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THE COST OF LIVING IN SWEDEN
1830-1930

## WAGES; COST OE LIVING AND NATIONAL INCOME IN SWEDEN 1860-1930

BY THE STAFF OF

THE INSTITUTE FOR SOCIAL SCIENCES, INIVERSITY OF STOCKHOLM


VOLUME I

## THE COST OF LIVING IN SWEDEN

1830-1930

LONDON<br>P. S. KING \& SON, LTD.<br>ORCHARD HOUSE, 14 GREAT SMITH STREET WESTMINSTER

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## X:946.571.N3 6.3 .1 <br> 81868

## PRINTED IM STOCNHOLM 2933

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# THE COST OF LIVING IN SWEDEN $1830-1930$ 

BY

GUNNAR MYRDAL<br>ASSISTED BY<br>SVEN BOUVIN

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## FOREWORD.

This volume presents the results of investigations carried on as a part of a series of studies on Wages, Cost of Living and National Income in Sweden 1860-1930 at the Institute for Social Sciences in the University of Stockholm. The aims and general methods of these studies, which have been made possible by grants from The Laura Spelman Rockefeller Memorial, are explained in volume II of this series, Wages in Sweden 1860-r930. The third study, National Income in Sweden 186x-1930, is under preparation.

It has been found practical to extend the publication of data regarding the Cost of Living in Sweden back to I830 in connection with certain historical studies regarding social conditions in Sweden during the period 1830-60. On the other hand, the present investigation has not been carried further than to 19I3, as from that time official statistics regarding Cost of Living in Sweden have been published by the Swedish Social Board. A summary description of these official statistics will be found in an appendix.

The manuscript of this volume was ready for the press in the summer of 1929, but the publication has been postponed in order to allow the simultaneous publication of the two first volumes of the series.

Stockholm, May 1933.
Gösta Bagge.

## ACKNOWLEDGMENT.

In planning and accomplishing this study the author:. has had to contend with many peculiar difficulties, of which some, but not all, are accounted for in the text. If the result is not entirely without value it is due to help received from many quarters. The Social Board's expert on price statistics, Mr. Hugo Heyman, has been kind enough to place his experience and knowledge to disposal, as also has Mr. Karl Amark, the originator of the first Swedish price index for earlier periods and an expert on the markegaingstaxor and price statistics generally. Professor Erik Lindahl collected some parts of the primary material for the study. Heads of libraries, public archives, official and semi-official institutions, and directors of business enterprises, as well as private business men, have freely made available material which they had at their disposal. Mr. Sven Bouvin has composed the appendix and has assisted in preparing the main study. Mr. Ernst L. Ekman, Mr. Ivar Ekstedt, and Mr. Boris Tullander have also assisted in parts of the work at different stages of the investigation. Dr. E. Classen of the Swedish Chamber of Commerce, London, has undertaken the translation into English of the Swedish text. To all the above-named and many others the author desires to express his gratitude.

Stockholm, May 1933.
Gunnar Myrdal.

# THE COST <br> OF LIVING IN SWEDEN 

1830-1913.

## CHAPTER I.

## THE PROBLEM.

## Definition of Cost of Living.

By cost of living we mean the total cost in money of a standard of living composed in a certain way. A more precise definition of the conception is to be found, thetefore, in the statistical premise: the budget to be taken into account. We must, of course, endeavour to bring this budget into as close a relation as possible with the actual expenditure of income in the social class at the time and place to which the investigation relates. ${ }^{1}$ In comparing costs of living under different conditions - whether the comparison is between two periods of time, two different places, two social groups, or a combination of these alternatives the difficulty of the definition lies in the fact that not only prices but also budget quantities are different.

If these quantitative differences, as regards the budget, between the two situations compared are of interest from the point of view of an investigation into the cost of living, it is ultimately because price differences also occur. If prices were identical in all places and remained unchanged even in time, there would be no cost of living problem in

[^0]the comparison of incomes. Even if money income were to show ever so great differences, we should be entitled to compare those incomes direct.' Even though the expenditure of income varied, an equal sum of money would everywhere and at every time possess the same alternative purchasing power over commodities and services. The cost of living would be the same everywhere and at all times, and a cost of living index would show the same relative figures when calculated on the basis of any budget, however compiled.

It is therefore primarily the geographical differences and the temporal variations of prices which cause our problem. The problem is a very real one, for we know without further enquiry that prices changed considerably in the last century. We also know that they vary - and always have varied - in different parts of our extensive country, where economic conditions differ so much from place to place. A priori it appears highly probable that these geographically determined price differences were relatively greater in former days of imperfect communications. The contribution which our enquiry into the cost of living should make to an enquiry into wages therefore primarily consists of statistical evidence of the prices entering into the cost of living, both in different parts of the country and at different times. It is to this problem that we have directed our attention in this study.

In the development of our theme we shall unhappily be compelled to point out how the quantitative and qualitative paucity of the available price material imposes strict limits on our ability to solve this problem. For the moment, however, we shall disregard these purely practical difficulties in order instead to say a few words by way of introduction to the more theoretical difficulties of compiling a cost of living index on the basis of observed prices,

[^1]difficulties which would still exist even•if we were in possession of ideally complete and reliable information as to prices.

These inevitable theoretical difficulties are rooted, as has just been said, in the circumstance that the way of spending income varies in time and space, as well as for different classes and social groups. In regard to this question we are also confronted with a purely practical, statistical difficulty, exactly parallel with that just mentioned in relation to prices, though even greater, viz. the difficulty of statistically determining the budgets of expenditure of the different social groups, and their variations in time. But this difficulty we shall also disregard for the moment. We will suppose that we can obtain all the data we may possibly desire, both as to prices and as to actual consumption.

The difficulty which then remains is that of the general index problem, around which so much of the mathematical statistical literature of the last decades turns. From the point of view of the cost of living the problem is how to define the conception of comparable cost when the kinds of expenditure of income are different. This problem can, of course, not be exhaustively treated here.

As has been said, the problem arises precisely from the differences and variations in the use of income. If we could assume that the relative direction of the expenditure of income were everywhere the same, remained unchanged in time, and were independent of prices and of the magnitude of incomes (so that a higher money income or a reduced price of some commodity merely occasioned a proportionate increase of all forms of expenditure and vice versa) then the relative budget figures indicating this form of expenditure would render it possible to weigh the changing and different prices. We could then compile cost-of-living indices making possible a clear comparative conception of the real wages of the different groups of workers, quite independently of differences in the level of wages and prices of commodities. Such an assumption is, however, unreasonable and unreal. Every movement

## 4

 THE COST OF LIVING IN SWEDENof relative prices is normally accompanied by a relative change in the manner of expenditure. Further the magnitude of income exercises considerable influence on the direction of expenditure.

The problem is, strictly speaking, insoluble. We must content ourselves with an approximate solution. But there: exist various methods of achieving such an approximation.

## Problems Referring to Budgets.

The simplest - and the most common - method is to compose a certain budget and use this as an unchanging norm both in space and time. If we multiply the budget figures by prices and add the products we shall obtain for each time and place a figure which will show how much such and such a form of expenditure - the assumed budget - amounts to in all. An index number constructed in this manner possesses therefore a simple, clear economic meanning which is immediately apparent. On the other hand this method frequently only affords a rough approximation to what is really required, especially if the investigation, as in the present case, covers a long period of time, during which there have occurred considerable changes in the manner of living, and great local or social differences in direction of expenditure. One means of correcting these errors, or at any rate of gauging roughly the magnitude of the possible error, is to experiment with a number of budgets and to observe the differences which appear. One may also construct an index from more composite average calculations on the basis of several different budgets. There is of course the risk in such calculations - owing to the circumstance that by a more complicated formula one finds a single expression for the difference of the cost of living although the calculation is based on different budgets that one may forget the theoretical impossibility of an ideal solution of the problem. One may forget the economic purpose of the calculation; and one is tempted to take refuge in abstract mathematical tests which have very little to do with the economic function of the index number and
which give to the calculations the appearance of a much higher degree of reliability than they really possess.

If we wish to obtain a closer approximation we must of course operate with a changing budget. We must compare index numbers based on budgets variously composed. From the point of view of the atility theory of value the most zatural method is to endeavour to equate in subjective value a certain expenditure with another, differently composed, expenditure, corresponding more closely to conditions of life at another place or time or in another social class. Each of the two budgets thus "equated" in value is employed in its place and the relation between total costs gives an index number which shows the relation between the cost of living in the two places, times or social classes compared.

This method suffers from the defect that it assumes an equation in value or utility which can scarcely be other than arbitrary. It is indeed difficult to say exactly what these calculations aim at. It can obviously not be a question of a purely technical measurement (calories etc.); the satisfaction of the desires here in question is much more capricious and must ultimately be thought of as the outcome of a purely psychological process which is beyond the reach of crude methods of calculations.
But quite apart from this fundamental weakness, this method does not even pretend completely to overcome the difficulty. The presumption in every comparison of real income based on this index method must necessarily be that it relates to groups of workers with "equal" consumption measured in subjective value. Even assuming that the method were ideally practicable, it does not make comparisons possible if the standard of living of the persons concerned is different. It assumes similarity in things which are to be compared with regard to their differences. When, as in this study, a knowledge of the development of the cost of living is required in order to determine the actual movements of real wages during a comparatively long period during which such movements were considerable and to determine the different
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levels of real wages in different places and in different occupations, this method presents in fact the same difficulties as the preceding one. It would, indeed; require to be supplemented in such a way that not merely a certain use of income, a certain standard of living was estimated equal in subjective value with another, but also that a standard was estimated corresponding in value to a certain multiple of that other. And if the first valueestimation may without any exaggeration be said to be rather delicate, the other is certainly quite impossible of execution.

It is obvious, however, that only such a comparison in terms of subjective value would lay a basis for calculations of cost of living indices which could rightly be said to be "ideal" or "rational". If, therefore, we deem this method to be impossible of execution for both practical and theoretical reasons, we at the same time give up the pretension of an ideal solution and have to content ourselves with results of a more vague character. This makes it the more necessary to state exactly the limitations of these results.

The chief difficulty in the last mentioned method is the arbitrariness which necessarily attaches to estimates of the subjective value of various budgets. This difficulty is, however, smaller the less the two budgets differ. If, therefore, we assume that the variations are relatively small from one unit of time to another, which they of course are, although over a longer period they accumulate and become very considerable budgetary movements, we may dislocate the budgets at every interval of time (and eventually build on both budgets by means of a more complicated index calculation) and secure a good picture of the short period variations of the costs of living. In this way we obtain a better measure of these short period variations than by a fixed budget designed for a longer period, since in the latter case the fixed budget - especially during periods more remote from that to which the budget most closely corresponds - diverges very considerably from the actual expenditure of income. A lesser error has been substituted for a greater.

This method, however, also has its serious defects. One weakness is that comparisons over a longer period of time are just "as difficult. The cost figures compared relate to budgets of entirely different composition and, since no assumptions have been made as to the relative subjective value of these budgets, it is difficult to discover any conceivable economic meaning in the arithmetical relation of these figures. Moreover, it is scarcely possible to compare costs of living and real incomes of social groups with different total incomes or living in different parts of the country. The presumption for possible short period comparisons in the same place and social class was that the successive changes of budgets within a short period were small. But a corresponding presumption does not usually apply to. direct inter-local and inter-social comparisons.

Hitherto we have tacitly assumed the social groups compared to be homogeneous, i. e. each of them to consist of individual households with exactly the same standard of life and the same budget. The index-problem has then been stated as the problem how to measure the difference in cost of living of two such homogeneous groups at different places or in different social strata or one group at different times between which its consumption has changed, although in an equal way for all its individual members. But such homogeneous groups do not exist: it is always a question of representing the actual consumption of the individual households in a group by means of some sort of average. This problem of the average is, of course, very much stressed when a national index of cost of living (e.g. in a calculation of national income) is required. But even when the task is only to calculate a cost of living index for a group smaller than the national population (e. g. industrial workers), there are very great differences to be bridged over by an average. We are not going to enter upon this problem of averages, but it may be indicated that here also it is impossible to reach more than imperfect approximations. Owing to very much the same difficulties this problem of getting a representative average budget for a
social group cannot be solved ideally, even assuming that all statistical data were at our' disposal.

There are of course many other aspects of the index problem, but we shall restrict ourselves to those already mentioned. We would only add that if an index of the cost of living affords a theoretically unsolvable problem, it is, from the logical point of view, ultimately due to the fact that the desired deductions from the statistical material are not logically clear and free from ambiguity. They only become so when the mathematical formula is already determined by which an index number is extracted from the price and quantity data. Consequently the calculated index number is only adapted within an approximate margin to answer the various questions which may arise as a part of the wider question: how has the cost of living changed? Since it is, in fact, just the finally accepted mathematical formula which fixes the problem, a further consequence is that in the determination of this formula purely technical mathematical considerations must not be allowed to decide the matter. The problem is indeterminate in regard to its real, logical content and this indeterminateness of the actual premisses cannot be removed by considerations which, like all mathematical reasoning, are in character only inferences. Hence, finally, we should be careful in talking of "ideal formulas" etc., for the very idea that it is possible to draw a definite conclusion from indefinite premisses is absurd. It should be frankly recognised that we are here operating with vague and approximate generalisations about very ambiguous conceptions not definable in strict logical terms and that this characteristic of a cost of living index-number is due not only to statistical defects but also to the necessary theoretical vagueness of the problem.

The whole problem is so difficult and the inevitable defects of every conceivable solution are so great that pradence demands the utmost caution in every use of an in-dex-number in subsequent economic analysis. For the same reason, it is advisable to work simultaneously with different index methods. If by different routes we attain the same index relations, we may feel ourselves on safer
ground, and if we find more serious differences they may be regarded as a welcome danger signal. However this may be, if we wish to penetrate deeper into the problem of the changes of the standard of living during a longer pe-. riod and into the real conditions of different social groups it is not permissible to allow a cost of living index-number and a real wages index-number - which are always based on more or less unreliable statistical primary material and are always constructed on very incomplete and fundamentally conventional considerations - to count for more than they actually are: a rough indication of approximate developments. In each special case it is necessary to proceed to a careful and detailed description of habits of life and other actual social conditions if it is desired to accomplish a deeper analysis. This observation is of weight even in relation to the other factor in a calculation of real wages: money income is by no means an economic dimension as easily determinable as has been assumed above, least of all in earlier times. Benefits in kind constitute a difficult crux as does also work in the home and taxation by the state and the communities and the corresponding commodities and services rendered to the citizens. Similarly hours of labour play a part. These questions will be treated in detail in the above mentioned volume on real wages and only to the extent that such circumstances are of more direct interest from the special point of view of the cost of living problem shall we have occasion to refer to them later in this study.

For the present we leave the budget problem and direct our attention to actual prices. The primary reason why the cost of living constitutes a problem in the calculation of real wages, and at the same time embarrasses us in regard to budgets, is, as has been said, that prices vary from time to time and from place to place. It has been our main task to collect material for the statistical determination of prices themselves.

## 10 THE COST OF LIVING IN SWEDEN

## Problems Referring to the Nature of Prices to Be Obseroed.

In planning a statistical study of prices it is necessary to take up a position in regard to one or two questions of principle.

It is, of course, impossible to register the prices in all the transactions by which consumers buy their necessities. We must always rely on relatively few observations at each time and locality and these observations must therefore be supposed to be representative. Such a supposition is reasonable only if there exist markets everywhere with competitive money prices, i. e. definite and regular rates of exchange fixed in money as the medium of exchange.

The assumption of competitive uniform prices in its turn involves the assumption that in any particular place there actually is an adequate number of acts of selling and buying of goods of a certain quality| to create sufficient competition between buyers and sellers for the elimination, as far as possible, of the indeterminate margin which would otherwise prevail and which is greatest in cases of "isolated barter". Competition is, of course, a very relative conception. Quite apart from differences of quality - to which subject, as to other difficulties connected therewith, we shall have frequent occasion to return - the assumption of competitive conditions is in any case somewhat hazardous, especially for earlier times.

In this connection it must not be forgotten that the old economic system, based on nearly self-contained and selfsupporting households which usually supplemented their own production chiefly by barter even if the goods exchanged were often calculated and sometimes paid for in money, has only very slowly yielded place to a monetary system founded on a developed division of labour, functioning in the fully modern manner. There is a residuum of the old system left even to-day. This is more particularly the case, of course, in country districts, though even in towns the population in Sweden as elsewhere has not en-
tirely emerged from it. Thus, not to go further, there is a survival of it in every form of domestic housekeeping.

In a more pare system of self-supporting household economy, we meet with great difficulties in the very statement of our problem. There existed no prices for the necessities - of life. Very few exchange transactions were effected, and 'these were sometimes actual exchanges of commodities, which were not computed in terms of money. ${ }^{1}$ Under such conditions there are no marketprices to observe, and a computation of a reliable cost of living index is impossible. On the other hand, there is no need of such calculations. The real income of a farmer's household could under such conditions be measured directly by the quantity of the various necessities of life which he produced (or, exceptionally, procured in exchange for a part of his own product) and which he consumed or saved. A calculation of the cost of living - which is nothing else than a statistical link in a calculation of real income - would be superfluous, since the real income under such conditions is determined directly by the amount of goods and services which a man produces. If it is desired to compare the real income of various groups of the population, or the real income of the same group at various times, it would, however, be necessa-" ry to obtain quantitative and commensurable expressions for the totals of those various necessities of life. This could easily be done, if only the relation between the quantities of those goods and services produced were the same in both comparisons, despite differing total production. If, on the other hand, these relations were different, we should have to wrestle with a budgetary problem which is analogous, mutatis mutandis, to the problem briefly characterised above in connection with the assumption of monetary exchanges based on a developed division of labour.

The system of self-supporting household economy, however, has scarcely ever been so complete during the period

[^2]considered in our investigations. If wages are paid in cash, there exists a monetary price link in the economy of every wage-earner's family, and the degree to which such a family is self-supporting will then depend on the extent to which either articles for consumption or the raw materials from which they are prepared in the home are purchased for this money income. Even if a part of the wages should be paid in kind - as still happens in agriculture and in some of the industries situated in country districts - the most convenient method of calculating the total real income is first to compute the value of the payments in kind in terms of money and then reduce the total calculated money wages to real wages in the usual way. But it is a necessary assumption in this case that the wage agreements involving payment in kind are made where the prices of such goods paid in kind have a market and can be statistically determined.

## The Choice between Raw <br> Materials and Finished Articles.

In a combination of the two systems in which the households are partly self-supporting and partly specialised (and therefore in the same degree dependent on other similarly specialised households) such as, in one form or another, must be taken into consideration nearly everywhere, especially in earlier times, another difficulty arises, namely the question at what point in the chain of production the article of consumption is to be priced. In the state of partial self-support the household does not buy finished articles for consumption but actually buys the raw materials and makes them up at home. The problem is whether we ought to take into consideration the prices of finished articles or the prices of raw materials. If, in reference only to modern conditions, an index for clothing were to be made, it would seem a priori suitable to take the price of the finished article, since the working classes nowadays have for the most part abandoned home manufacture of articles of clothing and purchase almost exclusively the
ready-made article. Such a method may, however, even in regard to modern times, lead to difficulties, especially in the case of articles subject to change of fashion. It is, of course, possible to select standard goods of more stable quality as typical. But it remains an open question whether, instead, the pricing of raw materials (with the addition, eventually, of costs of labour) would not give a better result, since it is naturally more easy to determine a certain quality of raw material, and since they are used even in the manufacture of non-standardised articles of apparel.

In an historical investigation such as this it is absolutely necessary to collect the prices of raw materials instead of those of ready-made articles, since in former days clothing was almost exclusively of home manufacture. Obviously it is desirable to approach as near as possible to the finished state, as otherwise the comparison may turn out less accurate, but if there is no other possibility, then cloth must be substituted for the article of apparel, yarn for the cloth, and wool or cotton for the yarn. Since the cost arising between the raw material and the finished article is principally the cost of labour, the question must be considered whether to introduce the cost of labour into the budget of the cost of living as well as the cost of raw materials. It may be remarked in passing, especially as regards clothing, that the statistical material which we have been able to collect is so scanty that we have naturally sought to take advantage of whatever prices are available. In regard to the rough average which, for this reason, we have been compelled to adopt for this item in the cost of living, it may appear that the above argument is superfluious. But the same problem presents itself also for other goods, for which we have better material.

It may be remarked that even if in a particular social group raw materials were in fact bought for preparation in the home, it would still be possible to estimate the price of the finished article of necessity in that group if there existed other groups in the same locality which bought finished articles instead. In this way, it would be possible to discover what it would have cost the workers to purchase
the corresponding articles of consumption if they had not preferred to buy the raw materials for their manufacture. There is good ground for questioning, however, whether the prices thus arrived at would constitute a better criterion than the prices of raw materials. People as a rule have special reasons for acting in a particular manner. They have access in the family, for example, to labour of various kinds at a cheap rate in alternatively possible uses elsewhere, and this means that they actually get the finished goods for a lower cost by taking over a part of the production of them. Moreover, it should be remembered that the method indicated is not easily practised, as the habits of life in this respect, especially in former days, were very uniform in different parts of the country, independently of social distinctions. Finally there is actually the danger of differences of quality, especially where there is one social group in a place which buys finished goods, whilst another group manufactures them from its raw materials.

Hitherto we have assumed, however, that it is a statistical desideratum to determine the prices, not of raw materials actually purchased, but of the articles of consumption manufactured from them. This may also be theoretically correct, but only on the assumption of the possibility of including in the nominal wages of a family the value in money of the home labour of its members: the labour which produces directly the necessaries of consumption from the raw materials purchased. This possibility is, however, strictly limited; as a rule only the merest guesses can be made. But if this "income in kind" (the value of the home labour) is not included in the total nominal income, then it is obviously wrong to include in the budget the corresponding "cost in kind". And that is just what is attempted in seeking to price the finished article instead of the purchased raw materials. If such a method involves, as has just been remarked, practical statistical difficulties, we are confronted with a theoretical and decisive objection. It may be observed that if in such a case both practically and theoretically the correct method is to keep to the prices of the raw materials and if at the same time the correspon-
ding "income in kind" is not included in total wages, the whole palculation of real wages then leaves entirely out of account a very important part of the economic life of the working classes. This is one more reason - if more are required - for caution in deductions and comparisons. This excluded group of income and cost phenomena unfortunately varies in extent in the course of time, especially in the long run, but sometimes also over short periods. Its extent varies also from place to place and from one social class to another.

For these and other reasons it is often necessary in an investigation into the cost of living to rely on the prices of raw materials rather than on the price of the finished articles of consumption. In favour of such a method of procedure there exists yet another reason. As a rule the market is better organized for raw materials than for finished articles of consumption. This is all the more important since in practice it is the statistical accuracy of the price material which is in the first instance decisive. And it is easier, for many reasons, to obtain reliable material concerning the prices of raw materials. For practical considerations - e.g. the cost of preparation of the statistics and the facility of survey - one is furthermore compelled to present observed prices in the form of averages for comparatively large areas. These averages are of course more informative if the price differences between various localities in the regional unit are comparatively small. Just because there generally exists a more developed market for raw materials and more uniform prices over larger areas, such average figures for larger areas are as a rule more valuable for raw materials than for finished articles of consumption.

In this study we have yet another very special reason for trying to determine as exactly as possible just the prices of raw materials. The above mentioned benefits in kind in the payment of wages of agricultural and other groups of workers must namely be valued already in order to calculate the total nominal wages, and they consist for a large part of raw materials, grain, etc.

## The Choice between Wholesale Prices and Retail Prices.

In direct connection with this problem - at what point in the chain of production an article of consumption is to be valued, or, in other words, the concrete category of goods which is to be included in the budget - there arises another problem: which of the various prices set upon the same goods in their progress from the producer to the final buyer, is to be selected? In a more highly developed market the choice will be between wholesale prices and retail prices. Other variations of prices can usually be traced to differences of place or time, differences which are in themselves the basis of the statistical grouping of prices from the point of view of the cost of living.

A priori it might seem obvious that retail prices are in general to be preferred, for it is our purpose to determine the cost of living of various groups of workers, and we should therefore naturally in the first place take note of the prices which consumers must pay for goods and services. As we shall attempt to show, there exist in our particular case, however, cogent reasons for departing from this a priori rule. But meanwhile some words may be said in passing on the economic relations between the different prices for the same goods.

Under static conditions the relation between the price paid by the consumer and the price received by the producer should not vary and it would be determined by the amount of the cost of this special phase of the process of production: the cost of distribution. Under dynamic conditions, on the other hand, the margin between the two prices is not constant. The relation is here determined with reference to the changeability of the process of price formation in a manner which will not be discussed here.

We may, however, consider for a moment a certain aspect of this question of the relation between the two prices. In spite of the fact that as a rule there are fewer persons in a given place who buy and sell goods wholesale than those who buy retail, yet there develops a more uniform compe-
titive price in the case of the former than of the latter. The element of indeterminateness in the formation of prices is greater in retail than in wholesale trade. The causes of this phenomenon are many. In the first place it may be observed that retail trade often works with considerably higher overhead costs in proportion to its turnover than does wholesale trade. As always happens where there are high overhead costs and dynamic conditions, it is often, within wide limits, a matter of opinion what price a seller can accept with profit. In an extreme case goods may be sold without actual loss if only the price covers current expenses. The question must be decided in each individual case by the seller's personal conception of, among other things, the psychological attitude of customers and competitors. The fact that retail trade is less specialised than wholesale trade is of the greatest importance in this connection. For from the seller's point of view it is a matter of indifference which goods pay the overhead costs and in what proportion the varions kinds of goods do so. Similarly, within wide limits, it does not matter to the seller in what proportion the various buyers pay those costs. For him the main thing is that he, as he thinks, has a satisfactory prospect of covering them on the whole.

In addition, the retail trader has to contend to a greater extent than has the wholesaler with conceptions of fairness and other psychological factors in the mind of the buyer. In wholesale trade agreements are more abstract in this respect. If the price of an article rises, whoever possesses a quantity of that article will profit, whereas he who has not covered his requirements early enough will lose, and vice versa when the price falls. But the business on the wholesale market is so organised with regard to this speculative element that there can scarcely, for just this reason, arise a question of faimess or reasonableness in dealings. The position is different in retail trade. If the wholesale price of an article rises, it by no means appears. natural to the costomer that the retailer should also raise the price, so long as he still has in stock some of the articles bought at the lower price. And the retailer would certainly
act unwisely if he entirely ignored the psychological reaction of his customers. If on the other hand the price were to fall, it is not equally sure that customers would still find it natural that the retailer should sell out his stock at the higher price - our sense of fairness is rarely carried to such logical extremes. But the comparative ignorance among consumers of the general movement of the markets nevertheless often enables the retailer to maintain his prices unchanged, unless some competitor is prepared to lower his price. In the customer's conception of reasonableness there is as a rule a certain preference for the "usual", the already established price.

The closer and more personal contact between the retailer and his customer - often strengthened by loans, deliveries on credit, and social intercourse - prepares furthermore the way for a sort of natural monopoly, often, indeed, not strong enough to permit a regular and constant screwing up of prices, but nevertheless affording opportunities for less noticeable and occasional price deviations. This monopoly, however, is built up on a very uneven and shifting foundation. It is very probable, for example, that it is strengthened in bad times, - especially in cases where the working classes do not make any considerable savings out of their earnings during good times.

It would be of great interest to enquire into the relation between wholesale and retail prices over a period of time. From what has been said above it appears probable that the movements of retail prices are slower and more rounded than those of wholesale prices; also that there should be a certain not too considerable "lag" between these movements. It is, however, a circumstance which makes comparisons very difficult. The most conspicuous feature of retail prices is their great indeterminateness. Beyond comparison the most important resuit of the above-mentioned divergences from the "law of indifference" is the very great dispersion of retail prices of a given article at a given time and place, the consequence of this indeterminate margin in price formation.

For the purpose of our study of the cost of living, we have,
as we shall describe later, collected and arranged retail price material, consisting partly of domestic account books, kept by working class and middle class families, and partly of accounts and books kept by traders. The information concerning the retail prices of various goods derived from these sources shows a striking lack of internal agreement and a great capriciousness in movement. Prices have not even been uniformly determined by each individual trader. As an extreme example it may be mentioned that a large grocer in a central Swedish industrial town, who gave access to his old customers' ledger, as late as the turn of the century charged different prices to different customers for such a standard article as refined sugar. The price of a certain quality of sugar may vary sometimes as much as $30 \%$ from the minimum price. Nor has this variation much relation to the quantity purchased. If we were in possession of exhaustive price material of this kind, this unequality in local prices would perhaps not be so significant. But we are not: this particular source of information is naturally the most inaccessible. If the determination of retail prices were not so arbitrary and unequal the series of prices which we have obtained might certainly be regarded as representative. But as the retail price market is constituted they are not representative. Least illuminating of all are the special price-series for particular goods, taken separately before aggregation in the cost of living index, since, as we have pointed out, it is to a certain extent a matter of indifference to the seller - and the buyer - in what way the overheads are distributed over the various categories of goods.

