.

(Households in receipt of under £4 10s. per week.)

Item	Two Average Expenditure	Two Percentage of Total	Three Average Expenditure	Three Percentage of Total	Four Average Expenditure	Four Percentage of Total	Five Average Expenditure	Five Percentage of Total	Six Average Expenditure	Six Percentage of Total	Seven Average Expenditure	Seven Percentage of Total	Eight Average Expenditure	Eight Percentage of Total	All Families Average Expenditure	All Families Percentage of Total
Bread	590	3·12	707	3·34	881	3·54	992	4·13	1102	4·47	1630	6·80	1436	4·89	885	3·83
Flour	220	1·16	208	0·98	191	0·77	250	1·04	220	0·89	744	3·10	247	0·84	231	1·00
Meat	1590	8·40	1618	7·64	2289	9·21	2022	8·42	2093	8·48	2547	10·62	2607	8·87	1953	8·46
Bacon and ham	176	0·93	331	1·56	268	1·08	276	1·15	129	0·52	532	2·22	677	2·30	287	1·24
Milk	679	3·59	822	3·88	1095	4·41	1061	4·42	1395	5·65	1019	4·25	1554	5·29	1003	4·35
Butter	837	4·42	754	3·56	1103	4·44	1030	4·29	1364	5·53	780	3·25	1645	5·60	992	4·30
Sugar	302	1·60	354	1·67	407	1·64	404	1·68	475	1·92	576	2·40	577	1·96	395	1·71
Tea, coffee, and cocoa	331	1·75	328	1·55	417	1·68	379	1·58	452	1·83	336	1·40	341	1·16	371	1·61
Vegetables and fruit	605	3·20	721	3·41	786	3·16	912	3·80	946	3·83	971	4·05	1577	5·37	830	3·60
Other foods	1799	9·51	1903	8·99	2480	9·98	2235	9·31	1999	8·10	3794	15·82	3306	11·25	2195	9·51
Clothing and drapery	1369	7·23	2846	13·44	2620	10·54	2656	11·06	2988	12·11	2467	10·29	2127	7·24	2553	11·07
Boots and shoes	429	2·27	763	3·60	878	3·53	944	3·93	1061	4·30	1513	6·31	990	3·37	845	3·66
Fuel and light	1454	7·68	1508	7·12	1706	6·86	1512	6·30	1583	6·41	685	2·86	1093	3·72	1515	6·56
Tobacco, cigars, &c.	411	2·17	236	1·11	314	1·26	392	1·63	218	0·88	444	1·85	781	2·66	340	1·47
Fares: Rail, tram, &c.	282	1·49	568	2·68	631	2·54	392	1·63	259	1·05	780	3·25	652	2·22	480	2·08
Sports and recreations	401	2·12	306	1·45	396	1·59	344	1·43	404	1·64	255	1·06	567	1·93	362	1·57
Life insurance	371	1·96	724	3·42	584	2·35	600	2·50	939	3·80	390	1·63	1775	6·04	671	2·91
Fire insurance	65	0·34	39	0·18	50	0·20	53	0·22	44	0·18	31	0·13	58	0·20	49	0·21
Contributions	991	5·24	526	2·48	679	2·73	709	2·95	452	1·83	156	0·65	420	1·43	645	2·79
House-rent	1975	10·44	839	3·96	2701	10·87	2290	9·54	3428	13·89			1943	6·61	1972	8·54
Dwelling-expenses	1620	8·56	1871	8·84	1026	4·13	910	3·79	1080	4·38	1051	4·38			1254	5·43
Other payments	2426	12·82	3199	15·11	3356	13·50	3645	15·18	2049	8·30	3282	13·68	5012	17·06	3251	14·10
Total expenditure	18923	100·00	21171	100·00	24858	100·00	24008	100·00	24480	100·00	23983	100·00	29385	100·00	23079	100·00
Number of cases	6		14		10		15		4		1		2		52	

HOUSEHOLD BUDGET INQUIRY, 1919.

Expenditure on and Relative Importance of Various Items according to Number in Household.

(Households in receipt of £4 10s. per week and over.)

Item	Two Average Expenditure	Two Percentage of Total	Three Average Expenditure	Three Percentage of Total	Four Average Expenditure	Four Percentage of Total	Five Average Expenditure	Five Percentage of Total	Six Average Expenditure	Six Percentage of Total	Seven Average Expenditure	Seven Percentage of Total	Eight Average Expenditure	Eight Percentage of Total	Nine Average Expenditure	Nine Percentage of Total	Eleven Average Expenditure	Eleven Percentage of Total	All Families Average Expenditure	All Families Percentage of Total
Bread	328	1·10	754	2·65	800	2·72	1099	3·65	1233	4·16	1266	3·56	1397	4·56	2605	9·26	2350	5·83	1146	3·64
Flour	28	0·09	171	0·60	253	0·85	228	0·76	266	0·90	489	1·38	699	2·28	480	1·71	425	1·05	307	0·98
Meat	2288	7·68	2149	7·54	1920	6·45	2238	7·43	2098	7·08	2297	6·46	2682	8·76	3805	13·52	6545	16·25	2429	7·72
Bacon and ham	96	0·32	125	0·44	192	0·64	300	1·00	221	0·75	223	0·63	122	0·39	132	0·47	970	2·41	248	0·79
Milk	771	2·59	1082	3·80	1102	3·70	1377	4·57	1277	4·31	1425	4·01	1323	4·32	1602	5·69	1302	3·23	1264	4·02
Butter	465	1·56	994	3·49	1140	3·83	1400	4·65	1233	4·16	1694	4·77	2238	7·31	2475	8·80	2393	5·94	1391	4·42
Sugar	48	0·16	297	1·04	358	1·20	440	1·46	440	1·49	690	1·94	760	2·48	864	3·07	888	2·20	489	1·55
Tea, coffee, and cocoa	322	1·08	363	1·27	325	1·09	462	1·53	440	1·50	445	1·25	168	0·55	776	2·76	1281	3·18	458	1·46
Vegetables and fruit	418	1·40	1053	3·70	1420	4·77	1208	4·01	1372	4·63	1437	4·05	388	1·27	1420	5·05	1540	3·84	1282	4·07
Other foods	1731	5·81	2393	8·40	2635	8·85	2595	8·62	3273	11·05	2742	7·71	2305	7·53	3530	12·55	3334	8·28	2768	8·79
Clothing and drapery	2881	9·07	4455	15·64	3931	13·20	4270	14·21	3845	12·98	3612	10·16	6702	21·90	3688	9·55	4040	13·57	4040	12·84
Boots and shoes	780	2·62	956	3·36	895	3·01	1052	3·49	1127	3·80	1400	3·94	2091	6·83	1308	4·65	5486	13·57	1189	3·78
Fuel and light	1655	5·56	1590	5·58	1950	6·55	1991	6·61	1729	5·84	1757	4·94	1142	3·73	2178	7·74	2266	5·62	1823	5·79
Tobacco, cigars, &c.	195	0·65	410	1·44	171	0·57	209	0·69	259	0·87	194	0·55	428	1·40			2473	6·14	250	0·79
Fares: Rail, tram, &c.	2944	9·88	1010	3·55	869	2·92	969	3·22	969	3·22	1231	3·46	710	2·32	56	0·20	422	1·05	965	3·07
Sports and recreations	772	2·59	495	1·74	794	2·67	607	2·02	618	2·09	566	1·59	1032	3·37	512	1·82	755	1·87	613	1·95
Life insurance	1415	4·75	1103	3·87	1020	3·43	354	1·18	563	1·90	1166	3·28	563		610	2·17	435	1·08	825	2·62
Fire insurance	85	0·29	76	0·27	54	0·18	45	0·15	38	0·13	81	0·23	90	0·29			504	1·25	57	0·18
Contributions			1494	5·24	1668	4·11	871	2·89	1070	3·61	1108	3·12			1478	5·25	17	0·04	1152	3·66
House-rent	1743	5·85	3333	11·70	1795	5·96	1795	5·96	2441	8·24	1765	4·97					104	0·26	2217	7·04
Dwelling-expenses	6008	20·17	916	3·22	2310	5·69	1715	5·69	1746	5·89	2478	6·97	1974	6·45	270	0·96	3141	7·80	1710	5·43
Other payments	4518	16·17	3269	11·48	4734	15·90	4883	16·21	3811	12·86	7479	21·04	4361	14·25	1345	4·78	3402	8·44	4850	15·41
Total expenditure	29791	100·00	28488	100·00	29773	100·00	30117	100·00	29629	100·00	35545	100·00	30608	100·00	28134	100·00	40287	100·00	31473	100·00
Number of cases	2		8		8		12		12		13		1		1		3		57	

HOUSEHOLD BUDGET INQUIRY, 1919.

Expenditure on and Relative Importance of Various Items according to Income.

Item.	Families of Undermentioned Income.				Weighted Average of all Families.	
	Under £4 10s. per Week.		£4 10s. or over per Week.			
	Average Expenditure.	Percentage of Total.	Average Expenditure.	Percentage of Total.	Average Expenditure.	Percentage of Total.
Bread	885	3·83	1146	3·64	1021	3·72
Flour	231	1·00	307	0·98	271	0·99
Meat	1953	8·46	2429	7·72	2202	8·02
Bacon and ham	287	1·24	248	0·79	267	0·97
Milk	1003	4·35	1264	4·02	1139	4·15
Butter	992	4·30	1391	4·42	1201	4·37
Sugar	395	1·71	489	1·55	444	1·62
Tea, coffee, and cocoa ..	371	1·61	458	1·46	417	1·52
Vegetables and fruit ..	830	3·60	1282	4·07	1066	3·88
Other foods	2195	9·51	2768	8·79	2494	9·08
Clothing and drapery ..	2553	11·07	4040	12·84	3331	12·13
Boots and shoes	845	3·66	1189	3·78	1025	3·73
Fuel and light	1515	6·56	1823	5·79	1675	6·10
Tobacco, cigars, &c. ..	340	1·47	250	0·79	293	1·07
Fares: Rail, tram, &c. ..	480	2·08	965	3·07	734	2·67
Sports and recreations ..	362	1·57	613	1·95	493	1·79
Life insurance	671	2·91	825	2·62	752	2·74
Fire insurance	49	0·21	57	0·18	53	0·19
Contributions	645	2·79	1152	3·66	910	3·31
House-rent..	1972	8·54	2217	7·04	2100	7·64
Dwelling-expenses	1254	5·43	1710	5·43	1492	5·43
Other payments	3251	14·10	4850	15·41	4087	14·88
Total expenditure ..	23079	100·00	31473	100·00	27468	100·00
Number of cases ..	52		57		109	

Except as regards rent (a matter which is fully referred to below), the various investigations show remarkable similarity, and, probably, had more householders sent in budgets so that the figures were more truly representative and not so liable to be affected by fortuitous anomalies peculiar to individual households, the correspondence would have been even more close. Such differences as there are, are felt to be such that they do not in the circumstances warrant any present adjustment of the mass-units which have hitherto been used in connection with the retail-prices investigation.

The following table shows at a glance the degree to which the various recent investigations have corresponded. It is interesting to note that the figures afford striking confirmation of Engel's law, which states that the poorer a family is the greater the proportion of its income it spends on food. An exception occurs in connection with that portion of food expenditure which is

sometimes, whether rightly or wrongly, regarded as somewhat of a luxury—fruit and vegetables. Engel also laid it down that the proportion of income spent on housing is, roughly, constant for all classes. Schwabe, however, subsequently called this into question, and the results of his investigations were to establish the law which bears his name, and which states that with an increase of income the actual amount expended on housing increases, but the proportion falls. This law, too, is verified by these figures :—

HOUSEHOLD BUDGETS.

Table showing the Percentage which each Item of Expenditure bears to Total Expenditure, New Zealand Investigations of 1910–11 and 1919, and Australian Investigation of 1913.

Item of Expenditure.	Place and Year of Investigation.				
	New Zealand.				Australia.
	1910–11.*	1919.			1913.
	General Average.	Income under £4 10s. per Week.	Income £4 10s. per Week and over.	General Average.	General Average.
Housing	20·31	13·97	12·47	13·07	12·36
Food	34·13	39·61	37·44	38·32	41·16
Clothing	13·89	14·73	16·62	15·86	13·61
Fuel and light ..	5·22	6·56	5·79	6·10	4·53
Other items—					
Tobacco and cigars	1·05	1·47	0·79	1·07	1·25
Fares	2·82	2·08	3·07	2·67	2·49
Insurance ..	2·47	3·12	2·80	2·93	2·72
Sports	1·62	1·57	1·95	1·79	1·47
Other items ..	18·49	16·89	19·07	18·19	20·41
Totals ..	100·00	100·00	100·00	100·00	100·00

* The differences between this and the other results may be largely attributed to the fact that the scope of this investigation alone was confined to the four chief centres.

VALIDITY OF INDEX NUMBERS AS BETWEEN DIFFERENT COMMUNITIES, ETC.

A remarkable discrepancy will be noted between the results of the 1910–11 investigation and that of 1919 in regard to the proportion of expenditure on housing, although the 1919 figures agree very closely in this respect with those of the 1913 Australian investigation. This is largely accounted for by the fact that in the 1910–11 investigation households not paying rent were excluded, while in the later investigations the inquiry was not so confined. It is natural that, as pointed out above, in an investigation of this kind the class of person who would go to the trouble of keeping a record of details of expenditure over a considerable period would be just the class of person who, through thrift and foresight, had either obtained the freehold of his house or was on the way to do so through having, for instance, taken advantage of the system of the State advances, instead of being content to pay rent. There is also the

point that the 1910–11 investigation was confined to the four chief centres, where rents are high, while that of 1919 was not. Finally, there is the point which has already emerged in the preceding chapter—viz., that the war increase has been less for housing than for any other group; this of itself would be sufficient to bring it about that housing-cost would form a smaller proportion of the total expenditure of the average household in 1919 than it did in pre-war days.

Now, the 1910–11 figures were adopted as the basis of the weights used throughout the actual prices investigation, and it may well be asked whether in the light of the recent investigation it is not advisable to institute forthwith a new system of weights, especially in order to rectify the anomaly as regards housing. But to effect such an alteration on the basis of so small and perhaps non-representative an inquiry as that of 1919 would certainly be rash. Moreover it must not be overlooked that the index numbers as they are, from 1891 to 1913, relate only to the four chief centres, and that only a small proportion of the total areas covered by the investigation since 1913 (see Chapter V) lies outside these centres. Moreover, it is in the centres that the cost of living is believed to press hardest on the people. The fact is that there is a price-index appropriate to each community—indeed, to each individual—in regard to expenditure on living. But in order that a statistical investigation may be general in its application it is essential that hypothetical average communities or individuals alone be dealt with. For some purposes it might be desirable to institute a separate investigation based on an amended regimen for towns lying outside the four centres, but, since the essence of the method is the assumption of a fixed regimen, to do so would certainly invalidate comparisons between groups so formed; and, since the usages of individuals and communities differ among themselves, there is no saying where the process of taking out special index numbers would end. It is better by far to adopt one fixed hypothetical regimen which is as representative as possible of all the individuals making up the communities coming within the scope of the investigation; and this it can safely be claimed is done under the present system.