These are the reasons why the retail price material which we have collected - and which ought to be ideal primary evidence, since it relates to prices actually paid by customers - is comparatively less useful for statistics of the cost of living. It should be added here that this indeterminateness of prices naturally applies less to certain classes of goods with a more highly developed market, as also where sales are effected under more powerful influence of competition. There has also been a strong tendency towards more stable market conditions in retail trade, especially, perhaps, under
the influence of the cooperative movement. But even in the decades before the Great War conditions were in the main as we have described them above.
The importance of the above remarks is that in approaching the task of compiling an index for the development of the cost of living, even fairly copious retail price material is frequently less representative. In all probability wholesale prices offer a better approximation to the total variations of retail prices than does a limited number of retail prices. Naturally it is a matter of opinion which method will yield the best results in any particular case, but we must be on our guard against relying blindly on any a priori preference for the retail price method. An index of retail prices naturally looks much more attractive, especially for one who has not looked behind the scenes, but in reality it may conceal very great defects. The position is quite different if it is a question not, as here, of an investigation into former times, but merely of the compilation of current statistics. In the latter case, it is possible in doubtful cases to supplement the sources of information as much as may be desired, and in the instructions relating to the collection of primary evidence an injunction is naturally given to collectors to scrutinise prices critically and to take into consideration all available knowledge of local conditions at each point of time - an injunction which, if the person in question possesses sufficient judgement and experience, can be satisfactorily followed. But in that case the consequence is that the person to whom the compilation of the index-number is entrusted would be in possession of primary material of quite a different kind than the bare figures occasionally available relating to prices paid in some particular place.

There is, however, yet another important consideration which strongly supports the use of wholesale prices instead of retail prices. We have already expressed the opinion that in many cases it would be more correct and more suitable to consider the prices of raw materials than of finished articles. The reasons for this opinion were principally the greater statistical value of raw material prices,
in consequence of a more highly developed standardisation of quality and competition, and also the circumstance that the home mannfacture of articles of necessity and consump: tion still continues and was, especially in former times, the prevailing custom.

Let us assume that in a particular case it is decided to consider the price of the raw material instead of the finished product. What will be the consequences of such a decision in considering the problem now under discussion?

The position will be different according as the consumer actually purchases (or receives as payment in kind) the raw material or in fact purchases the finished article, though we have, for one reason or another, selected the prices of the raw material as more representative. If in the former case he buys in the wholesale market, it is evident that it is the wholesale price which should be considered.

Under other conditions it might appear that the retail price should be preferred. But that is by no means obvious. In the first place it is conceivable that there exists no retail price for the article in question. Thus nobody buys grain "retail". But even where there is in fact a retail price, there is often reason to suppose that the wholesale price of a raw material moves in closer agreement with the retail price of the finished product than does the retail price of the raw material. In such case the wholesale price would be a better approximation and in both cases it is a question of an approximation, since in neither case is the retail price of the finished article of consumption considered.

In this connection we would refer to our remarks concerning the greater indeterminate margin of retail prices during the period now under review, and would add that just in such cases the retail price of raw materials must, it is to be feared, relate to a particular quality or must depend on somewhat special market conditions. If, for example, working class families completely passed over from the baking of rye bread at home to the purchase of baker's bread, and if working men ceased to eat rye porridge, it is very probable that the wholesale price of rye meal or

[^3]even rye would give a better idea of the variations in the price of bread than the retail price of rye meal would do. The insignificant quantities of rye meal which would be sold retail under the circumstances might be used mainly for frying herrings, etc. The consumption thereof constitutes perhaps so small a part of the budget that the retail demand for rye meal would be to a certain extent independent of the price, and consequently there would be the possibility of fixing the prices almost arbitrarily within a very wide margin. Moreover, such rye meal might perhaps be of quite a different quality to the baking meal.

Moreover, even where consumers actually bought finished articles of consumption over the whole period (e.g. potatoes, bacon and meat) yet in olden times these commodities were purchased in larger quantities and were stored for future use. Only gradually has retail trade expanded. Retail trade and retail prices in the real sense of the words did not in many places, and for many articles, exist for more than three or four decades at the end of the period under review. Formerly a whole side of bacon or half a sheep was bought at one time.

But it must not be supposed that the gradual transition to retail trade really implied an increase of the cost of living corresponding to the margin by which retail prices exceeded wholesale prices. The actual result was just the contrary. If we nowadays no longer buy wholesale and store our purchases, the main reason is surely, as a rule, the fact that by buying retail we procure a more desirable article (e. g. fresh instead of salted) at a lower price. The fundamentally changed housing conditions of modern times naturally render storage more difficult, but they obviously cannot prevent people from following the older methods if they are willing to accept the consequences of the cost of storage and inferior quality. If therefore we compile an index of the cost of living on the basis of wholesale prices until a date as late as 1913, we ought, we believe, properly to correct the index downwards in order to make it correspond to this real tendency to cheapening of the cost of living, resulting from the development of retail trade.

On the other hand it is clear that once the transition to retail trade has been accomplished, retail prices may, within wide limits, take a different course from wholesale prices. It is conceivable that retail prices will show a falling tendency, as a result, for instance, of the cooperative movement or of the rationalisation of retail trade in general. But it is also conceivable that retail prices will rise relatively (up to the point at which it would again be profitable to revert to wholesale purchases). Everybody knows that after the Great War this was very often the character of the developments, as is seen in the customary relation of the cost of living indices, based on retail prices, to wholesale price indices. One of the chief factors in this development has of course been the peculiar character of the development of wages on the sheltered domestic market, and in particular in the distributing trades.

From what we have said it appears that there exist many strong reasons for basing our study on wholesale rather than on retail prices. We have found these reasons more and more compelling during the course of the investigation as we became familiar with the nature of the available material and with the actual development of the conditions of life in former days. This is not an ideal solution of the problem, but only a makeshift which appeared better than any other possible alternative.

Hitherto we have spoken of wholesale and retail prices as if these terms were clearly defined conceptions, completely comprising and exhausting the price phenomena of the market. In reality, on the contrary, there exists a whole series of prices for the same goods, depending both on the relative distance of the sale from the consumer, and on the quantity of the goods sold. It is necessary, therefore, to define the particular type of wholesale price which will be noted. This presents a very difficult problem, which, as will appear in the course of the investigation, cannot in practice be finally solved. We have not been able to avoid certain differences in kind between the prices adopted. These differences appear not only between different goods, but also, unfortunately, though to a less extent, for the same
goods between different price areas and different times. Our aim has been, however, to endeavour to present the semiwholesale price, i. e. the price where the wholesale transaction was for a comparatively small quantity and where the transaction was the ultimate or penultimate wholesale transaction. We have in this manner endeavoured to present statistically the kind of wholesale prices which most nearly approaches the retail price. This semi-wholesale price is therefore not the wholesale price prevailing in the wider wholesale market and which is usually adopted in the preparation of wholesale price index numbers. It represents rather the price paid by the retailer to the wholesaler. It would also correspond to the price received by the farmer in the market place. The quantity in this latter case would not as a rule exceed one waggon load, and by carrying his goods to town and offering them in competition with wholesalers the farmer may be assumed to have brought the value of the goods to the suggested level. This wholesale price appears as a rule, especially in earlier times, to some small extent to have been less than that which public institutions paid for their purchases, so that the latter price must therefore be considered as approaching most nearly the retail price. On the other hand the said semi-wholesale price will in general slightly exceed the official price in the markegdng scale (see below), since the latter was based on reports from the places of production. But as the prices quoted in the newspapers have usually regard to these very town market prices they agree with our definition of semi-wholesale prices and this fact is rather important, because - as will appear below - the newspaper prices are from a statistical point of view our most reliable price material. The above remarks are not to be considered as an a priori reasoning deduction, but rather as a rough generalisation of our experience from scrutinising and arranging the material. A more exhaustive treatment of this important question, as of a number of other questions of principle which were encountered in arranging the material, must be postponed until we have reported on the nature of the available primary material.

## CHAPTER II.

## THE MATERIAL.

## The "Markegdngstaxor".

The natural starting point for an historical study of Swedish prices in the period here ander discussion is the socalled maskegangstaxor. It is not easy to describe briefly to foreign readers the exact nature of these official price scales, as they are so intimately bound up, in their origin and development, with certain public institutions peculiar to Sweden. Generally speaking they are historical relics of the state system of bygone times of self-contained and self-supporting economy and taxation in notura. They consist of official, annual price scales for various goods expressed in terms of money, and fixed in a manner prescribed by law for observance in the change from certain transactions in kind to transactions in terms of money or to transactions in goods other than those originally prescribed or agreed on.

It must be remembered that all the old taxes on land, as well as tithes on the yield of the soil, and all public dues were originally payable in specific goods. In the selection of such goods attention was naturally paid to the nature of the public requirements and still more to what the taxpayer could most easily pay, which latter meant, in the primitive conditions of olden times, what he produced. To a large extent this public revenue in kind was apportioned in advance for delivery direct to officials or for the satisfaction of other special public needs. Both the Crown and certain public servants thus had a right to annual payments in kind from the taxpayers. Moreover, as a result of the old system of privileges, land came to be taxed in various degrees and in various manners. Both by agreement
between the Crown and private persons and by direct grants (sometimes also by mutual agreement between private persons) it came to pass that private persons also acquired rights of a quasi-public nature to rents or other payments in kind from the soil. Finally, it should be noted that the salaries of public servants were usually fixed in kind, even in those exceptional cases where they were paid directly by the state.

As soon as, for practical or other reasons, a substitutioni of specific goods for other goods or for money was permitted or prescribed - whether the substitution was obligatory or voluntary on either side - it became necessary to fix certain rates of exchange expressed in money as legally binding: In consequence of the frequent and considerable fluctuations both in the price relations between different goods and in the general price level in former days, it became desirable not to fix these money prices of goods for all time, but to have available a standard or gauge, varying with actual price conditions. This was the function of the markegaing scale. It has been a means of adapting public obligations and terms of agreements to the gradual transition from an almost complete system of payment in kind to a monetary system.

It is natural that this means was often employed even for the regulation of purely private contractual obligations. Both leasehold agreements and other private contracts were in former times frequently entered into with the terms of payment specified in money value, in accordance with, the markeging scale, of specific goods. Having regard to the instability of the monetary system in olden days, such a method was very well conceived.

From the latter part of the middle ages there exist sporadically certain equivalents to the maykeging scales of modern times. They acquired greater stability and continuity, however, in the 17th century. In 1724 it was enacted that they should be printed annually for each county and from about this time the determination of the scales was effected in very much the same way as at the present day.

With regard to the somewhat varying legal prescriptions
for the determination of these scales during the period now under review, we shall confine ourselves to what is strictly necessary for a proper understanding of their content and of their value as material for price statistics.

In the fixing of the scale two different prices are incorporated: the "special" scale (A), and the "average" scale (B) [as also a ten-year average of the current year's and the nine preceding years' average (C)]. In this study, however, we refer exclusively to the "special" or "current" scale (A). We have chosen this procedure partly because the average scale has only been in existence since the 'fifties of the rgth century and therefore does not cover the whole of our period, and partly because this scale includes fewer articles and, for reasons on which' we need not dwell here, is less reliable from a statistical point of view than the other.

The scales are prepared for each county (län) ${ }^{1}$. The City of Stockholm is not included in a county scale, neither has it any special scale of its own. In certain cases a county is divided into two "scale" districts. These price scales should, therefore, so far as they are reliable, satisfy our requirements in presenting a perspective of the relative price variations of the country.

The special scale presents prices ruling at the beginning of October in each year, i.e. at the time when the new harvest has been gathered in. They relate to "market" or "usual" prices of "fully good" commodities. This description of quality is, however, very vague. It is frequently supplemented by the provision that the price shall relate to the quality usual in the place, and, concerning grain, that it shall be of the local harvest of the year. There is no doubt, however, that these terms meant very different qualities in different parts of the country and at different times. It is well known, for example, that there was formerly thought to be reason for considering Scanian wheat to be inferior to that of the Mälare district, whereas on the other hand Scanian butter has certainly for a long time past been

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[^5]directly calculated on the price of grain. Moreover, meal was more seldom an article of commerce in the first half of the last century; consumers usually purchased grain, which they milled to meal, as did also those who produced grain themselves or received grain as part of their wages. Among articles of clothing we find wool and flax, sometimes yarn, linen and homespun. Various kinds of wood are priced in nearly all scales up to 1875, but after that date only in certain counties. The same applies to tallow candles.

If these scales are to be considered from the point of view of their value as statistical material, we must bear in mind that the prices were determined not to serve statistical purposes but to regulate certain existing legal relations. To some extent this fact enhances the value of the material: we may be sure that the fixing of prices was done with care and did not, like a great deal of other statistical material of early days, arise hap-hazard. But on the other hand this circumstance is also a ground for suspicion of the correctness of the prices. We must of course assume that the fixing of prices in the scales was not altogether free from improper influences. People were interested in making the scale of prices either high or low, and from this point of view there is good reason for enquiring more closely into the legal procedure by which the scales came into existence.

This procedure is very circumstantial and very democratic. It is devised for the purpose of securing the greatest measure of market uniformity for the scales of prices. In every commune the usual local prices were fixed. Thereupon it was the duty of the communal officials in every bailiwick (fögderi) to meet the High Bailiff (kronofogden) and calculate from the various communal prices an average for the whole bailiwick. In the event of the High Bailiff having a contrary opinion concerning the actual price conditions, he must record the fact. Thereupon the averages from the bailiwicks (together with the primary statements of prices from the communes) were sent to the county authority of each county, and the municipal magistrates similarly returned to the county authority the
corresponding prices, current for each municipality. On the basis of the prices from the municipalities and the bailiwicks it was the duty of the county authority to work out an average price for the whole county. Finally, at the beginning of November in every year eight deputies from the county met, with the Lord Lieutenant (Landshövdingen) as Chairman, and on the basis of that county, average price established the county scale. In order to ensure justice it was prescribed that one half of these deputies must be rent-payers and one half rent-receivers. The Board of Land Revenue (Kammarkollegium) constituted a court of appeal.

This elaborate organisation for the determination of price scales did not, in all probability, ever function quite satisfactorily. In contemporary literature there are not seldora complaints that the official scales of prices do not correspond to market prices. As a rule they were regarded as too low. Most of the rectifications made after appeal show an increase in price. It is therefore not surprising that in debates in the Riksdag and elsewhere we sometimes find the statement that the rent-payers often had the majority. The provision that rent-receivers should have the same number of votes as the rent-payers was difficult to maintain, as the former were comparatively few. Apart from the defects which thus may perhaps have attached to this ingeniously devised balance of power, we must of course assume a certain impulse towards cheapness in favour of the rent-payers. If, for example, the harvest was a complete failure in a certain poor county of Norrland, it is very probable that in some cases at least an effort was made not to force up the scale prices to full agreement with market prices, which might make the situation critical for a poor rent-payer. It is probable that the rent-receivers, who as a rule belonged to the more protected ranks of society, at least sometimes took this into consideration.

The final test of the statistical value of the price scales, is, naturally, a comparison with the other price material which we have been able to collect, and such a comparison shows that, in spite of all, the price scales are comparati-
vely good. Thus the views to which several investigators have given expression are fortified. Especially the calculated averages for the country as a whole appear to be very safe. Less satisfactory are some of the special county scales, and their value varies from time to time. These price scales, which are comparatively easy of access, have been used in earlier price investigations. Thus, for example, Amark's general price index, the only one yet compiled for this period, is to a large extent based on averages for the country of the county price scales.

As we have said already, the price scales are incomplete. Such an important article as potatoes is entirely lacking and in the case of certain other commodities we are dependent on a few, often less representative, scales. Since, furthermore, it was scarcely possible without further checking to attribute definitely any very great statistical value to these price scales - least of all with regard to the magnitude of local differences - it has been found of importance in this investigation to endeavour to collect price material from other sources also. Our investigation assumes very largely the character of a general inventory of hitherto unused primary sources of evidence for the compilation of price statistics. We have, in fact, endeavoured to collect any information concerning prices which is not too difficult of access. Even if there does remain a certain amount of material, we believe, nevertheless, that we have included most of what is of value.

## The Quinquennial Reports.

The county authorities in every county were directed, until the year 1905, to submit a comparative report on economic and social developments within the county during the last preceding quinquennium. These quinquennial reports (Konungens Befallningshavandes fomarsberättelser), which in some other respects constitute one of the most important documents for the economic and social history

[^6]of the period, comprise, however, very rare and sporadic details of certain prices, principally of grain and potatoes, sometimes also of meal; bacon, butter etc. These prices vary much in their origin and nature; some are real wholesale prices communicated by wholesalers in the county town, others are average county prices based on calculations made by the High Bailiff in certain bailiwicks, etc. In some cases nothing at all is stated as to the source of the information. The reliability of the prices also varies greatly. From a comparison with other information regarding prices, and for other reasons, it would appear that the reports from Orebro and Gotland counties are the best.

## Contract Prices.

Of much greater importance for our study is another kind of statistical material, namely the prices paid on deliveries to certain public institutions, such as hospitals and asylums, prisons and workhouses, military and naval depots, etc., hereinafter called contract prices. In providing for the maintenance of personnel or of inmates these institutions either contracted out the maintenance, in which case the entrepreneur took over the whole management on a pre-determined budget, or the management was retained and the foodstuffs were purchased by agreement. It may be added that the former system was more widespread in earlier times, which is quite natural, since these institutions were less important and the number of persons to be provided for were fewer. It might be thought that this farming out of the whole maintenance, usually for a fixed amount per portion or per person, would be of great value in an investigation into the cost of living. We did, indeed, at the beginning of our enquiry endeavour to collect a number of series of such maintenance grants. But the quality and composition of each portion varied so immensely that any comparison or grouping proved to be useless. For this reason we have only used the purchase prices of the particular goods used, and
it is the origin and statistical value of the agreed prices of these goods on which we shall here briefly comment.

The purchases were usually effected as follows: - the institution gave notice in the press that tenders were invited, up to a certain date, for the supply of certain goods at a certain future date. After examination of the tenders and after eventual modification of them a contract was entered into with the offerors for the supply of the goods. As a rule the lowest tender was accepted. Sometimes, however, a higher offer was accepted on account of the better standing of the offeror, better quality of the goods, or for other reasons.

Purchases were usually made annually. In such cases the contract was usually concluded in October and was for delivery in small parcels during the period from November rst to October 3rst in the next ensuing year. But the times for submitting tenders, the conclusion of contracts and the completion of deliveries varied in particular cases, a circumstance which must be taken into account in the application of these contract prices for statistical purposes. There are, however, also frequent examples of half yearly purchases and sometimes, especially during the first half of the period under review, purchases were made from hand to mouth i. e. as occasion required, in the open market. The accounts of the various institutions are not preserved in any central archives. To a large extent we have been compelled to go in search of them and collect them on the spot. The information has usually been derived in the first instance from the cash books themselves or from the concluded contract notes, but where these documents have not been preserved, we have had recourse to the minutes of the boards, the original tenders, or the cash vouchers. In order to assure ourselves of the correctness of the information we have always, where possible, made a comparison by occasional checking of the various kinds of documents preserved. Especially the minutes of the boards contain many supplementary details in explanation of the bare figures.

In statistically evaluating this material, it must be con-
sidered of great advantage that these contract prices are prices actually paid instead of more or less reliable estimates. A further advantage is the great variety of kinds of goods priced: almost all the important necessities of life had to be purchased and their prices fixed. The descriptions of quality were sometimes very complete, sometimes less complete; in many cases purchases were made according to sample, or after inspection. As a rule, however, certain fixed traditions were followed at each institution in respect of the quality of the goods, so that there exist long and qualitatively rather uniform series of prices. These series sometimes extend from as early as 1830 to 1913 . We must not forget, however, that during the course of time gradual changes of quality occurred everywhere according as customs changed or standards were raised. The trouble is; furthermore, that qualities at one and the same time were not uniform in different institutions. As a rule, for example, prisons bought poorer qualities than hospitals. Unfortunately most of these qualitative changes and inequalities are not statistically accessible. And this leads us directly to our comments on the defects of the material.

It may first be pointed out that the contract prices are usually speculative prices. They are fixed at one date for delivery on another future date, which is sometimes not fixed, but depends upon the requirements of the institutions. For this reason they do not reflect either a reliable cash price at the moment of the binding tender or at the date of the completed delivery. This defect is of course much emphasised during periods of great or unexpected changes of prices. It should be pointed out, however, that in case of annual purchases tenders were invited after the harvest was gathered, when more accurate forecasts of developments in prices during the ensuing year became possible. This defect is of course of considerably less importance in the case of half yearly purchases, and vanishes entirely in the case of hand to mouth purchases. A further difficulty in the interpretation of the material is caused by the fact that the date of submission for a tender and the date for completion of delivery vary at different insti-
tution's and often at one and the same institution for different categories of goods and at different periods. We have done our utmost to determine accurately these special terms of the agreements, but very often it has naturally not been possible to do so. Even where we have succeeded in establishing these dates there are great difficulties in using the prices for calculating average annual prices just because of the differences as to time clauses.

Further, it is necessary to take into consideration the fact that the quantities of goods purchased varied in a high degree. They vary from institution to institution and even at times for the same institutions. In former times only very small quantities were purchased, often from day to day. But as time passed, and the institutions grew, the quantities became larger and larger. Towards the end of our period these contract prices are often real wholesale prices. In earlier times the prices approach more to retail prices. In consequence the contract prices show, in relation to other price series, a slightly falling tendency. The characteristic change in contract prices occurs especially during the 'eighties and 'nineties. Without doubt a contributary cause to this development was the improvement in organisation both in purchasing methods and in the public control of the management of the institutions. It is little comfort that the general improvement in quality ought to have given rise to an opposite tendency, since we know very little of the relative strength of the two tendencies, nor can we be sure that they in all respects operated simultaneously.

Finally we must take into account more or less undue personal influences in the making of purchases. It is true that in a country like Sweden, with immemorial and deep-rooted respect for law and justice, we can scarcely conceive any actual large-scale corruption during any part of the period under review. But if one looks through old minute books one sometimes finds complaints from persons whose tenders have not been accepted, that the maker of an accepted tender was a member of the hospital board or of that of a poor law institition. One also finds, though seldom, insinuations
that the board has improperly allowed itself to be "influenced by "friendship" or other social relations. Especially in deciding the stability or general reputation of the maker of tender, or the quality of goods, the margin between what is proper and what is improper is naturally somewhat uncertain. It is clear that a grocer who may himself be the member of a board or who is socially intimate with the members of a board and has for many years supplied its needs, would scarcely be set aside because he had made a somewhat higher tender. For us, however, these legal or moral considerations are not of direct importance. The question is merely whether or not such considerations deprive the material of any degree of reliability as a statistical source of evidence. In the absence of more accurate information it is in any case safer to take this source of error also into account. It is obvious that the possibility of such personal influence was much greater in early times than it is to-day. The greater magnitude of purchases, the higher development of the market and the improvement of control have all, in this respect, brought about a rationalisation of the system of purchase.

Quite apart, however, from the possibility of errors for the above reasons we must remember that the connection between these contract prices and the open market is not by any means so direct as one might, a priori, be inclined to suppose. Here also the influence of overhead costs plays an important rôle. It may often prove highly advantageous for a trader to effect a large delivery to a public institution, even if the price does not cover much more than current expenses. Thas where his business activity is mainly of another kind he may regard a transaction with such a customer as something special and extraordinary. He need not pay any regard to the supposed effects of the low price on his own market. For this reason also contract prices may be, from the point of view of price statistics, less representative of actual price conditions.

If we remember all these statistical defects of the contract price material it is clear that such material must be interpreted and classified with the utmost caution. It has been

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necesiary to obtain the most comprehensive and varied material possible and at the same time to select the material for further treatment with strict care. Despite the utmost strictness in these respects we must naturally regard the results critically. We shall return later, however, to the question of the interpretation and arrangement of the material. In Appendix D the sources which have been used are surveyed. We have grouped them by counties, indicating the place of the institution and the periods covered by the series.
As appears from this table, the most exhaustive material has been obtained from the city of Stockholm. Of the twenty contract price series from Stockholm almost all cover the whole period under review. Malmöhus county is almost as fully represented although only four price series cover entirely the whole period. Similarly, Óstergötland, Blekinge, Gothenburg and Bohus counties offer comparatively rich material. The other counties are more poorly represented. Most imperfect, unfortunately, is the price material of this kind from Norrland. From what has been said, however, the material must not be judged exclusively from the quantitative point of view. As has been seen, this particular evidence is most unequally distributed over the different parts of the country, but it is a defect which unhappily cannot be remedied, since in the main there is no other evidence of this nature available.
The goods of which the prices are given in this material are especially foodstuffs and primarily just those relatively cheap foodstuffs which constituted the most important articles of consumption of the poorer classes. In early times public institutions usually purchased grain, which they milled and baked themselves; but during the 'fifties and 'sixties of the rgth century a change took place and grain was no longer purchased. Instead various kinds of meal, flour and ready-baked bread were purchased. In addition to the above named important articles there were also usually purchased potatoes, meat and bacon of various kinds, variously prepared (fresh and salt pigmeat, fresh and salt beef, mutton, veal etc.) as well as herrings, eggs
and dairy produce (butter, milk, cheese). Amongy gróceries the most important were coffee, sugar and rice. Further, wood, lighting oils and candles were naturally purchased everywhere. Regarding clothing the material is more scanty and more difficult to classify. Only in one or two places have we been able to obtain information concerning prices of clothing in any way suitable for statistical use.

## Quotations in the Newspapers.

To a certain extent it may be said that contract prices have, in spite of all, been a disappointment in the course of our investigation. On the contrary another statistical source has proved to possess a higher representative value than we at first supposed. We refer to quotations in the daily press.

Swedish newspapers have from the very beginning supplied information concerning the prices prevailing in markets and market places for various goods and localities. Interest in these quotations has in fact been so great that even comparatively insignificant provincial newspapers have given, regular quotations from the great world markets (Hamburg, London, Copenhagen) side by side with the quotations of the market prices of their own town or commercial centre. It should be remembered that in those days of undeveloped communications and trade connections, when there existed no trade press, the local newspaper was the only link with the outer world. Farmers and estateowners needed information concerning prices in their capacity as sellers in order not to be cheated by buyers. And the town populations, which still to a large extent made their purchases in small wholesale quantities in the market place, were interested as buyers. As transport facilities and market connections developed this need grew less. It is quite remarkable to observe how these market-place quotations disappear more and more towards the turn of the century, and how, even if they do not entirely disappear, they are clearly prepared with less care and thoroughness.

For the purpose of utilising this valuable statistical ma-
terial for our investigation we have searched the whole of the Swedish press and have included all price series of greater length, or which could be used for amplification or verification, and bore evidence of reliability. In a few cases we have noted complete monthly series, but as it was our purpose only to obtain suitable annual average figures (see below, p. 49) and in view of the heavy expense, we have as a rule incorporated, after experiment, only four quotations annually (in the middle of January, April, July and October) and sometimes only two (mid-April and midOctober).

As a rule these quotations are given in the papers under the heading "Market-place prices", or sometimes as "Mar-ket-place and port prices". They relate to selling prices of smaller quantities in the town market places on market days. In the Stockholm newspaper Dagens $N y$ heter there is often a note under this heading to the effect that "these quotations are for semi-wholesale prices for the guidance of sellers, who may as a rule count on the lowest price quoted when sending their goods to Stockholm by an agent or to a factor; retail prices to buyers are higher, especially if bought at second remove". As a rule, however, the newspaper quotations are not accompanied by any such explanation and we are obliged to interpret the price by comparison with other price material from the same place. It appears that as late as the beginning of the 'nineties, and even later, these quotations are regularly for smaller wholesale quantities, in accordance with the old traditional custom, whereby the farmers, butchers and producers came to the market towns with their goods and sold them in the market place directly to the buyers in comparatively small quantities, and, more exceptionally, retail. As a rule the newspapers appear to have obtained their information by direct observation in the market place by one of their staff, who in the course of years was specially appointed for this task. The quality of the goods is usually not indicated with any precision, though certain fixed conventions were clearly followed, differing in different parts of the country. This variation in respect of quality is of course a defect in this kind of material, as are
also the gradual changes of quality which occurred in the course of time. A much greater danger in the interpretation of the material is to be found, however, in the gradual transition from semi-wholesale to retail prices which appears in most newspaper quotations towards the end of the period of investigation. At the same time, as has been said, it is apparent that much less care is bestowed on the collection of information regarding prices. The newspapers do not indicate when these changes take place. As a rule they did not occur suddenly, but as the result of a slow change in the habits and interests of the reading public. In this case there has been no other possibility than to draw the best conclusion possible, after comparison with other price material, as to the date from which the price series may no longer be regarded as forming a reliable series of semiwholesale prices.

So much for the average run of newspaper price quotations. There do, however, sometimes occur quotations which may be regarded as genuine wholesale prices. These are to be found especially in the technical press, more particularly in the province of agriculture during the last decades of the period; but even the ordinary newspapers often during the last decades contain quotations from the genuine wholesale market. In working up the material it is of course important clearly to distinguish between these latter quotations and the old traditional market-place quotations.

An important advantage of the prices derived from newspapers over the contract prices paid by institutions is that they are in no way speculative prices, and are definitely fixed as to the time to which they refer. Another advantage is that information as to prices may be had for different times, and for just the selected times, of the year. A third advantage of this material is that the prices were real market prices and were not isolated from the ordinary process of price formation as was very often the case with the contract prices of the public institutions.

The newspaper prices show, in comparison with the latter, greater variability and also a greater latitude of annual
movement. We certainly ought as a rule to place more confidence in this respect in the newspaper quotations than in the contract prices. Indeed, we have already pointed out the special reasons for which the latter may be thought to reflect price movements less accurately.

In olden times, as has been said, the prices paid by institutions are as a rule somewhat higher than the newspaper prices. This cannot be due to better qualities, for it would be remarkable indeed if prisons, poor law institutions, hospitals, asylums and military depots consumed better materials than the general public. The cause is probably to be found, as has already been said, in the restricted demand of these institutions, in the limited circle of sellers who could or would compete and also in the speculative element, which possibly scared them away, and finally in the system of payment, which did not give the producer immediate value for his goods. During the last two (sometimes three) decades of our period these prices showed a falling tendency in comparison with newspaper prices. The reason for this was partly the transition to retail quotations in the press and partly the transition of contract prices to real wholesale prices.

In Appendix D is shown the extent of the newspaper material, arranged and specified in the same manner as the earlier mentioned contract price material. As appears from this table, the newspaper prices in the various parts of the country are to some extent more equally distributed. In the case of Norrland, unfortunately, the material is very imperfect. An exception is Gävleborg county, in which the paper Gävleposten presents excellent price series for almost the whole of the period. Especially good material is available for the city of Stockholm and the counties of Ostergötland, Malmöhus, Gothenburg and Bohus, Älvsborg, Skaraborg, Orebro and Västmanland. There are in all riz sources and quotations have been obtained for 74 places.

The quoted prices relate principally to agricultural produce, i. e. mostly to foodstuffs and wood, and sometimes to other commodities. Unfortunately information as to prices of clothing is totally lacking in this source.

## Accounts Kept by Private Works, Factories, and Estates.

After this account of the most important sources of information for an investigation, apart from the markegang prices, - i. e. the contract prices of public institutions and the newspaper prices - it remains to say a few words concerning one or two other sources which have been used sometimes in the absence of other and better information, mainly when it has been necessary to complete or modify a broken series. To this category belong a number of prices extracted from the accounts of certain iron works and other factories, and from the accounts kept on certain larger country estates. Especially the books of the old Swedish iron works should be considered here. This information is mainly a sort of by-product of the study of wages referred to above.

If one wishes to form an idea of the Swedish iron works and of the peculiar economic and social conditions under which their workmen lived, one must bear in mind two things: that these works were usually situated in remote and isolated forest areas and further that the relations between the employer and his employees - partly as a result of the remoteness and isolation of the works - continued to be in a high degree patriarchal until comparatively modern times. It is natural for these reasons that the works' management usually purchased grain, herring, salt etc. for the workers. Sometimes a fixed quantity of these commodities entered into their wages in addition to cash payments (stat), in which case greater or less regard was paid to their individual needs (number of children etc.). Sometimes, again, the workers bought these commodities from the works at a price which often had little relation to market conditions. If the price was considerably below the normal their right to purchase was usually in some way limited. In determining the amount of total wages these circumstances are, of course, a primary consideration.

Similarly from the more restricted point of view of our investigation the details of prices contained in these works'
accounts are of a certain interest. Not, of course, the prices which the workers had to pay; for these, as has been said, had very seldom any close relation to market prices. Sometimes they remain unchanged for decades and even when they change, their movements are usually not a true reflection of the actual conditions governing pricing on the general market. But sometimes there appear details of selling prices to others than workers. Such prices may occasionally have a statistical value, though not always. More important are the actual buying prices of the works. But even these have proved to be of little value from the point of view of general market conditions. For these purchases were often made in very large quantities, which meant in former times, with undeveloped market organisation, that more room was left to the influence of haggling and bargaining of buyer and seller in fixing prices. A seller might forego some of his overhead costs if only he could obtain so large an order as the one in question. Furthermore, buyer and seller often stood in other relations to each other; the seller possibly also bought products of the works. The purchase of foodstuffs had in that case the character of one side of an actual exchange of commodities, in which case the nominal price might be determined rather arbitrarily.

Despite these defects we have been able in a few special cases to avail ourselves of these buying prices of the iron works - principally to fill up a gap in other price material. It may be added that this material is restricted almost entirely to the mining district of central Sweden.

## Grocers' Accounts and <br> Household Accounts.

There remains only one more kind of material, namely private accounts, which have been placed at our disposal. In a few cases we have succeeded in discovering domestic accounts kept for a single household. Of the same kind, in principle, are a number of account books kept by traders with their customers. Sometimes particulars of traders' selling prices can be taken from the price lists and shop
journals drawn up for their own use. From tradesmen's books of account and confirmations can be extracted their wholesale buying prices.

It may be said at the outset concerning this kind of statistical material that we have fonnd it impossible to assemble a complete and representative collection. Private individuals are not in the habit of preserving their accounts for more than 10 years, the period of the Statute of Limitations. Such accounts are usually burned or destroyed at the end of that period. And further, in spite of great efforts, - we have published requests for material in the press and the Social Board has kindly instructed its officials to make finvestigations on our account in the respective districts - we have only come into contact with a small number of persons who have actually preserved their accounts. The price material of this kind is, however, relatively plentiful for Norrland, which is so much neglected in respect of other price material in our investigation. This is the chief merit of this particular source.

Concerning the inherent defects of the retail prices adopted we have made some observations in the previous chapter. As regards semi-wholesale brying prices, on the other hand, the material is very scarce. These prices are also less reliable than both the prices paid by public institutions and the newspaper prices in that they are usually not cash prices, but credit prices of varying periods of time and, naturally, varying degrees of stability among buyers. Moreover the prices relate sometimes to goods delivered to the buyer and thus include carriage, whilst in other cases they relate to goods in the sellers or producers' locality. It is therefore not surprising that this material is the least satisfactory with which we have had to deal.

## Smmmary and Comparison.

We have now endeavoured to characterise the statistical material at our disposal. The best material, beyond doubt, is the newspaper prices, less good are private accounts and works prices. Somewhere between them in respect of reli-
ability we may place the prices paid by public institutions and the markeging prices, of phich the former are to be preferred.

This material comprises in the main all that can be collected with a reasonable expenditure of effort. If we wish to form an idea of the conditions of the cost of living during this period there are scarcely any other sources of information available. It may further be remarked that the defects of the different primary sources are of different kinds. Just because of this extremely important circumstance, there are greater possibilities of correctly interpreting the material and of forming an idea of actual conditions. But in this interpretation it is not at all feasible to employ any kind of schematic system of averages. We must endeavour in every concrete case - in each place and at each time - to determine the semi-wholesale price after consideration of all the known data and after endeavouring reasonably to explain the differences of the various prices given.

To publish the whole of the comprehensive primary material has not been possible. As a slight compensation we shall endeavour in Chapter IV to characterise the price series of the various classes of goods and at the same time to say something of the degree of reliability attaching to them. As a conclusion to the discussions in this chapter of each separate source of information we shall offer a few generalisations on the price material as a whole.
-We have defined the purpose of our study to be the determination of semi-wholesale prices for different places and times. If we look at the material from the chronological point of view, it is quite natural that, with the exception of the markeging scales, the sources are fewer and usually more defective in the two or three first decades. In the 'fifties the material becomes more plentiful and better. In the 'sixties, 'seventies, and 'eighties and possibly the beginning of the 'nineties, the material is most valuable. The prices for these decades are relatively accurate. After that date, however, the material again becomes more scanty, and above all things, greatly inferior in quality and more difficult to interpret. In the first less interest is
shown in the mavkegares scales, which become more arbitrary on that account. As a result of a rationalisation of the contract purchases by public institutions there also occurs a change in the character of these price series. There is a transition from approximately retail prices to approximately pure wholesale prices, and it is difficult in a given case to determine the exact date of the transition. The newspapers become more and more careless in their quotations, which tend to pass over into pure retail prices, wherever they continue to be quoted at all. 'Especially in the twentieth century the material becomes on that account somewhat poor, though conditions naturally vary in different parts of the country.

If, again, we study the material from the point of view of the local differences, we may describe that from Stockholm City, Óstergötland, Skaraborg, Älvsborg, Gothenburg and Bohus, and Gävleborg counties as good. For many commodities Malmöhus, Orebro, Västmanland, Kopparberg and Uppsala counties are also comparatively good. The remaining counties are more or less poor, especially Norrland (with the exception of Gävleborg county), Stockholm and Halland counties.

In one very important respect our sources throw very little light on local differences, i. e. those between town and country. The best part of our material is derived from the towns. The public institutions are of course, almost without exception, situated in the towns. Similarly the newspaper quotations as a rule relate to prices in the town mar-ket-places.

If it were merely a question of establishing the development of prices during a period of time in a given district, this circumstance would be less important, at least on a short view, since the price conditions of the towns must be regarded as fairly representative for the surrounding country. The towns constituted the real market for goods and the prices of the outlying country districts must be regarded as a reflection of the town prices. If on the other hand we wish to establish the absolute difference in the cost of living between town and country, our material

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 THE COST OF LIVING IN SWEDENleaves us without an answer. We can only deplore this fact but we can see no means of surmounting the difficulty. It may however be mentioned that the prices current of town magistracies, and the average figures of the High Bailiffs, which are the basis of the markegang scales, are preserved in the archives of the Board of Land Revenue. It is conceivable that at any rate an internal comparison of the primary material of the price scales would be desirable. We have not, however, made such a comparison, because we are not convinced that the special interests, which must be assumed to have affected the markegding scales, were equally strong in town and country. For if there is no assurance of this fact, then the observed difference would be a measure not only of the actual difference of price, but also of the different force of this specific cause of statistical error.

If, in conclusion, we regard the material from the point of view of its distribution over the various main items of a budget, it may be said that the material affecting the more important foodstuffs is comparatively the most plentiful. For wood and light the material is also comparatively good. For clothing the material is, on the other hand, scanty, and similarly for housing. We shall have occasion to describe the situation as regards these two important items of the cost of living budget more in detail in Chapter VI.

## CHAPTER III.

## THE METHODS.

Two main circumstances have determined the methods which we have adopted in the statistical treatment of the primary material, the nature of which we have endeavoured to indicate in some detail in the previous chapter. The one is the purpose of this study, which has in various respects indicated special methods of approach in order that the results might be as far as possible of use for that special purpose, namely to serve as a means for the investigation of real wages in Sweden. The other circumstance is the very nature of the material: there is, indeed, a great difference between, on the one hand, the compilation of current statistics, in which it is usually possible simply to call for all the statistical data required, and, on the other hand, the compilation of historical statistics in which one seeks to make the best possible use of the data which happen to be available.

## Time Unit and Geographical <br> Districts.

The very object of the investigation requires us to take the year as the unit of time. Had we desired to compile price statistics more adaptable for a close study of the business cycles, we should naturally have taken monthly figures. As regards the most valuable material - the newspaper quotations - such a procedure would have been by no means impossible. It has, however, been found necessary to base the whole investigation into wages on the year as a. unit, and therefore as well as in regard to the greatly

## THE COST OF LIVING IN SWEDEN

increased cost of collecting monthly statistics we have confined ourselves to the year as the minimum time-unit.

But even assuming the decision to adopt the year as the unit, there may be good reason, especially from the point of view of the cost of living, and also on other grounds, not to relate prices to the calendar year but to the "harvest" year, i. e. an annual period detached from the calendar year in such a degree that this period includes the consumption of agricultural products reaped in one and the same harvest. The fixing of the "harvest year" would, indeed, not be easy, since the harvest occurs at different times in different parts of the country and for different products; but a rough approximation would nevertheless have been possible. The investigation into wages is, however, based on the calendar year as the time unit, and we have had to follow the same principle for this study of prices. - It may be pointed out that price-series with the harvest year as the unit would reveal relatively greater yearly variations than the price-series here published, with the calendar year as a unit, for the average price of the calendar year depends on two - always to some extent varying harvests. The calendar year price may be regarded as a kind of shifted and modified two years average of "harvest year" prices.

Our statistical material is not so complete and uniformly distributed in time and space that it is generally possible on this basis to calculate more precisely special local price series with a claim to reliability. The only place for which special price series have been calculated is the City of Stockholm. Otherwise it has been our principle to calculate average prices for larger districts. Naturally this involved the abandonment of any attempt to study price differences within these areas, even though these differences, especially in olden times, were in fact considerable. In certain cases, however, it would have been possible to enquire into this question, e. g. in those districts where there exist satisfactory newspaper prices from different places within the district. Also in Upsala county and Kopparberg county the agricultural guilds (hushdllningssällskapen) have kept stati-
stics of grain prices in the different localities. Finally there remains the possibility of studying the already mentioned primary material of the markegäng scales preserved by the Board of Land Revenue. We have, however, not entered into such enquiries. It has been sufficient for our purpose to establish the more general price differences between larger districts.

If we were to regard this problem exclusively from the point of view of prices, it would be very tempting to determine the districts on purely geographical and economic grounds, whereby of course agricultural and transport conditions specially would be taken into consideration. Such a local delimitation would be very difficult for a country like Sweden, with its greatly varying natural conditions, especially as the period of the investigation is long and many changes (e. g. construction of railways) occurred in the meantime, but it would not be quite impossible. ${ }^{1}$

It is, however, highly desirable, that the delimitation of the districts should be such that direct statistical comparisons may be made between our price statistics and the official statistics of various kinds. This amounts to saying that we must retain the administrative division of the country into Stockholm City and 24 counties. Thus, the whole of the official statistics concerning the wages of agricultural workers during this period relate to the county as the smallest unit. An additional reason for this procedure is that the markeging scales regularly relate to counties. It may also be maintained on good grounds that the ancient division of the country into counties actually represents a fairly natural combination of similar territorial units, apart from certain important exceptions. Thus for example, both Westmanland and Orebro counties, to some extent also Uppsala and Ostergötland counties, embrace two entirely different kinds of culture: fertile agricultural land in one part and forest, mining and industrial land in another. It should be added that owing to the scantiness of the material we have combined Jönkoping county and Kronoberg

[^7]county in one unit under the name of "Smailand" (these two counties taken together form a considerable part of the old landskap of that name).

Thus our primary purpose has been to fix a price for each commodity for each county and each year, which may be regarded as the average county price for that year. A difficulty is that whereas the price material for, e. g. Ostergötland, Skaraborg and Alvsborg counties relates to various places fairly evenly distributed over the whole county, yet almost the whole of the price material in, for example, Gothenburg and Bohus county relates to Gothenburg City, even though we are also in possession of information as to prices in other places in the county. The same applies, though in a lesser degree, to Gävleborg county and, with regard to certain goods, also to particular other counties. But even in such special cases we have usually been able to obtain sporadic information from other places in the county in question, which have served as a guide and a control.

From the county prices thus calculated we have arrived at the average prices for the whole country by a method which will be described later.

## The Calculation of County <br> Price Series.

We have now defined the main principles which we have followed in the preliminary treatment of our primary material. The process has been first to seek to establish county prices for each year and commodity in order subsequently to make the calculations of averages by which we have arrived at prices for the whole country. It remains to explain how we have tried to establish these annual county prices. This task has been the most difficult and the most laborious of all. Though we have endeavoured to proceed with the greatest care the result has naturally only a relative value.

A purely technical difficulty in the calculation of county prices arises from the circumstance that individual prices in earlier times related to quantities, sometimes unequal,
of goods calculated in antiquated measures and to values calculated in an old currency. The first task was therefore to express these prices in terms of modern weights, measures and currency. The old currency has not caused us any difficulty in this connection, but the weights and measures have constituted a more serious problem. A measure such as a "barrel" (tunna) has had different meanings for different goods and in different places. On the other hand the magnitude of the measures has not appreciably varied in the same part of the country; it has not even changed during the course of time, for in this connection tradition has been strong. Without entering into the question of the sources and the method of procedure adopted in determining ancient measures we may venture to say that we have probably been right in the main, despite possible occasional errors.

Another difficulty has been to establish the specific weight of the various kinds of commodities. It has been necessary to do so because we have had to consider price series based some upon weight and some upon cubic capacity. In olden times especially, cubic measures were often used in cases where in modern times weights would be used. Especially as regards grain, we might have considered it proper to allow the specific weight to vary with the quality of the harvest. Such a procedure might not have been quite impossible as we are in possession of annual agricultural statistics, officially compiled, for the counties relating to the specific weight of the grain harvests of different kinds of grain. We have not considered it advisable, however, to employ these varying details of specific weight, not only because of their statistical defects and of the greatly increased labour which such a procedure would have involved, but also because of objections in principle. It is, for example, an open question to what extent newspaper prices, and still more contract prices, were determined more with relation to certain rough standard qualities than to the annual average quality of the places. We have therefore made, instead, an estimate of the average weights of the various kinds of grain per hektoliter for the whole period of our

[^8]investigation, and so followed the tradition of other investigators in the same field, such as Sundbärg, Amark and others. Concerning other commodities than grain we have obtained the necessary specific weights from experts. ${ }^{1}$

These technical difficulties - the determination of the old measures, and the valuation of specific weights - have been, however, the least serious in proceeding from the primary material to reliable county price series. The greatest difficulties have their origin in the to some extent heterogeneous character of the primary material. In the previous chapter we have mentioned that the various forms of primary information - quite apart from their statistical reliability per se - have to some extent different price characters, i. e. give different kinds of prices. Only newspaper prices - and also retailers' buying prices, where exceptionally they can be used - as a rule agree with the definition of our semi-wholesale price, although, as has been said, the newspaper prices also, towards the end of the period, become more uncertain and mostly develop into retail prices. Contract prices are for the greater part of the period as a rule somewhat higher than the semi-wholesale prices, but towards the end of the period they sink to, and very often even below, our wholesale price for smaller quantities. The markegang scales are more indefinite in their contents. Owing to these type differences of the available price information it is clear that the primary sources must be interpreted before they are used.

A further great difficulty is caused by differences of quality and it has not been possible entirely to surmount it. It is practically certain, at any rate in some special

\footnotetext{
${ }^{1}$ The relative figares are as follows: -

cases, that the differences between our published prices for the same goods in different counties (or conversely the circumstance that price differences do not appear or are not greater than they are) depend on qualitative differences. It is natural, however, that it has been still more difficult to eliminate the considerable differences of quality which everywhere occur in the course of time; as a rule these qualitative changes have signified a change to a superior quality.

In addition it may be noted that prices relate to different, and sometimes in the case of contract figures, to indeterminate dates of the year. In strict theory this is a difficulty, even where, as in regard to newspaper prices, we possess prices from various selected times of the year. For prices relate only to a few points of time in the year and we do not know the relative quantities turned over during the various periods of the year. In a simple calculation of an average figure prices would be equally weighed, which would presuppose an equal turnover, - an assumption which may evidently be misleading.

To all these difficulties we must add one more. The price material is unequally distributed over the country, and what is worse, even in time. The price series sometimes have the character of longer or shorter fragments; even the relatively long series have often their lacunae. This defect in the material is all the more to be regretted since the price series, just by reason of their different type-character, regularly present somewhat different levels.

For these reasons, which have been more fully referred to in the previous chapter, it appeared quite early in the course of our investigation that it was impossible to adopt any schematic method of averages for the determination of county prices. It is not possible to regard the price data as more or less correct observations of the very prices we seek to determine. The observations relate to various types of prices from which we wish to separate only one type, namely the one which accords with our definition of wholesale prices for smaller quantities in the last instance, or last but one, and which relates to a quality neither better nor worse than that which we have selected for pri-

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 THE COST OF LIVING IN SWEDENcing. And the price material relating directly to this desired type is not by far so comprehensive or so reliable that it is unnecessary to employ the remaining price material for the verification and interpolation of the typical material.

The only way under these circumstances, if we desired at all to obtain an approximately reliable result from this primary material, was the following. We endeavoured to interpret the special price series. It was necessary to explain in a reasonable manner the price differences. In doing so we of course derived much help from the records and minutes of contracts of public institutions, isolated newspaper notices, etc. It was then necessary as thoroughly as possible to determine movements of just the type of price of which we are in search. And since the primary material is scanty, it was necessary as far as possible in each concrete case to take into consideration the whole of the price material, in spite of the fact that a considerable part of it related to a different price type. This latter is possible because there exists between the various price types a general relation of price formation which can to some extent be surveyed.

For guidance in this direction a preliminary county average was calculated for each price type taken by itself. In preparation for these preliminary average calculations the material was subjected to a scrutiny and a rough sorting into types. In the process some price series were freely rejected as of little value and in other cases certain corrections and interpolations were made. The latter form of manipulation, was, however, very rare in this preliminary stage.

These various preliminary county averages were, however, only intended to facilitate the final price determination by affording a general survey of the lines of development. In the final calculation of the county price series these preliminary county averages only served as indications of the original promary material, which was examined anew in each special case.

## Averages for the Whole Country.

The prices for the whole country are averages calculated from the county prices thus established. In this calculation of averages we have made use of very roughly estimated weights for the county prices. The particular counties have been given a weight approximately corresponding to the average of the relative population of the county at the various censuses during the period of investigation. ${ }^{1}$

This principle appeared most natural from the point of view of the cost of living, since the population gives an approximate measure of the relative magnitude of quantities consumed. During the period, however, especially owing to internal migrations, these relative masses of population have shifted greatly. We have not, however, considered a variable weighing. In that case prices for the whole country would have changed not only as a result of actual changes of price in the particular districts, but also as a result of the movements of population from cheap to expensive districts or vice versa. Such a procedure might be defensible from certain points of view, but from others it is irrational. In further explanation of our roughly approximative method of measuring, it may be added that somewhat extensive experimental calculations have shown us that the prices for the whole country are to a large extent independent of our weights: we obtain nearly the same price for the whole country whether we do not weigh the prices

\footnotetext{
${ }^{1}$ The following are the relative weights, in percentage of the whole country.

| Stockholm City. . . . . . . 4 | S6dermanland | county | 3. |
| :---: | :---: | :---: | :---: |
| Malmohus county . . . . . 8 | Stockholm | - | . . 3.2 |
| Kristianstad county . . . 4.8 | Uppsala | - | 3. |
| Blekinge . . . 3.2 | Orebro | - | 3.2 |
| Smaland . . . . . . . . . . 8 | Vāstmanland | - | 3.2 |
| Kalmar county . . . 6.4 | Varmland | - | 4.8 |
| Gotland 3 . . . 1.6 | Kopparberg | $\cdots$ | 4.8 |
| Halland b . . . 2 | Gavleborg | , | 4 |
| Gothenburg and Bohus county 6 | Jamtland | - | 1.6 |
| Aivsborg county . . 6 | Västernorrland | - | 2.4 |
| Skaraborg , .. 6 | Vasterbotten | , | 2 |
| Ostergotland . . . . 6.4 | Norrbotten | - | 2 |

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 THE COST OF LIVING IN SWEDENfor the counties at all or whether we weigh them in any possible and not entirely irrational manner.
These weight figures indicate the main principle of the calculation of average prices for the whole country. Very frequently, however, certain county prices did not exist for parts, or even the whole, of the period of investigation. In such cases it has been our general rule to add their weights to those of a neighbouring, or economically closely comparable, county, in which procedure we sometimes had to take into account known differences between the counties in the general level of the prices in question.

Only in the case of certain commodities - fortunately the most important - such as grain, potatoes, salt and fresh beef, bacon and pork, butter and eggs has it been possible as a rule to establish more consistent county price series of a reliable character. In the remaining cases the county series calculated have not been published, but have only been utilised in the calculation of the series for the whole country, which latter are then published together with the price series for the particular counties in which the material happened to be better. Even in these latter cases, however, where satisfactory county prices could not be published for the whole period, the series for the whole country should as a rule be comparatively reliable, since usually there exists an abundance of material upon which to base them.
It is our opinion that the published price figures for the whole country are as a rule reliable. The county prices, on the other hand, are not always reliable to the same degree: the material varied so mụch in quantity and character. It has been very difficult to decide in each case whether the calculated county prices were sufficiently valuable for publication. We have endeavoured to keep on the safe side. Even where, in certain cases, we have published comparatively poor county series in order to render the price perspective as complete as possible, we hope that our procedure may be considered justified, for even if certain county series are somewhat unreliable it is still conceivable that they may be of use in compilations for larger areas. It
may, for example, be of interest from various points of view to combine neighbouring counties into larger units, or, irrespective of the situation of the county, to compare agricultural and forest counties, southern and northern counties, intensively and sparsely cultivated counties. Similarly special combinations may appear desirable from the point of view of a study of the influence of railway construction on price formation, etc. In such combinations even poor county series may prove to be of value.

In this connection it may be remarked that a mathematical calculation of the probable error could hardly be carried through in an investigation of this kind; for the assumption would be that there in fact existed a definitely fixed price from which the particular observations only deviated by reason of the element of error. In reality, on the contrary, all the particular price observations usually correctly represent actual prices. These prices, however, differ among themselves; there are prices, but no "price". As we have pointed out, our price observations, even on superficial consideration, fall into fairly distinct types. A calculation of the probable error would scarcely refer to more than the observations of a particular type by itself. In this way the calculated average error would of course be less significant with reference to the final result, since in the latter we have endeavoured to determine a price with a certain abstract and typical character by an intelligent interpretation of - in the most favourable case - all the available price data. But, further, even the prices relating to a certain type are in fact heterogeneous in character. They are at different levels in consequence of special agreements; they are different in different - and even in neighbouring - places. The type as such is more or less an abstract construction, and the relative magnitude of the differences within a certain type or, still more, between different types, need not characterise a calculated average in respect of its statistical accuracy, if, as in the present case, an explanatory interpretation of the differences themselves underlies the calculation.

But although it thus appears impossible to adapt the
mathematical calculus of error, it is possible to express an opinion on the relative statistical value of the price series. The persons who themselves have made the calculations know, of course, that at one time the material is copious and at another time scanty; that sometimes the primary data for various reasons are more and sometimes less reliable; that sometimes it is easier and sometimes more difficult to understand theoretically the causes of price differences and therefore easier to typify and interpret the price material; that sometimes differences of quality are slight and sometimes considerable, and so on. In the next chapter we shall endeavour to say something on the value of the price series of each commodity.
It should be noted that the markeging scales have been employed very little in the compilation of our price series, the two first decades excepted, during which the markegang scales are mostly reliable and other sources of information very scanty. They have, however, for the whole period constituted a certain uniform foundation and we have of course made use of them for interpolations and extrapolations. In cases where they have been used more extensively in the calculation of county prices we have usually considered it necessary to characterise the price series so compiled as less reliable.

## CHAPTER IV.

## THE DIFFERENT PRICE-SERIES AND THEIR STATISTICAL RELIABILITY.

A detailed account of the treatment of the original very comprehensive material would require an account of all the considerations which, in each particular case - i. e. in the determination of each particular price in each particular county for each year and commodity - were decisive. As has already been said, it was also impossible to achieve by mathematical calculation arithmetical measures of the degree of statistical error. In this chapter we will therefore comment somewhat further on the varying statistical value of the published price series. The task is a difficult one as we must try to describe the degree of statistical reliability by employing general terms, and it may be asked whether such a commentary is of any use. We hope, however, that our remarks may afford at least some guidance in the use and interpretation of our price-series.