In any case, as before mentioned, rough and not meticulous accuracy as regards weighting is required in such an investigation as this, although strict accuracy as regards the prices taken is essential.

CONTINUITY OF INDEX NUMBERS IN POINT OF TIME.

There does, however, exist a real difficulty in this connection. The method here adopted assumes the maintenance over a long period of time of a fixed regimen; but it must be perfectly obvious that actual maintenance for long of a given grade or quality of a commodity is not possible. Moreover, some commodities in course of time vanish absolutely from the housewife's basket, and others take their place. There is a possibility, then, of our regimen ceasing to be that of actual usage and becoming inapplicable to the real world of fact. While comparisons may be, and are, very satisfactory and absolutely valid over a period of time not too long, with an increase of time the actual changes that have taken place in usage will have become greater, and the results will eventually lose all intelligible meaning in relation to the realm of reality. Thus, while the price-indexes relating to rent may well show a valid

comparison over the years 1914–19, during which changes in standard have been relatively slight, it may very likely be that a comparison between 1891 and 1951 would be largely futile, since the standard of a four-roomed house will in all probability have so changed during the sixty years that the price-indexes mean a very different thing for the two points of time.

Where a commodity changes in grade in such a manner that the new grade may be deemed to be directly substituted for the old grade, the fact of variation may for practical purposes usually be ignored, although there has undoubtedly been a change in the standard of living. On the other hand, where there is a change in the commodities themselves comparisons are largely nullified. There exists, however, a perfectly valid method of adjusting price-indexes *ex post facto* to allow for such changes, provided that full data exist for the prices of all the commodities concerned over the period covered by the change. Obviously, however, where such an adjustment has been made, our price-indexes do not really cover the same things, and quasi-continuity alone can be claimed for the index numbers.

The basis of the method by which the relative importance of the groups in the new regimen would be fixed is the household budget, while the weights assigned to individual commodities would be fixed, in accordance with their relative household consumptions. Changes in actual consumption are so gradual that they are apt to pass unnoticed, although a considerable difference may exist between the state of affairs at one date and that prevailing several years later. For this reason it is desirable that household budgets should be collected at fairly frequent intervals; and if the results warrant such a course the mass-units should be adjusted in accordance therewith, and the index numbers for the years covered by the change recompiled in such a way as to allow for a gradual change. As already mentioned, the results of the 1919 household-budget collection are not deemed to warrant any such adjustments, especially in view of the smallness and perhaps unrepresentative character of the cases dealt with. It is hoped to conduct an investigation on a much larger scale at some future date.

PART III.—WHOLESALE PRICES.

CHAPTER I.—METHOD OF THE INVESTIGATION.

COMMODITIES SELECTED.

The fact that wholesale prices are more or less typical of all prices has already been referred to. In making the choice of commodities to be included in the investigation every effort should be made to select such as are representative of as many phases as possible in the chain of production. For this reason, as will be seen from the subjoined list, a judicious selection has been made from not only home products but also imported commodities. Moreover, all stages of production are represented, from potatoes on the one hand to tinned peaches on the other, and from pig iron to 4-in. nails.

As previously mentioned, a much wider and more comprehensive range of commodities is available for selection from than was the case in the retail-prices investigation. Ideally, of course, it would be desirable to include each and every article finding its way into the wholesale markets. The list of commodities selected for inclusion in the general investigation will be found to include 106 items—about twice as many as were included in the retail-prices investigation. In the more detailed investigation according to groups 140 commodities have been considered. Several investigations have covered a much larger list of items, but the list adopted in New Zealand, which is essentially a primary producing and not a manufacturing country, is necessarily smaller than in more highly industrialized lands. It has, moreover, been felt that the inclusion of other items (most of which would necessarily be of very minor importance) would tax the work of collection and compilation to an extent more than commensurate with the increased value of the results given. Moreover, the effect of including numerous unimportant articles would necessarily be to lay undue emphasis on particular lines, and at the same time to increase the chances of error without any proportionate advantage accruing. Details have, however, been collected in connection with the wholesale prices of a number of other commodities of minor importance, and, should occasion arise, there ought to be no serious difficulty in incorporating these data in the calculation of the index number.

The list of commodities selected for purposes of computing the index numbers is quoted later. The commodities are divided into groups as follows: Agricultural produce; flour, bran, &c.; wool, hides, &c.; general merchandise and crockery; building-materials, ironmongery, &c.; leather; chemicals and manures; coal.

This list is of itself sufficient to show at a glance the more comprehensive scope of the wholesale investigation as compared with the retail.

"MASS-UNITS" OR WEIGHTS.

For purposes of this inquiry it was necessary to have recourse to a modification of the "aggregate expenditure method" as adopted in the retail-prices investigation. In the retail-prices inquiry the quantities of the various commodities used for household consumption throughout the Dominion were taken as the criteria; in the wholesale-prices inquiry the total quantities sold for consumption locally were substituted. These two quantities might differ considerably: e.g., the amount of coal consumed in households is very small compared with the total consumption of that commodity in the Dominion. Careful inquiries were instituted of wholesale merchants as to the amounts of the commodities included in the investigation sold for local consumption, and the information so obtained was carefully checked and to some extent supplemented by official records of production and trade (imports and exports).

The mass-units eventually assigned to the various commodities for purposes of computing the general index number are shown below, the unit of measurement being also given in each case. The mass-unit represents the total local consumption of the commodity in terms of the unit of measurement, the last three cyphers being for convenience omitted.

WHOLESALE PRICES INQUIRY. — COMMODITIES, UNITS OF MEASUREMENT, AND MASS-UNITS: GENERAL INVESTIGATION.

Number of Item.	Commodity.	Unit of Quantity.	Weight (less 000).
1	Wheat, milling	Bushel	1,000
2	Oats	,,	6,000
3	Barley, malting	,,	1,100
4	Maize	,,	350
5	Cocksfoot, machine-dressed	lb.	3,000
6	Rye-grass, perennial, machine-dressed	Bushel	1,500
7	Potatoes	Ton	160
8	Onions	,,	7
9	Flour	,,	110
10	Bran	,,	26
11	Pollard	,,	15
12	Oatmeal	,,	6
13	Wool, merino (medium to good)	lb.	1,400
14	,, half-bred (medium to good)	,,	2,400
15	,, crossbred (medium to good)	,,	3,200
16	Hides, ox	,,	1,940
17	,, cow	,,	1,140
18	Tallow	Cwt.	100
19	Butter	lb.	21,400
20	Cheese	,,	4,300
21	Tinned apricots	Doz. 2½ lb. tins	33
22	,, peaches	,,	33
23	,, pears	,,	16
24	Dried currants	lb.	2,600
25	,, sultanas	,,	4,700
26	,, prunes	,,	1,100
27	Herrings	Doz. 1 lb. tins	85
28	Salmon	,,	85
29	Sardines	Doz. ½ lb. tins	85
30	Coffee	lb.	400
31	Cocoa	,,	350
32	Tea	,,	7,500
33	Sugar, No. 1A	Ton	55
34	Golden syrup	Doz. 2 lb. tins	83
35	Treacle	,,	17
36	Sago	Cwt.	17
37	Tapioca	,,	6
38	Rice	,,	73
39	Salt, common	Ton	15
40	,, table	,,	6
41	Cream of tartar	lb.	1,135
42	Carbonate of soda	Cwt.	16
43	Vinegar	Gallon	380
44	Mustard	lb.	255
45	Pepper	,,	150
46	Starch	Cwt.	10
47	Soap	Ton	10
48	Blue	lb.	200
49	Candles	,,	4,000
50	Tobacco	,,	2,800
51	Kerosene	Caes, 8⅓ gal.	585
52	Ham	lb.	4,200
53	Bacon	,,	9,900
54	Honey	,,	400

WHOLESALE PRICES INQUIRY.—COMMODITIES, ETC.—*continued.*

Number of Item.	Commodity.	Unit of Quantity.	Weight (less 000).
55	Cornsacks	Dozen	592
56	Woolpacks	Each	615
	English china cups and saucers—		
57	Norwich, W. and G.	Dozen	50
58	Worcester shape, London size	,,	19
59	White granite and semi-porcelain dinnerware, 10 in. plate	,,	44
60	Toilet sets	Set	10
61	Tumblers, ½ quart, plain, heavy bottom	Dozen	35
62	Iron, pig	Ton	10
63	,, bar	,,	23
64	,, plate	,,	8
65	,, corrugated galvanized	,,	18
66	Fencing-wire, No. 8, galvanized	,,	12
67	Nails, 4 in. wire	Cwt.	102
68	Zinc, sheet	Ton	0·3
69	Lead, sheet	,,	1
70	Tinned plates	Box, 108 lb.	82
71	Copper, sheet	lb.	85
72	Lime	Cwt.	1,220
73	Cement	Ton	123
74	White-lead	,,	6
75	Linseed-oil	Gallon	450
76	Bricks	1,000	60
77	Kauri, first grade	100 sup. ft.	200
78	,, second grade	,,	70
79	,, third grade	,,	70
80	Rimu, heart (bridge quality)	,,	520
81	,, ordinary building	,,	700
82	Totara, heart (bridge quality)	,,	1,100
83	Matai, heart	,,	120
84	White-pine	,,	320
	Leather—		
85	Sole (N.Z.)	lb.	2,500
86	Kip (N.Z.)	,,	150
87	Split kip (N.Z.)	,,	250
88	Chrome calf (imported)	Feet	300
89	Chrome sides (N.Z.)	,,	1,800
90	Horrockses' "A1" calico	Running yard	2,400
91	Crewdson's No. 2 calico	,,	788
92	Alum	Cwt.	5
93	Bluestone	,,	3
94	Caustic soda	,,	16
95	Saltpetre	,,	2
96	Sulphur	,,	35
97	Tartaric acid	lb.	140
98	Superphosphate (36 to 38 per cent.)	Ton	70
99	Guano (60 per cent.)	,,	25
100	Basic slag	,,	15
101	Kainit	,,	2
102	Pure bonedust	,,	17
103	Sulphate of ammonia	,,	[0·6
	Coal—		
104	N.Z., screened	,,	550
105	,, unscreened	,,	1,450
106	Newcastle, screened	,,	250

COLLECTION OF DATA.

The method by which the data for the wholesale-prices investigation are collected is by monthly returns obtained from merchants, &c., and differs in no essential respect from the method employed in connection with the retail-prices investigation. Most of the information relating to years prior to 1913, moreover, was obtained in conjunction with the retail-prices investigation, and by the same official of the Department of Labour. Later, when the Census and Statistics Office was in a position to pursue its investigations, further returns for years since 1913, and in a few cases for earlier periods, were obtained by a similar method.

In some of the earlier years the data obtained are not quite so complete as might have been wished, but sufficient detail has been found to exist for the compilation of index numbers as follows :—

Years.	Frequency of Computation.	Groups for which Index Numbers computed.
From 1891	Yearly	Total of groups only.
From 1909	Yearly	Each group.
From 1914	Quarterly	Each group.
From 1918	Monthly	Each group.

CHAPTER II.—RULING WHOLESALE PRICES, 1891–1919.

The actual wholesale prices obtained as a result of the investigation, details of the method of which have been supplied in the preceding chapter, are now quoted in a series of tables. It should be noted that in all cases the average of the predominant prices shown on the returns from each of the four centres has been selected as the current price for that centre. The figures quoted, unless the contrary is expressly stated, represent the unweighted average of the prices ruling in the four chief centres.

The actual wholesale quotations are given in two separate series of tables. Of these, the first shows the data used in the compilation of the general wholesale-prices index numbers, and excludes certain items (not of predominant importance) used only in the preparation of the index numbers for the various groups of commodities. This table goes back as far as 1891.

The second series of tables shows the various commodities comprised in the wholesale-prices investigation classified according to groups, and represents the data of the more detailed inquiry that has been carried out for the period from 1909 onwards.

WHOLESALE PRICES.—AVERAGE QUOTATIONS USED IN COMPUTING THE GENERAL INDEX NUMBERS, 1891–1919.

(NOTE.—Where not otherwise stated the figures represent the unweighted average of the prices ruling in the four chief centres.)

Commodity.	Unit of Quantity.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Wheat, milling*	Bushel										
Oats†	"										
Barley, malting†	"										
Maize‡	lb.										
Cocksfoot, machine-dressed*	Bushel										
Rye-grass, perennial, machine-dressed†	Ton										
Potatoes	"										
Onions	"										
Flour	"										
Bran	"										
Pollard	"										
Oatmeal	"										
Wool—	lb.										
Merino (medium to good)†	"										
Half-bred (medium to good)†	"										
Crossbred (medium to good)	"										
Hides, ox	Cwt.										
" cow	lb.										
Tallow	"										
Butter	"										
Cheese	Doz. 2½ lb. tins										
Tinned apricots	"										
Tinned peaches	lb.										
Tinned pears	"										
Dried currants	"										
Dried sultanas	"										
Dried prunes	Doz. 1 lb. tins										
Herrings	Doz. ½ lb. tins										
Salmon	lb.										
Sardines	"										
Coffee	Ton										
Cocoa	Doz. 2 lb. tins										
Tea											
Sugar, No. 1A											
Golden syrup											
Treacle											

*Christchurch prices only. † Christchurch and Dunedin prices averaged. ‡ Auckland prices only.

WHOLESALE PRICES.—AVERAGE QUOTATIONS USED IN COMPUTING THE GENERAL INDEX NUMBERS, 1891–1919—continued.

Commodity.	Unit of Quantity.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Sago	Cwt.										
Tapioca	"										
Rice	"										
Salt, common	Ton										
" table	"										
Cream of tartar	lb.										
Carbonate of soda	Cwt.										
Vinegar	Gallon										
Mustard	lb.										
Pepper	Cwt.										
Starch	Ton										
Soap	lb.										
Blue	"										
Candles	"										
Tobacco	Case 8½ gal.										
Kerosene	lb.										
Ham	"										
Bacon	"										
Honey	Dozen										
Cornsacks	Each										
Woolpacks											
English china cups and saucers—	Dozen										
Norwich, W. and G.	"										
Worcester shape, London size	"										
White granite and semi-porcelain dinnerware, 10 in. plate	Set										
Toilet sets	Dozen										
Tumblers, ½ quart, plain, heavy bottom											
Iron—	Ton										
Pig	"										
Bar	"										
Plate	"										
Corrugated galvanized	"										
Fencing-wire, No. 8, galvanized	Cwt.										
Nails, 4 in. wire	Ton										
Zinc, sheet											
Lead, sheet	Box, 108 lb.										
Tinned plates	lb.										
Copper, sheet	Cwt.										
Lime*											

* Auckland and Dunedin prices averaged—Auckland hydraulic lime, Dunedin white lime.