Before we enter upon this more detailed commentary, we wish to recall the general observations on the statistical value of our price material which we have made on various occasions in different connections. Especially we would recall that the greater part our price-series may be said to be most reliable during the 'fifties, 'sixties, 'seventies, 'eighties and possibly the beginning of the 'nineties, whereas they are less reliable during the two first and the two last decades of our period. If in the following pages we characterise certain price-series as more or less reliable, we do so in accordance with a scale of value which to some extent changes with the lapse of time; our demands for statistical accuracy are greater during this generally satisfactory
middle period than during the periods preceding or succeeding it.

We append to this chapter Table 1 , pp. 74, 75, which affords a survey of our estimates of the value of the various series. We employ for the purpose a value scale $1-6$. The figures in this scale are of course not intended as a quantitative measure of the degree of accuracy; they merely indicate the estimated rank-order.

## Grain.

The prices of the various kinds of grain naturally constitute a very important item in such an investigation into the cost of living as ours. This is more especially true of former times. The price material for this commodity has been comparatively copious, with the exception of certain unfavourable counties, and the results may on the whole be characterised as good. The greatest difficulty as to the pricing of this commodity arises from differences of quality. We have endeavoured to price Swedish grain of medium quality, but this quality changes over a long period (especially for wheat); and changes even over a shorter period, as well as in different parts of the country, as a result of varying harvests and other circumstances. It has not been possible completely to overcome this difficulty. Another difficulty arises from the differences of the prices considered owing to differences in the quantities sold. This difficulty we have probably surmounted to a large extent, even though just in the case of grain our "semiwholesale price" more nearly approaches a real wholesale price than we intended. We found it easier to follow our plan in the case of all other commodities. For the most part it may be said that rye prices are the best, whereas the prices of the other three kinds of grain are not quite so good. For all four kinds, however, the published price-series for the whole country may be said to be very reliable.

Wheat. Owing to the lack of primary material it has been impossible to calculate price-series for this kind of grain for Jämtland, Västernorrland, Västerbotten and Norrbot-
ten countiest Norrland, i. e. the five most northerly counties, is thus represented only by a price-series from Gävleborg county, which, however, must be characterised as one of the most reliable. In the case of Smaland, the published price-series extend only from 1852 until 1890. The priceseries for Malmöhus, Kristianstad, Blekinge, Gotland, Värmland and Kopparberg counties are more or less incomplete at the beginning of the period.

The price-series for Halland, Stockholm, Värmland and Kopparberg counties are unreliable. Similarly the priceseries for Kristianstad and Blekinge counties are poor, though not to the same degree. The remaining county prices are more reliable. Most valuable are the price-series for Ålvsborg, Skaraborg, Östergötland, Västmanland and Gävleborg counties, but the price-series for Stockholm City and Gothenburg and Bohus county are also good.

Rye. The price material for rye has on the whole proved much more reliable and more copious than that for wheat. The only county for which it has been impossible to calculate a price-series for rye is Jämtland. All the other counties are represented by complete price-series.

The price-series for Halland, Stockholm, Västernorrland, Västerbotten and Norrbotten counties are unreliable. The price-series for Kristianstad, Blekinge, Värmland and Kopparberg counties are also poor, though better than those mentioned above. Most reliable are the price-series from Ålvsborg, Skaraborg, Ostergötland, Uppsala, Orebro, Västmanland and Gävleborg counties. The price-series from Stockholm City, Gothenburg and Bohus, and Södermanland counties are also good.

Barley. The price material is very copious. The priceseries, however, are in the main not so good as for rye, as the differences in quality constitute a more considerable difficulty. Only in the case of Jämtland and Norrbotten before 1854 has it been impossible to calculate the priceseries for this commodity. Otherwise the price-series are complete.

The price-series for Halland, Stockholm, Värmland, Västernorrland, Västerbotten and Norrbotten counties are
unreliable. Relatively the most valuable are the price series from Alvsborg, Skaraborg, Óstergötland, Uppsala and Gavleborg counties. Similarly the price-series for Stockholm City, Gothenburg and Bohus, and Orebro counties are good.

Oats. The price-series for this commodity are on the whole as good as those for barley. The price material is copious, but differences of quality are considerable. It has not been possible to calculate price-series for Jamtland, Västerbotten and Norrbotten counties. Norrland is thas represented only by price-series from Gävleborg and Västernorriand counties, of which the former is relatively good, but the latter more unreliable. In Blekinge the price-series only begin in 1846 .

Of the published county price-series those of Kristianstad, Blekinge, Halland, Stockholm, Värmland and Västernorrlanid counties are unreliable. Relatively best are the series from Stockholm City, Malmöhus, Gothenburg and Bohus, Älvsborg, Skaraborg, Uppsala, Orebro and Västmanland counties. Comparatively good also, though in a lesser degree, are the price-series from Smaland, Oistergötland and Kopparberg counties.

## Manufactured Products of

Grain.
The primary material for fixing the prices of these commodities is very copious, but the differences of quality are much more considerable than for grain. We therefore only publish price-series for Stockholm City of wheat flowr, rye meal, barley groats and oat groats, as well as price-series for the whole country for these commodities, also for rye flour and barley meal.
The prices for the whole country of the most important commodities in this group, i. e. wheat flour, rye meal, rye flour, barley groats, and oat groats may be regarded as comparatively reliable, whereas those for barley meal are less reliable. The Stockholm prices for wheat flour and rye meal must be regarded as reliable, but Stockholm prices
for barley groats and oat groats are also comparatively reliable.

A relatively reliable series for hard rye bread, for Stockholm City is also published. It has not been possible to obtain good material from other districts and consequently no price for the whole country has been calculated.

## Dried Peas.

The price material for this commodity is not on the whole so ample as for the kinds of grain already mentioned. The differences in quality are also very considerable. The price-series for the whole country may, however, be regarded as reliable.

* In addition to the price for the whole country we consider only the following price-series to be worth publication, viz., Stockholm City, Gothenburg and Bohas, Älvsborg, Skaraborg (from 1842), Ostergötland, and Gävleborg counties. Even these price-series, however, are not so reliable as the corresponding county series for grain.


## Potatoes and Potato Flour.

Potatoes. The primary material is very copious and relatively reliable, for which reason the results as a whole may be regarded as comparatively valuable. We hiave, it is true, not been able to calculate a price-series for Jamtland county, nor for Stockholm county (except for the nineties). Similarly the series for most of the other counties are more or less incomplete for the beginning of the period, but the published series should suffice broadly to give an adequately complete picture of price developments in relation to this commodity.

The price-series for Halland, Västernorrland, Västerbotten and Norrbotten counties are unreliable. Similarly the price-series for Kristianstad, Blekinge and Kalmar counties are poor, although not in the same degree as those mentioned above. The price-series for Stockholm City, Gothenburg and Bohus county, Älvsborg, Skaraborg, Os-
tergötland, Orebro and Gävleborg counties must be regarded as the most reliable, whereas the series for the counties not mentioned above are fairly good, though in a lesser degree. The series for the whole country is quite reliable.

Potato flour. The price material is exceedingly poor. The published price for the whole country is only of statistical value as an indication of the broadest lines of price movements. A price-series for Stockholm City is published for the period 1871-1913, and this series is comparatively reliable.

## Meat.

We have succeeded in collecting copious material for our guidance in fixing prices of these important animal foodstuffs. The chief difficulty in connection with these commodities, and the chief weakness in the results, lies in the variations of quality. We believe, however, owing to the copiousness of the material and the relatively more uniform standard of quality, that we have passably succeeded in surmounting the difficulty as regards beef, mutton and especially bacon and pork, whilst veal has presented greater difficulties.

Beef, fresh. We have not been able to calculate priceseries for Halland, Óstergötland, Södermanland and Stockholm counties, neither for Jämtland, Västerbotten and Norrbotten. Certain other series are even less complete at the beginning of the period.

The price-series for Kristianstad and Västernorrland counties are weak. The other series are more reliable. Best are the prices for Stockholm City and Småland, Malmöhus, Älvsborg and Skaraborg counties.

The published price for the whole country should possess a high degree of statistical reliability.

Beef, salted. Although the primary material is less copious for this commodity than for the foregoing, yet the price-series for the whole country should be considered as relatively reliable. Besides the price for the whole country
we publish only the series for Stockholm City and Småland. These two series may be regarded as fairly reliable.

Veal, fresh. The primary material is unusually plentiful, but owing to the extreme differences of quality in this commodity we have not been able to calculate county prices deserving any great confidence. The principal difficulty has been to separate prices of young calf and fattened calf. Moreover, between these two there appear to have existed all sorts of intermediate qualities. The two published priceseries for the whole country - for fresh young calf and fresh fattened calf - may therefore be regarded as somewhat unreliable. In addition we give a price-series for Stockholm City from 186x for fresh fattened calf. This price-series is also comparatively poor.

Mutton, fresh and salted. The price-series for the whole country for these two commodities may be regarded as comparatively reliable and as almost as good as thie series for beef. The series for the whole country for salt mutton only extends as far as to the year 1900 .

We publish in addition more or less complete price-series for fresh mutton for Stockholm City, Kalmar, Gotland, Gothenburg and Bohus, Älvsborg, Skaraborg, Ostergötland, Uppsala, Orebro, Västmanland, and Värmland.counties. Of these series those for Kalmar and Gotland are weakest, whilst the series for Ostergötland is probably the best. The other series are comparatively reliable.

Pork. (Färskt fläsk.) The primary material is exceedingly plentiful and comparatively reliable., No price-series could be calculated for Halland and Stockholm counties. For Norrbotten county the price-series only begins in 1895. For the other counties also the series are far from complete at the beginning of our period.

The price-series for Västerbotten and Norrbotten counties are very weak. Those for Kristianstad, Blekinge, Västmanland, Värmland, Gotland and Västernorrland are also weak, though in a lesser degree. Otherwise the price-series are all comparatively reliable. The price-series for the whole country may be regarded as reliable.

Bacon. (Salt fläsk.) The primary material for this com-
modity is even more copious, uniform and reliable than that for the foregoing commodity. The results are correspondingly more reliable. No series could be calculated for Kristianstad, Halland, and Västerbotten counties, whilst those for Orebro, Kopparberg and Västèrnorrland counties are incomplete. Otherwise the series are complete.

The series for Blekinge, Gotland, Alvsborg, Västmanland and Norrbotten counties are less reliable. Those for Södermanland, Stockholm, Uppsala, Värmland, Jämtland and Västernorrland counties are similarly, though in a less degree, weak. The other series are good.

The series for the whole country may be regarded as very reliable.

In addition to the above kinds of meat we publish more or less complete price-series for Stockholm City for venison (reindeer meat), smoked bacom and smoked ham. These series are to some extent reliable, though of no very great value.

## Salted Fish.

Herrings, salted. In this case there exists a very large amount of primary material for fixing the price of this in Sweden very important commodity. We have not thought the calculated county price-series worth publishing, however, despite the fact that each one in itself is usually good and well reflects price movements, as they obviously refer to too dissimilar qualities in the different districts, owing to different conditions of production and habits of consumption. Within each separate county, however, the differences of quality appear to have been very slight. The published prices for the whole country may therefore be regarded as quite reliable.

We also publish a series for Stockholm City which may be regarded as very good.

Sprats, salted. The primary material for fixing the price of this important foodstuff is unhappily very scanty. To a great extent we have been compelled to fall back upon markeging prices, which has otherwise only been necessary in exceptional cases and to a limited extent. The published
price-series for the whole country has therefore not the same statistical value as, for example, the series for salt herring.

Cod, salted (kabeljo). The primary material is not plentiful, but is comparatively reliable, since differences of quality do not appear to have played an important rôle. Price-series are published only for Stockholm City, Gothenburg and Bohus, Södermanland, Stockholm, Uppsala, Västmanland and Värmland counties. Of these series only that of Gothenburg and Bohus county goes back to 1830 . This series is also statistically the most reliable. The other series are less reliable.

The price-series for the whole country is not very reliable until about 1870, after which it is better.

We also publish a price-series for salted salmon for Stockholm City. This is comparatively reliable.

## Dairy Produce and Eggs.

Milk. The primary material consists mainly of contract prices, i. e. the agreed prices paid by hospitals, poor law and other institutions for delivery at the institution (usually in a town). Other sources are not so copious, even though in certain cases we have had recourse to newspaper quotations.

As regards unskimmed milk the price-series for the whole country may be regarded as quite reliable. Besides the latter we publish price-series for Stockholm City, Malmöhus, Ostergötland and Kopparberg counties, of which the two first named are comparatively very reliable, whilst the last named are somewhat weaker.

Skimmed milk. The price-series for the whole country, which begins in 1861, may be regarded as considerably less reliable than those for unskimmed milk. In addition we publish a price-series for Stockholm City. (from 1839) which is relatively reliable.
Butter. The material for fixing the price of this commodity is unusually plentiful. We have therefore succeeded in calculating price-series for all counties. Price-series begin, however, for Blekinge first in 1856 and end in 1go2. The

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results may be described as good, except insofar as qualitative differences were obviously considerable. Certainly the diversity of particular price data has not been very great within each county taken by itself att a given time. On the contrary, there would appear to prevail fairly uniform customs in every part of the country and at every time regarding the conception of what constituted a good table butter. But the quality undoubtedly greatly improved during the period of investigation, and perhaps it changed still more for different districts. With regard to this commodity there exists a certain tendency to falling prices the further north one comes. This tendency can prabably not be fully explained by the better marketing conditions of the more fertile districts. We must also take into account an inferior quality in the cheap districts.

The price-series for Blekinge, Halland, Västerbotten and Norrbotten are unreliable. Those for Smàland, Gotland, Stockholm, Uppsala, Värmland and Västernorrland are also less reliable, though not to the same degree as the former. The series for Stockholm City, Gothenburg and Bohus, Älvsborg, Skaraborg, Ostergötland and Gāvleborg counties are the most reliable. The price-series for the whole country must be regarded - subject to the above-mentioned general observation - as very reliable.

Chease. The primary material is unusually plentiful. The differences of quality in this commodity are, however, especially great. The two published price-series for the whole country for whole-milk cheese and skim-milk cheese are therefore not completely reliable. In addition to these we publish for Stockholm City price-series for the two abovementioned commodities and also one for caravay cheese. These series are, however, not very reliable.

Eggs. The price material is very copious and as a rule comparatively reliable. The greatest difficulty in connection with this commodity has been the circumstance that the price varies so very much during the year. As we only possess price data for four - sometimes only two - periods of the year, there is here a source of weakness in the final
result. 'On the whole, however, the results must be said to be comparatively good.

We have not been able to calculate prices for Halland, Stockholm, Jämtland, Västerbötten and Norrbotten counties. The series for most of the counties are also incomplete for the beginning of the period.

The series for Blekinge and Västernorrland counties are unreliable. Otherwise the price-series are to some extent reliable. The best series are those for Stockholm City, Smáland, Gothenburg and Bohus, Älvsborg, Skaraborg, Ostergötland; Uppsala, Orebro and Gävleborg counties.

The price-series for the whole country may be characterised as comparatively reliable.

## Groceries.

Coffee. The price material is not comprehensive, and qualitative differences are naturally considerable. We have sought to fix the price of the cheapest quality on the market (Brazilian or Santos). The price-series for the whole country may be regarded as comparatively reliable from 1870, but before that date as somewhat weaker. Apart from this series only a price series for Stockholm City is published, which may be described as comparatively good.

Sugar, white refined. The price material is plentiful and reliable from about the beginning of the seventies, but before that date is less complete and reliable. It principally consists of the contract prices of public institutions. The published series for the whole country may be characterised as comparatively good (more valuable than the coffee series).

Besides this latter series we also publish a price-series for Stockholm City and one for Malmöhus county. These series may also be regarded as comparatively good.

Syrup. The price material - which in this case also consists mainly of contract prices - is comparatively plentiful and reliable. It has been quite difficult, however, to escape qualitative differences. The published priceseries for the whole country may nevertheless be considered
comparatively reliable. In addition to the latter, we publish only a price-series for Stockholm City, which is comparatively reliable.

Rice. The primary material is again comparatively plentiful but remarkably heterogeneous as regards quality. The published series for the whole country is not valuable in any high degree, but may be regarded as indicating the broader movement of prices. Besides the price-series for the whole country we publish one for Stockholm City which may also be described as less reliable.

## Lighting.

Our material for fixing the prices of illuminants has been plentiful and relatively reliable. Our price-series are based primarily on information derived from contract prices, but newspaper data have also been used. (Cf. below on gas.)

Tallow. For this commodity we publish a price-series for the whole country and one for Stockholm City. Both series only go forward as far as Igoo. They may be regarded as comparatively reliable.

Tallow candles. Both the series for the whole country and that for Stockholm City_may be regarded as relatively reliable. Both extend forward to 1890.

Stearin candles. Both the series for the whole country, which begins in 1865, and that for Stockholm City, which begins in 1854, are relatively reliable.

Petroleum (refined illuminating oil). The material for fixing the price of this commodity is very abundant and comparatively reliable. Both the series for the whole country and that for Stockholm City, both of which begin in 1863, must be regarded as comparatively very good.

Cooking and illuminating gas (for private consumption). The price for the whole country is calculated as an arithmetical average of the prices of the gas works in the following I5 towns: Stockholm, Malmö, Lund, Landskrona, Hälsingborg, Ystad, Jönköping, Vänersborg, Norrköping, Eskilstuna, Uppsala, Orebro, Västerảs, Karlstad and Gävle, and must be regarded as fully representative. As gas works were
erected at different times, we have been obliged to make some extrapolations at the beginning of the period. Until the middle of the sixties, therefore, the series for the whole country is less valuable than afterwards.

## Fuel.

Soft wood. The price material is particularly plentiful and good. There has been a difficulty, however, in determining the magnitude of the old measure (usually called a "famn" - which varied extremely in size in different parts of the kingdom) for which our primary price data are given. We have derived unusually valuable assistance, however, from the markegang scales. The published series for the whole country may be described as representative and reliable.

In addition we publish prices of birch, for Stockholm City, Gothenburg and Bohus, Ostergötland, Södermanland and Kopparberg counties. Only the two first named extend back to 1830 ; the others begin in 1870. Of these series, that for Stockholm City is the best, but the others are also comparatively reliable. For pine and fir we publish series for Stockholm City, Malmöhus, Gothenburg and Bohus, Östergtitland, Kopparberg and Gävleborg counties. Of these the series for Ostergötland and Gävleborg counties only go back to 1882 and 1869 respectively, but the others are complete. The price-series for Stockholm City and Malmöhus county are the best, but the others are relatively reliable, with the possible exception of Ostergötland and Gävleborg counties, in which the material is more sparse,

Coke. A price-series is published for Stockholm City, based on the contract prices of public institutions as far back as 1862. It may be regarded as very reliable.

Table x. Estimates of the Statistical



## CHAPTER V.

## THE MOVEMENTS AND RELATIONS OF THE DIF. FERENT PRICE-SERIES.

We have endeavoured with varying success to determine statistically the semi-wholesale prices, as defined, of the different commodities which enter into the cost of living. These prices, together with all other prices, constitute a system within which there exists an inter-dependence, determined in its turn by the whole complex of economic data not taken into account in this book. An interpretative, more exhaustive analysis of our price-series can only be given on the basis of a comparison of these price data and all other economic data. It is by no means the purpose of this chapter to anticipate this deeper analysis of the economic interrelations. It is merely intended, in the form of a commentary on certain tables, to seek to indicate certain characteristic features of the various price movements, and to sketch on this basis certain special problems which naturally present themselves from a study of the price material here presented.

## The Local Divergence of Prices.

We shall first make some observations on the local divergence of prices and of the developments in this respect during the period of our investigation. There are only a few commodities - fortunately the most important ones for which we have been able to calculate continuous county price-series of value. The reservations made in the previous chapters, however, must be strictly borne in mind in any attempt to generalise on the basis of this material.

## Table 2. Relative Prices of Wheat.

Decemial average prices for Stockholm Clty and the counties in perceatage of corresponding decennial average prices for the whole country.


## Table 3. Relative Prices of Rye.

Decennial average prices for Stockholm City and the counties in percentage of corresponding decennial average prices for the whole country.


## Table 4 Relative Prices of Barley.

Decennial average prices for Stockholm City and the counties in percentage of corresponding decennial average prices for the whole country.


## Table s. Relative Pricea of Oats

Decennial average prices for Stockholm City and the comenties in percentage of corresponding decennial average prices for the whole country.


Table 6. Relative Prices of Potatoes.
Decennial average prices for Stockholm City and the counties in percentage of corresponding decennial average prices for the whole country.


## Table 方. Relative Prices of Presh Beef.

Decennial average prices for Stockholm City and the counties in percentage of corresponding decennial average prices for the whole country.


## RELATIONS OF THE PRICE-SERIES:

Table 8. Relative Prices of Pork.
Decennial average prices for Stockholm City and the connties in percentage of corresponding decennial average prices for the whole country.


## Table g. Relative Prices of Bacon.

Decennial average prices for Stockholm City and the counties in percentage of corresponding decennial average prices for the whole country.


Table 10. Relative Prices of Butter.
Decennial average prices for Stockholm City and the counties in percentage of corresponding decennial average prices for the whole country.


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## "Table ni. Relative Prices of Eggs.

Decennial average prices for StockhoIm City and the counties in percentage of corresponding decennial average prices for the whole country.


The tables on pp. 77-86 are intended to afford a perspective of local prices within the kingdom. The pelative figures in tables $2-11$ indicate average county prices for even decades calculated as percentages of the prides for the whole country during the same period. Whenever in what follows we say of a certain commodity that the price in some particular county is high or low during a certain period, we mean thereby, unless the contrary is expressly stated, in relation to the price for the whole country during the same period.

The price developments in the three most southerly counties - Malmöhus, Kristianstad and Blekinge - are specially interesting. If we regard these three counties as a whole, Division II of the country, they show for grain in the beginning of the period a low price level in comparison with the price level for the whole country. In the 'seventies and 'eighties they are at parity with this and in the first decade of the 2oth century they definitely exceed it. (An exception is oats which even at an earlier date was comparatively dear in this part of the country.) The same general tendency to a relatively rising price level is seen in potatoes, except that the rise is greater and begins earlier than in the case of grain. In this division the general price level for fresh beef, as well as pork and bacon similarly reveals in the main a tendency to rise, except for the last two decades, during which there is a falling tendency. It is of interest to note that, especially as regards bacon, prices, in spite of the rise, are low in comparison with the level for the whole country. For butter the level is consistently high (similarly with a tendency downward to the national level during the two last decades), a circumstance which at least in part is probably only apparent and depends on a superior quality. Egg prices are throughout fairly low.

More remarkable are the price differences within this division and the developments which took place there during our period of investigation. For all kinds of grain Malmöhus county is cheapest at the beginning of the period, Kristianstad is somewhat dearer and Blekinge dearest. The price level thus rises from west to east. Malmöhus
county ${ }_{5}$ however, shows a tendency, on the whole unbroken; to higher prices for all kinds of grain. The developments in the other counties are not quite so uniform. The main feature in relation to Malmöhus is in any case a falling price level, whilst Blekinge as a rule maintains a somewhat higher level than Kristianstad.

The most consistent price movement is perhaps that shown by wheat. At the start the position is the usual one: Malmöhus is cheapest, Kristianstad is dearer, and Blekinge dearest. Malmöhus, however, reaches the Kristianstad level as early as the 'sixties, then surpasses it and draws level with Blekinge until, in the 'eighties, it becomes the dearest county in this division, with a price level for wheat considerably above the national level. Simultaneously Blekinge shows a distinct tendency to a falling price level for wheat, and finishes at parity with Kristianstad, in which wheat prices, from having a tendency to fall at the beginning of the period, yet during the last three decades show a slightly rising tendency in relation to the national level. A relative general levelling of prices occurred within this division, whilst at the same time the price maximum shifted from Blekinge county to Malmöhus county. * The development of rye prices in this division of the country corresponds closely to that of wheat prices. Until about the beginning of the 'eighties rye prices in Malmöhus are low; they are considerably higher in Kristianstad and especially high in Blekinge. A certain levelling tendency as between the three counties reveals itself, however, until this time. After $\mathbf{1 8 8 0}$ Malmöhus becomes dearer than Kristianstad and reaches parity with Blekinge. At the end of our period the order of dearness is the opposite of that at the beginning. Similarly for barley the picture is approximately the same. Especially during the first four decades the correspondence with the other species of grain is very close: the price in Malmöhus is exceptionally high, but shows on the whole a falling tendency. During the last decades Malmőhus is almost level with Blekinge, whilst Kristianstad appears somewhat cheaper. For oats also price movements resemble mostly those of bread grain
during the first half of the period. During the làst, two decades all these counties show comparatively high prices for oats: "

Potato prices scarcely show, on the whole, the same correspondence with general developments as do grain prices. It is noteworthy that potato prices are kept so high during the latter half of our period. It is difficult to say whether this circumstance is merely apparent and due to the statistical weakness of our material (the price-series for Kristianstad and Blekinge are indicated as less reliable).

For fresh beef the rising tendency in all three counties persists until the 'nineties. After that, prices in all three counties show a decided tendency to fall below the national level. But it would appear with regard to this commodity as if Malmöhus during the whole of the period was dearer than the other two counties. The change in order of dearness which occurred in the case of grain, does not appear to have taken place here.

The development of pig meat prices, again, shows greater agreement with those of grain, which is perhaps natural, since grain constitutes an important part of pigs' fodder. Bacon prices appear, therefore, at first to have been lowest in Malmöhus and thereafter to have become the highesta in this same county.

It may be added that the noteworthy price situation and the changes in price levels which we have noted in respect of grain and bacon should naturally be associated with the more active industrial development of Malmöhus county. Other differences which certainly played a part are the development of transport facilities, the policy of higher duties on corn pursued at the end of the century ${ }^{2}$ and, not to be forgotten, the development of agriculture, especially in Malmöhus, which certainly brought about a general improvement of the products marketed, particularly as reregards purity and uniformity.

Price conditions in Division III of the country - including Småland, Kalmar and Gotland counties - are

[^9]moies stable during trip period. For all kinds of grain Småland shows the, highest price level; after it comes Kalmar, whereas Gotland shows the lowest level. (Oas form an excéption in the two last decades, during which Gotland showis a higher average price than Kalmar and is on a parity with Smajland.) The price difference between the two extremes, Smaland and Gotland, appears to have been greater during the first two or three decades of the period; a cest tain levelling occurs, however, which is probably due to improved transport and trade conditions.
.Smáland, which is a more barren and wooded county, shows as a fule a higher price for wheat, rye and barley thai the average national price. The prices show a tendency in the last two decades to fall toward the national lever: Oats, which as a rule are better suited to the Smáland soil, stand (with the exception of the first two decades) below the general national level; there is, however, noticeable a tendency to levelling during the last two decades, though in this case it is achieved by a raising of relative prices for oats.

Kalmar does not show a distinct tendency to a rise or fall in price for any kind of grain in relation to the national -price level. Prices on the whole are very low, lowest for oats and rye, and highest - about the level of the national price - for barley. Gotland shows, apart from the already mentioned rise in price during the first two or three decades, scarcely any more general tendency to comparative dearness. This county is almost consistently the cheapest county in the kingdom.

The conception of price relations within this division which arises from a survey of grain prices applies very well also to other commodities. In the first place it applies to potatoes, with regard to which - with very great fluctuations " - Smaland shows a tendency to be dearest, though below the national level. After Småland come, in the usual order, Kalmar and Gotland counties. Approximately the same remarks apply to fresh beef. This commodity is remarkably cheap in this division of the kingdom, especially in Gotland county. In the latter county, however,
there appears a distinct tendency to rising prices. $\boldsymbol{a}^{\text {a }}$ alse in Smáland, though the tendency is less strong...

Mutton appears also to have been especially cheap in thit division. Prices of pork and butter correspond less with the general tendency: in certain periods Smaland is actually. cheapest and Gotland dearest. This applies especially to butter during the first half of the period; afterwards the ${ }^{2}$ scale of dearness is the usual one. Prices of these commodities in this division are maintained on the whole below thy national level. The same applies to egg prices. The latte are, however, more in accord with the general scale, with Smáland as the dearest and Gotland as the cheapest county.
Division IV, which includes the West Coast counties of Halland, Gothenburg and Bohius, and the interior counties of Allvsborg and Skaraborg, shows, like the above mentioned divisions, very great internal price differences. In the fof lowing we exclude Halland entirely from further notice since our price-series for this county are very unreliable. It would appear, however, that Halland consistently maintained a low, though slowly rising, price level. On closer examination the price-series seem to show a certain correspondence with Malmöhus, with which county Halland has at all times had good connections, not least by sea.

If we look at the relative dearness of the remaining counties of this division, for which our price material is comparatively very reliable, we are able to observe a falling price level from west to east: from the broadly speaking unfertile coastal county of Gothenburg and Bohus to Alvsborg and Skaraborg counties. It is, however, more difficult tp discover any more general and consistent tendencies of development.

As regards grain in particular, Skaraborg shows a faindy consistent tendency to rising prices until the 'seventies, after which there occurs a still more marked tendency to falling prices. The county as a rule shows prices which are low in relation to the national level, lowest for oats, after which come barley, rye and wheat in the order mentioned. In the case of wheat alone is the national level exceeded, in three decades in the middle of our period, and only the cul-
minating accade of the seventies reveals considerable dearpess. During that decade wheat is dearer in Skaraborg than in Alvsborg county.
Grain prices in Älvsborg are consistently higher than in $\delta_{\text {karaborg county. Similarly in relation to the national }}$ level wheat, and especially rye prices are high. Grain prices, however, show in this county a less regular tendency han in Skaraborg, even though we may be inclined to per<eive a similar though less general rise towards the middle $f$ the period and subsequently a fall. The falling tendency, \%owever, is interrupted during the last two decades and is oonverted into a rising tendency, for which reason grain frices in Älvsborg and Skaraborg county diverge still hore during these decades.

* In Gothenburg and Bohus county grain prices are even gher than in Alvsborg. An exception is rye, which, as sual in the three first decades, appears to be highest in Gothenburg and Bohus, but subsequently falls to a lower level than in Alvsborg, though still remaining on a higher level than Skaraborg. A further exception for all kinds of grain is found in the last or last two decades, when the tengency in Gothenburg and Bohus is falling, whilst in Alvsborg, as has been said, it is rising. The price situation at the end of the period is thus that Alvsborg consistently is dearest, Skaraborg cheapest and Gothenburg and Bohus spmewhere in between.
The development of potato prices is, as usual, more difficult to survey. The order of dearness as between the counthes, is, however, the usual one. Gothenburg and Bohus cpunty is dearest (considerably above the national level) and Ålvsborg and Skaraborg follow in the order mentioned. Especially Skaraborg, but also Älvsborg, keeps as a rule considerably below the national level. There is a certain levelling up as between these two counties towards the last decades. Especially with regard to potato prices in Skaraborg, the general tendency of development appears to be the opposite to what we have observed for grain. The price lekel appears to fall towards the 'seventies, after which it rises again.

During the first half of the period (especially in the 'four, ties, 'fifties and 'sixties) Gothenburg and Bohus county reveals very high prices for tresh beef. After that date al three counties remain at about the national level. The nine ties appear to have been a period of relative dearness. The price developments in Skaraborg for fresh beef, as for po: tatoes, show a directly opposite tendency as compared with grain. We are able to observe a steady fall in priced towards the 'sixties and subsequently a rise.

Uncommonly enough, with regard to pig-meat, Skarat borg appears to have been the dearest county and Gothene burg and Bohus the cheapest. This applies especially to bacon. (Pork on the other hand appears to have been dearer in the last named county than in Alvsborg.) We thus arrive here at an inversion of the order of dearness. The price of bacon shows in all three counties a falling tendences towards the 'seventies and 'eighties, and a subsequenf though irregular rise.

For butter and eggs we again observe the usual order of dearness. In Skaraborg county prices show a falling tendency from about the 'sixties or 'seventies (as for potatoes and the above-mentioned animal foodstuffs) and afterwards a rising tendency. In this way Skaraborg reaches and exceeds the Alvsborg level for both of the two last decades. Egg prices, especially in Skaraborg, though alsg in the other two counties, are exceptionally low. Butter prices are also low in Skaraborg and Älvsborg, but are verý high in Gothenburg and Bohus.
Division V, which embraces Óstergötland, Södermanland: Stockholm and Uppsala counties, constitutes, in contrast: to the divisions already mentioned, a more homogeneous district in respect of prices. Grain prices are maintained about, or below, the national level. Grain prices in Uppi sala county show a falling tendency towards the middle of our period and afterwards a less decided rising tendency which is again converted to a falling tendency during the last decade. This curious development, almost the exact opposite of that which we observed in Skaraborgjand to some extent in Alvsborg, is followed also by Stockholm
county, from which, however, as has been indicated, our pricesseries are weaker) and also, though with many deviations, by Södermanland county.
Falling prices during the last decade are common to all three. Ostergötland, which scarcely follows this development, appears to have a certain tendency to relatively higher grain prices. In all counties in this division (as for Skaraborg and Västmanland) oat prices are especially low towards the end of the period.
Potato prices in this division are as a rule low. This applies especially to Uppsala county. Also beef and pigmeat prices are usually below the national level, although the difference is not considerable. Butter prices again are relatively high during the first half of the period, but afterwards low (with the exception of Ostergötland, where the tendency, though weak, is rather the contrary).
$\therefore$ In this connection we may refer to Division $I$, Stockholm City, since Stockholm is surrounded by the counties included in the previous division. Noteworthy are the high oat prices, which, however, throughout the whole period show a falling tendency in comparison with the national level. Prices of bread cereals remain as a rule low, but rise in the last decades. The price of potatoes rises towards 1860 and 1870, when it is very high, but falls again considerably afterwards. Prices of meat, butter and eggs remain high during the first half of the period and afterwards fall.

- Division VI, which includes the mining districts, Orebro, Västmanland, Värmland, and Kopparberg counties, is from the price point of view very heterogeneous. The two first named counties also contain very fertile agricultural areas. Västmanland county, especially, is most nearly related from the point of view of prices to the neighbouring counties in Division V: Uppsala and Södermanland. Price developments also reveal evident resemblances.
As regards grain prices, Vastmanland stands very low düring the whole period, especially for rye, barley and oats. Grain prices in Orebro are somewhat higher. The two northern and more wooded counties, Värmland and Kopparberg (from which our price-series are sometimes
weak) stand somewhat higher as regards prices, usually" considerably above the national level. This appliesmpartic. cularly, to the first half of the period, during which we canobserve; however, a general tendency to fall to or below the national level. During the two or three last decades, however, Kopparberg county and also, though in a lower degree and less distinctly, Värmland county show a rising tendency for rye, barley and oats. Prices are as a rule higher in Kopparberg county than in Värmland.

Price developments for potatoes in this division show in' the main, in spite of great irregularities, a similar picture. Remarkable is the almost uninterrupted fall in prices in Kopparberg county. Prices of meat seem in general more stable. The same applies to butter prices, even though towards the end of the period Kopparberg county has a, tendency to be dearer than the others. Egg prices seem to have been lower in Orebro than in Västmanland. In Kopparberg county egg prices are very high, but show a falling tendency.

As regards Division VII, we lack price series to a large extent from Jämtland, and the series from Västernorrland. are less reliable. The series for Gävleborg county, on the' other hand, are as a rule comparatively good.

Bacon and pork prices in Jämtland are high, but show a: falling tendency. Butter prices on the other hand are low and show a rising tendency. We do not possess any other' price-series for this county.

All the price-series for Vasternorrland show almost re-" gularly a price level higher than that of Gävleborg. This. applies in the first place to grair) prices. Notable is the strong falling tendency of prices for potatoes, meat, and eggs in this county. Butter prices, again, - as in Jämtland' - are rising. Butter prices in Västernorrland are as a $a^{\text {i }}$ rule above prices in Jämtland - similarly above the prices' in Gävleborg during the three last decades but not during the earlier decades (this is the only exception from the rule just stated that Västernorrland is dearer than Gävleborg).

If we now turn to Gävleborg, from which our price-series are both more complete and more reliable, it must be ob-

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served in the first place that prices in that county are more or less consistently lower than in Kopparberg county and frequently lower than in Värmland (the only exception worth mentioning is fresh beef). The superior transport and trading facilities of Gävleborg - especially with Stockholm and to some extent perhaps with Finland - here play a part. A closer examination of the price-series shows also a connection between Stockholm prices and those of Gävleborg. This appears to have been the case since the beginning of the period. We observe therefore little of the price fall so typical of the surrounding counties during the first decades.

From Division VIII our price material is exceedingly scanty. The two counties included in this division appear, however, to have been extremely dear. As a rule the price level in the more northerly county, Norrbotten, is higher than in the more southerly, Västerbotten. Butter prices, which according to our very weak price series seem very 'low, show a rising tendency.

## 'Dispersion of County Prices.

The above sketch of the relative level of prices in the different parts of the kingdom must be taken for what it is, merely a very summary survey. Like all such surveys of actual conditions it has a natural tendency to obliterate the finer nuances. A real analysis of the problem of price differences would have to probe into much greater detail. It is necessary in the first place to enquire how these geographical price differences are related to short-period movements in national prices and to the general economic situation ${ }^{1}$ and especially the course of business cycles. It is necessary to correlate price differences with corresponding differences of wages, with internal migrations and with the whole idiversified development of industrial life in different parts of the country. Above all it is of course necessary to observe the influence of transport developments, especially the construction of railways.

With reference to transport developments the a priori assumption is, of course, that improved communications

# (i. e. relatively cheaper transport facilities) will be accompanied by a corresponding levelling of price differences. ${ }^{1}$ 

${ }^{2}$ This assumption is, however, valid only with reference to commodities which already before the transport development entered into the trade between the districts compared and which, furthermore, were then traded in the same direction as afterwards. Otherwise there is no direct relation between price differences and costs of transportation. It may therefore very well be the fact that price differences in a certain case will not diminish, or not diminish at the same rate as transport costs are cheapened. It is even conceivable that differences in cost of living may increase, despite a considerable reduction of transport costs. We may, for example, imagine a Norrlarld district in olden times, where the population was so sparse that it could support itself on the product of the district. The whole economic life of the district was conducted on traditional hide-bound lines in more or less complete isolation from the rest of the country. It is true that coffee, tobacco, sugar, spices, etc. were procured from the south and a number of implements and domestic articles. They were paid for by the produce of the district (possibly with foodstuffs, cheese, butter, meat etc.). But these imported articles of consumption were a mere fraction of the total budget. In spite of high costs of transport the total cost of living might in terms of money be just as low (perhaps lower) than further sonth. Assume the development of communications in such an area: a railway is built and transport costs, are reduced enormously. But with the railway come more people and the produce of the district can easily, from being sufficient, become entirely inadequate. The situation may be such that the immigration of a few hundred souls to a large district may involve the overstepping of the . margin and may result in an increase in the cost of living. It is probable, that the reduction of transport costs may render profitable another kind of production than previously prevailed. Previously perhaps only articles of necessity were produced - now it becomes more profitable to exploit the forests or to extract ore than to grow corn and breed cattles. The consequence of the building of a railway may therefore be a very considerable increase in the cost of living. It is possible that the latter may proviously have been somewhat lower than in the south where foodstuff were produced for sale in large quantities. They will now be higher by an amount which bears a certain relation to transport costs and middlemen's profits. Even though in reality such extreme cases are naturally ? rare, yet similar conditions must frequently have the result that the level. ling of the cost of living which usually accompanies transport developments does not correspond to what one prima facie would have expected.

It would be possible to point to other circumstances which explain why cheaper transport is often not accompanied by a corresponding levelling of the cost of living. Among others there is a mass of psychological and conventional factors in price formation and, in fact, we know very little of the influence of these factors, since a purely theoretical analysis must make abstractions from them or, at best, include them in very general conceptions or reservations. These factors, which sometimes reveal a very constant stability and consequently do permit the assumption of a coteris paribus, may often just under the influence of the wholly changed social conditions and psychological milieu which usually accompanies developments in transport, suddenly become remarksbly unstable. It is therefore a pre-condition for a further analysis of the important problem of local price differences that one should be prepared in a concrete case to find very different and special cause factors. Theoretical reasoning es to price formation may be dangerous if it is built on the assump-

Table 12．Dispersion of Prices．
a）average of the divergence of the connty prices from the prices for the whole country calculated for 100 kg wheat，rye，barley， oats，potatoee；for $\mathbf{y}$ kg fresh beef，pork，bacon；butter；for $x$ scone eggs．
b）the former dispersion numbers（a）calculated as percentages of the corresponding prices for the whole country．

| Year | Wheat |  | Rye |  | Barley |  | Oats |  | Potatoes |  | Beef，fresh |  | Pork |  | Bacon |  | Butter |  | Eggs |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\underset{\text { ate }}{\mathbf{a}}$ | $\begin{aligned} & \mathbf{b} \\ & \% \end{aligned}$ | ${ }_{\text {ore }}^{\text {a }}$ | $\begin{aligned} & \mathbf{b} \\ & \text { \% } \end{aligned}$ | $\underset{\mathrm{yre}}{\mathbf{a}}$ | $\begin{aligned} & \text { b } \\ & \% \end{aligned}$ | $\underset{\text { bre }}{\mathbf{a}}$ | $\begin{aligned} & \text { b } \\ & \text { \% } \end{aligned}$ | $\begin{gathered} a \\ b r e \end{gathered}$ | $\begin{aligned} & \mathbf{b} \\ & \boldsymbol{\%} \end{aligned}$ | are | $\begin{aligned} & \mathbf{b} \\ & \text { \% } \end{aligned}$ | $\begin{gathered} \mathbf{a} \\ \mathbf{z r e x}^{2} \end{gathered}$ | $\begin{aligned} & \mathbf{b} \\ & \text { \% } \end{aligned}$ | $\underset{\text { are }}{\text { a }}$ | $\begin{aligned} & \text { b } \\ & \text { \% } \end{aligned}$ | $\begin{gathered} \mathbf{a} \\ \mathbf{b r e} \end{gathered}$ | $\begin{aligned} & \mathbf{b} \\ & \mathbf{\%} \end{aligned}$ | $\begin{gathered} \text { a } \\ \text { bre } \end{gathered}$ | b \％ |
| 1830 |  | － | 130 | 13.9 | 114 | 12.6 | 89 | 13.0 |  |  |  |  |  |  | 6.3 | 10.9 | 11.1 | 13.0 |  |  |
| 1838 |  | － | 126 | 9.5 | 124 | 12.3 | 90 | 12.0 | － |  |  |  |  |  | 6.4 | 11.0 | 10.1 | 11.7 |  |  |
| 1832 |  | － | 172 | 16.7 | 124 | 12.7 | 113 | 16.8 |  |  |  |  |  |  | 7.6 | 13.1 | 11.0 | 12.9 |  |  |
| 1833 1834 | － | － | 135 | 14.5 | 114 | 14.5 | 86 | 15.1 |  |  |  |  |  |  | 7.3 | 12.6 | 10.7 | 12.6 |  |  |
| 1834 1835 |  | 二 | ${ }^{96}$ | 10．1 9 | 89 <br> 101 | 11.3 11.5 | 73 | 12.5 |  | － |  |  | － |  | 6.9 | 12.1 | 11.5 | 13.7 <br> 12.8 |  |  |
| 1836 | － | － | 96 | 9.8 | 94 | 10.4 | 82 | 11.6 | － |  | － | － | － | － | 7.9 | 12.2 | 10.0 | 12.9 |  | － |
| 1837 |  | － | 107 | 9.8 | 88 | 9．0 | 72 | 8.7 | － |  | － | － | － |  | 7.6 | 12.8 | 10.4 | 10.7 | － |  |
| 1838 1838 |  | － | 103 | 8.0 | 95 | 8.5 | 89 | 8.7 |  |  |  |  |  |  | 8.3 | 13.0 | 10.7 | 10.9 |  |  |
| 1839 |  |  | 93 | 8.4 | 85 | 8.2 | 69 | 8.7 |  |  |  |  |  |  | $5 \cdot 9$ | 9.2 | 10.2 | 10.3 |  |  |
| 1840 | － | － | 112 | 9.9 | 80 | 8.7 | 68 | 9.5 | － |  | － | － | － | － | 7.3 | 11.6 | 11.3 | 11.8 | － | － |
| 1841 1842 |  |  | 107 | 8.4 | 44 | 5.2 | 60 | 9.7 |  |  |  |  |  |  | 7.1 | 11.8 | 11.0 | 11.6 |  |  |
| 1843 |  | － | 110 | 9.6 | 74 | 7.8 | 68 | 9.9 |  |  |  |  |  |  | 7.1 6.3 | 12.2 | 18．9 | 12.5 |  |  |
| 1844 |  | － | 159 | 17．8 | 79 | 10.0 | 59. | 9.7 |  |  |  |  |  |  | 5.9 | 12.3 10.5 | 12.5 | 13.5 |  |  |
| 1845 1846 | － | － | 103 | 9.0 | 108 | 12.2 | 80 | 12.1 | － | － | － |  |  |  | 7.5 | 12.9 | 10.8 | 11.4 |  |  |
| 1846 |  | － | 113 | 8.2 | 88 | 7.3 | 102 | 11.2 |  |  |  |  |  |  | 6.8 | 11.1 | 9.7 | 10.0 |  |  |
| 1847 | － | － | 135 | 9．9．9 | 106 | 8.3 <br> 11.3 | 117 7 1 1 | 12.0 |  |  |  |  |  |  | 7.1 | 10.9 | 9．5 | 9.2 |  |  |
| 1849 | － | － | 115 | 12.2 | 109 | 13.0 | 73 | 11.4 |  | － |  |  |  |  | 6.4 5.3 | 8.8 | 12.3 | 11.8 |  |  |
| 1850 | － |  | 93 | 8.7 | 104 | 11.6 |  | 10.3 |  |  |  |  |  |  | 6.2 | 10.3 | 12.3 | 11.6 |  |  |
| 1851 | 97 | 6.8 | 92 | 7.3 | 9 T | 8.6 | 87 | 9.2 |  | － | － |  | － |  | 6.3 | 10，3 | 12.1 | 11.3 |  | － |
| 1852 | 103 | 6.9 | 109 | 8.1 | 75 | 6.5 |  | 8.0 |  |  | 二 |  | － | － | $5 \cdot 9$ | 9.8 | 11.3 | 10.4 | － | － |
| 1853 1854 | 1101 | 5.5 6.1 | 79 90 | 6.4 | 100 73 | 8.0 5.8 | 80 71 | 8.4 | － | － | 二 |  | 二 | － | 4.6 6.1 | 6.6 8.0 | 11.0 11.3 | 10．1 ${ }^{1.3}$ | 二 | － |




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##  <br> 99

Table ing(cont.).

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[b]{2}{*}{ear} \& \multicolumn{2}{|l|}{Wheat} \& \multicolumn{2}{|l|}{Rye} \& \multicolumn{2}{|l|}{Barley} \& \multicolumn{2}{|c|}{Oats} \& \multicolumn{2}{|l|}{Potatoes} \& \multicolumn{2}{|l|}{Beef, freah} \& \multicolumn{2}{|l|}{Pork} \& \multicolumn{2}{|l|}{Bacon} \& \multicolumn{2}{|l|}{Butter} \& \multicolumn{2}{|l|}{Eggs} \& \\
\hline \& \[
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\& 8890 \\
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\end{aligned}
\] \& \& \& \& \& \& 6.1 \& \({ }_{52}^{62}\) \& 5.2 \& \({ }^{57}\) \& \& 4.9 \& 7.6 \& 8.3 \& 10.6 \& 4.6 \& \& \& \& \({ }_{11.5}^{9.3}\) \& \& 8 \\
\hline 1891 1892 \&  \& 5.4 \& 756 \& 4.0 \& \({ }_{78}^{78}\) \& 6.1. \& 42 \& 4.2. \& 1204 \& 18.4 \& 4.9 \& 6.8 \& \begin{tabular}{l}
8.3 \\
7.2 \\
\hline
\end{tabular} \& 10.6 \& \({ }^{4.0}\) \& \({ }^{5} 6.5\) \& 11.2 \& 5 \& 11.0 \& 17.2. \& 4 \\
\hline 1893
1894 \& 46 \& 3.9
3.4 \& \({ }_{6} 7\) \& 6.6
7.5 \& \(\xrightarrow{92}\) \& 8.4
7.6 \& 53 \& 7.6 \& 78 \& 15.8
20.8 \& 4.3 \& 6.6
7 \& 8. \& 10.7
12.3 \& \({ }^{6.9}\) \& \begin{tabular}{l}
6.8 \\
7.4 \\
\hline
\end{tabular} \& 14.3
14.3 \& 8.0
8.

8 \& 8.5 \& 8.7 \& - <br>
\hline 18 \& 68 \& 5.0 \& 58 \& 5.5 \& ${ }^{4}$ \& 7.2 \& 65 \& 8.6 \& 93 \& 18.6 \& 4.6 \& . \& 8.4 \& 12.5 \& 6.6 \& 8.0 \& 11.9 \& 7.2 \& 9.4 \& 9.4 \& H <br>
\hline 188 \& ${ }_{77}^{68}$ \& 5.2 \& 73 \& 7.0 \& 81
73 \& 7.4 \& 5 \& 7.4 \& 78 \& 19.6 \& 4.0 \& 6.6 \& 4.6 \& ${ }^{312.9}$ \& 5.9 \& 8.8 \& 18.1 \& 5 \& 10.5 \& 10.6 \& <br>
\hline 1897
1898 \& 77 \& 5.6 \& ${ }_{6}^{4}$ \& 3.9
5.4 \& 73 \& ${ }_{3.4}^{5.9}$ \& 68 \& 7.1
6.9 \& ${ }_{102}$ \& 19.6
17.3 \& 3.4 \& 7.0 \& 4.6 \& 6.2. \& 4.2 \& 4.4 \& 10.9
10.0 \& 6.3
5.9 \& 10.9 \& ${ }_{9}^{9.6}$ \& , <br>
\hline 1899 \& 48 \& 3.3 \& 55 \& 4.2 \& 68 \& 5.6 \& 59 \& 6.5 \& 208 \& 15.2 \& 3.8 \& 5.8 \& 6.7 \& 8.3 \& 5.9 \& 6.5 \& 8.8 \& 4.7 \& 9.2 \& 8. ${ }^{\text {a }}$ \& , <br>
\hline 1900 \& 38 \& 2.7 \& 59 \& 4.4 \& 5 \& \& 54 \& 5.3 \& 101 \& 16.5 \& 3.4 \& 5.0 \& 6.1 \& 6.6 \& 5.0 \& 4.9 \& 11.3 \& 6.1 \& \& \& Д <br>
\hline 1901 \& ${ }^{38}$ \& 2.6 \& 82 \& 5.4
6.5 \& 77 \& ${ }_{6}^{6.4}$ \& 5 \& 5.2 \& 103 \& 18.8 \& 3.0 \& 4.3 \& 7.1 \& 7.3 \& 4.5, \& 4.0 \& 10.4 \& 5.4 \& 88 \& 7.8 \& \% <br>
\hline ${ }_{1902}$ \& 75 \& 5.2 \& 828 \& 6.5 \& 78 \& ${ }^{6.1}$ \& 81 \& ${ }^{7.8}$ \& 78 \& 11.4
13.9 \& 3.2 \& 5.6 \& 8. 8 \& 8.6
10.6 \& 6.1. \& 5.4 \& 11.7 \& ${ }_{6} 6.2$ \& 8.9 \& 7.9 \& <br>
\hline 1904 \& 65 \& 4.5 \& ${ }^{8}$ \& 6.7 \& \& 7.4 \& 8 \& 7.5 \& 9 \& 15.8 \& 3.5 \& 4.9 \& 10.a \& ${ }^{11.9}$ \& $5 \cdot 8$ \& 5.8 \& 11.3 \& 6.1 \& 9.3 \& 88. \& ? <br>
\hline 1909 \& 61 \& 4.2 \& 70 \& ${ }_{4}^{5.5}$ \& 67 \& 7.0
5.2 \& 74 \& 7.0 \& 64 \& 15.1 \& 4.9 \& 7.6 \& 7.1 \& 7.6 \& 4.6 \& ${ }_{4}^{4.6}$ \& 0.3 \& 5.4 \&  \& 6.0 \& <br>
\hline 19 \& 4
6.
63 \& 3,9 \& 882 \& 55 \& 81
87
8 \& 6. 6 \& ${ }_{8}^{8}$ \& 6.6 \& 56 \& 8 \& 3. \& ${ }^{6.3}$ \& 8.5 \& ${ }^{8.4}$ \& 3.6 \& 3.8 \& 78 \& 3.9 \& \& . \& <br>
\hline 1908
1999 \& 63
83
81 \& 3.9 \& 71 \& 4.9 \& 77 \& 6.3
5.7 \& ${ }_{94}^{98}$ \& 8.9 \& ${ }_{74} 5$ \& 13.72 \& ${ }_{3}^{3.6}$ \& 4.6 \& 9.4
9.4 \& 10.4
10.5 \& 5.1. \& 5.5 \& 8.8 \& 4.6 \& \& 6.4 \& 8 <br>
\hline 19 \& \& 3.3 \& \& 6.5 \& \& 7.3 \& 78 \& \& 67 \& \& \& \& \& \& 6.2 \& \& \& \& \& 5.9 \& <br>
\hline 19 \& \%69 \& 3.5 \& 69
74 \& 5.5 \& ${ }^{78}$ \& 4.7 \& ${ }_{9}$ \& 7.6 \& 38 \& ${ }^{8.4} 8$ \& 4.6 \& 6.4. \& 10.0 \& 92.7 \& 4.0 \& 3.5 \& 11.7 \& 4.6 \& 8.9 \& 6.2
6.2 \& <br>
\hline 1913 \& ${ }_{75}$ \& 5. \& 74
79 \& 8.15 \& $13{ }^{\circ}$ \& 4.7 \& 85 \& 7.8 \& \& 14.1) \& 6. \& ${ }_{5.8}^{7.8}$ \& \& 7.7 \& 6.1 \& 5.5 \& $1{ }^{\text {9.9.2 }}$ \& 4.8 \& 6.7 \& 4.9 \& <br>
\hline
\end{tabular}

## Table sg Diapersion of Prices.

a) decemilal averagen of tho annual dispersion coefficients (table 12, pp. 90-wnon). b) disperuton coefficients, calculatod on the basis of docennial avesage prices.


From the material here published, it would also appear evident, that transport developments and the consequent rationalisation of the whole mechanism of trade has in general occasioned a certain equalisation of prices.

We have for certain important commodities calculated as a comparatively simple, though by no means perfect, measure of the dispersion of prices an annual "dispersion number" (average of the divergence of the various county prices from the national prices), as well as an annual dispersion coefficient (the above mentioned dispersion figure stated as a percentage of the national price). Table 12, pp. 98-100 presents these two dispersion measures. In Table 13, p. IOI we have collected firstly the decennial average of the annual dispersion coefficients and secondly similarly calculated dispersion coefficients of the decennial county averages of prices. The latter dispersion coefficient is naturally always less than the decennial average of the annual dispersion coefficients, as it is dependent in a less degree on annual fluctuations. It gives, so to speak, a measure of the dispersion between the more stable price levels in the various districts of investigation.

The dispersion coefficients for different commodities are perhaps not fully comparable one with another, as there is a certain unavoidable difference in the number of county prices available. 1 The more important differences are,
tion of already existing, developed market conditions at the moment when transport developments are initiated, or on the presumption that the psychologically conditioned coefficients of the functional connections between demand, supply and price remain passive in the process.

It may be mentioned in passing that the above example was by no means taken at random. There are indications that price formation in remote parts of Sweden really developed in relative isolation before the vast social revolution which was introduced by the construction of railways. We know also that the development of transport has radically changed the whole social and psychological constitution of the people.
${ }^{1}$ For rys the calculations are based on complete price-series for Stockholm City and all the counties except Jamtland. The same applies to baviey after 1854; before that year Norrbotten was also laching, for which reason the neighbouring county of Vasterbotten, which is comparable as regards prices, has been reckoned twice. With regard to oads, not only Jamtiand but also both Norrbotten and Vasterbotten are blanks (similarly Blekinge is lacking before 1846, but this lacuna should not be of great importance for the height of the dispersion figure). As regards whoat, for which our dispersion measure is only calculated after 1851 Jamtland, Vasternorrland, Vasterbotten and Norrbotten (as well as
however, apparent. Thus the dispersion coefficient for potatoes remains remarkably high during the whole period, which is explained by the greater difficulty of transporting and warehousing this commodity.