WHOLESALE PRICES.—AVERAGE QUOTATIONS USED IN COMPUTING THE GENERAL INDEX NUMBERS, 1891–1919—*continued.*

Commodity.	Unit of Quantity.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Cement	Ton										
White-lead											
Linseed-oil	Gallon										
Bricks	1,000										
Timber—											
Kauri, first grade*	100 sup. ft.										
,, second grade*	,,										
,, third grade*	,,										
Rimu, heart (bridge quality)	,,										
,, ordinary building	,,										
Totara, heart (bridge quality)	,,										
Matai, heart	,,										
White-pine	,,										
Leather—											
Sole, New Zealand	lb.										
Kip, New Zealand	,,										
Split kip, New Zealand	,,										
Chrome calf, imported	Feet										
Chrome sides, New Zealand	,,										
Calico, Horrockses' "A 1"	Running yard										
,, Crewdson's No. 2	,,										
Alum	Cwt.										
Bluestone	,,										
Caustic soda	,,										
Saltpetre	,,										
Sulphur	,,										
Tartaric acid	lb.										
Manures—											
Superphosphate (36–38 per cent.)	Ton										
Guano (60 per cent.)	,,										
Basic slag	,,										
Kainit	,,										
Pure bonedust	,,										
Sulphate of ammonia	,,										
Coal—											
New Zealand screened	,,										
New Zealand unscreened	,,										
Newcastle screened	,,										

* Auckland prices only.   * Christchurch prices only.

WHOLESALE PRICES.—AVERAGE QUOTATIONS USED IN COMPUTING THE GENERAL INDEX NUMBERS, 1891–1919—*continued.*

Commodity.	Unit of Quantity.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Wheat, milling*	Bushel										
Oats†	,,										
Barley, malting†	,,										
Maize†	lb.										
Cocksfoot, machine-dressed*	Bushel										
Rye-grass, perennial, machine-dressed†	Ton										
Potatoes	,,										
Onions	,,										
Flour	,,										
Bran	,,										
Pollard	,,										
Oatmeal	,,										
Wool—	lb.										
Merino (medium to good)†	,,										
Half-bred (medium to good)†	,,										
Crossbred (medium to good)	,,										
Hides, ox	,,										
,, cow	,,										
Tallow	Cwt.										
Butter	lb.										
Cheese	,,										
Tinned apricots	Doz. 2½ lb. tins										
Tinned peaches	,,										
Tinned pears	,,										
Dried currants	lb.										
Dried sultanas	,,										
Dried prunes	,,										
Herrings	Doz. 1 lb. tins										
Salmon	,,										
Sardines	Doz. ½ lb. tins										
Coffee	lb.										
Cocoa	,,										
Tea	,,										
Sugar, No. 1A	Ton										

* Christchurch prices only.   † Christchurch and Dunedin prices averaged.   ‡ Auckland prices only.

WHOLESALE PRICES.—AVERAGE QUOTATIONS USED IN COMPUTING THE GENERAL INDEX NUMBERS, 1891–1919—*continued.*

Commodity.	Unit of Quantity.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Golden syrup	Doz. 2 lb. tins										
Treacle	,,										
Sago	Cwt.										
Tapioca	,,										
Rice	,,										
Salt, common	Ton										
,, table	,,										
Cream of tartar	lb.										
Carbonate of soda	Cwt.										
Vinegar	Gallon										
Mustard	lb.										
Pepper	,,										
Starch	,,										
Soap	Cwt.										
Blue	Ton										
Candles	lb.										
Tobacco	,,										
Kerosene	Cass, 8½ gal.										
Ham	lb.										
Bacon	,,										
Honey	,,										
Cornsacks	Dozen										
Woolpacks	Each										
English china cups and saucers—Norwich, W. and G.											
Worcester shape, London size	Dozen										
White granite and semi-porcelain dinnerware, 10 in. plate	,,										
Toilet sets	Set										
Tumblers, ¼ quart, plain, heavy bottom	Dozen										
Iron—											
Pig	Ton										
Bar	,,										
Plate	,,										
Corrugated galvanized	,,										
Fencing-wire, No. 8, galvanized	,,										
Nails, 4 in. wire	Cwt.										
Zinc, sheet	Ton										
Lead, sheet	,,										
Tinned plates	Box, 108 lb.										
Copper, sheet											

* Auckland and Dunedin prices averaged.—Auckland hydraulic lime, Dunedin white lime.

WHOLESALE PRICES.—AVERAGE QUOTATIONS USED IN COMPUTING THE GENERAL INDEX NUMBERS, 1891–1919—*continued.*

Commodity.	Unit of Quantity.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Lime*	Cwt.										
Cement	Ton										
White-lead	Gallon										
Linseed-oil	1,000										
Bricks											
Timber—	100 sup. ft.										
Kauri, first grade†	,,										
,, second grade†	,,										
,, third grade†	,,										
Rimu, heart (bridge quality)	,,										
,, ordinary building	,,										
Totara, heart (bridge quality)	,,										
Matai, heart	,,										
White-pine											
Leather—											
Sole, New Zealand	lb.										
Kip, New Zealand	,,										
Split kip, New Zealand	,,										
Chrome calf, imported	Feet										
Chrome sides, New Zealand	,,										
Calico, Horrocks's " A 1 "	Running yard										
,, Crewdson's No. 2											
Alum	Cwt.										
Bluestone	,,										
Caustic soda	,,										
Saltpetre	,,										
Sulphur	lb.										
Tartaric acid	Ton										
Superphosphate (36–38 per cent.)	,,										
Guano (60 per cent.)	,,										
Basic slag	,,										
Kainit	,,										
Pure bonedust	,,										
Sulphate of ammonia	,,										
Coal—											
New Zealand, screened											
New Zealand, unscreened											
Newcastle, screened											

† Auckland prices only.

WHOLESALE PRICES.—AVERAGE QUOTATIONS USED IN COMPUTING THE GENERAL INDEX NUMBERS, 1891-1919—continued.

Commodity.	Unit of Quantity.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
Wheat, milling*	Bushel									
Oats†	,,									
Barley, malting†	,,									
Maize‡	,,									
Cocksfoot, machine-dressed*	lb.									
Rye-grass, perennial, machine-dressed†	Bushel									
Potatoes	Ton									
Onions	,,									
Flour	,,									
Bran	,,									
Pollard	,,									
Oatmeal	,,									
Wool—										
Merino (medium to good)†	lb.									
Half-bred (medium to good)†	,,									
Crossbred (medium to good)†	,,									
Hides, ox	,,									
,, cow	,,									
Tallow	Cwt.									
Butter	lb.									
Cheese	,,									
Tinned apricots	Doz. 2½ lb. tins									
Tinned peaches	,,									
Tinned pears	,,									
Dried currants	lb.									
Dried sultanas	,,									
Dried prunes	,,									
Herrings	Doz. 1 lb. tins									
Salmon	Doz. ½ lb. tins									
Sardines	lb.									
Coffee	,,									
Cocoa	,,									
Tea	Ton									
Sugar, No. 1A	,,									
Golden syrup	Doz. 2 lb. tins									
Treacle*										

*Christchurch prices only. † Christchurch and Dunedin prices averaged. ‡ Auckland prices only.

WHOLESALE PRICES.—AVERAGE QUOTATIONS USED IN COMPUTING THE GENERAL INDEX NUMBERS, 1891-1919—continued.

Commodity.	Unit of Quantity.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
Sago	Cwt.									
Tapioca	,,									
Rice	,,									
Salt, common	Ton									
,, table	,,									
Cream of tartar	lb.									
Carbonate of soda	Cwt.									
Vinegar	Gallon									
Mustard	lb.									
Pepper	,,									
Starch	Cwt.									
Soap	Ton									
Blue	lb.									
Candles	,,									
Tobacco	,,									
Kerosene	Case, 8½ gal.									
Ham	,,									
Bacon	,,									
Honey	Dozen									
Cornsacks	Each									
Woolpacks	Dozen									
English china cups and saucers—										
Norwich, W. and G.	Dozen									
Worcester shape, London size	,,									
White granite and semi-porcelain dinnerware, 10 in. plate	,,									
Toilet sets	Set									
Tumblers, ½ qrt., plain, heavy bottom	Dozen									
Iron—										
Pig	Ton									
Bar	,,									
Plate	,,									
Corrugated galvanized	,,									
Fencing-wire, No. 8, galvanized	,,									
Nails, 4 in. wire	Cwt.									
Zinc, sheet	Ton									
Lead, sheet	,,									
Tinned plates	Box, 108 lb.									
Copper, sheet	lb.									
Lime*	Cwt.									

* Auckland and Dunedin prices averaged.—Auckland hydraulic lime, Dunedin white lime.

WHOLESALE PRICES.—AVERAGE QUOTATIONS USED IN COMPUTING THE GENERAL INDEX NUMBERS, 1891–1919—continued.

Commodity	Unit of Quantity	1911	1912	1913	1914	1915	1916	1917	1918	1919
Cement	Ton									
White-lead										
Linseed-oil	Gallon									
Bricks	1,000									
Timber—										
Kauri, first grade*	100 sup. ft.									
,, second grade*	,,									
,, third grade*	,,									
Rimu, heart (bridge quality)	,,									
,, ordinary building	,,									
Totara, heart (bridge quality)	,,									
Matai, heart	,,									
White-pine	,,									
Leather—										
Sole, New Zealand	lb.									
Kip, New Zealand	,,									
Split kip, New Zealand	,,									
Chrome calf, imported	ft.									
Chrome sides, New Zealand	,,									
Calico, Horrockses' "A 1"	Running yard									
,, Crewdson's No. 2	,,									
Alum	Cwt.									
Bluestone	,,									
Caustic soda	,,									
Saltpetre	,,									
Sulphur	,,									
Tartaric acid	lb.									
Superphosphate (36–38 per cent.)	Ton									
Guano (60 per cent.)	,,									
Basic slag	,,									
Kainit	,,									
Pure bonedust	,,									
Sulphate of ammonia	,,									
Coal—										
New Zealand, screened	Cwt.									
New Zealand, unscreened	,,									
Newcastle, screened	,,									

* Auckland prices only.

WHOLESALE PRICES.—AVERAGE QUOTATIONS USED IN CALCULATING THE INDEX NUMBERS FOR EACH GROUP OF COMMODITIES, 1909–19.

(NOTE.—Where not otherwise stated the figures represent the unweighted average of prices ruling in the four chief centres.)

Commodity	Unit of Quantity	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
GROUP I.—AGRICULTURAL PRODUCE.												
Wheat,* Tuscan	Bushel											
,, Hunters	,,											
,, Velvet	,,											
,, fowl	,,											
Oats,† Garton's A Grade	,,											
,, Garton's B Grade	,,											
,, Sparrowbills	,,											
Barley,† malting	lb.											
,, feed	Bushel											
Maize‡	,,											
Cocksfoot machine-dressed*	lb.											
Rye-grass, perennial, machine-dressed†	,,											
Rye-grass, Italian	Ton											
Potatoes	,,											
Onions	,,											
GROUP II.—FLOUR, BRAN, POLLARD, AND OATMEAL.												
Flour	Ton											
Bran	,,											
Pollard	,,											
Oatmeal	,,											
GROUP III.—WOOL, HIDES, TALLOW, BUTTER, AND CHEESE.												
Wool, merino, medium to good†	lb.											
,, half-bred, med. to good†	,,											
,, crossbred, med. to good	,,											
Hides, ox, heavy	,,											
,, ox, medium	,,											
,, ox, light	,,											
,, cow, heavy	,,											
,, cow, medium	,,											
,, cow, light	,,											
,, yearling	,,											
,, calf	,,											
Tallow	Cwt.											
Butter	lb.											
Cheese	,,											

* Christchurch prices only. † Christchurch and Dunedin prices averaged. ‡ Auckland prices only.

WHOLESALE PRICES.—AVERAGE QUOTATIONS USED IN CALCULATING THE INDEX NUMBERS FOR EACH GROUP OF COMMODITIES, 1909-19—*continued.*

Commodity.	Unit of Quantity.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.

GROUP IV.—GENERAL MERCHANDISE.

Tinned fruits—
Apricots — Doz. 2½ lb. tins
Peaches
Pears
Dried fruits—
Currants — lb.
Sultanas
Prunes
Herrings — Doz. 1 lb. tins
Salmon
Sardines — Doz. ½ lb. tins
Coffee — lb.
Cocoa
Tea
Sugar, No. 1A — Ton
Golden syrup
Treacle — Doz. 2 lb. tins
Sago — Cwt.
Tapioca
Rice
Salt, common — Ton
„ table
Cream of tartar — lb.
Carbonate of soda — Cwt.
Vinegar — Gallon
Mustard — lb.
Pepper
Starch — Cwt.
Soap (New Zealand) — Ton
Blue — lb.
Candles
Tobacco
Kerosene — Case, 8½ gal.
Ham — lb.
Bacon
Honey
Cornsacks — Dozen
Woolpacks — Each

WHOLESALE PRICES.—AVERAGE QUOTATIONS USED IN CALCULATING THE INDEX NUMBERS FOR EACH GROUP OF COMMODITIES, 1909-19—*contd.*

Commodity.	Unit of Quantity.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.

GROUP IV.—GENERAL MERCHANDISE—*continued.*

English china, cups and saucers— Dozen
London, W. and G.
Norwich, W. and G.
Worcester shape, London size
„ Irish size
„ Breakfast size
White granite and semi-porcelain dinnerware, 10 in. plate
Toilet sets — Set
Tumblers, ⅓ quart, plain, heavy bottoms — Dozen

GROUP V.—BUILDING MATERIALS.

Iron, pig — Ton
„ bar
„ angle and T
„ plate
„ hoop
„ corrugated galvanized
Fencing-wire, No. 8, galvanized — Cwt.
Nails, 4 in. wire — Ton
Zinc, sheet — Box, 108 lb.
Lead, sheet — lb.
Tinned plates — Cwt.
Copper, sheet — lb.
Lime* — Ton
Cement — Gallon
White-lead
Linseed-oil — 1000
Bricks — 100 sup. ft.
Kauri, first grade†
„ second grade†
„ third grade†
Rimu, clean heart
„ bridge quality
„ ordinary building
Matai, heart
Totara, heart (bridge quality)
„ ordinary building
White-pine
Oregon, merchantable

* Auckland and Dunedin prices averaged.—Auckland hydraulic lime, Dunedin white lime.   † Auckland prices only.