For every commodity, taken by itself - apart from the greater or less weakness of the primary material at various points in the period of investigation - a comparison in time should be fully justified. In the comparatively few cases where, for a particular commodity, a county price which would otherwise have been included is lacking for a short part of the period of investigation, the dispersion figure for that part of the period has only been calculated where a thorough investigation of price conditions within that county for similar commodities and for the same commodity in adjacent periods has led us to believe that the lacuna is irrelevant or that the missing price figures could be safely interpolated. The dispersion coefficients, which constitute a measure of the relative dispersion, show, apart from short-period fluctuations, a practically general falling tendency. (Among the exceptions from this general rule may be specially mentioned the rise in the dispersion figure in the middle of the "eighties shown by potatoes.) This fall in the long run of the relative dispersion of prices must of course not be entirely attributed to developments of transport and the development of inter-local trade organisation. The equalisation and standardization of quality
Smaland after 1890, though this lacuna seems to be irrelevant) are lack ing. As the Norrland counties usually deviate quite considerably from the national price, we must assume that the dispersion coefficients for oats, and still more for wheat, will appear too low in relation to the dispersion coefficients for the two other kinds of grain.

The coefficients for potatoes are calculated on the price-series for Stockholm City and all the counties except Jamtland and Stockholm. (For the period 187r-1878 there are no figures for Norrbotten, and for the period 1861-1870 none for the same county and Vasterbotten, but these two lacunae would appear, to judge by the price material, fairly irrelevant so far as the general leval of the dispersion figure is concerned.) For fresh beof our calculations are based on only 17 price-series: Halland, Ostergotland, Stockholm, Jamtland, Vasterbotten and Norrbotten counties are missing. It is difficult to say whether the dispersion coefficients are for this reason too high or too low. For pork only Halland, Stockeholm, and Norrbotten counties are missing. For bacon Kristianstad, Halland, Orebro and Vasterbotten counties are missing. For butter only Blelenge is missing. For aggs Halland, Stockholm, Jamtland, Vasterbotten and Norrland counties are missing.
which has taken place in most commodities tend in the same direction. It is true that we have endeavoured to fix prices. of the same quality in different parts of the country, but, as we have often remarked, it is very probable that we have not been able entirely to surmount the difficulties in this respect. During the first half of our period, up to the 'fifties and 'sixties, the completeness and reliability of our primary material improves without interruption. The calculated price-series during this period became more and more accurate from the statistical point of view and this circumstance must also have contributed to some extent to the considerable fall in the dispersion coefficients which occurred during this period. For the two or three last decades the degree of accuracy of the calculated price-series is, however, diminished. We have therefore to take into account fluctuations in particular county prices which are not due to other causes, and this circumstance tends, during the latter half of the period, to keep the dispersion coefficients relatively high.

If again, we regard the short-period fluctuations of the dispersion coefficients, they will show, as is natural, a certain tendency to move in inverse relation to the national price level of the commodity in question. Transport and trading costs move as a rule somewhat slowly, and in any case they do not necessarily follow the price movements of commodities. This tendency is naturally strongest in the case of grain, as these commodities show the most marked short-period price variations.

## The Tomporal Movements of <br> Prices.

Hitherto we have only considered local differences in prices. It has throughout been characteristic that one element of comparison has been the national price for a year or a decade. If, instead, we look at the temporal movements in absolute prices, the problem becomes essentially different according as we look at movements over a long or a
short period. For the present we draw attention only to the problem of short-period fluctuations.

A comparison between these price movements and the wider general economic movement requires a clear definition of the conception "economic movement", a chronology of business cycles properly adapted to Swedish conditions. This problem in its turn presents difficulties, especially since conditions are so fundamentally different in agriculture and in industry; and in former times Sweden was principally an agricultural country. At the present stage of the investigations - the study on the national income of Sweden 186r-1930 will present more material bearing on this question - we will only remark that the enormous and general rise in prices in the middle of the 'fifties and in the 'seventies is obviously dependent on these general economic causes and reflects very important movements in the monetary system of the country and in its general economic conditions.

In regard to the short-period price movements there are one or two general observations which ought to be made. One relates to the change in the magnitude of the annual price movements which took place as a long period result. In olden times, when Sweden was more isolated and worldtrade was not so fully developed, these short-period variations were vastly greater. The result of the harvest, for example, had considerably greater influence on prices. A good grain harvest was often regarded as a misfortune by the farmers, as they must then look forward to extremely reduced grain prices. ${ }^{1}$

World trade here operated as a powerful brake on the range of annual price fluctuations. This applies especially to grain prices, the development of which in general is more even after the 'seventies and 'eighties. A similar tendency is apparent for other commodities. Certain differences appear, however. It is evident, for example, that the variability in the price of potatoes, a commodity

[^10]Ohart 1. Prices in Ore per Kilogramme of Wheat, Rye, Dried Peas, Barley, Oata, and Potatoes



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difficult to transport, and therefore more protected from foreign competition, was reduced less than that of grain.

The second observation relates to the very considerable differences is the latitude of variation for different kinds of goods. We have in mind principally former times. The greatest variations are shown by grain and potatoes. The prices of meal and groats produced from grain follow as a rule a more even course and often show a certain time lag. The cause is to be found partly in the stocks held by merchants and by the millers, which no doubt caused a certain dullness in price movements for the manufactured products of those goods. Grain prices react immediately and strongly to an abnormal harvest, and prices of meal and groats react somewhat later and less strongly. Another cause is to be found in the fact that those costs of production for meal and groats which do not consist of the price for the grain as raw material, i. e. above all wages, are less flexible and in any case need not be regarded as strictly following the movements of grain prices.

The relative amplitudes of variation for animal foodstuffs and especially dairy produce, are, however, much less still. A comparison shows a complete difference in character with regard to the general form of price movements.

The explanation of this remarkable difference between vegetable and animal stuffs must not be sought in the differences between the two groups as regards foreign competition, which should cancel each other. It is true that the animal foodstuffs are as a rule much dearer per unit of weight or volume and should therefore more easily bear the cost of transport, but on the other hand they are more perishable, and it is a fact that whereas Sweden has always had a considerable foreign trade in grain, yet her foreign trade in animal foodstuffs has until recent times been less extensive. The explanation is rather to be sought in two other circumstances: the greater steadiness in the volume of production of animal foodstuffs and the greater elasticity of demand.

The yield of the grain harvests can be calculated with some degree of accuracy. On the other hand it is mare dif-
ficult to say anything definite concerning the total output of animal foodstuffs. There is a probability, however, that these changes were less considerable than those of the grain harvest. Especially in olden times the fallow meadows and forest pastures in Sweden played an importanit part in cattle raising. Even though these pastures were probably as a rule worse in bad harvest years and vica versa (always when the cause was a cold summer or drought, but not when the bad harvest was due to bad harvest weather), yet the pastures were frequently so extensive that the cattle could be well nourished, even in bad summers. In such years especially meadow hay, leaves and moss were collected as cattle fodder for the winter. In this manner there existed a certain elastic reserve of available fodder, which had no corresponding counterpart in the cultivation of grain. These circumstances are of importance, especially in explanation of the more even movement of prices of dairy produce.

As regards the production of meat, it must also be remembered that whereas rising prices for grain and fodder must as a rule raise the costs of production for meat (though not in the same degree, since wages and other costs of production need not rise at the same rate) and tend to raise the price of meat, yet on the other hand a real failure in the harvest with high grain and fodder prices might compel farmers to slaughter on a large scale, whereby the quantity of meat offered would increase and prices would tend to fall. This state of affairs is clearly visible in the famine year of 1868, when grain prices soared to the skies, whilst meat prices fell (with the exception of bacon). But even where the consequences are not so extreme as in this case yet in any case there is in such increased slaughtering a tendency counteracting a rise in prices (and vice versa in reduced slaughtering a tendency counteracting a fall in prices) which should level out the curve of prices for meat. In general meat prices, especially bacon, often tend to lag behind during the levelling out process.

The principal cause of the greater short-period variations of vegetable foodstuffs in comparison with animal

Chart 2. Prices in ore per Kilogramme of Butter, Bacon, Pork, Fresh Beef, Salted Beet, Merrings, in Ore per 10 Litres of unskimmed Milk and in Ore per Score of Egge (logarithmio acale).


Chart $a$ (cont.).


## 112 <br> THE COST OF LIVING IN SWEDEN

foodstuffs should not be sought, however, in differences on the supply side but rather in differences on the demand side. The elasticity of demand must be assumed to have been always considerably greater for the more expensive animal foodstuffs than for grain and potatoes, which latter were the chief sustenance of the people, in a higher degree in earlier times than at the present day. We must even assume that sometimes higher prices for vegetable foodstuffs would directly occasion a reduced demand for animal foodstuffs, even if the price of the latter remained unchanged. For the great majority of the population an increased price for grain and potatoes must have had the result in the first place that they had less income available for the purchase of animal foodstuffs - which were of the nature of luxuries -, and in the second place that it would compel a restriction of demand for vegetable foodstuffs.

As to the secular movement of the prices we content ourselves with a reference to tables 14 and 15 pp .113 and 114.

Table is. Decennial Averages of Prices for the Whole Country
$(186 x-1870=100)$,

|  | $\begin{array}{r} 1831 \\ -40 \end{array}$ | 1841 | $\left\|\begin{array}{l} 1851 \\ -60 \end{array}\right\|$ | ${ }_{-70}^{1861}$ | 1871 -80 | $\begin{array}{r} 188 \mathrm{I} \\ -90 \end{array}$ | ${ }_{\text {189 }}^{\text {189 }}$ | 1901 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Whe | 76.2 | 83.1 | 103.5 | 100.0 | 107.5 | 85.2 | 80.7 | 86.2 |
| Wheat fio | 85.3 | 87.2 | 102.0 | 100.0 | 106.1 | 87.2 | 80.1 | 83.8 |
| Rye | 75.6 | 81.0 | 95.4 | 100.0 | 99.3 | 82.8 | 83.9 | 90.9 |
| Rye meal | 82.5 | 85.9 | 91.5 | 100.0 | 96.0 | 83.6 | 89.3 | 94.9 |
| Rye flour |  |  |  | (100.0) | 97.9 | 83.8 | 87.6 |  |
| Barley | 2.4 | 73.7 | 95.4 | 100 | 106.5 | 87.6 | 89.0 | . 2 |
| Barley meal | 74.0 | 65.9 | 90.2 | 10 | 111.0 | 91.3 | 98.8 | 114.5 |
| Barley groats | 81.6 | 85.0 | 95.3 | 100.0 | 101 | 85.9 | 85.5 | 2 |
| Oats | 70 | 70.4 | 101. 3 | 100.0 | 113.7 | 91.9 | 91.2 | 106.5 |
| Oat groats | 87.7 | 86.7 | 99 | 100.0 | 99.4 | 79.8 | 71. | 71.7 |
| Peas, dried | 68.9 | 71.9 | 83.6 | 100.0 | 105.4 | 95.5 | 97.2 |  |
| Potatoes <br> Potato flour | 63.7 | 73.5 |  | 100.0 | 106.7 | 93.7 | 110.6 | 5 |
| Potato flour |  |  | ${ }_{104.8}^{10 .}$ | 100.0 | 110.2 | 102.0 | 79.6 | 5 |
| - salted | 52.9 | 62.9 | 86.3 | 100.0 | 123.5 | 119.6 | 125.5 | - |
| Veal, fresh, yo |  | - | 121.7 | 100.0 | 134.8 | 134.8 | 130.4 | 7.0 |
| - fatt |  | 71.4 | 10 | 100.0 | 126.5 | 128.6 | 138.8 | 73.5 |
| Mutton, fresh |  | 76,0 | 94.0 | 0, | 128.0 | 132.0 | 140.0 | 184.0 |
| B | 71.6 | 66. | 90.5 | $100 . d$ | 110.8 | 102.7 | 105.4 | 131.8 |
| Bacon - . ${ }^{\text {Pr }}$ | 69.4 | 71.8 | 91.8 | 100.0 | 110.6 | 103.5 | 105.9 | 130.6 |
| Herrings, salted | 76.9 | 80.3 | 108.6 | 100.0 | 129.7 | 115.3 | 85.0 | 94.3 |
| Sprats, | 103.3 | 105.2 | 119.2 | 100.0 | 113.9 | 90.4 | 76. | 97.7 |
| Cod, | 100.0 | 89.7 | 105.3 | 100.0 | 100.0 | 105.1 | 100. | 105.1 |
| Milk, unskimmed | 69.8 | 76.4 | 91.5 | 100.0 | 111.3 | 103.8 | 99.1 | 112.3 |
| - okimmed Butter |  |  |  | 100.0 | 87.7 125.7 | 67.9 124.3 | 59.3 | 74.2 39.3 |
| Cheese, whole |  |  | 91.4 | 100.0 | 135.8 | 131.9 | 136.3 | 39.3 <br> 152.7 |
| , skim-milk | 88. | 91.5 | 117.0 | 100.0 | 114.9 | 95.7 | 80.9 | 106.4 |
| $\mathrm{Eggs}^{\text {c }}$ | 81.3 | 82.5 | 96.3 | 100.0 | 125.0 | 116.3 | 128.8 | 151.3 |
| Coffee | 96.9 | 75.5 | 86.2 | 100.0 | 124.5 | 100.0 | 108.9 | 69.2 |
| Sugar | 124.8 | 115.0 | 106, 2 | 100.0 | 85.6 | 76. | 57.5 | 52.2 |
| Syrup | 89.7 856 | 92.6 | 1.5 | 100.0 | 88.3 | 69. | 51. | 5 |
| Rice ${ }^{\text {Tallow }}$ | 156.2 100.0 | 147.9 101.1 | 1418.7 118.3 | 100.0 | 89.6 | 70.8 | 64. | 62.5 |
| Tallow candles. | 95.5 | 94.6 | tog.9 | 0,0 | 93.7 | 87.4 |  |  |
| Stearin candles |  |  |  | (100.0) | 94.7 | 78.1 | 59.4 | 69. |
| Petroleum |  |  |  | (100.0) | 55.8 | 29. | 22.3 | 21.8 |
| Gat |  |  |  | 100.0 | 95.9 | 80.0 | 60.4 | 51.9 |
| Birchwood | 63.3 | 73.3 | 96.0 | 100.0 | 139.6 | 119.4 | 113.6 | 130.1 |
| Pine and fir pood | 66.4 | 74.7 | 97.0 | 10 |  |  |  |  |

Table 15. Decennial Averages of the Country Prices for Manufactured Products in Percentage of Prices for the Raw Materiale.

|  | $\begin{array}{\|c\|} \hline 2838 \\ -40 \end{array}$ | $\left\lvert\, \begin{array}{r} 184 x \\ -50 \\ \hline \end{array}\right.$ | 185x | $\left\lvert\, \begin{array}{l\|l\|} x 86 x \\ \rightarrow 0 \end{array}\right.$ | $\mathfrak{c}$ | $\begin{array}{\|c} \mathbf{1 8 8 x} \\ -90 \end{array}$ | 1889 | 1901 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wheat flour/wheat | 189 | 178 | 167 | 169 | 167 | 173 | 168 | 165 |
| Rye meal/rye. | 135 | 31 | 8 | 123 | 119 | 125 | 13 x | 12 |
| Rye flour/rye |  |  | - |  | 16x | 165 | 17 | 16 |
| Barley meal/barley | 135 | 118 | 125 | $\times 32$ | 138 | 138 | 147 | 154 |
| Barley groats/barley | 201 | 206 | 179 | 179 | 171 | 175 | 72 | 164 |
| Oat groats/oats | 405 | 402 | 320 | 326 | 285 | 283 | 25 | 230 |
| Potato flour/potatoes |  |  | 1182 | 998 |  |  | 718 | 634 |
| Beef, salted/beef, fresh | 90 | 94 | 100 | 102 |  | 98 | 100 |  |
| Calf, fattened/calf, young |  |  | 193 | 213 | 100 | 203 | 227 | 198 |
| Mution, salted/mutton, fresh |  | 79 | 00 | 100 | 100 | 92 | 104 |  |
| Bacon/pork | III | 124 | 116 | 115 | 15 | 116 | 155 |  |
| Milk, skimmed/milk, unskámmed |  |  | $-1$ |  | 60 |  | 46 | 50 |
| Butter/mill ${ }^{\text {a }}$ unskimmed | 230 |  | 1320 | 25 | 1492 | 1582 | 67 | 3 |
| Cheese, whole-milk/milk, unskimmed |  |  | 56 | 858 |  |  |  |  |
| Cheese, skim-milk/milk, skimmed . | 514 | 531 | 567 | 44 | 458 | 409 | 362 | 20 |
| Tallow-candies/tallow |  | $1 \times 2$ | 128 |  | 133 |  |  |  |

## CHAPTER VI.

## COST OF LIVING INDEX.

As a conclusion to this investigation we shall in this chapter offer, and comment upon, a cost of living index. The indexnumbers - which we have calculated in two variant forms - is based on ratioral prices, and thus relates to an average of the kingdom as a whole. It is calculated on the basis of an unchanged approximate weighing of budget quantities for the whole of the period of investigation. It may be said to correspond to some extent to the requirements of a general all-purpose cost of living index for the 84 years covered by the investigation.

As has already been explained in the brief theoretical notes in the opening of our introductory chapter, the scientific problem of which such an index is the solution is not sufficiently clearly and unequivocally defined. Price and budget material should be combined in index-numbers in different ways according to the special problem which presents itself in each special economic analysis. The compilation of a cost of living index should, ideally, be regarded as an integral part of the calculations of real income, and be adapted to each special case. The various standard of living problems should affect the calculations in quite different ways. A number of practical and theoretical difficulties must be confronted - some of which are touched upon in the introductory chapter - and the manner of dealing with these difficulties will differ with the different objects in view, each of which must give a more definite though shifting logical content to the essentially vague question: what is the relation between costs of living under the two assumed sets of circumstances.

The significance of these observations is, among other things, that our general cost of living index should, if possible, be differentiated and broken up in various ways.

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Special county index-numbers should be compiled with due reference - as far as the material permits - both to local price differences and to local differences of habits of life and consequently of budget quantities. Social differentiation constitutes another ground of distinction; cost of living indices for different social groups - e. g. agricultural labourers and factory workers - should be calculated on the basis of different budget quantities. These two lines of division may in their turn be combined. Finally, account should be taken, if possible, of the very considerable changes of budget which have always occurred in all parts of the country as a result of long-period developments. In order to satisfy to some extent this last requirement we have calculated two parallel index-series, each based on its own weighing of prices, one of which corresponds roughly to the kind and quantities of consumption during the 'forties and 'fifties and the other during the 'eighties and 'nineties.

A very cogent reason for concluding our work with a general cost of living index has been, however, that the budget material which it is possible to collect for finer calculations of index-numbers is, at best, very poor and as a rule totally lacking. If we wished, therefore, to compile special indices to satisfy more particular requirements, it is probable that this could often more easily and more reliably be accomplished by certain modifications of a general index than by a totally new compilation of special indices, for which the budget material is mostly very scanty.

## Budget Compilations.

Recent direct empirical budget investigations in Sweden, conducted on modern scientific principles are, it is true, admirable, but they are not applicable to conditions in earlier times, though they may offer some guidance. ${ }^{2}$

[^11]The domestic account books of earlier times which we have collected have proved insufficient as a foundation for more detailed and reliable budget estimates. The material is too scanty and in the majority of cases we also lack precise information as to the size of the household, its social rank etc. In connection with the Social Science Institute's study of wages, information has been collected for industrial works and agricultural estates as to the composition and magnitude of the payments in kind (stat), which were frequently fixed, of the commodities which the labourers purchased from the employer and which were debited to them in the books of the employer (in both cases usually grain, salted herrings, milk, wood etc.). This information sometimes proves of value, even from the budget point of view, but usually it is very difficult to make use of it, since we know so little of the size of the household or of the extent to which the household also purchased goods elsewhere or, conversely, sold a part of the receipts in kind. Finally the assistance to be derived from contemporary or subsequent literature is quite inconsiderable. There are certain sporadic data in the above-mentioned quinquennial reports of the county authorities. v. Feilitzen also undertook in the 'nineties certain searching enquiries into the cost of living and into budgets of agricultural workers in some Swedish counties ("Tjänare, statare och torpare", Stockholm $\mathbf{1 8 9 0 - 9 r}$ ). There is little more than this to be found in the existing literature.

One source remains, however, and that is the information concerning the national consumption of various goods to be obtained from a combination of the statistics of production and those of exports and imports. But this source must also be used with the greatest caution, especially as the older statistics of production were somewhat faulty. Yet for the compilation of a national index of changes in the cost of living it nevertheless furnishes a comparatively safe foundation. This national budget does not, however, in itself render possible any differentiation between different parts of the country, and between different social classes, even if it constitutes a good framework and a necessary

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support for such differentiations (it constitutes a verification through the fact that the total must equal the sum of the parts). On the other hand it can be made annually, which therefore makes possible more accurate calculations of the changes of consumption occurring in the course of time.

The investigation into national income in Sweden 186rI930 is based on the above-mentioned material found in official statistics and in other sources and seeks, among other things, to establish the annual changes in national consumption. From the results of this enquiry we have calculated the approximate consumption quinquennially per consumption unit of various commodities during the latter part of our period.

After reference to all the statistical sources abovementioned, and of course especially on the basis of the calculated national consumption, we have estimated for the chief category, foodstuffs, the approximate average consumption per consumption unit for the twenty-year period 1841-r860 (budget a) and for the twenty-year period 188 r -rgoo (budget $b$ ) table 16, p. 119). The estimates made for the construction of the budgets relate to any particular raw material and the products manufactured from it as a single unit; the allotment of the total weight between the raw material and the manufactured product is of course of no significance in regard to our differentiation of consumption. We have had the working classes in view, but since the Swedish people formerly, as nowadays, naturally consisted mainly of the working classes and the classes closely associated with them, only a slight modification of the average budget of the people as calculated by the number of consumption units has to be made. The estimates are of course extremely rough and we wish to emphasize that the relation between the weights of the various commodities were more important from our point of view than the absolute weight figures, which are probably faulty to a higher degree than the relation between them. The estimate for the earlier period (budget a) is, naturally, considerably more uncertain than that for the later period (budget b).

## Table 16. Weighte in the two Foodstuff Budgete.



As regards the degree of accuracy of the weight figures of the various commodities it may be said that the estimates are probably relatively safe for bread-stuffs and, for the later budget period, for those commodities which are not manufactured in the country but are exclusively imported, such as groceries. The estimates of the weight figures for peas, potatoes, oats and barley are somewhat uncertain, partly owing to the difficulty of determining what portion of the total production, or of a family's purchases or receipts in kind, is used as fodder. For all animal foodstuffs the estimates are still more doubtful, since they, insofar as the figures for national consumption underlie them, must in the last instance be based upon very difficult calculations of the total live-stock figures and of the slaughter percentages. A similar remark holds true in regard to dairy produce. The estimates of the weight figures for eggs, herring, sprats and cod had to be made almost entirely on the basis of common sense and of a general knowledge of conditions in former days.

The two budgets reflect the very considerable increase in the consumption of wheat which took place during the time between the two basic periods, and also the increase, though a smaller one, in the consumption of rye. The consumption of oats and barley, on the other hand, has diminished. Consumption of all kinds of meat has increased considerably; it is indeed especially in the increased consumption of the latter and of groceries that the higher standard of living finds its expression as regards foodstuffs.

If our budget estimates are thus for obvious reasons very rough, it would appear nevertheless as if this fact did not in any important degree invalidate our index result. It may be said already here that the two index series based on the somewhat divergent budgets $a$ and $b$ in the main follow each other astonishingly close. We find herein another confirmation of the old observation that the weight figures, if at all reasonably determined, generally do not greatly influence the general trend of index series.

On the basis of these two budgets the index calculation has been made by the aggregative method, whereby the
above-mentioned absolute weight figures are multiplied by the corresponding national absolute price for the various commodities in the foodstuff budgets. The index series based on budget a only runs to 1880 , whilst the other index series is calculated for the whole period. In order to facilitate comparison, all index figures have been reduced to a common basis: the decennial average for the years 186 r $1870=100$. The basic period has been selected with reference to its suitability from the point of view of the Social Science Institute's study of wages, but as these indices are calculated on the basis of the aggregate method, the calculations can be converted for another basic period without difficulty. The foodstuffs index is also divided into subsidiary groups, corresponding to the most important categories of foodstuffs. The relative importance in terms of money cost for the different commodities during the different parts of the period is shown by table 17.

Similarly, we have compiled special indices for the main categories of fuel and lighting. As regards fuel, we have assumed that consumption of birchwood and that of pine and fir wood in cubic measure had the relation of 2 to 3 . As this assumption has been applied to both budgets, the two index series will coincide. For the category lighting the determination has been more difficult, since an extremely great change in consumption has occurred. For this reason totally different articles are included in the two budgets. In budget $a$, in which only two articles, tallow and tallow candles, are included, we have assumed similar absolute weights. In budget $b$ are included stearin candles, petroleum and gas. To these the following weights have been given: stearin candles 0.5 kg ., petroleum 8 litres, gas 3 cubic metres. In the case of this last allocation we have derived some guidance from the official statistics.

## Remaining Principal Items in

Cost of Living.
It remains to give an account of the treatment of the remaining main items in a complete budget of the cost of living: the cost of clothing, housing and taxes.

Table r7. Relative Costs of Different Commodities and
(Stated in percentage of the total cost

| Commodities: <br> Wheat and wheat flour | 1831/8840 |  | 1841/8850 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | budget a | budget b | budget 2 | $\begin{gathered} \text { budget } \\ \text { b } \end{gathered}$ |
|  | 2.6 | 7.1 | 2.6 | 7.3 |
| Rye, rye meal and rye flour | 21.7 | 16.0 | 21.7 | 16.3 |
| Barley, barley meal and barley groats | 7.9 | 3.0 | 7.5 | 3.0 |
| Oats and oat groats | 3.1 | 1.4 | 2.9 | 1.3 |
| Peas, dried. | 2.2 | 0.8 | 2.2 | 0.8 |
| Potatoes. | 10.8 | 5.9 | 11.8 | 6.7 |
| Vegetable fordatufta | 48.3 | 34.2 | 48.7 | 35.4 |
| Beef, tresh and salted . | 2.9 | 3.3 | 3.2 | 3.6 |
| Veal, young and fattened calf | 1.4 | 1.6 | 1.4 | 1.8 |
| Mutton, fresk and salted | 2.8 | 1.5 | 2.7 | 1.6 |
| Pork and bacon. | 6.9 | 9.9 | 6.6 | 9.6 |
| Meat | 14.0 | 16.3 | 13.9 | 26.6 |
| Milk, unskimmed and skimmed | 19.9 | 17.0 | 20.3 | 17.8 |
| Butter . | 3.1 | 4.3 | 3.3 | 4.6 |
| Cheese, whole-milk and skim-milk | 1.6 | 2.3 | 1.7 | 1.4 |
| Eggs | 1.1 | 1.8 | 1.1 | 1.8 |
| Dairy produce and egge | 25.7 | 24.4 | 26.4 | 25.6 |
| Herrings, salted. | 3.3 | 2.6 | 3.2 | 2.6 |
| Sprats, salted. | 2.5 | 0.8 | 1.5 | 0.8 |
| Cod, salted. | 1.3 | 1.1 | 1.1 | 1.0 |
| Pinh, anlted | 6.1 | 4.5 | 5.8 | 4.4 |
| Coffee | 1.3 | 4.4 | 1.0 | 3.3 |
| Sugar and syrup . . . . : . . | 4.6 | 15.1 | 4.3 | 13.7 |
| Rice. | - | 1.1 | - | 1.0 |
| Grocerles | 5.9 | 20.6 | 5.2 | 18.0 |
| The total foodstuff budget. | 100 | 100 | 100 | 100 |
| Ment, dalry produce and egge . - | 39.7 | 40.7 | 40.3 | 42.2 |
| Ment, thoh, dairy produce and egre | 45.8 | 45.2 | 46.1 | 46.6 |

Groups of Commodities 'within the two Foodstuff Budgets. for the whole of each foodstuff budget.)

| 1851/1860 |  | 1861/1870 |  | 1871/1880 |  | $\begin{gathered} 188 x / \\ 1890 \end{gathered}$ | $\begin{aligned} & 1891 / \\ & 1900 \end{aligned}$ | $\begin{aligned} & \text { I90x/ } \\ & \text { 1910 } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| budget a | $\underset{\mathrm{b}}{\mathrm{budget}}$ | budget <br> a | budget b | budget a | budget b | budget b | budget <br> b | budget b |
| 2.6 | 7.5 | 2.4 | 7.0 | 2.4 | 6.9 | 6.2 | 5.9 | 5.7 |
| 20.0 | 15.4 | 20.2 | 16.0 | 18.2 | 14.3 | 13.8 | 14.6 | 13.9 |
| 7.8 | 3.1 | 7.8 | 3.1 | 7.6 | 3.0 | 2.8 | 2.9 | 2.9 |
| 3.2 | 1.4 | 3.0 | 1.4 | 3.0 | 1.4 | 1.2 | 1.2 | 1.2 |
| 2.3 | 0.9 | 2.3 | 0.9 | 2.3 | 0.9 | 0.9 | 0.9 | 1.0 |
| 11.6 | 6.7 | 12.5 | 7.3 | 12.3 | 7.2 | 7.1 | 8.6 | 8.2 |
| 47.5 | 35.0 | 48.2 | 35.7 | 45.8 | 33.7 | $3 \pm .0$ | 34.1 | 38.9 |
| 3.5 | 41 | 3.8 | 4.5 | 4.4 | 5.2 | 5.7 | 6.0 | 6.4 |
| 1.7 | 2.2 | 1.4 | 1.8 | 1.6 | 2.1 | 2.4 | 2.6 | 3.0 |
| 3.2 | 1.8 | 3.2 | 1.9 | 3.8 | 2.2 | 2.5 | 2.8 | 3.3 |
| 7.0 | 10.6 | 7.3 | 11.1 | 7.5 | 11.3 | 12.8 | 12.4 | 13.7 |
| 13.4 | 18.7 | 15.7 | 19.3 | 17.3 | 20.8 | 22.4 | 23.8 | 26.4 |
| 20.2 | 18.3 | 20.3 | $\underline{8.4}$ | 30.0 | 17.9 | 18.3 | 17.4 | 18.2 |
| 3.5 | 5.0 | 3.6 | 5.2 | 4.1 | 6.1 | 6.7 | 6.9 | 6.9 |
| 1.9 | 1.5 | 1.8 | 1.4 | 2.0 | 1.6 | 1.6 | 1.6 | 1.7 |
| 8.0 | 8.8 | 1.0 | 1.8 | 1.2 | 2.1 | 2.2 | 23 | 2.6 |
| 26.6 | 26.6 | 26.7 | 26.8 | 27.3 | 27.7 | 28.8 | 28.3 | 29.4 |
| 3.6 | 2.9 | 3.1 | 2.6 | 3.7 | 3.1 | 3.1 | 2.3 | 2.3 |
| 1.4 | 0.8 | 1.1 | 0.6 | 1.1 | 0.7 | 0.6 | 0.5 | 0.6 |
| 1. 1 | $x .0$ | 1.0 | 0.9 | 0.9 | 0.8 | 1.0 | 0.9 | 0.9 |
| 6.1 | 4.7 | 5.2 | 4.1 | 5.7 | 4.6 | 4.7 | 3.7 | 3.8 |
| 0.9 | 3.2 | 1.0 | 3.6 | 1.2 | 4.1 | 3.7 | 3.8 | 2.3 |
| 3.5 | 12.0 | 3.2 | 10.0 | 2.7 | 8.7 | 8.0 | 5.9 | 4.9 |
| - | 0.8 | - | 0.5 | - | 0.4 | 0.4 | 0.4 | 0.3 |
| 4.4 | 15.0 | 4.2 | 14.1 | 3.9 | 13.2 | 22.1 | 10.1 | 7.5 |
| 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 42.0 | 45.3 | 42.4 | 46.1 | 44.6 | 48.5 | 51.2 | 58.1 | 58.8 |
| 48.1 | 30.0 | 47.6 | 50.2 | 50.3 | 53.1 | 55.9 | 35.8 | 50.6 |

As regards the first two, the index numbers published in the tables are unhappily very poor. We include them only because they must in any case be much better than the off-hand estimate to which the reader would otherwise be forced if he desires a general index, and which would be necessary if, for example, he wishes to use the index for converting money wages into real wages. We have not in the price tables accounted for any specified price series in these two groups, because we have not been able, from the available material, to calculate prices sufficiently reliable to be of any real interest per se.

## Clothing.

The material for our calculations of the cost of clothing index consists of:
I. Markegaing Scales (1830-1913) from a number of counties for flax, linen thread, linen yarn, linen, wool and homespun.
2. Contract prices from an orphanage (Stockholms allmänna barnhus, 1830-1847) for tick drill, linings, fine and medium linen, striped linen, grey cloth, Scotch cloth, striped woollens, gray homespun, leather soles and dubbed leather.
3. Contract prices from the Naval Administration in Stockholm (Marinförvalıningen I841-1865) for .blankets, woollen sweaters, long white woollen stockings, cotton stockings, white linen shirts, blue woollen shirts, dubbed leather shoes, cloth of hards, baize, sacking, linings, dark blue face cloth, dark grey homespun, dark blue homespun, cotton yarn, leather soles.
4. Contract prices from the Naval Administration in Stockholm (Marinförvaltningen 1876-1913) for woollen vests, woollen sweaters, cloth trousers, long white woollen stockings, short white woollen stockings, short grey woollen stockings, canvas trousers, linen shirts, black ties, handmade shoes, handmade boots, grey calico, tick, baize, canvas, dark blue face cloth, dark blue army clothing, linen cloth, leather soles.

The above prices are for specified qualities, as a rule in accordance with fixed regulations. Sometimes no purchases were made for a year or sometimes several years, in which case we have made interpolations with the help of prices of other similar goods.

The final index has been constructed in the following manner. A simple mathematical average was calculated for the six commodities included in the markeging scales (index r). By weighing the above-mentioned groups of contract prices approximately corresponding to the relative weight of the various commodities in the clothing budget an aggregative index was calculated for each of the sources 2-4 (indices 2-4). These different index series were reduced to a comparable basis by equating the average for each of the series 2-4 with the average for corresponding periods of index I , which in its turn is given with the average figure for the decade $186 \mathrm{x}-\mathrm{r} 870=100$. (Table 18 ).

Index series 2 and 3 correspond fairly well with index series $x$, whilst index series 4 , on the other hand, diverges more from I . The index series published in the final index table has been obtained by a simple graphic construction.

## Housing.

It is a common experience derived from almost all earlier investigations into the cost of living that one of the greatest difficulties is to obtain information concerning the cost of housing. Partly the difficulty is to obtain any information at all as to the amount of rent paid and partly the quality of housing accommodation has in the course of time undergone radical changes. In an historical investigation such as this it is usually impossible to determine precisely the kind of dwelling for which rent has been paid, even if any information as to the amount of the rent is available. In addition, a considerable part of the working classes in Sweden either owned its own dwellings or occupied houses belonging to their employer as a part of their total wages. Of course, they nevertheless bore the "cost" of their housing in the economic sense, but these costs are naturally more difficult

Table 18 Compilation of the Coat of Clothing Index．
（See Pp．124－125．）

| Year | Index no． 1 | Index no． 2 | Indez no． 3 | Index no． 4 | Finally cal－ culated cost of clothing index |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1830 | 78.2 | 81.0 | － | － |  |
| 1831 | 82.8 | 81.9 | － | － | 82 |
| 1832 | 85.1 | 90.2 | － | － | 87 |
| 1833 | 92.0 | 90.9 | － | － | 91 |
| 1834 | 93．1 | 93.7 | － | － | 93 |
| 1835 | 87.9 | 95.3 | － | － | 94 |
| 1836 | 89.1 | 86.7 |  | － | 88 |
| 1837 | 87.9 | 84.1 | － | － | 86 |
| 1838 | 86.2 | 80.9 | － | － | 85 |
| 1839 | 85.6 | 83.5 | 二 | － | 84 |
| 1840 | 85.6 | 83.8 | － |  | 84 |
| 1831－40 | 87.5 | 87.1 | － | － | 87 |
| 1841 | 85.1 | 85.9 | 80.5 | － | 84 |
| 1842 | 85.1 | 87.7 | 79.3 | － | 83 |
| 1843 | 83.9 | 96．1 | 78.9 | － | 82 |
| 1844 | 81.0 | 77．8 | 78.3 | － | 80 |
| 1845 | 81.0 | 82.8 | 73.0 | － | 79 |
| 1846 | 81.6 | 74.5 | 72.5 | － | 78 |
| 1847 | 79.9 | 74.5 | 75.0 | 二 | 78 |
| 1848 | 79.3 |  | 79.9 | 二 | 78 |
| 1849 | 79.3 80.5 | － | 83.2 78.0 | 二 | 79 79 |
| 1841－50 | 81.6 | － | 77.9 | － | 80 |
| 1851 | 80.5 | － | 75.7 | － | 79 |
| 1852 | 80.5 | － | 76.5 | － | 80 |
| 1853 | 83.9 | － | 83.8 | － | 83 |
| 1854 | 88.5 | － | 91.2 | － | 89 |
| 1855 | 93.7 | － | 101.4 | － | 95 |
| 1856 | 97．1 | － | 101， | 二 | 9 |
| 1857 1858 | 98.3 | 二 | 120 | 二 | 99 |
| 1859 | 92.5 | － | 92.9 | － | 93 |
| 1860 | 90.8 | － | 97.7 | － | 94 |
| 1851－60 | 89.7 | － |  | － | 91 |
| 1861 | 93.1 | － | 103.2 | － | 96 |
| 1862 | 101.7 | － | － | － | 101 |
| 1863 | 106.3 | － | － | － | 106 |
| 1864 | 102.3 | － | 111.3 | － | 105 |
| 1865 | 102.3 | － | 110.0 | － | 104 |
| 1866 | 102.3 | － | － | － | 103 |
| 1867 | 101.7 | － | － | － | 102 |
| 1868 | 100.6 | － | 二 | 二 | 101 |
| 1869 | 96.0 | － | 二 | 二 | 96 |
| $\xrightarrow{1870}$ 1861－70 | 94－3 | 二 | － | 二 | 95 100 |


| Year | Index no．I | Index no． 2 | Index no． 3 | Index no． 4 | Finally cal－ culated cost of clothing index |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1871 | 96.0 | － | － | － | 96 |
| 1872 | 100.0 | － | － | － | 100 |
| 1873 | 104.6 | － | － |  | 105 |
| 1874 | 106.9 |  | － | － | 107 |
| 1875 1876 | 105.7 |  | － | 1079 | 107 |
| 1876 1877 | 106.9 105.7 | 二 | 二 | 107.9 101.8 | 107 104 |
| 1878 | 102.9 | $\dot{-}$ | － | 96.6 | 104 |
| 1879 | 98.3 | － | － | 92.9 | 97 |
| 1880 | 99.4 | － | － | 92.5 | 97 |
| 1871－80 | 102.6 | － | － |  | 102 |
| 1881 | 100.0 | － | － | 91.9 | 98 |
| 1882 | 101.7 | － | － | 92.4 | 99 |
| 1883 | 101.1 | 二 |  | 93.4 | 100 |
| 1884 1885 | 100.6 96.6 | － |  | 88.9 88.7 | ＊97 |
| 1885 | 96.6 95.4 | 二 | 二 | 88.7 87.6 | 94 93 |
| 1887 | 93.1 | － | － | 90.2 | 93 |
| 1888 | 92.5 | － | － | 9 9 .4 | 93 |
| 1889 | 92.0 | － | －1 | 96.3 | 94 |
| 1890 ${ }_{1881}$ | 9 9 .4 |  | － | 94.5 | 94 |
| 1861－90 | 96.4 | － | － | 91.5 | 96 |
| 1891 | 90.8 | － | － | 97.2 | 94 |
| 1892 | 89.7 | － | － | 88.1 | 90 |
| 1893 | 87.9 | 二 | 二 | 90.9 | 89 |
| 1894 1895 | 87.4 87.4 | － | 二 | 90.9 | 89 |
| 1896 | 87.4 86.8 | 二 | 二 | 95.3 90.7 | 89 89 |
| 1897 | 87.9 | － | － | $9 \mathrm{gr.1}$ | 90 |
| 1898 | 88.5 | － | － | 90.2 | 90. |
| 8899 | 90.8 | － | － | 96.0 | 92 |
| 1900. | 90.8 | － | － | 95.9 | 92 |
| 1891－00 | 88.8 | － | － | 92.6 | 90 |
| 190： | 89.7 | － | － | 94.8 |  |
| 1902 | 89.7 | － | － | 95.0 | 91 |
| 1903 | 89.1 89.7 | 二 | － | 100.3 | 92 |
| 1904 | 89.7 89.7 | 二 | 二 | 99.5 | 93 |
| 1906 | 92.5 | － | － | － | 96 |
| 1907 | 96.6 | － | － |  | 97 |
| 1908 | 98.9 | － | － | － | 98 |
| 1909 | 99.4 | － | $\cdots$ | － | 99 |
| 1910 ．． | － 100.6 | － | － | － | 100 |
| 1901－10． | 93.7 | － | － | － | 95 |
| 1911 ．． | 100.6 | － | － | $\checkmark$ | 101 |
| ${ }_{1913}^{1912} \ldots$ | 104.6 | － | 二 | 二 | 102 |
| 1913 ••• | 106.9 |  | － | － | 103 |

to observe statistically. And even in the exceptional cases where it is possible to obtain information as to these costs (for example where the cost is debited to the worker in the employers' books, and is thus known to us) we must regard this book-keeper's cost of housing with the greatest suspicion. Frequently it was no doubt determined arbitrarily or at best on traditional grounds. Whether it was fixed. higher or lower than the market rate did not affect the interests of either party so long as the other conditions of the agreement were adjusted correspondingly.

For these reasons we have been compelled, after many efforts, to abandon hope of collecting direct information as to the cost of housing. The only exception is the Stockholm list of lodgings to let, of which more will be said later.

We have instead endeavoured to determine the development of the cost of building, and to get an index of this development which could fairly be regarded as an approximate index of rents. Full parallelism between these two lines of development would presuppose free competition, in the sense of perfect mobility of the capital invested in houses. It would also pre-suppose a stable rate of interest. Both suppositions are, of course, unreal, the former more so than the latter, but as our estimates of the development of the cost of building in themselves must be considered somewhat unreliable and as, moreover, our possibilities of judging the effects of the imperfect mobility of capital invested in houses are necessarily very slight, we have not wished to give to our calculations an appearance of reliability which they do not in fact possess by manipulating in any way our cost of building index with the intention of transferring it into a real index of rents. We simply leave the former as an approximation to the latter.

Our material for determining the development of building costs has been derived primarily from the minutes of the surveys which must be made according to prescribed regulation on a change of lessee on the so-called Gustavian estate and other lands belonging to Uppsala University. ${ }^{1}$

[^12]The lessees of these lands, situated mostly in Stockholm county, Uppsala county and some in Västmanland county, were obliged by covenant in a prescribed manner to maintain and build the premises necessary to the leasehold, and on a change of tenant it was determined to what extent the previous tenant had built too little or too much. The -legal obligations which had to be satisfied related therefore primarily to the old and the new tenant between themselves. Specially appointed valuers, who, like the interested parties, usually belonged to the agricultural class, then estimated the necessary rebuilding and new construction, and this estimate was made in such a manner that on the one hand labour and the necessary materials were estimated, and on the other hand the prices of such labour and materials. The reason why we have been unable to obtain similar information from other sources is that elsewhere (f. e. in Crown leases) the estimate was as a rule only for a lump sum, instead of the detailed specification which discloses prices per unit.

From the above surveys we are able to note prices of a number of commodities and classes of labour, of which the following have been of use in our calculation, both on account of their great importance in the cost of building, and because the prices are more regularly given: timber, poles, boards, linings, lime, bricks, roof tiles, bricklayers' wages, repairing joiners' wages, hands' wages, cost of carman with horse and cart.

The price material has been treated as follows: first the material was divided upin two groups according as leaseholds were situated in Uppsala, Stockholm and in the part of Vastmanland county which belonged to the old landskap Uppland, or were situated in the other part of Vasstmanland county, which belonged to the lardskap Västmanland. After this division into two groups, the groups may be regarded as fairly homogeneous and they relate to more or less uniform districts. Thereupon, starting from all available price data, special unit prices were calculated, by a simple average calculation, for every group for each commodity and year. The first group includes the majority of
the leaseholds, and the prices calculated for the excluded part of Västmanland county have only been used for purposes of interpolation.

It may be mentioned that the existing primary material is of course very unevenly distributed in time. During the first three decades of our period it is very scanty, often consisting of not more than three or four price statements. and sometimes still less per year per commodity. But the material becomes more and more plentiful during the last decades and then often contains as many as twenty or thirty statements.

These calculated average prices have been combined in two index numbers, based on two different budgets $A$ and $B$. These two budgets, which have been prepared by a building expert, represent approximately as follows: $A$ budgett, the type of building for working class dwellings in earlier times (beginning and middle of 19th century) and $B$-budget, the type of building at the end of the rgth and beginning of the 20th century. From the markegaing scales for the three counties in question we have also been able to obtain prices of logs and boards of a certain quality and of ordinary agricultural labour. By weighing together 200 $\operatorname{logs}, 1,200$ boards and 200 labourer's working days we have obtained a third index (C). (The markegaing prices have also been of use, though to a less extent, in checking the statements relating to the Gustavian estate, and also for purposes of interpolation.)

As will be seen from table 19, the three index numbers show a great relative conformity in their trends. Index C naturally diverges more from the two others, which are based on the same price material, than the latter among themselves. In the final index table we publish two cost of building indices, of which one is an average of $A$ and $C$, corresponding to our budget $a$ and the other of $B$ and $C$ corresponding to our budget $b$. For these average calculations $A$ and $B$ weigh twice as much as $C$.

It may be mentioned that these final index-numbers of course have their defects as elements in the cost of living indices for the whole kingdom, not only because the price
material is not statistically of the first order and because it does not relate directly to what is to be measured, the cost of housing, but also because it only relates to a certain part of the country, the agricultural and forest tracts immediately north of Stockholm. These districts may, however, be regarded as fairly representative. The index is obviously most suitable for a perspective of the development of building costs in rural districts. For urban districts it would sometimes be misleading. It is especially in regard to housing costs that the differences in the cost of living are great as between town and country. The higher urban site values, which have been rising, especially in the last three decades, constitute the most important item in these differences. In order to give some idea of the relative magnitude of the difference, we have extracted in table $T$ the rent per room from the Stockholm list of houses to let. $1^{\text { }}$ (Column 7 indicates the relative change. $1883=112.2 \stackrel{\prime}{=}$ the index figure for the same year of the final cost of building index $b$ in column 5.). In the great majority of the smaller towns and rural industrial communities of Sweden the development of the cost of housing probably approximated more closely to those in agricultural areas than to the rents represented in the Stockholm list, which relates to the period during which Stockholm developed into a great city, and which naturally shows signs both of the peculiar type of business cycles in the building trade in a growing metropolis and of the rising value of building land.

## Taxes.

Finally it may be noted that the item of "taxes" is entirely excluded from our cost of living budget. It seems to be the common opinion that provision is to be made in the budget for taxes and that the corresponding price factor of this item should be represented by the absolute amount of direct taxes. In order to determine this price term it is

[^13]Table s. Compliation of the Cost of Building Index.
(See pp. 128-131.)

|  | I | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year | $\underset{\boldsymbol{A}}{\text { Index }}$ | $\begin{gathered} \text { Index } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Index } \\ \mathbf{C} \end{gathered}$ | Finally calculated |  | Rent per room (Stockholm List of Houses to let) |  |
|  |  |  |  | index a | index b | Sw. kr. | $\begin{gathered} 188_{3}= \\ 112.2 \end{gathered}$ |
| 1830 | 70.7 | 78.2 | 64.9 | 68.8 | 73.7 | - | - |
| 1831 | 73.0 | 80.4 | 66.9 | 71.0 | 75.9 |  |  |
| 1832 | 75.0 | 81.7 | 68.9 | 73.0 | 77.4 | - |  |
| 1833 | 89.6 | 82.6 | 72.7 | 84.0 | 79.3 |  |  |
| 1834 | 80.3 | 90.2 | 73.7 | 78.1 | 84.7 | - |  |
| 1835 | 81.8 | 91.: | 73.7 | 79. ${ }^{\text {7 }}$ | 85.3 |  |  |
| 1836 1837 | 82.9 82.5 8. | 92.2 | 73.7 73 73 | 79.8 79.6 | 86.0 86.2 |  |  |
| 1838 | 83.7 | 93.2 | 73.75 | 88.4 | 86.7 | - | - |
| 1839 | 84.9 | 93.9 | 73.7 | 81.2 | 87.2 | - |  |
| 1840 | 84.3 | 93.5 | 73.7 | 80.8 | 86.9 |  |  |
| 18931-40 | $8 \mathrm{8}$. . | 89.1 | 72.4 | 78.7 | 83.5 | - |  |
| 1841 | 84.1 | 94.1 | 74.3 | '80.8 | 87.5 | - | - |
| 1842 | 80.8 | 90.8 | 76.2 | 79.3 | 85.9 |  |  |
| 1843 | 74.6 | 91.7 | 76.2 | 75.: | 86.5 | - |  |
| 1844 | 74.5 | 76.6 | 75.3 | 74.8 | 76.2 | - |  |
| 1845 1846 | 72.0 | 81.4 | 67.3 | 70.4 | 76.7 | - |  |
| 1846 1847 | 70.6 | 75.9 | 70.8 | 70.7 | 74.2 |  |  |
| 1847 | 71.5 81.2 | 78.7 91.0 | 73.7 76.9 | 72.2 79.8 | 77.0 86.3 | 二 |  |
| 1849 | 84.5 | 92.8 | 80.1 | 83.0 | 88.6 |  | - |
| 1850 | 77.2 | 81.3 | 80.1 | 78.2 | 80.9 | - | - |
| 1841-50 | 77.1 | 85.5 | 75.1 | 76.4 | 82.0 | - | - |
| 1851 | 78.4 | 90.3 | 80.1 | 79.0 | 86.9 | - | - |
| 1852 | 78.7 | 92.7 | 80.1 | 79.2 | 88.5 |  |  |
| 1853 | 83.0 | 92.7 | 82.3 | 82.8 | 89.2 |  |  |
| 1854 | 87.6 | 102.9 | 89.2 | 88.1 | 98.3 | - |  |
| 1855 1856 | 89.4 | 95: | 104.0 | 94.3 | 98.1 |  |  |
| 1856 1857 | 94.9 | 96.2 | 114.7 131.9 | 101.3 108.5 | 102.2 |  |  |
| 1857 1858 | 96.8 98.5 | 97.7 99.3 | 131.9 110.6 | 108.5 102.5 | 109.1 <br> 103.1 <br> 10. |  |  |
| 1859 | 97.9 | 100.4 | 113.2 | 103.0 | 104.7 |  | - |
| 1860 | 100.5 | 103.2 | 115.2 | 105.4 | 107.1 |  |  |
| 1851-60 | 90.6 | 97.1 | 102.1 | 94.4 | 98.8 |  |  |
| 1861 | 98.3 | 94.7 | 111.8 | 102.8 | 100.4 |  | - |
| 1862 | 106.9 | 106.1 | 107.4 | 107.1 | 106.5 |  |  |
| 1863 | 102.9 | 101.2 | 104.7 | 103.5 | 102.4 |  |  |
| 1864 | 100.2 | 101. 5 | 101.2 | 100.5 | 101.4 |  |  |
| 1865 | 106.6 | 111.5 | 101.4 | 104.9 | 108.1 |  |  |
| 1866 | 100.0 | 99.9 | 100.9 | 100.3 | 100.2 | - | - |
| 1867 | 96.7 | 96.7 | 97.0 | 96.8 | 96.8 |  | - |
| 1868 | 95.2 | 95.2 | 91.6 | 94.0 | 94.0 | - | - |
| 1869 | 97.1 | 96.6 | 90.4 | 94.9 | 94.5 |  |  |
| ${ }_{1861}^{187}{ }^{\circ}$ | 96.2 | 96.3 100.0 | 93.7 | 95.4 100.0 | 95.4 100.0 |  | 二 |


| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Index } \\ \mathbf{A} \end{gathered}$ | $\left.\right\|_{B} ^{\text {Index }}$ | $\stackrel{\text { Index }}{\text { C }}$ | Finally calculated |  | Rent per room (Stockholm List of Houses to let) |  |
|  |  |  |  | index a | index b | Sw. kr. | $\begin{gathered} 1883= \\ 1 \times 2,2 \end{gathered}$ |
| 1871 | 100.9 | 99.9 | 98.5 | 100.1 | 99.4 |  |  |
| 1872 | 100.7 | 99.7 | 109.9 | 103.8 | 103.1 |  |  |
| 1873 | 116.0 | 116.4 | 134.3 | 122.3 | 122.4 |  |  |
| 1874 | 110.0 | 101.2 | 134.0 | 118.0 | 112.1 |  |  |
| 1875 1876 | 117.6 | 116.8 | 130.2 | 121.8 | 121.3 |  |  |
| 1876 1877 | 124.2 116.1 | 129.5 | 129.2 13.8 | 125.9 | 129.4 |  |  |
| 1878 | 168.1 | 113.8 | 131.8 116.7 | 121.3 | 119.3 1118 |  |  |
| 1879 | 104.3 | 105.3 | 108.6 | 105.7 | 106.4 | - |  |
| 1880 | 105.0 | 105.3 | 109.8 | 105.3 | 106.8 |  |  |
| 1871 | 110.1 | 109.6 | 120.3 | 183.5 | 113.2 |  |  |
| 1881 | 102.7 | 105.3 | 110.9 | - | 107.2 |  |  |
| 1882 | 101.9 | 104.6 | 115.3 | - | 108.2 |  |  |
| 1883 | 107.7 | 111.1 | 114.5 | , - | 112.2 | $165^{\circ}$ | 112.2 |
| 1884 | 110.4 | 110.9 | 114.6 | - | 112.8 | 171 | 116.3 |
| 1885 | 112.3 | 109.3 | 110.5 |  | 109.7 | 174 | 118.3 |
| 1887 | 110.9 | 111.9 | 101.4 | , - | 108.4 | 165 | 112.3 |
| 1888 | 109.1 114.3 | 1113.4 | 93.4 99.7 | 二 | 105.0 | 154 | 104.7 |
| 1889 | 113.5 | 111.7 | 194.3 | 二 | 108.8 | 147 | 100.0 |
| 1890 | 115.9 | 114.3 | 106.1 |  | 111.6 | 139 | 95.4 94.5 |
| 188:-90 | 109.9 | 110.3 | 107.1 | - | 109.2 |  |  |
| 1891 | 113.8 | 110.4 | 105.6 | - | 188.8 | 138 | 93.8 |
| 1892 | 109.4 | 107.3 | 106.3 | - | 107.0 | 137 | 93.2 |
| 1893 | 106.9 | 106.2 | 106.3 | - | 106.2 | 136 | 92.5 |
| 1894 | 104.1 | 99.4 | 102.6 |  | 100.4 | 140 | 95.z |
| 1895 1896 | 110.3 | 119.2 | 102.5 | - | 113.6 | 147 | 100.0 |
| 1897 | 1115.8 | 122.6 | 109.7 150.6 |  | 117.2 | 157 | 106.8 |
| 4898 | 118.1 | 124.5 | 110.6 |  | 118.6 | 157 | 106.8 |
| 1899 | 125.7 | 129.6 | 133.6 |  | 123.6 130.9 | 176 | 119.7 |
| 1900 | 124.0 | 122.3 | 129.1 |  | 130.9 124.6 | $\begin{array}{r}199 \\ 203 \\ \hline 1\end{array}$ | 135.3 |
| 1891-00 | 114.1 | 116.3 | 112.8 | - | 115.1 | 159 1 | 108.1 |
| 1901 | 113.3 | 118.5 | 108.0 | - | 115.0 | 203 | 138.0 |
| 1902 | 117.9 | 119.0 | 112.9 | - | 117.9 | 194 | 131.9 |
| 1903 | 135.2 | 146.0 | 114.4 |  | 135.5 | 199 | 135.3 |
| 1904 | 130.8 | 133.2 | 114.8 | - | 127.1 | 204 | 138.7 |
| 1905 | 137.6 | 148.4 | 116.8 122.6 | - | 137.9 | 207 | 140.8 |
| 1907 | 155.7 | 165.6 | 134.1 |  | 139.2 155.1 | 213 235 235 | 144.8 159.8 |
| ${ }_{1}^{1908}$ | 244.9 | 151.2 | 131.3 | - | 144.6 | 257 | 174.8 |
| 1909 | 152.2 | 155.9 | 131.4 |  | 147.7 | 258 | 175.5 |
| ${ }^{1910}$ 901-10 | 150.7 137.9 | 159.3 144 | 133.6 | - | 150.7 137.0 | 249 | 169.3 |
|  |  |  |  |  | 137.0 | 222 | 150.9 |
| 1911 | 145.6 | 150.9 | 131.2 |  | 144.3 | 244 | 165.9 |
| ${ }_{1}^{1912}$ | 159.1 162.0 | 171.1 | 137.4 |  | 159.8 | 253 | 172.0 |
|  |  | 170.2 | 139.0 |  | 159.8 | 248 | 168.6 |

necessary to determine in a conventional manner the features of a representative family which are relevant from the taxation point of view (amount of income, number of children etc.) and then to ascertain from the finance laws the amount which a family so constituted would pay. This presents no difficulties, and it would have been easy to adopt this method in our investigation. The procedure implies that if the rate of taxation rises then the amount of the cost of this item in the budget must also be raised in the same degree, and conversely if the rate of taxation is lowered. Now it is true that this budget item of taxes only represents a part of the payments which citizens make in 'exchange for the advantages they derive from the public services, i. e. that part which is covered by direct taxation. But indirect taxation is already included in the composition of the budget though not under its proper heading, since its effect is to raise the price of other commodities; except insofar, it may be added, as their effect is not instead to lower money income. In this second case they are, of course, not included in the budget of the final taxpayer but on the other hand a corresponding part of the nominal income may be said to be also excluded in calculations of real income, since in such case a lower nominal income is calculated than in the case of no taxation with such results as to the income.