WHOLESALE PRICES.—AVERAGE QUOTATIONS USED IN CALCULATING THE INDEX NUMBERS FOR EACH GROUP OF COMMODITIES, 1909–19—*continued.*

Commodity.	Unit of Quantity.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
GROUP V.—BUILDING-MATE-RIALS—*continued.*												
Jarrah, sawn	100 sup. ft.											
Ironbark, hewn	"											
GROUP VI.—LEATHER.												
Sole, New Zealand	lb.											
" imported	"											
Kip, New Zealand	"											
Split kip, New Zealand	Feet											
Chrome calf, imported	"											
Chrome sides, New Zealand	"											
Glace kid, imported	"											
GROUP VII.—CHEMICALS AND MANURES.												
Chemicals—												
Boracic acid	Cwt.											
Carbolic acid	Gallon											
Tartaric acid	lb.											
Alum	Cwt.											
Caustic soda	"											
Cod-liver oil	Gallon											
Epsom salts	Cwt.											
Joyes' fluid	5-gal. drum											
Resin	Cwt.											
Saltpetre	"											
Sulphur	"											
Bluestone	"											
Manures—												
Superphosphate (39–43%)	Ton											
" (36–38%)	"											
Guano (60 per cent.)	"											
Basic slag	"											
Pure bonedust	"											
Sulphate of potash	"											
Sulphate of ammonia	"											
Nitrate of soda	"											
Kainit	"											
GROUP VIII.—COAL.												
New Zealand, screened	Ton											
" unscreened	"											
" small	"											
Newcastle, screened	"											

CHAPTER III.—INDEX NUMBERS OF WHOLESALE PRICES, 1891–1919.

GENERAL INDEX NUMBERS, 1891–1919.

In this chapter are quoted the index numbers of wholesale prices compiled from prices collected in the four chief centres over the period 1891–1919. The average annual prices on which these index numbers are based have already been quoted in the preceding chapter.

WHOLESALE PRICES.—GENERAL INDEX NUMBERS, 1891–1919.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Year.	Index Number.	Year.	Index Number.	Year.	Index Number.
1891	994	1901	931	1911	994
1892	972	1902	975	1912	1041
1893	973	1903	954	1913	1032
1894	927	1904	922	1914	1077
1895	920	1905	994	1915	1269
1896	943	1906	1016	1916	1380
1897	942	1907	1016	1917	1555
1898	972	1908	1006	1918	1809
1899	893	1909	949	1919	1834
1900	917	1910	983		

It will be seen that the level of wholesale prices fell gradually to 1895, after which (except for two peaks, one in 1898 and one in 1902) it fluctuated about a fairly low point until 1904, since when the general tendency prior to 1914 was to rise gradually. The effect of the outbreak of war in that year was to accentuate greatly this rising tendency, with the result that the index number for 1919 is very nearly twice that for 1909.

The fall prior to 1895 is merely the reflection of the world-wide decline which lasted roughly from 1873 till that date. Since then the general world tendency of prices has been in the direction of a rise, and the cause of the fluctuations in the New Zealand wholesale-prices index number during the next ten years is to be looked for in a study of local influences. Thus the high figure for 1898 is due mainly to the high price of agricultural produce, resulting from the poor harvest then experienced, while the falls in and after

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1903 and 1907 may be traced to the tariff revisions of these years. It is notable, however, that the New Zealand fall after 1907 synchronized with an almost universal fall throughout the world.

INDEX NUMBERS OF GROUPS, 1909-19.

As already indicated, the trend of the general wholesale-prices index number has been upwards over the whole of the period covered by the more detailed investigation, the rate of increase being fairly slow up to 1914 and rapid thereafter. It is now to be examined whether these characteristics of the general index number are shared by each of the groups, and, if not, in what respects differences emerge.

Of all the groups probably that which includes agricultural produce is the one which might be expected to show the greatest fluctuations; it is a well-known fact that the nature of harvests profoundly affects the wholesale prices of such commodities. This expectation is fully borne out by the accompanying table and charts.

WHOLESALE PRICES.—ANNUAL INDEX NUMBERS OF GROUPS.

Average of Four Chief Centres, 1909–19.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Year.	Group I: Agricultural Produce.	Group II: Flour, Bran, Pollard, and Oatmeal.	Group III: Wool, Hides, Tallow, and Butter, Cheese.	Group IV: General Merchandise and Crockery.	Group V: Building-materials, &c.	Group VI: Leather.	Group VII: Chemicals and Manures.	Group VIII: Coal.	General Index Numbers.
1909 ..	932	1082	939	946	951	913	956	986	949
1910 ..	1021	989	981	969	957	986	994	985	983
1911 ..	991	972	1008	993	995	982	986	985	994
1912 ..	1089	970	1029	1053	1037	993	1024	1011	1041
1913 ..	967	981	1047	1055	1063	1126	1035	1038	1032
1914 ..	1021	1120	1116	1089	1120	1184	1076	1004	1077
1915 ..	1580	1555	1297	1202	1217	1348	1218	1019	1269
1916 ..	1487	1310	1401	1317	1444	1470	1445	1145	1380
1917 ..	1517	1440	1466	1447	1772	1806	1674	1369	1555
1918 ..	1845	1548	1466	1685	2148	1900	1981	1478	1809
1919 ..	1868	1534	1515	1796	2067	2066	1958	1647	1834

Quarterly figures for the war period are also appended.

Movement of Wholesale Prices (General, and Groups I–III), 1909–19.
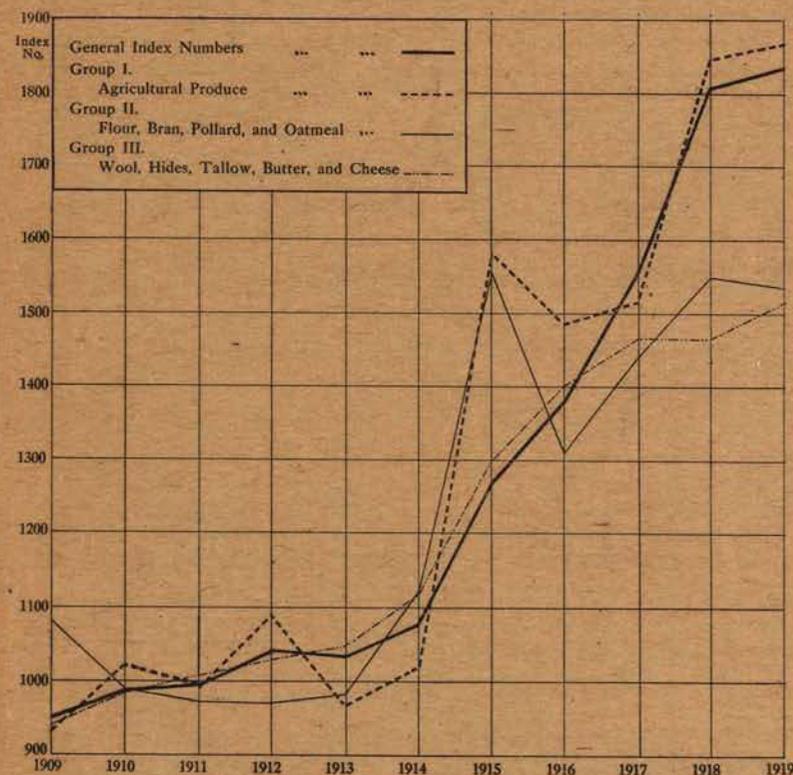
Movement of Wholesale Prices (Groups IV–VIII), 1909–19.

Legend:
Group IV.
  General Merchandise and Crockery _ _ _
Group V.
  Building Materials, &c. ... _ _ _ _ _
Group VI.
  Leather, &c ... ...
Group VII
  Chemicals and Manures ... •••••
Group VIII.
  Coal ... ...
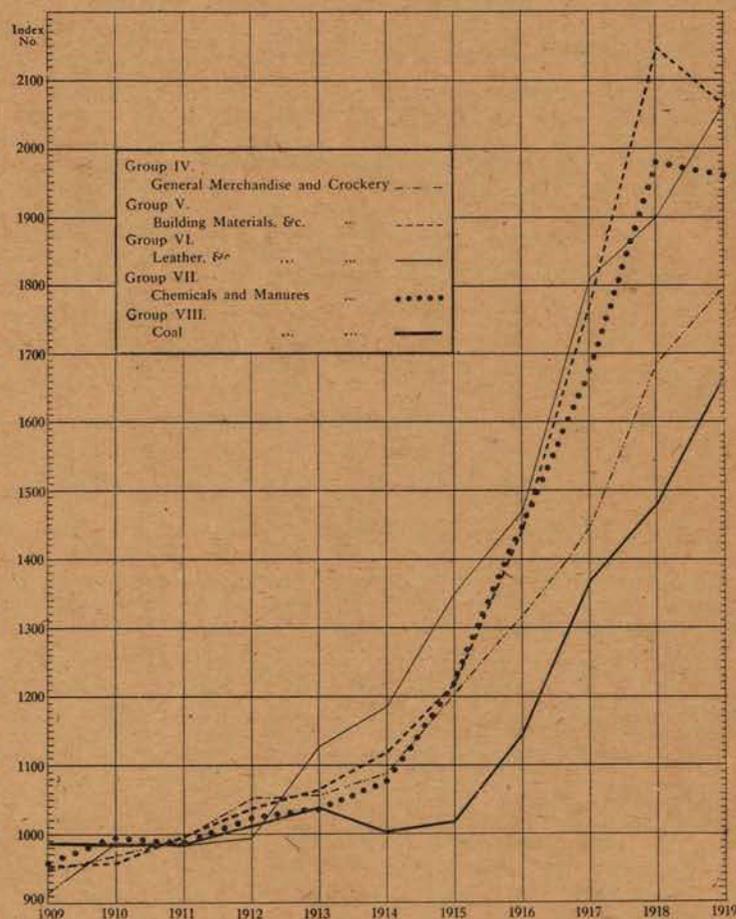
WHOLESALE PRICES.—QUARTERLY INDEX NUMBERS OF GROUPS.

Average of Four Chief Centres, 1914–19.

(Base : Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Quarter ended	Group I : Agricultural Produce.	Group II : Flour, Bran, Pollard, and Oatmeal.	Group III : Wool, Hides, Tallow, and Butter, and Cheese.	Group IV : General Merchandise and Crockery.	Group V : Building-materials, &c.	Group VI : Leather.	Group VII : Chemicals and Manures.	Group VIII : Coal.	General Index Numbers.
1914.									
March ..	907	990	1123	1078	1103	1172	1064	1003	1045
June ..	969	1031	1159	1077	1109	1180	1077	1003	1067
September..	1033	1131	1115	1077	1123	1187	1080	1003	1073
December ..	1176	1326	1067	1125	1144	1198	1082	1008	1123
1915.									
March ..	1542	1589	1196	1175	1148	1286	1160	1016	1221
June ..	1621	1727	1305	1186	1192	1349	1195	1014	1267
September..	1641	1605	1371	1216	1256	1368	1244	1014	1304
December ..	1517	1298	1315	1229	1273	1388	1272	1031	1284
1916.									
March ..	1480	1361	1337	1271	1334	1440	1375	1082	1323
June ..	1305	1273	1402	1312	1448	1458	1417	1118	1344
September..	1461	1306	1436	1340	1485	1472	1494	1175	1403
December ..	1702	1300	1430	1345	1508	1510	1495	1204	1449
1917.									
March ..	1499	1419	1431	1367	1564	1676	1574	1267	1450
June ..	1503	1447	1452	1407	1676	1795	1650	1330	1510
September..	1535	1459	1468	1463	1838	1853	1719	1432	1593
December ..	1529	1436	1512	1551	2009	1901	1753	1445	1665
1918.									
March ..	1582	1475	1470	1592	2007	1899	1817	1461	1684
June ..	1716	1557	1462	1665	2077	1907	1965	1462	1759
September..	1902	1573	1463	1727	2209	1891	2070	1463	1849
December ..	2181	1587	1467	1756	2300	1903	2071	1525	1944
1919.									
March ..	1873	1573	1466	1735	2181	1887	1977	1535	1842
June ..	1727	1525	1480	1709	2050	1915	1919	1557	1764
September..	1898	1516	1544	1808	2000	2117	1916	1688	1828
December ..	1974	1521	1571	1933	2035	2344	2021	1809	1903

The main features of each group are now briefly referred to.

Group I.—Agricultural Produce.

This group includes milling-wheat, oats, milling-barley, maize, cocksfoot, rye-grass, potatoes, and onions, and represents the product of industry at the primary stage of production ; it is this fact which no doubt mainly accounts for the great fluctuations revealed by this group as compared with the others. Prior to 1914 the index number for this group fluctuated in veritable see-saw fashion, and even during the war period the increase was by no means uniform.

Group II.—Flour, Bran, Pollard, and Oatmeal.

These commodities represent an advance of a stage in the process of production as compared with the commodities comprised in the preceding group. Now, the further production has proceeded, the greater the proportion of the comparatively constant elements—e.g., remuneration of organization and labour, cost of upkeep of plant, &c.—included in the cost of production. Hence, while it is not surprising to find the index numbers of this group fluctuating in rough sympathy with those of the preceding group, they do not fluctuate to so marked a degree.

Thus falls in the two groups synchronized in 1911 and 1916, and a marked rise in both groups manifested itself in 1915. Turning to the quarterly table covering the war period, we find that fluctuations in the two groups again reveal a remarkable degree of similarity.

Of the two groups the first has shown a considerably greater proportional rise during the war period than has the second.

Of the commodities comprised in Group I, potatoes and onions, and of those comprised in Group II, flour and oatmeal, are also constituents of Group IB in the retail-prices investigation. It is interesting to compare the fluctuations revealed by the two wholesale groups (see page 164) with those revealed by the retail sub-group referred to (see page 57). Falls in the retail sub-group will be observed in 1911 and 1916 closely sympathizing with those already noticed in connection with the two wholesale groups. Similar remarks apply to the big rise of 1915. Except in 1911 the wholesale fluctuations are more marked than the retail.

Group III.—Wool, Hides, Tallow, Butter, and Cheese.

This group is distinguished from the two which precede it by the fact that it covers pastoral in lieu of agricultural products. Moreover, while the commodities comprised in the first two groups find their market locally, and their prices are therefore fixed largely by local supply and almost wholly by local demand, those comprised in Group III have their prices normally determined in the main by those prevailing in the world's markets. During the war period, however, an artificial element has been introduced which has had the effect of keeping the increase in New Zealand prices in this group considerably below that of the general world level. The reference is, of course, to the Government purchases combined with fixation of prices.

Of all groups this and the preceding one are those which show the smallest war increases. In all other cases wholesale prices have reached a mark in 1919

practically double that of the base period, but in the case of Groups II and III the increase over the same period represents little more than one-half the prices prevailing during the base period.

Group IV.—General Merchandise and Crockery.

The commodities belonging to this group might be classed in two subgroups, as follows : A, Groceries ; B, Crockery. The increase in the general level of wholesale prices for this group has been most marked since 1916. With the exception of coal, no other group showed at the end of 1915 so small an increase as compared with prices prevailing at the base period. Since 1916, however, the increase has been rapid, particularly so during 1919, the monthly index number soaring from 1735 in January, 1919, to 1979 in December of the same year, and suggesting the imminence of an even higher index number in 1920.

Group V.—Building-materials, &c.

In view of the pressing nature of the housing problem it is interesting to note that the wholesale-price index number for this group reached a maximum in 1918, showing a phenomenal rise of 1027 points from December quarter, 1915, to the same quarter of 1918, at which latter date the number stood at 2300. Thereafter it has gradually fallen, the total fall for 1919 being 265 points. For all that, the index number for the December quarter of 1919 shows an increase of over 100 per cent. as compared with prices prevailing during the base period. Moreover, timber has throughout 1919 still been rising in price, the fall manifested by the group being produced by a temporary fall in iron, white-lead, and other imported materials. On the yearly figures this group appears to have advanced since the war period in a higher proportion than any other group.

Group VI.—Leather.

This group, both on the quarterly and monthly index numbers, shows a greater increase since the base period than any other group. The rise has been particularly marked during 1919, the index number being 1887 for the March and 2344 for the December quarter of that year. On the monthly figures the increase has been even more marked, the index number for December, 1919 (2405), showing an increase of 519 points (or 28 per cent.) over that for January of the same year. This represents an increase since the base period of 140½ per cent. This group, like that relating to general merchandise, promises further increases during 1920.

Group VII.—Chemicals and Manures.

This group also shows on the quarterly index numbers an increase since the base period amounting to well over 100 per cent., an increase which showed the highest ratio during 1917 and 1918. Indeed, during 1919 the general level of wholesale prices of commodities belonging to this group was practically constant.

Group VIII.—Coal.

The wholesale price of this commodity in the December quarter of 1915 showed an increase over that of the base period of only 3 per cent., and in the same quarter of 1916 of 20 per cent. Since then, and especially during the coal famine of 1919, the increase has been rapid, and the figure for December quarter, 1919, is 1809, representing an increase of 81 per cent. over prices ruling during the base period. This increase was particularly marked between the second and fourth quarters of 1919.

It is of interest to compare the wholesale- and retail-price indexes of coal from 1909 onwards. It will be noted that there is a fairly close correspondence between the two, even though the grades of coal covered differ somewhat in the two investigations.

It should be understood that these figures are comparable vertically but not horizontally. The figures do not claim to indicate directly the relation between the wholelsale and retail prices at any one date; what they do claim to indicate is the relative increase or decrease in retail or wholesale prices as compared with prices prevailing in the same class during the base period.

INDEX NUMBERS OF RETAIL AND WHOLESALE PRICES FOR COAL, 1909–19.

(Base: Average annual aggregate expenditure, four chief centres, 1909–13 = 1000.)

Year.	Retail-price Index.	Wholesale-price Index.	Year.	Retail-price Index.	Wholesale-price Index.
1909 ..	990	986	1915 ..	1098	1019
1910 ..	974	985	1916 ..	1185	1145
1911 ..	974	985	1917 ..	1365	1369
1912 ..	1017	1011	1918 ..	1447	1478
1913 ..	1046	1038	1919 ..	1594	1647
1914 ..	1093	1004			

Of late years the rise in the retail-price index of this commodity will be seen to have lagged behind that of the wholesale price.

PART IV.—PRODUCERS' AND EXPORT PRICES.

CHAPTER I.—PRODUCERS' PRICES.

NATURE AND METHOD OF INVESTIGATION.

Part II of this report, dealing as it did with retail prices, approached the problem of prices wholly from the point of view of the consumer; in Part III (containing the results of the wholesale-prices investigation) the point of view was carried a step nearer the producer; while in this part of the report the matter is regarded wholly from the point of view of the producer. This portion of the report naturally falls into two sections according as the general producer or the producer for export is being considered.

At the date of the compilation of this report reliable detailed figures of production and export for the full year 1919 were not available, and accordingly no figures in this Part of the report relate to a period later than the six months ended 30th June, 1919.

The method adopted in the retail and wholesale prices investigations assumes a constant regimen. The effect of employing this method in connection with the producers' prices investigation would, however, be to give undue weight to the price of a commodity in years when its production was below normal. A different method is therefore adopted in connection with the calculation of both the general producers' and the export index numbers. The method employed is one which has the sanction of the usage of the British Board of Trade and the Australian Commonwealth Statistician. It consists in equating to 1000 the total value of the production in the base period of all the commodities covered by the investigation. The index number for any one year is arrived at by multiplying by 1000 the ratio of the actual total value of the production in that year to what the value of the same amount of products would have been had prices been identical with those ruling in the base period. It is exactly the same method which is employed for ascertaining the index number of export values, and for a specific example of the application of the method the reader of this report is referred to Chapter II of this Part.

New Zealand is a country which depends for its manufactures very largely on other countries. The agricultural production of the country is, moreover, now barely sufficient to supply local needs. The chief industry of the country is undoubtedly pastoral. Accordingly, as is necessarily the case with a primary producing country, the number of commodities produced on a scale worth consideration is small, and it has been deemed sufficient to select the following sixteen commodities, covering a very large proportion of the total production of the Dominion, for investigation in this connection: Wheat, oats, potatoes, wool, hides, sheep-skins, tallow, butter, cheese, phormium-fibre, coal, kauri-gum, timber, beef, lamb, mutton.

The base period selected is identical with that used in the retail and wholesale prices investigations—namely, the average of the years 1909-13.

INDEX NUMBERS, 1891–1918.

A table is now quoted showing the index numbers for producers' prices computed as described above.

INDEX NUMBERS OF PRODUCERS' PRICES, 1891–1918.

(Base : Average annual value 1909–13 = 1000.)

Year.	Index Number.	Quinquennial Index Number.	Year.	Index Number.	Quinquennial Index Number.
1891 ..	803	..	1905 ..	969	940
1892 ..	799	..	1906 ..	1006	964
1893 ..	795	776	1907 ..	1009	984
1894 ..	740	771	1908 ..	978	989
1895 ..	745	765	1909 ..	959	983
1896 ..	778	764	1910 ..	995	986
1897 ..	766	765	1911 ..	975	1002
1898 ..	791	774	1912 ..	1022	1029
1899 ..	744	765	1913 ..	1059	1099
1900 ..	788	777	1914 ..	1095	1191
1901 ..	735	791	1915 ..	1346	1306
1902 ..	828	814	1916 ..	1434	1427
1903 ..	861	850	1917 ..	1597	..
1904 ..	860	904	1918 ..	1661	..

The matter is illustrated further by a diagram.

Annual and Quinquennial Index Numbers of Producers' Prices, 1891–1918.
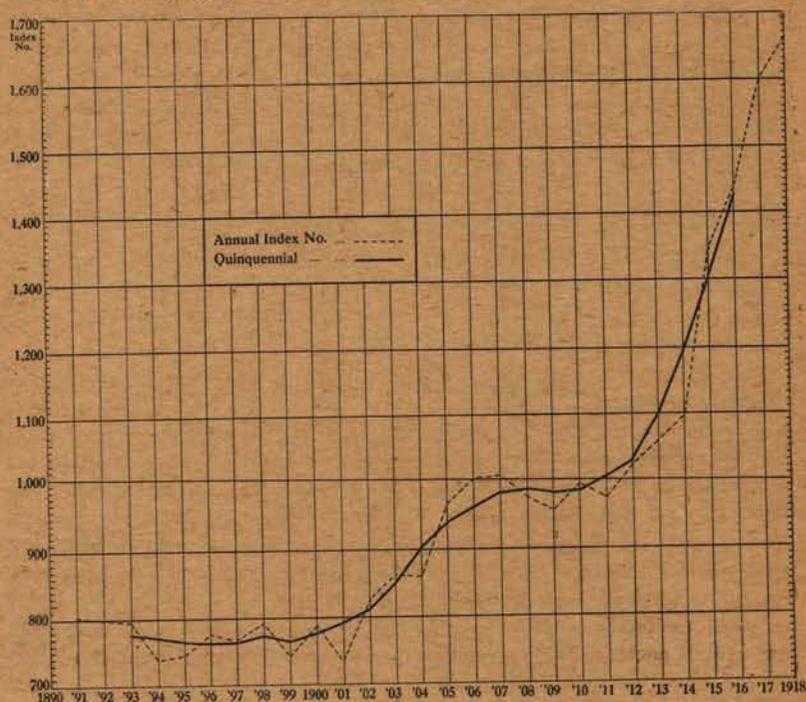
The general tendency of the figures is in accordance with the movement of retail and wholesale prices, index numbers being at a minimum about 1894–5, rising thereafter to about 1907–8, when a temporary fall was succeeded by a rising tendency, a tendency which was greatly accentuated by war conditions.

Agricultural produce is particularly liable to good and bad seasons and consequent marked fluctuations in price, and although only three commodities belonging to this class are included in the investigation it will be found that the changes revealed in the index numbers can in a large degree be directly traced to fluctuations in the prices of these commodities. The marked fall in 1899 in the index number of producers' prices can be directly attributed to this influence, and the fall of 1894 is attributable partly to similar agencies and partly to a fall in the price of certain other products, notably kauri-gum, hides, and sheep-skins. It is worth mentioning that prior to 1900, next to agricultural produce, kauri-gum appears to have had a very considerable influence on the tendency of the index numbers, the recovery in 1900 being due almost as much to enhanced prices for this commodity as for agricultural produce.

The fall of 1901, on the other hand, is mainly attributable to the slump in wool, while the rises of the following years are due no less to a recovery in that commodity than to enhanced prices of agricultural produce. Potatoes in particular were very largely responsible for the very large increases in the index numbers of 1905 and 1906.

The fall of 1908, on the other hand, was largely attributable to falls in the prices of oats and crossbred wool (and to a lesser degree of hides, sheep-skins, and phormium-fibre), and took place despite a marked increase during the year in the prices of timber.

From 1911 dates a considerable rise in pastoral produce, and to this rise the increase of the next few years may largely be attributed, although the price of meat does not appear to have risen greatly prior to 1913.

With 1914 the influence of the war becomes noticeable, and from that date, with but few temporary exceptions, every commodity shows a producers' price-index considerably higher than the level of the base period.

CHAPTER II.—EXPORT PRICES.

NATURE AND METHOD OF INVESTIGATION.

The problem of prices is now approached from the point of view of the producer for export. In certain cases, as will have already appeared, no line can be drawn between the general producers' price and that of the producer for export ; in a few cases of home products New Zealand wholesale prices are so dependent on those prevailing in the world's markets that all three correspond. In many cases, however, there is one price which may be conceived as being the predominant price from the point of view of the producer for export and another and very different price from the point of view of the

general producer. It is this circumstance which warrants the subdivision here made of the problem of producers' prices, involving as it does a separate discussion on export prices.

Practically all the main exports of New Zealand are primary products, either raw materials or foodstuffs. From their nature it is possible in nearly every case to obtain the quantities exported as well as the values. It is then an easy matter of computation to find what the value would have been, assessing the quantities for each year at the prices of a selected base year or period, and by comparison with the actual values recorded to estimate the effect of price-changes. An example may serve to make the method plain. Suppose 1901 has been selected as the base year, and let us suppose it is intended to ascertain an index number for export values in 1917. Now, the value of domestic exports (excluding gold) actually recorded for 1917 was £30,184,069. Suppose the quantities of various commodities exported (amounting in recorded value to £29,911,460) are known and are separately valued, and are found to be worth at 1901 prices £13,157,143. Then it is assumed that the whole of the exports, amounting in recorded value to £30,184,069, would be reduced in the same ratio—viz., to

$$£30,184,069 \times \frac{13,157,143}{29,911,460} = £13,277,055.$$

The index number, taking as base (= 1000) export values in 1901, is then obtained by the simple process of dividing the recorded value of exports by the value as assessed on 1901 prices and multiplying by 1000, viz. :—

$$\frac{30,184,069}{13,277,055} \times 1000 = 2273.$$

This method has been used by the British Board of Trade and by the Australian Commonwealth Statistician, and it is very suitable for application to New Zealand. Of the total exports of New Zealand produce, 99 per cent. can, for the purpose of the present inquiry, be treated in this fashion, leaving only 1 per cent. to be calculated *pro rata*. In all the computations gold is necessarily treated separately, since under normal conditions its price is fixed and cannot change. Figures in respect of gold for the years 1917 and 1918 and for the first six months of 1919 are, moreover, not available for publication.

SELECTION OF BASE PERIOD.

In the previous portions of the investigation the average of the years 1909–13 has been taken as the base. For purposes of comparison with other countries, and for reasons which will appear later, other periods have been selected as a base for the index numbers of export prices which have been published from time to time in the "New Zealand Official Year-book," and are now reproduced here. For purposes of comparison with other parts of this report these figures have been recomputed with the average of 1909–13 as base, and the index numbers thus arrived at are also quoted below. It should be noted, however, that the regimen is not constant in the case of export index numbers, with the result that such price-indexes are not strictly reversible, nor in strictness should their base be changed. In consequence

the export index numbers computed for base 1909–13 are not altogether valid, although experiment has shown that the error thus introduced is not sufficient grossly to invalidate these figures.

INDEX NUMBERS FOR CALENDAR YEARS.

The first table given is based on the year 1901, and is useful for comparison with the similar figures published for Australia.

EXPORTS OF NEW ZEALAND PRODUCE, SHOWING VALUES AS ACTUALLY RECORDED AND AS ASSESSED AT THE PRICES OF 1901.

Year.	Exports (excluding Gold).		Gold Bullion exported.	Total Exports (Domestic Produce).		Index Number of Export Values.	
	Recorded Value.	Value at 1901 Prices.		Recorded Value.	Value at 1901 Prices.	Excluding Gold.	Total (Domestic Produce).
	£	£	£	£	£		
1901 ..	10,936,676	10,936,676	1,753,784	12,690,460	12,690,460	1000	1000
1902 ..	11,547,173	11,649,485	1,951,426	13,498,599	13,600,911	990	992
1903 ..	12,800,360	11,805,546	2,037,832	14,838,192	13,843,378	1084	1072
1904 ..	12,614,286	10,796,802	1,987,501	14,601,787	12,784,303	1168	1142
1905 ..	13,409,594	10,470,926	2,093,936	15,503,530	12,564,862	1281	1234
1906 ..	15,569,442	11,381,746	2,270,904	17,840,346	13,652,650	1368	1306
1907 ..	17,755,648	12,507,357	2,027,490	19,783,138	14,534,847	1419	1361
1908 ..	13,889,731	11,363,776	2,004,799	15,894,530	13,368,575	1222	1189
1909 ..	17,456,036	14,367,853	2,006,900	19,462,936	16,374,753	1215	1189
1910 ..	20,047,845	15,040,664	1,896,318	21,944,163	16,936,982	1333	1295
1911 ..	16,966,647	12,964,823	1,815,251	18,781,898	14,780,074	1308	1271
1912 ..	19,927,274	14,816,138	1,345,131	21,272,405	16,161,269	1344	1316
1913 ..	21,118,391	14,477,405	1,459,499	22,577,890	15,936,904	1458	1416
1914 ..	25,089,350	17,067,441	895,367	25,984,717	17,962,808	1470	1446
1915 ..	29,348,309	16,899,622	1,694,553	31,042,862	18,594,175	1736	1669
1916 ..	31,776,695	15,827,309	1,199,212	32,975,907	17,026,521	2007	1936
1917 ..	30,184,069	13,277,055	*	*	*	2273	*
1918 ..	27,894,619	11,139,818	*	*	*	2504	*

* Not available for publication.

In this table the base used is the same as that used in Australia; similar information was given in the "New Zealand Official Year-book" for 1914, pages 349–354, based on the year 1900, the base used by the British Board of Trade.

The feature of the table is the constant rising tendency shown by the index number of export values, especially in recent years. This upward tendency is always under normal conditions retarded by the influence of gold, which so long as gold coinage circulates freely and in sufficient quantities does not change in price. The comparison of the recorded value with that assessed at the prices of 1901 shows to how slight an extent increases in export values are a true index of increases in actual trade.

The index numbers of export values (excluding gold) recomputed on the base of the average export values, 1909–13 (equated to 1000), together

with the moving quinquennial averages computed on the same base, are as follows :—

Year.	Index Number.	Moving Quinquennial Averages.	Year.	Index Number.	Moving Quinquennial Averages.
1901 ..	751	..	1910 ..	1001	965
1902 ..	744	..	1911 ..	983	1000
1903 ..	814	830	1912 ..	1010	1039
1904 ..	877	885	1913 ..	1095	1099
1905 ..	962	949	1914 ..	1104	1204
1906 ..	1027	970	1915 ..	1304	1344
1907 ..	1066	977	1916 ..	1508	1501
1908 ..	918	985	1917 ..	1707	..
1909 ..	912	976	1918 ..	1880	..

INDEX NUMBERS BASED ON PREVIOUS YEAR'S PRICES.

In order to show the effect of changes in price from year to year, and particularly in the later years, it is interesting to construct a series of index numbers basing the figures for each year upon the prices of the previous year. In this way it is possible to compare succeeding years directly, instead of comparing each year with a given base. The method used is the same, except that the base is changed.

EXPORTS OF NEW ZEALAND PRODUCE FOR EACH YEAR, 1901–18, SHOWING ACTUAL VALUES AND VALUES ASSESSED AT PRICES OF THE PREVIOUS YEAR.

Year.	Exports (excluding Gold).		Gold Bullion exported.	Total Exports (Domestic Produce).		Effect of Price-changes.		Index Number of Export Values.	
	Recorded Value.	Value at Prices of Previous Year.		Recorded Value.	Value at Prices of Previous Year.	Gain.	Loss.	Excluding Gold.	Total (Domestic Produce).
	£	£	£	£	£	£	£		
1901	10,936,676	..	1,753,784	12,690,460	..	..	..	1000	1000
1902	11,547,173	11,649,485	1,951,426	13,498,599	13,600,911	..	102,312	990	992
1903	12,800,360	11,701,863	2,037,832	14,838,192	13,739,695	1,098,497	..	1094	1079
1904	12,614,286	11,706,612	1,987,501	14,601,787	13,694,113	907,674	..	1078	1066
1905	13,409,594	12,233,553	2,093,936	15,503,530	14,327,489	1,176,041	..	1096	1082
1906	15,569,442	14,576,036	2,270,904	17,840,346	16,846,940	993,406	..	1068	1059
1907	17,755,648	17,109,200	2,027,490	19,783,138	19,136,690	646,448	..	1038	1034
1908	13,889,731	16,132,202	2,004,799	15,894,530	18,137,001	..	2,242,471	861	876
1909	17,456,036	17,561,558	2,006,900	19,462,936	19,568,458	..	105,522	994	995
1910	20,047,845	18,273,459	1,896,318	21,944,163	20,169,777	1,774,386	..	1097	1088
1911	16,966,647	17,280,937	1,815,251	18,781,898	19,096,188	..	314,290	982	984
1912	19,927,274	19,389,403	1,345,131	21,272,405	20,734,534	537,871	..	1028	1026
1913	21,118,391	19,471,688	1,459,490	22,577,890	20,931,187	1,646,703	..	1085	1079
1914	25,089,350	24,896,512	895,367	25,984,717	25,791,879	192,838	..	1008	1007
1915	29,348,309	24,842,654	1,694,553	31,042,862	26,537,207	4,505,655	..	1181	1170
1916	31,776,695	27,486,103	1,199,212	32,975,907	28,685,315	4,290,592	..	1156	1150
1917	30,184,069	26,656,516	*	*	*	*	..	1166	*
1918	27,894,619	25,325,272	*	*	*	*	..	1100	*

* Not available for publication.

The comparison of each year with the preceding year brings out the advantage gained by a rise in prices. The gain shown represents the surplus value added by rising prices to the exports of any year, and, similarly, the loss shows how falling prices penalize New Zealand. The figures for the crisis years 1908–9, and for 1911, are eloquent of what falling prices would mean for the Dominion. The gain due to the rise of prices in 1915 amounted to upwards of £4,500,000—an unprecedented figure—and, taking this into account, the subsequent increases are truly remarkable.

EXPORTS FOR YEAR ENDED 30TH JUNE.

It has been noticed repeatedly that the calendar year is a bad period for which to calculate exports of New Zealand produce. These exports consist almost wholly of seasonal products, and the calendar year often splits the seasons. The largest export, wool, is sheared from the sheep in the early summer, and the wool-sales are held in December and January. Exports of any season's wool-clip are therefore divided between one year and the next in varying proportion. A favourable season or, as in 1914, a sudden demand may cause a great increase of exports in the December quarter, with the result that the March quarter of the next year shows low figures. The wool trade invariably bases its calculations on each season's clip, not on calendar years.

The same argument holds good in the case of butter and cheese, which are almost wholly exported in December and March quarters. It is desirable therefore, for many purposes, to investigate New Zealand exports for years ending in June instead of December, since this division does not split the seasonal production of any main commodity, and more truly shows the results of each season as compared with previous seasons.

It was stated earlier in this report that the present period of price-movements began about 1895. Since that time the level of prices and exports has risen continuously, and this period is quite a distinct epoch in the economic history of New Zealand. A series of tables has accordingly been compiled to illustrate more definitely the effect of prices upon the exports, and therefore upon the prosperity of the Dominion, since 1890. The tables have been compiled throughout for June years. The list of commodities covered comprises rather more than 97 per cent. of the total value of exports, leaving less than 3 per cent. to be calculated pro rata. It will be noted that the data available for June years are such that rather a smaller proportion of the total exports can be covered than was the case with calendar years, but the proportion of the total included in the investigation is sufficiently large to warrant the claim that the figures quoted represent with a high degree of approximation the total exports.

As in the cases of the wholesale and retail prices investigations, and also the investigation into producers' prices, the average of a series of years has been chosen as the base in preference to any single year, since by obtaining the average of a period of years the effect of any temporary fluctuations cannot vitiate the results. A base has been chosen as the beginning of the period to be considered in order that the benefit New Zealand has received from a constantly rising price-level might more easily be seen. The decade 1890–99 is a good base, covering as it does a period of both falling and rising prices, and is a fair level from which to begin comparisons.

The rise in prices is reflected by the following table of index numbers of export values for (1) wool, (2) frozen meat, (3) butter, (4) cheese, and (5) all exports ;—

INDEX NUMBERS OF EXPORT VALUES OF THE PRINCIPAL EXPORTS FOR YEARS ENDED 30TH JUNE.

(Base : Average annual value, 1890–99 = 1000.)

Year.	Wool.	Frozen Meat.	Butter.	Cheese.	Total Exports.	
					Excluding Gold.	All (Domestic) Produce.
1890–91 ..	*1158	1046	892	1023	1089	1081
1891–92 ..	1132	1034	961	1097	1077	1069
1892–93 ..	1018	1048	1100	1040	1031	1028
1893–94 ..	1018	1031	1015	1055	1019	1017
1894–95 ..	930	989	956	980	937	943
1895–96 ..	1011	1027	979	889	1007	1006
1896–97 ..	979	997	974	946	983	985
1897–98 ..	940	924	1000	956	947	952
1898–99 ..	875	985	998	1002	928	937
1899–1900 ..	1006	993	1041	1065	1011	1010
1900–1 ..	814	1033	1044	1136	930	938
1901–2 ..	604	1067	1102	1055	893	907
1902–3 ..	737	1165	1159	1272	990	991
1903–4 ..	902	1227	1074	1108	1051	1044
1904–5 ..	1110	1354	1075	1088	1158	1135
1905–6 ..	1284	1301	1167	1233	1253	1215
1906–7 ..	1351	1100	1195	1377	1293	1253
1907–8 ..	1063	1290	1203	1370	1194	1165
1908–9 ..	932	1275	1245	1371	1112	1099
1909–10 ..	1208	1230	1229	1303	1235	1209
1910–11 ..	1155	1330	1222	1303	1232	1206
1911–12 ..	1101	1338	1317	1401	1224	1201
1912–13 ..	1264	1493	1348	1427	1350	1325
1913–14 ..	1238	1528	1307	1454	1349	1321
1914–15 ..	1437	1810	1372	1526	1512	1499
1915–16 ..	1941	1891	1682	1742	1808	1725
1916–17 ..	1989	1974	1917	2116	1985	*
1917–18 ..	2116	2146	1919	2244	2201	*
1918–19 ..	2095	2686	2094	2372	2303	*

* Export figures for gold are not available.

Movement of Export Prices, June Years, 1890–91 to 1918–19.
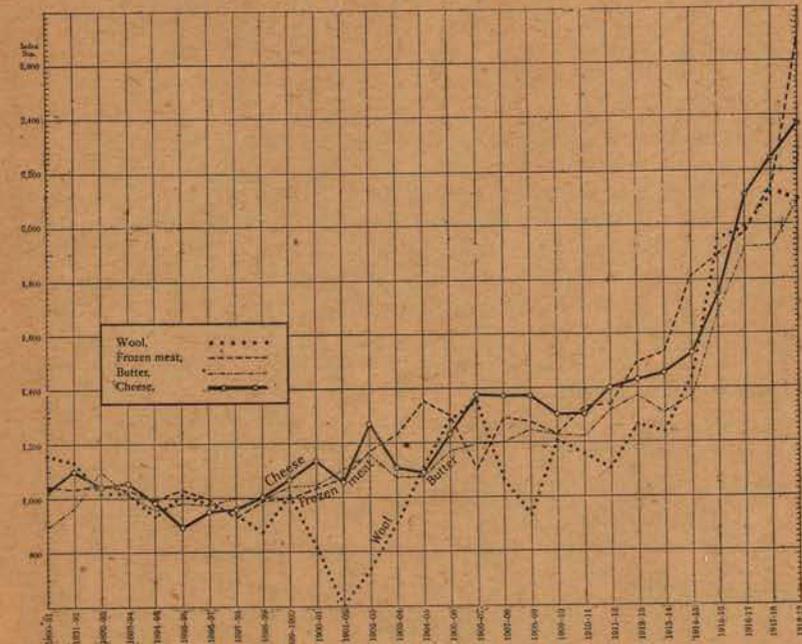
The values of the main exports were higher in 1890–91 than in the middle of the decade 1890–99, and for five or six years the fall is well marked. It is hard from a scrutiny of the index numbers for each item to fix on the turning-point, but the average for all exports puts it in 1894–95, thus corroborating other investigations into this subject.

Since this time, though there have been a good many fluctuations, particularly in wool, the general tendency has been very decidedly upward. The index number for all exports shows that in 1914 the immediate gain from rising prices was as much as 50 per cent., exports being worth half as much again as they would have been at the average prices of 1890–99. The year ending June, 1916, shows still steeper curves, which continued until the year ending June, 1919, which latter showed a falling-off in the steepness of the curve. The most serious set-back occurred in 1907–8 and 1908–9.

The course of wool-values has shown remarkable fluctuations. The seasons 1900–1, 1901–2, and 1902–3 show exceptionally low prices; and again in 1908–9 wool is responsible for lowering the value of exports. Wool has shown very much higher values during the three seasons preceding 1918–19, only to fall slightly again for that year.

Index numbers for cheese, frozen meat, and wool, and also for the total exports are for the last June year all well over 2000, indicating clearly that the export values per unit of quantity have more than doubled since the base period.

EXPORTS AT PRICES OF 1890–99.

Perhaps a better illustration of the effect of increased value will be found in the table given below, where the recorded values of exports are contrasted with values assessed on the basis of 1890–99 prices. Gold, which normally does not change in price, is necessarily calculated separately from the other commodities.

NEW ZEALAND EXPORTS FOR YEARS ENDED 30TH JUNE, SHOWING VALUES AS ACTUALLY RECORDED AND ASSESSED AT THE AVERAGE PRICES OF 1890–99.

Year.	Exports (excluding Gold).		Gold Bullion exported.	Total Exports (Domestic Produce).		Index Number of Export Values.	
	Recorded Value.	Value at Prices of 1890–99.		Recorded Value.	Value at Prices of 1890–99.	Ex-cluding Gold.	Total (Domestic Produce).
	£	£	£	£	£		
1890–91	8,601,525	7,891,864	897,918	9,499,443	8,789,782	1089	1081
1891–92	8,504,738	7,894,711	923,663	9,428,401	8,818,374	1077	1069
1892–93	8,065,782	7,821,133	926,556	8,992,338	8,747,689	1031	1028
1893–94	7,839,783	7,690,658	950,946	8,790,729	8,641,604	1019	1017
1894–95	7,612,430	8,128,360	923,931	8,536,361	9,052,291	937	943
1895–96	8,062,459	8,007,754	1,117,918	9,180,377	9,125,672	1007	1006
1896–97	8,265,455	8,406,001	1,076,504	9,341,959	9,482,505	983	985
1897–98	9,156,551	9,664,411	997,978	10,154,529	10,662,389	947	952
1898–99	9,248,433	9,961,865	1,303,672	10,552,105	11,265,537	928	937
1899–1900	11,759,063	11,631,573	1,457,540	13,216,603	13,089,113	1011	1010
1900–1	10,853,168	11,671,369	1,589,632	12,442,800	13,261,001	930	938
1901–2	10,952,806	12,261,296	1,798,345	12,751,151	14,059,641	893	907
1902–3	12,863,848	12,993,919	2,039,797	14,903,645	15,033,716	990	991
1903–4	12,604,740	11,991,834	2,084,095	14,688,835	14,075,929	1051	1044
1904–5	13,252,055	11,440,392	1,974,739	15,226,794	13,415,131	1158	1135
1905–6	15,388,595	12,280,611	2,153,047	17,541,642	14,433,658	1253	1215
1906–7	17,134,134	13,251,715	2,106,889	19,241,023	15,358,604	1293	1253
1907–8	14,321,316	11,996,945	2,129,042	16,450,358	14,125,987	1194	1165
1908–9	16,196,819	14,568,412	1,944,652	18,141,471	16,513,064	1112	1099
1909–10	19,780,063	16,022,222	1,948,212	21,728,275	17,970,434	1235	1209
1910–11	18,407,842	14,938,728	1,898,910	20,306,752	16,837,638	1232	1206
1911–12	18,438,612	15,068,559	1,710,021	20,148,633	16,778,580	1224	1201
1912–13	21,691,090	16,066,627	1,232,725	22,923,815	17,299,352	1350	1325
1913–14	22,830,978	16,927,383	1,485,920	24,316,898	18,413,303	1349	1321
1914–15	25,469,029	16,842,914	438,234	25,907,263	17,280,248	1512	1499
1915–16	31,627,757	17,495,330	2,134,256	33,762,013	19,629,586	1808	1725
1916–17	30,371,488	15,303,688	*	*	*	1985	*
1917–18	30,114,372	13,682,199	*	*	*	2201	*
1918–19	39,072,473	16,964,252	*	*	*	2303	*

* Figures in connection with the export of gold are not available for publication.

Domestic Exports (excluding Gold) as actually recorded and as assessed at Prices of 1890–99.
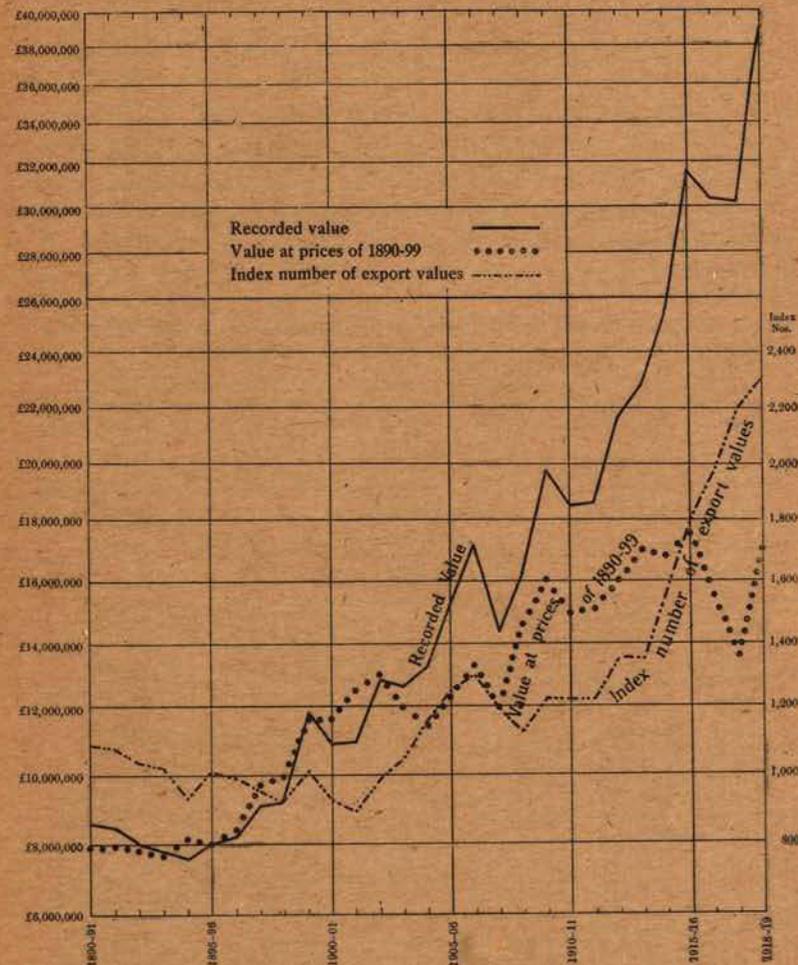
The diagram, which illustrates the effect of prices on export values, is very illuminating in its course. Since the period 1890–99 is the base, and during those years the relative levels have been equated, the lines naturally run together. It will be noticeable, however, that for the first years, while the quantity exported remained about stationary, the value fell owing to falling prices.

The rate of increase in the last twenty years is very high, though broken in 1907–8 and 1911–12. Both the quantity exported and its value show great increases. The dotted line which shows the quantities assessed at

the uniform values of 1890–99 varies in the same direction as the recorded value, and it is significant that the greatest fluctuations are apparently due to variations in the quantity exported.

The effect of rising prices is measured by the constantly increasing divergence of the two lines : war has so greatly accelerated the divergence that, whereas in 1914 (*i.e.*, fifteen years after the base period) our exports were worth half as much again, by 1917 they had risen to more than double what they would have been at the prices of 1890–99.

This divergence has been plotted separately by a curve showing the index numbers of export values, the scale for which is charted on the right-hand side of the graph. The index number for 1918–19 (excluding gold) was 2303, as against 2201 for 1917–18 and 1985 for 1916–17. The slackening in the rate of rise of the index number for the most recent June year is entirely due to a fall in the price of wool, tallow, and phormium.

Similarly, the following table and the graphs attached show the divergence for the four main exports—wool, frozen meat, butter, and cheese :—

EXPORTS OF WOOL, FROZEN MEAT, BUTTER, AND CHEESE FOR YEARS ENDED 30TH JUNE, SHOWING VALUES AS ACTUALLY RECORDED AND AS ASSESSED AT THE AVERAGE PRICES OF 1890–99.

Year.	Wool.		Frozen Meat.		Butter.		Cheese.	
	Recorded Value.	Value at Average Prices, 1890–99.	Recorded Value.	Value at Average Prices, 1890–99.	Recorded Value.	Value at Average Prices, 1890–99.	Recorded Value.	Value at Average Prices, 1890–99.
	£	£	£	£	£	£	£	£
1890–91	4,216,419	3,641,768	1,188,620	1,136,432	128,306	143,796	95,866	93,699
1891–92	4,229,683	3,735,461	1,140,571	1,103,579	198,363	206,478	91,670	83,578
1892–93	4,072,342	3,999,329	1,067,780	1,018,744	208,909	189,978	95,903	92,232
1893–94	4,353,415	4,274,711	1,054,537	1,022,559	303,951	299,575	106,280	100,779
1894–95	4,028,651	4,329,769	1,322,810	1,337,768	231,700	242,471	160,061	163,260
1895–96	4,393,574	4,345,449	1,276,232	1,243,269	250,885	256,159	121,993	137,210
1896–97	4,357,244	4,449,230	1,340,169	1,344,449	357,187	366,728	151,298	159,899
1897–98	4,732,542	5,032,162	1,691,546	1,831,138	404,049	404,127	136,146	142,455
1898–99	4,241,984	4,847,271	1,776,843	1,804,212	451,269	452,348	127,209	126,913
1899–1900	4,889,101	4,859,806	2,298,140	2,315,097	693,666	666,625	224,238	210,638
1900–1	3,890,573	4,781,059	2,193,494	2,122,519	858,543	822,599	239,325	210,630
1901–2	3,079,271	5,094,446	2,526,661	2,367,931	1,044,317	947,782	171,886	162,912
1902–3	4,034,712	5,475,277	3,310,073	2,840,937	1,211,223	1,045,407	186,412	146,500
1903–4	4,313,018	4,779,745	2,846,082	2,318,958	1,445,814	1,345,834	194,779	175,808
1904–5.	5,468,566	4,927,285	2,714,026	2,003,709	1,417,984	1,319,133	180,215	165,619
1905–6	6,605,790	5,144,559	2,882,387	2,215,618	1,540,327	1,319,385	300,056	243,318
1906–7	7,415,486	5,487,427	3,143,764	2,858,903	1,631,174	1,365,022	568,058	412,533
1907–8	5,649,636	5,314,779	3,165,048	2,453,043	1,133,665	942,588	761,100	555,439
1908–9	5,965,283	6,397,453	3,775,990	2,961,113	1,491,837	1,198,433	977,358	712,921
1909–10	7,962,669	6,594,295	3,631,122	2,952,041	1,712,659	1,393,613	1,275,148	978,653
1910–11	7,164,844	6,202,335	3,875,379	2,914,507	1,685,033	1,378,474	1,093,715	839,158
1911–12	6,965,416	6,328,167	3,671,948	2,743,477	1,891,235	1,435,884	1,496,730	1,068,174
1912–13	8,217,644	6,503,545	4,315,444	2,890,424	2,027,822	1,504,318	1,914,238	1,341,035
1913–14	8,262,153	6,673,803	5,079,228	3,323,433	2,197,662	1,681,915	2,317,970	1,594,670
1914–15	9,907,670	6,893,420	5,737,637	3,169,706	2,336,862	1,702,856	2,277,509	1,492,725
1915–16	12,127,697	6,247,718	7,476,637	3,954,744	2,805,152	1,668,157	3,345,314	1,919,876
1916–17	10,628,359	5,342,668	6,953,944	3,481,347	2,767,150	1,443,410	3,982,089	1,881,560
1917–18	9,519,199	4,497,983	6,414,471	2,943,970	3,232,788	1,684,537	4,010,842	1,787,735
1918–19	15,378,923	7,340,775	4,578,144	1,704,447	3,592,875	1,715,795	5,501,452	2,319,330

Exports of Wool as actually recorded and as assessed at Prices of 1890–99.

Recorded value.
Value at prices of 1890–99.
Index numbers of export values.
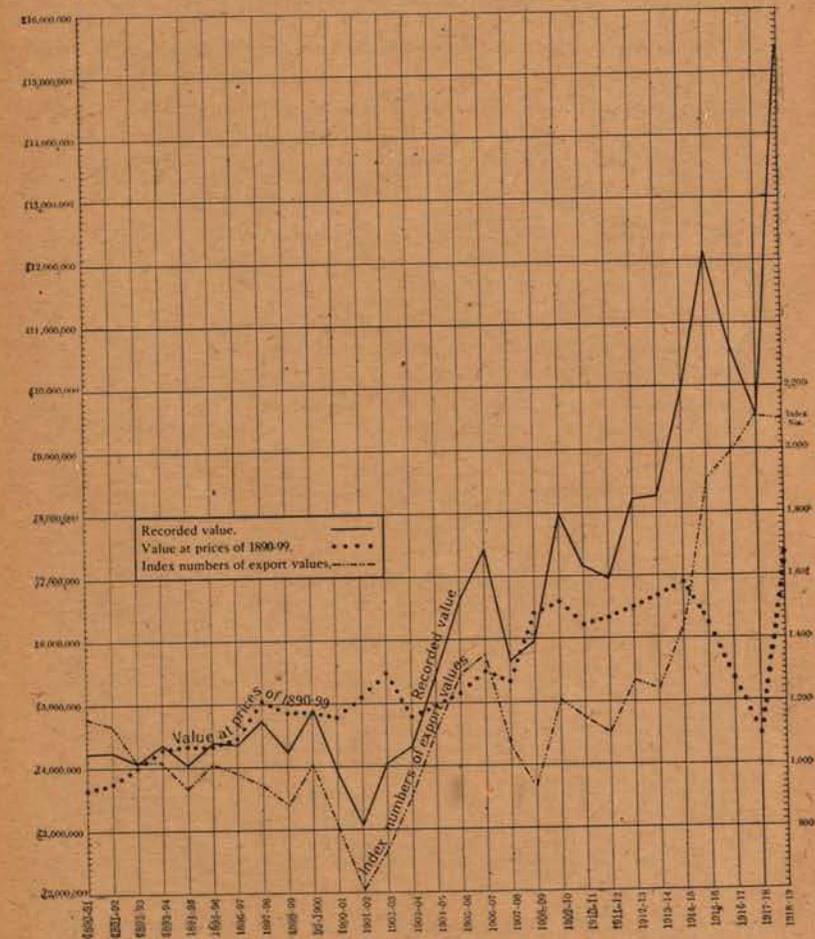
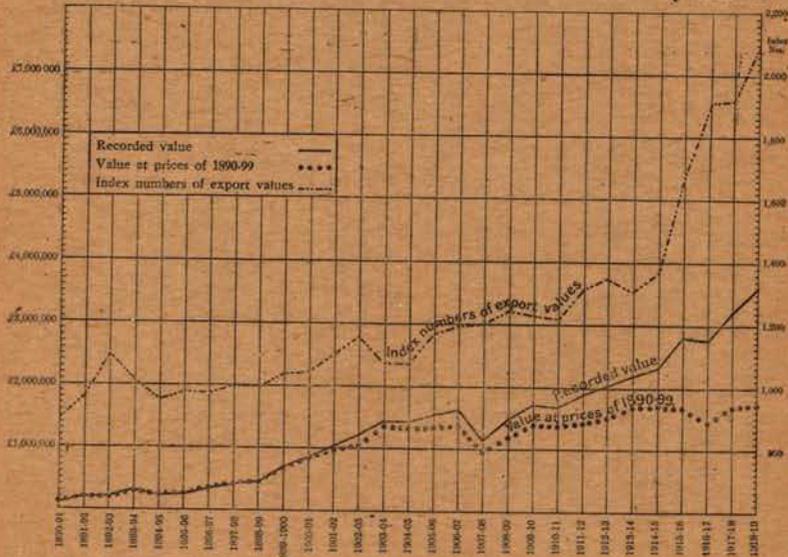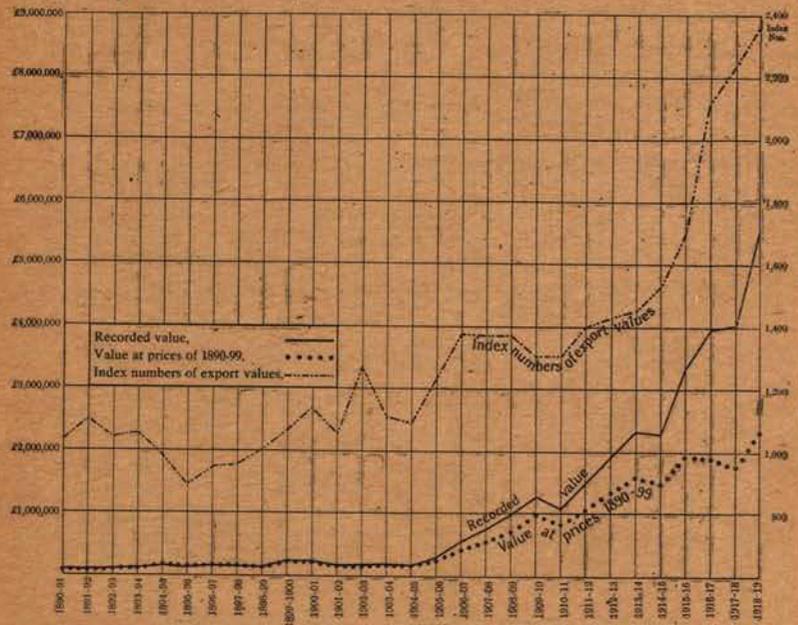*Exports of Frozen Meat as actually recorded and as assessed at Prices of 1890–99.*
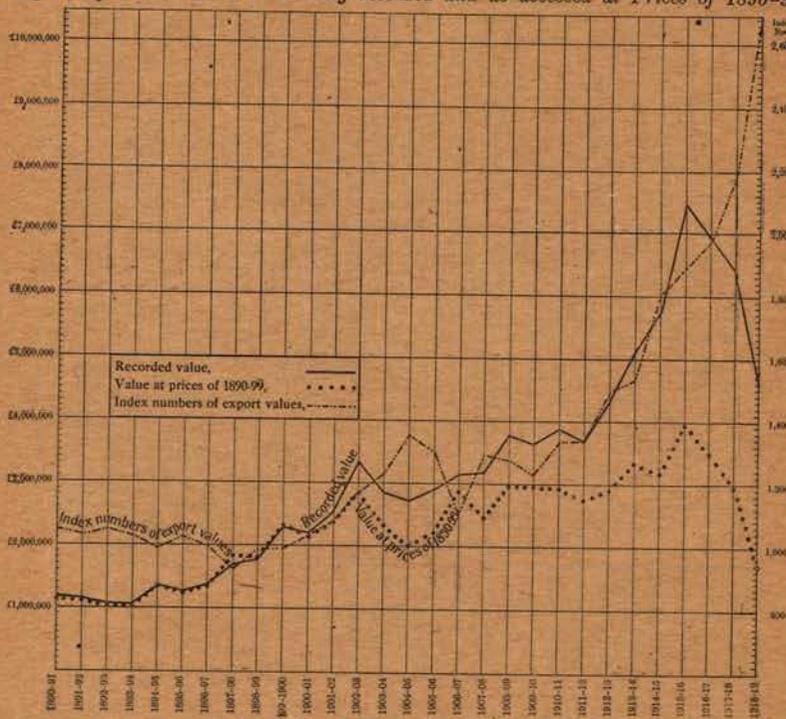
Exports of Butter as actually recorded and as assessed at Prices of 1890–99.

Exports of Cheese as actually recorded and as assessed at Prices of 1890–99.


The index numbers of total export values (excluding gold) of all domestic produce are now shown by June years as recomputed with the average of the export values prevailing for the five June years ended June, 1914 (equated to 1000), as base. The moving quinquennial averages are also shown. It should be noted that the base period here chosen is six months later than that previously used throughout this report.

June Year.	Index Number.	Moving Quinquennial Average.	June Year.	Index Number.	Moving Quinquennial Average.
1890–91 ..	852	..	1905–06 ..	980	931
1891–92 ..	843	..	1906–07 ..	1012	941
1892–93 ..	807	806	1907–08 ..	934	953
1893–94 ..	797	793	1908–09 ..	870	950
1894–95 ..	733	778	1909–10 ..	966	939
1895–96 ..	788	765	1910–11 ..	964	963
1896–97 ..	769	751	1911–12 ..	958	1000
1897–98 ..	741	763	1912–13 ..	1056	1043
1898–99 ..	726	751	1913–14 ..	1056	1134
1899–00 ..	791	737	1914–15 ..	1183	1253
1900–01 ..	728	744	1915–16 ..	1415	1386
1901–02 ..	699	763	1916–17 ..	1553	1535
1902–03 ..	775	786	1917–18 ..	1722	..
1903–04 ..	822	836	1918–19 ..	1802	..
1904–05 ..	906	899			

A diagram is appended showing the annual index numbers, together with the quinquennial moving average index numbers for calendar years and also for June years.

Annual and Quinquennial Index Numbers of Export Prices, June Years and Calendar Years 1900–19.

Legend:
Annual Index No. (calendar years) ...· – – – –
Annual Index No. (June years) ....
Quinquennial Index No. (calendar years) –..–..–
Quinquennial Index No. (June years) ....
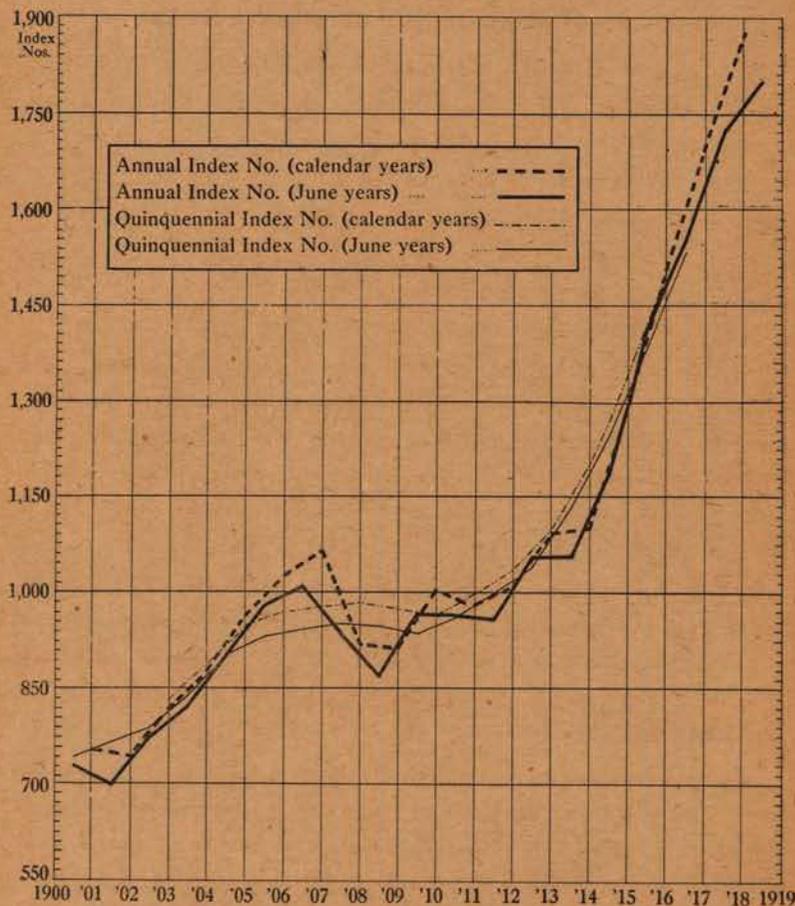
PART V.—GENERAL SURVEY OF INDEX NUMBERS.

It is of interest to compare the movements of the index numbers for retail prices, wholesale prices, producers' prices, and export prices. For this purpose representative index numbers for each of the four classes are graphed, the numbers selected being—

> Retail prices—food only, four chief centres.
> Wholesale prices—general index numbers.
> Producers' prices—general index numbers.
> Export prices—index numbers for June years.

Food-prices have been selected in the case of retail prices because index numbers of food and rent alone are available as far back as 1891. Moreover, as indicated in Chapter VI of Part II of this report, the effect of including rent with food, at least in so far as the war period is concerned, is to give an index number less truly representative of the general level of retail prices than if food alone is considered.

For reasons which have been fully gone into in Chapter II of Part IV June years give a better index of export prices than calendar years, and these have accordingly been selected in connection with the comparisons. As already mentioned, it has not been found possible to bring up the producers' index number later than 1918.

It will be remembered that the base adopted in the case of export-price indexes for June years is six months later than the base adopted elsewhere in this report. The effect of such a difference in base in a time is rising prices such as the period here selected as the base, is, other things being equal, to make the average of the index numbers for exports during June years a trifle lower than the average of the remaining index numbers.

The following table shows the actual index numbers used :—

INDEX NUMBERS OF RETAIL PRICES (THREE FOOD GROUPS, AVERAGE OF FOUR CHIEF CENTRES), WHOLESALE PRICES (ALL GROUPS), EXPORT PRICES, AND PRODUCERS' PRICES, 1891–1919.

BASE.—Average of years 1909–13 (except in the case of Export Prices, in which case the base taken is the average of the years ended 30th June, 1910–14, inclusive) = 1000.

| Year. | Index Number | | | |
	Retail Prices, Three Food Groups (Average of Four Chief Centres).	Wholesale Prices (all Groups).	Export Prices.*	Producers' Prices.
1891	918	994	852	803
1892	913	972	843	799
1893	934	973	807	795
1894	927	927	797	740
1895	906	920	733	745
1896	904	943	788	778
1897	904	942	769	766
1898	958	972	741	791
1899	896	893	726	744
1900	906	917	791	788
1901	928	931	728	735
1902	954	975	699	828
1903	946	954	775	861
1904	935	922	822	860
1905	990	994	906	969
1906	1003	1016	980	1006
1907	993	1016	1012	1009
1908	994	1006	934	978
1909	972	949	870	959
1910	991	983	966	995
1911	983	994	964	975
1912	1017	1041	958	1022
1913	1037	1032	1056	1059
1914	1082	1077	1056	1095
1915	1196	1269	1183	1346
1916	1267	1380	1415	1434
1917	1360	1555	1553	1597
1918	1486	1809	1722	1661
1919	1555	1834	1802	†

* Year ended 30th June.   † Data not available.

NOTE.—The above figures are comparable vertically but not horizontally.

Movement of Retail, Wholesale, Export, and Producers' Prices, 1891–1919.
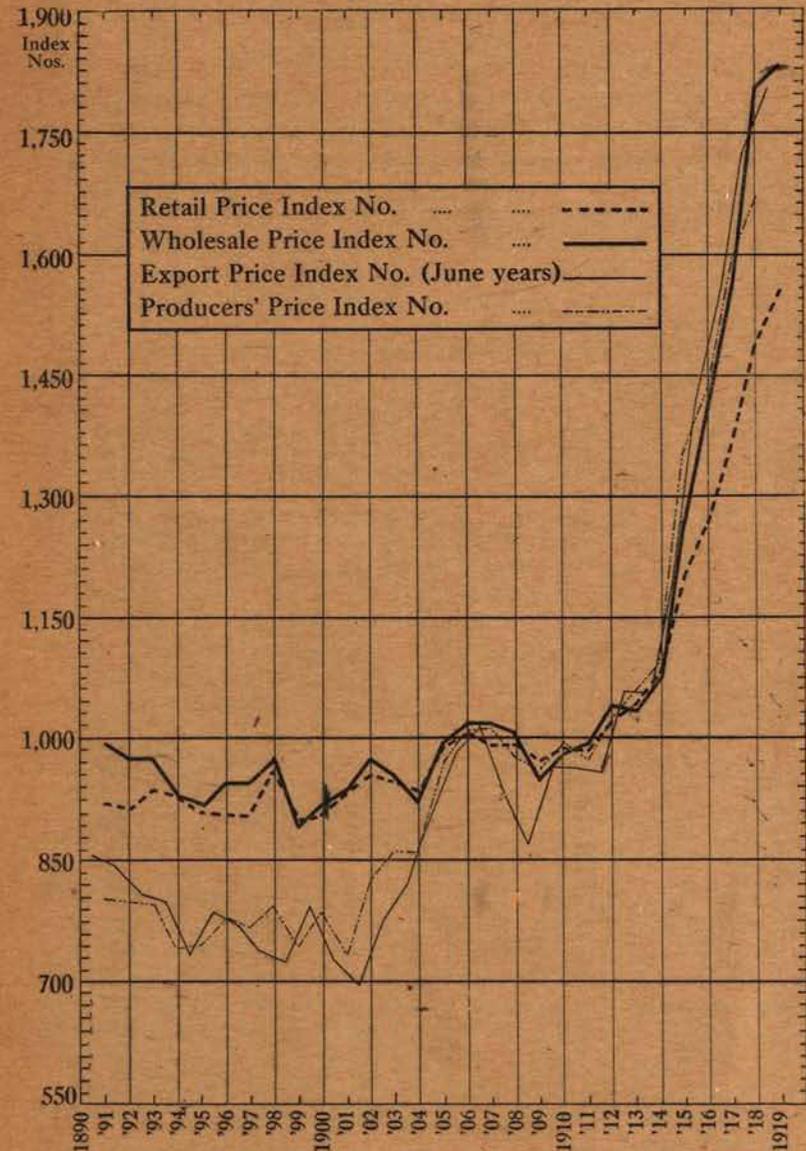
It should be realized at the outset that the foregoing figures are comparable vertically but not horizontally. The figures do not claim to indicate directly the relation between, say, wholesale and retail prices at any one date; what they do claim to indicate is the relative increase or decrease in each class of prices as compared with prices prevailing in the same class during the base period.

Thus actual retail prices are, except under very abnormal circumstances, considerably higher than wholesale, but a glance at the table just quoted reveals that in many years the wholesale index number was higher than the retail index number. This merely means that in the years concerned the ratio of the wholesale prices for that year to wholesale prices prevailing in the base period was greater than the ratio of the retail prices for that year to the retail prices prevailing in the base period.

In the chart, on the other hand, which lies the other way from the table just quoted, while each point on any one curve is comparable with other points on the same curve, points for the same period on different curves are not comparable with one another. The diagram is, however, instructive as comparing the general tendencies of the four classes of prices.

The bunched appearance of the graphs in the vicinity of 1911 is attributable to the fact that all index numbers are 1000 for the average of the five years 1909 to 1913.

It will be noted that the wholesale index numbers appear to have been, before the war, for the most part higher than the other index numbers. This suggests that in the base period wholesale prices may have been abnormally low as compared with other prices.

For export prices the base period was six months later than in the case of the other investigations. The conjunction of this fact with the fact that the base period coincided with a period of rising prices has resulted in giving the graph of export index numbers a fictitiously low position on the diagram. The error is, however, quite small, and may for practical purposes be neglected.

A few general tendencies appear to have been common to all the index numbers—namely, a fall to 1894–96, fluctuations thereafter with a general rising tendency gradually obtruding itself, followed by a slight fall after 1906–7 and a rise from about 1911 onwards, a rise the rapidity of which was greatly increased after 1914 by war conditions.

Throughout the period covered by the investigation, but especially in the pre-war portion of the period, the index numbers of wholesale and retail prices moved in very approximate sympathy with each other, forming a separate class of their own, with the wholesale prices manifesting, if anything, somewhat more violent fluctuation than the retail; while, on the other hand, export and producers' price index numbers formed another class, showing on the whole greater fluctuations than the other class, but still moving in rough sympathy with it. Fluctuations in the export index numbers are particularly marked, the effect of the world depression consequent on the American crisis of 1907 being most apparent here.

The reason why the index numbers fall into two classes is no doubt in part due to the different systems of weighting. In the case of wholesale and retail prices fixed weights based on consumption were employed; in the case of

export and producers' prices varying weights based on the amount of export and production respectively from year to year were employed. It is true, as mentioned earlier, that small differences in weights have little effect on an index number, but here the system of weighting differs in very material respects between the classes into which the index numbers fall. The other principal reason for the difference between the two classes lies in the fact that the commodities dealt with are in the case of the export and producers' index numbers wholly home produce, while in the case of the wholesale and retail index numbers imported commodities are included. Although it is true that the price of the staple exports of New Zealand produce are in the main determined by prices prevailing in the world's markets, it is not wholly true; moreover, in the case of imported commodities the position is further complicated by tariff considerations, the importance of which as an element in the determination of prices has already been referred to in some detail in Part II of his report.

It will be noted that during the war period retail prices have risen less than the others; indeed, of all the index numbers those for retail prices show the least variation during the period under review. The reasons are not far to seek, and may be briefly subsumed under the heads (1) retail friction, or a tendency which is much more marked in the retail trade than elsewhere for a charge to be made based on custom, (2) legal fixation of maximum prices during the war period.

Similar influences have to some, but to a lesser extent, resulted during the war period in a wholesale-prices index number generally lower than the index numbers for either producers' or export prices.

The first prices to feel the effect of the war were export prices and producers' prices, due no doubt to the fact of an extraordinary demand for primary produce resulting from the outbreak of hostilities.

It was not, however, till somewhat later that wholesale prices felt the pinch to the same extent, probably because many warehouses had at the date of the outbreak of war fairly large stocks of imported goods on hand, which did not become exhausted and call for replacement by a higher-priced article until the war had been in progress for some time.