Let us for the sake of simplicity assume that all the public services are paid for by direct taxation and that there are no indirect taxes. The tax item in the budget would then correspond to all the payments by the citizen for this purpose. Underlying this procedure there would be the assumption that the taxes may be regarded as the price paid by the citizen for the sum total of commodities and services which he enjoys from the public services. Even if this assumption is in itself an unreal analogy from the price formation of free competition to public finance (the "principle of benefit" in the science of finance), yet from the point of view of the cost of living we might be prepared to accept the assumption as reasonable. But it would be necessary to make the further assumption that the sum of commodi-
ties and services paid for by taxes remains qualitatively and quantitatively the same year after year. In the calculation of every price index there exists the fundamental premise that the units of quantity adopted in the budget may be regarded as unchanged both in quantity and quality at the two points of time between which a comparison is made. This second assumption is quite untenable, especially for the period of time included in our enquiry. In particular, it was during the latter half of our period that the public economy developed in the modern form. And what is worse, there is no possibility of calculating even an approximate term of correction which would represent reasonably the qualitative and quantitative changes which have actually occurred in the return to the citizen for the taxes he pays. It need scarcely be mentioned that this difficulty is the same for indirect taxation, i. e. that part of total taxation which is accounted for, not by an item in the budget but indirectly by higher prices of commodities (or is excluded in the case of the effect being lower nominal income). As may be shown, the assumption of unchanged quality and quantity in the public services still remains and underlies the method.

From this point of view it might appear best to exclude direct taxes altogether from the budget and to readjust commodity prices to the level they would have in the case of no indirect taxation. The consequence would further be that in calculations of real income one would have to subtract from the total money income an amount corresponding to payments of taxes. ${ }^{1}$ Everything paid by the citizen for public services and all the benefits which he derives from them would then be excluded from the calculations of the cost of living and of real wages. The method is of course only a makeshift, for it would indeed be advantageous to include even this

[^14]phase of economic life in our calculations. The reason for not doing so is merely that there is no rational means of paying proper regard to the quantitative and qualitative changes in the utilities and services which are obtained for the taxes paid. It is nevertheless of importance to indicate the problem. Its existence discloses a new side of economic life which is not properly accounted for by investigations into the cost of living and real income. The public services are a part of all the other advantages and conveniences which a person derives from his environment. They are moreover extremely important and have changed in character and amount vastly during the past century. If we wish to say anything of the change of economic and social standard of the Swedish worker during this period, we must not forget the immense improvement in the moral, intellectual and material level which has followed the development of primary education, poor law administration and general social policy. But it would certainly be dangerous to try to incorporate these important considerations by means of artificial, more or less unfounded, manipulations of the index of the cost of living or of real wages which are statistical instruments by necessity confined within rigid technical boundaries. It seems to be more profitable to present them as reservations or corrections.

Unfortunately, however, it is not possible to accomplish in a perfectly rational way this logical separation of taxes and public finance from our calculations. One consequence is, of course, that we ought to eradicate also the effects of indirect taxation from our calculations. This in its turn would imply the possibility of more or less correctly computing the incidence of indirect taxation, which in the present state of knowledge we are in fact unable to do.

Our method has therefore been to allow the actual prices of commodities to rembin (prices in which the indirect effects of taxation have operated) whilst at the same time not including direct taxes as an item in the budget. The method, as has been pointed out, does not lay claim to a rational solution of the problem. The only rational methods are: either ( I ) to include direct taxation in the budget,
whilst making due allowance for qualitative and quantitative changes in the conveniences and services obtained by the citizens for direct and indirect taxes paid, or (2) to exclude both direct and indirect taxation from the budget, whilst at the same time an amount equal to the total amount of the taxes is subtracted from money income when the real income is calculated. These rational methods are, however, as has been said, impossible in practice. Our problem has been merely: to what extent can we without making estimates of the said qualitative and quantitative changes (necessary for the application of the first one of the above-mentioned rational methods) and without seeking to eradicate from our calculations the indirect effects of taxation on price formation (necessary for the application of the second method), achieve a better approximation by including direct taxes as an item in the budget or by entirely excluding direct taxes from the budget? In selecting the latter of these alternatives we have had in mind, among other things, that the improvement in quality and quantity of the public services, at least during the last decades, has proceeded contemporaneously with a shifting of the weight of taxation from indirect to direct. By selecting this alternative we may expect to get a better approximation, since we then have two counteracting tendencies which should to some extent cancel each other out. 1 This, however, is somewhat poor comfort, since we cannot form any very definite opinion of the relative strength of the two tendencies, especially as the problem of the incidence of taxation is still for the most part an unsolved riddle. In any case there

[^15]is no reason to suppose, that we should obtain a better approximation by including direct taxes in our budget.

## Calculation of General Index.

We have thus arrived at special indices for the following items: foodstuffs, wood, lighting, clothing and housing (the last represented by the cost of building). All of these special indices with the exception of that for clothing are presented in two variants, of which one is for the first half of our period and the other for the second half (for wood the two coincide, as we have taken the same weight number for each).

In order to combine these special indices in a general index we have used the following relative weights:


Further, we have assumed the same development of prices for the costs not included in our budget as for the specified items in the budget and therefore allotted the percentage for the costs not included between the specified items in proportion to their own weights. Finally, we have multiplied the relative special index figures given in table A pp. 194 et seq., columns 12, 13, 14, 15 and 16 by these calculated percentages and in this way compiled the general cost-of-living index figures in column 17. The weights are of course to some extent uncertain, but should be approximately correct.

The $b$ variants for lighting only go back as far as 1865. The commodities specified in budget $b$ were scarcely consumed earlier. In this group petroleum naturally plays the most important rôle and the price of this commodity shows a tremendous fall. The same applies, in a less degree, to the two other articles in this group, stearin candles and

## Table 20. Classification of the Commodities in the Cost of Living Tables.



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gas. In proportion as the price fell, consumption increased enormously. The use of a fixed weight for this important item in the budget has therefore been difficult to maintain and as it was also desirable to take index $b$ as far back as r830, we have permitted ourselves to depart from our general plan. For common use with both general indices, we have calculated for the period 1867 - 1890 an arithmetical average figure between the two special indices $a$ and $b$ for lighting, by the use of a variable weight, in such a way that for r830-r866 index $a$ weights $100 \%$ and index $b$ $0 \%$, for year 1867 a $96 \%$ and $b 4 \%$, 1868 a $92 \%$ and $b$ $8 \%$ etc., 1890 a $4 \%$ and $b 96 \%$, 1891-1913 $a 0 \%$ and $b$ $100 \%$. Without entering further into the assumptions on which these calculations are based, we think it probable that this new average index reflects developments better than the two special index series separately. The lighting item is moreover comparatively unimportant in its relation to the calculation of the general index.

The whole of this attempt to construct general cost of living indices from our special indices is, however, only tentative, and it is a simple matter for anybody to make his own calculations as desired.

## Comments.

In conclusion a few comments may be made upon the movements of the cost of living indices published in Table $A$, columns 17 a and $b$. It is obvious that the indices, especially from the great boom in the 'fifties, reveal very considerable annual variations reflecting the business cycles. The movement of the cost of living indices seems sometimes to show a certain time lag, as for instance in the boom period in the 'seventies.

For several reasons it is quite probable that the indices give a somewhat exaggerated picture of the annual variations. It is possible that the various costs not included in the budgets, the "extras", do not vary within such wide limits as does the average of the costs included. Further it has to be remembered that the indices are based upon

## Chart 2. Comparison with Amark' Index-Series,



Chart \& Cost of Living Index a Analysed.


Chart s. Cost of Living Index $b$ Analyaed.


Xadani mninit ho isos

Etr
semi-wholesale prices while, in fact, at least during some decades towards the end of the period, the cost of living for most of the workers was determined by retail prices, which may be supposed to have moved in a more slow and smooth way, During the first half or more of the period, on the other hand, the semi-wholesale prices are certainly more significant for the actual cost of living.

The most conspicuous thing to be noted in commenting upon our general cost of living indices is the fact that they, both in long and short period fluctuations, move so closely parallel to the special indices for foodstuffs. The indices for foodstuffs might perhaps be said to have slightly greater latitudes of annual variations than the general cost of living indices, but otherwise the agreement is striking. To a large extent this is, of course, due to the fact that foodstuffs in both budgets, and especially in the earlier one, are such a dominating item in total budgets.

For the rest, the remarkable agreement between the general indices and the special foodstuff indices is explained by the circumstance that the other cost-items in the general budgets seem to differ between themselves as to their typical scheme of movement in such a way that the differences to a great extent neutralize each other, so that the average conforms rather closely with that of the foodstuff indices. Thus the prices included in the item for lighting shows during the whole period a falling secular trend compared with the foodstuff indices and the same is true, though to a less marked degree, of clothing during the latter part of the period. Fuel, on the other hand, nearly all the time becomes more and more expensive in comparison with foodstuffs, as also housing, during the latter part of the period. While, furthermore, these last mentioned cost items with a relatively upward trend display on the whole rather more pronounced business cycle variations than foodstuffs, the cost items for lighting and clothing seem to be less affected by the cyclical influences.

So much concerning the general cost of living indices. Within the foodstuffs' index it is remarkable how the item for meat, dairy produce and eggs become relatively more

Chart 6. Poodatuffe Price Index analysed.


Sti $\quad$ xtani onlait yo isoo

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Chart \$. Fóddatuffe Price Index 6 Analysed.

expensive, while groceries become cheaper all the time. Vegetable foodstuffs and salted fish show the largest annual movements, but the general average indices for foodstuffs are evened out because of the more steady course of the two other cost series and, of course, also because of the differences in the time-position of cycles for all the different series.

In the two last columns of table A we have for comparison printed Dr. Amark's general wholesale price index for Sweden and also the special index for foodstuffs included therein. ${ }^{1}$ Dr. Amarks' index, which is the only one constructed for the pre-war period, is from the point of view

[^16]
of statistical reliability to be divided inte two parts, the one from 1860 to 1875 and the other from 1875 to 1913. For the first fifteen years he was compelled to rely upon much less valuable and extensive price-material than for the rest of the period. ${ }^{1}$ That explains why there is a better agreement between his indices and ours after 1875 than before.

Dr. Amark's index, which is more of the type of an all-purpose wholesale index, shows, apart from the years 1860-1875, when especially the price-material for other items than foodstuff is rather poor, a remarkably close conformity with our cost of living indices. Amark's general index seems to have a downward tendency compared with

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our cost of living index, ' bat that tendency is mainly due to movements before 1875 , when, as has been said, his price-material is weaker. His index for foodstuffs taken separately has on the other hand, if anything, an upward tendency. From what has been said on the conformity between our general cost of living indices and the special indices for foodstuffs it is natural that Amark's index for foodstuffs should approach closer to our cost of living index than does his general index, which includes a lot of commodities out of immediate interest for cost of living, such as rawmaterials for agriculture and industry. That holds true especially for the period 1860-1875, when his general index is rather far from agreement both with our indices and his own foodstuff-index. If we were allowed to take our index as a norm we should therefore consider his special foodstuff index as a better approximation to a cost of living index than his general index, and especially so, of course, for the earlier period. ${ }^{1}$

[^18]
## APPENDIX.

## THE OFFICIAL STATISTICS OF RETAIL PRICES

## AND COST OF LIVING IN SWEDEN UP TO 1931.

By Sven Bouvin.

## Historical Notes on the official retail price statistics.

The official retail price statistics go back to r903. Ever since that year information on the prices of a great many necessities of life have been collected from a selected number of representative places all over the country by agents specially commissioned to procure the primary statistical material. The number of those places amounted to 28 prior to the year 1910, but has since then been increased and is now 49.

The need for reliable and authoritative retail price statistics had made itself felt as early as in the beginning of the 20th century as a result of the development of institutions and the trend of conditions on the labour market, and particularly the extension of collective bargaining between employers and employees. During these transactions there often arose long discussions concerning the price level and cost of living in the different industrial localities, and, for lack of official data, the bargaining parties themselves had to collect price quotations for foodstuffs, rents, etcetera. Frequently, of course, these quotations were found to be contradictory, and sometimes the conflicting opinions on the cost of living prevented the parties from coming to agreement on the terms of wages, resulting in strikes and lockouts. It was therefore soon deemed to be to the common interest that an impartial and authoritative institution should collect and publish reliable price quotations for the primary necessities of life in representative localities. The Labour Statistics Bureau of the Board of Commerce (Kommerskollegii avdelning för arbets-
statistik) was then commissioned to prepare official retail price statistics. From 1913 the task was transferred to the then established Social Board (Socialstyrelsen).

Thus, continuous price series for a great many categories of goods were published in the Meddelanden fran K. Kommerskollegii avdelning för arbetsstatistik for the years 1903-II and in the Sociala Meddelanden from 1912. General surveys of retail prices are to be found in special publications, such as the Livsmedels- och bostadspriser i Sverige (Foodstuffs prices and house rents in Sweden) for the periods 1904-07, 1908-09, and 1910-12. A volume covering the years 1913-30 is just being prepared for publication. ${ }^{1}$

Before 1912 no statistical index numbers were calculated. The chief reason was the lack of detailed knowledge of the way of spending income, i. e. the composition of the consumption budget. The Statistical Bureau of the City of Stockholm (Stockholms stads statistiska kontor) had carried out a statistical budget inquiry as early as in 1907-08 ( 150 housekeeping books), but elsewhere no such information was available. In the years 1913-14, however, the Stockholm budgetary investigation was followed by a similar inquiry covering the whole country, carried out by the Social Board (x 355 housekeeping books). The scope of this inquiry was confined to the wage-earners and the small-salaried men of the lower middle classes in towns and municipalities, as was also the earlier Stockholm investigation. The material for the budget inquiries was collected by means of special housekeeping books designed for the purpose. They were to be kept during a whole year by a number of families entrusted with the duty. This intensive method has been used afterwards in similar investigations, firstly in the inquiry of the year 1920 concerning the cost of living in rural districts ( 372 agricultural workers), and secondly in the inquiry of the year 1923 concerning the cost of living in towns and industrial communities (I 400 housekeeping books). During the Great War

[^19]annual investigations were carried out in order to obtain some idea of the changes in consumption caused by the exceptional circumstances of that time. In the last-mentioned inquiries the books were kept for only four weeks.

The first calculations of index numbers showing changes in the cost of foodstuffs were made by the Social Board in the year 1912. They were based on price data collected from 27 representative localities during the period 1905-1912 and on weightage figures taken from the above-mentioned statistical budget enquiry carried out in Stockholm in 1907-08. The result of the calculations was published in Livsmedels- och bostadspriser i Sverige under aren 19Io-rgia (Foodstuffs prices and house rents in Sweden in the years 1910-1912) issued by the Social Board in 1914. These computations were however of a somewhat sporadic nature, though they have proved to be of great importance in the work of constructing and elaborating subsequent index statistics.

A continuous weighted price index showing the changes in the cost of foodstuffs and fuel and lighting was first published in October 1916 in the Sociala Meddelanden. In this index series the month of July 1914 was chosen as the basis, and that basis has been kept until now. But as early as in December 1916 a complete cost of living index was calculated, which included, besides foodstuffs and fuel and lighting, costs of housing; clothing, taxes, and miscellaneous items.

Since then the continuous cost of living statistics comprise two index series - one referring to the monthly changes in the cost of foodstuffs and fuel and lighting, the other referring to the quarterly changes in the total cost of living. Later on we shall give an account of the methods of compiling these index numbers.

Besides these continuous index series, based on price quotations collected by special agents in certain representative places, extensive inquiries into the cost of living are carried out at certain fixed intervals in very many places all over the country. For the purpose of these inquiries the price quotations are secured through the local authori-
ties. Such investigations, instituted for the "classification of localities according to the height of the cost of living", have been carried out in the years 1919, 1924, and 1929. For the investigation in 1924, for instance, price data were gathered from 3600 towns and rural districts and also from 3000 particular localities within these districts. The purpose of these cost of living inquiries is to fix the relative dearness of each individual locality in the country at a given time. The total expenditure for a given budget is calculated for each place from the price quotations collected from the localities. The budget is not common to and fixed for the whole country, but several budgets are used, being supposed to reflect an "equal value" of consumption in different parts of the country. This total expenditure is resolved into an index number: the average dearness of all the places is fixed at 1000 . The localities are then divided into groups according to the relative height of the index numbers thus calculated. This grouping of localities according to relative dearness is partly done for taxation purposes, and partly in order to regulate the salaries of officials. According to the laws and tax regulations certain tax-free deductions have to be made from the gross income. These deductions are greater in the dearer places than in the cheaper ones. For this purpose the towns and rural districts are divided into five groups according to the height of the index number. The salaries of officials are also regulated according to the varying costs of living in different places, and for this purpose all the districts in the country are divided into seven groups. These arrangements have a bearing not only on State and municipal policy in the matter of taxes and salaries, but also on the contracts between employers and employees on the labour market, in view of the fact that in their collective bargaining they often refer to this grouping.

An account of the continuous price and cost of living statistics for Sweden referred to above is given in the following pages, special attention being paid to the manner in which the primary material is collected and treated, and to the methods of calculating indices.

## The Collection and Preliminary Arrangement of the Primary Material.

As has already been mentioned, the primary material is collected by special agents, at the present times in 49 different places, who are appointed and salaried by the Social Board. These "agent-places" consist of certain towns and important industrial centres selected with regard to the varying price conditions and the difference in the density of the population throughout the country, with the idea of their being representative in these respects. The price quotations do not refer to the purely rural districts with an agricultural population, but reflect the prices and their fluctuations in towns, municipalities, and important industrial places. As the official price statistics are important for regulating the adjustable portions of the salaries of public and municipal officials, and also in view of the bargaining that takes place between the parties on the labour market, the special agents in the different localities have been carefully selected, if possible from those professions in which the salary is not directly affected by those factors. The agents may therefore be expected to perform with impartiality their important task of collecting the primary material for the statistics. The commission is entrusted to the managers of Labour Exchanges, to retired teachers at elementary schools, to bank officials, and to people in similar professions. The special-agent institution has turned out remarkably well as a means of amassing information and relatively very reliable price data are thus secured. This is due partly to the fact that the Social Board has established a close connection with its agents through correspondence and inspections on the spot, and partly to the regular routine and the competence of the agents, who have usually been entrusted with this task for a long period of years.

The number of agent-places has considerably increased during the period covered by the statistics. Thus, the number of places from which price quotations were collected amounted to 39 at the end of 1912. Prior to the year r910
the number had been only 28, but at the turn of the year it was increased to 39, and at the beginning of 19135 places were added. After 19134 of the original agent-places were withdrawn, having been surpassed as industrial centres by other places in the neighbourhood that were more representative in regard to price conditions; on the other hand, 9 new places have been added, so that the present number of agent-places amounts to 49.1 By increasing the number of agent-places it has been possible to gain a better knowledge of the cost of living in various parts of the kingdom. As to the relation between the places withdrawn and those added from the point of view of their dearness, no appreciable dislocations of the average prices have taken place, according to special inquiries carried out by the Social Board. Thus the continuity of the price series may be regarded as practically unbroken.

The general principle for determining the prices of the various categories of goods is that exactly the same qualities ought to be priced in all the different places, so that complete comparability may be attained.

One great difficulty in this respect is the fact that the commodities are sold and bought in a great many different qualities, and consequently at various prices. Thus it may be that the qualities concerning the prices for which the Social Board desired to have information have not been put on the market in certain places owing to the small demand for those commodities. This fact, of course, gives rise to certain difficulties as to how to select appropriate substitutive qualities.

The number of foodstuffs and articles for fuel and lighting included in the cost of living statistics and collected monthly

| ${ }^{1}$ The ag | -nt-places are | Ystad | Filipsta | Sundsvall, the town |
| :---: | :---: | :---: | :---: | :---: |
| Sodertalje | Kalmar | Halmstad | Arvika | , the saw- |
| Uppsala | Văstervik | Varberg | Orebro | mill district |
| Nykroping | Visby | Göteborg | Vasterds | Kramfors |
| Eslcilstuna | Karlskrona | Lysekil | Falun | Ostersand |
| Linköping | Kristianstad | Vanersborg | Avesta | Umea |
| Norrköping | Malm ${ }^{\text {d }}$ | Bords | Ludvika | Vilhelmina |
| Motala | Lund | Lidköping | Mora | Lules |
| Jonkoping | Landskrona | Tidaholm | Gavle | Malmberget |
| Varnamo | Halsingborg | Karistad | Soderhamn | Kiruna |

amounts to 58.1 The list of categories of goods has been slightly changed after 1gI2, inasmuch as 8 new commodities have been added, whereas a similar number have been discarded as being of less importance. The discarded commodities are: skim-milk cheese, margarine (first and last qualities), rice (certain less important qualities), salted cod, and petroleum (Standard White). Instead there have been added: hard rye-bread, venison, perch, pike, cod, haddock, salt, and English coal. This means that whereas before 1913 three different qualities of margarine were quoted, there is now included in the list only margarine of the highest quality. The heading "wheat flour, first quality", has been made clearer by altering it to "wheat flour, Swedish, 'kärn'-, ('patent'-)". The principal flourmills in Sweden produce four qualities of wheat flour (extra "kän""-, "kärn"-, bakery wheat flour, and fine flour). The price quotations refer exclusively to "kärn"-flour and therefore either to the last or to the first qualities. Since Igro the price quotations for coffee, first quality, refer to Santos coffee, whereas before they referred to Brazilian coffee. Otherwise there are no changes made in the list.

The list of foodstuffs and articles for fuel and lighting is, then, as follows:

> Milk, ynskimmed skimmed separated Butter, first quality second Cheese, whole-milk, unseasoned skim-milk, Margarine, first quality Eggs, Swedish, new-laid Potatoes, last' preserved yeer's harvest new, this year's harvest Peas, dried (yellow) Beans, haricot Wheat flour, Swedish, "kstrn"Rye flour, first quality Rye meal, first quality Groats, oaten, "vapour-prepared" Rice, Buma or Swedish, first quality

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Rye bread, hard, coarse, "spis"-
    . ""naacke".
        loaf, spiced, sweet
        - , some
Wheat bread, biscuits, average
        loof, baked with water
            - . . milk
Beef, fresh, roast
    - , for soup
Veal, roast, fattened calf
    b, young calf
Mutton, fresh, roast
            salted, Swedish
Venison (reindeer), fresh, roast
Pork, fresh, Swedish
    salted, bacon, side, Swedish
        . , , American
Fish, fresh, perch
            , pike
            , herrings
            sprats
            , cod
            plaice
                haddock
    salted, herrings, first quality
        . sprats
        - , ling with fins and tail
Coffee, unroasted, Santos, first quality
Sugar, lump-
Salt, cooking-
Beer, small
Petroleum, Water white
Wood, buirch, unsawn
            pine and fir, misawn
Peat
Coal, anthracite
    English, coal
Coke, gas-works, crushed
    English, stove
```

The agents of the Social Board have to ask various retailers for information about the ruling prices of these articles. As the price statistics are principally intended to represent the conditions of life of the less well-to-do classes, the quotations have to be collected from such shops as are visited by the working and lower middle classes. Moreover thequotations have to be collected where the different articles are most generally sold, whether on markets in the open air, in market-halls, or in retail-shops. If cooperative retail shops are to be found in the locality, information is collected also from these. If possible, the same number of quotations, and quotations from shops of the same kind
are collected each time, so that the varying number and character of the quotations do not cause any change in the calculated averages that does not correspond to the actual conditions. Even though the quality prescribed on the form should not be the one most sold in the locality, that quality has to be quoted and none other, so that an entire comparability with other agent-localities is made possible. But if any of the prescribed qualities is entirely lacking in the locality, and it may be considered proper to communicate price quotations for other qualities, which are on the market, it shall be expressly stated to what qualities the quoted prices refer. The quotations refer to cash payment for a small quantity by weight, and not in packets.

To facilitate matters the agents are given special books of blank forms, which have to be filled in by them when they visit the shops, and which are also distributed among the shopkeepers that have undertaken to return regular price quotations. The prices of the so-called "fresh commodities"1 are collected once a week on a fixed day of the week on account of their prices fluctuating considerably. The forms filled in have to be returned to the Social Board by the agents to be at the disposal of the Board at the latest on the Monday of the week next after the one to which the quotations refer. The data concerning the prices of other categories of goods are collected only once a month, and refer to the middle of the month.

For the purpose of control the price quotations are sent in to the financial committees of the municipal councils at the same time. After having critically examined the figures these committees sometimes publish the price quotations in a local newspaper.

At particular dates the agents also have to collect price quotations for certain articles of clothing and some of them for other items of expenditure. They have likewise to quote the rents paid by workers for lodgings. The number of the articles of clothing that are included in the list of statistics is 17 and consists of woollen and

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cotton cloth, woollen yarn, men's suits (ordered and readymade), greatcoats (ordered and ready-made), shirt, undershirt, drawers, stockings, working-blouse, dubbed leather boots, men's, women's, and children's box-calf boots, and also the soling and heeling of men's boots. The quotations are collected in the last month of each quarter of the year and have to be returned to the Social Board at the same time as the monthly report. The agents have special samples of most articles of clothing in order to procure price information that is most likely to refer to nearly the same quality in various localities. During the War-period it was not possible to take into consideration the deterioration of quality, and therefore the relative increase in the index for the cost of clothing may be considered to be too small.

Furthermore, once a quarter there are returned to the Social Board quotations of the prices of furniture and furnishings and a great many other items in seven agentlocalities. The price quotations refer to 29 different categories of goods and services, divided into six ${ }^{\top}$ groups, viz. furniture and household fittings, washing and cleaning, hygiene, newspapers, amusements, ${ }^{*}$ and travelling. Among furniture and furnishings there are: a described suite of furniture for a plain sitting-room; various kitchen utensils, such as milk-basins, plates, coffee service, drinking-glasses, a bucket and a washboard, and such articles as nails, a hammer, a flat-iron, a wood-saw, and a stove - and all these articles are of specially determined trademarks and qualities. As to washing and cleaning prices, the prices are quoted for hard and soft soap, and the expenditure for the washing and ironing of 5 collars, one coloured, starched shirt without cuffs, and the laundering of I kg. of "washing" with and without mangling. Within the group "hygiene" there are quoted the prices of a bath with soap, second class, and of shaving and hair-cutting in a second-class barber's shop. The price of a year's subscription to the newspaper most widely circulated among, the working classes, and also the price of a single copy of the paper have to be quoted. The price quotations for different amusements refer to a cheap ticket for a cinema and a theatre. Where tramways
are to be found, the price of a tramway-journey is stated. Also the expenditure on temporary help in the house has to be reported.
The agents are obliged not only to collect the price data but also to carry out a preliminary critical examination of the price quotations. This preliminary examination will provide an explanation of the more notable changes in the prices that have occurred since the last quotation.
More reliable statements of charges and dues to societies, funds, and insurance companies are procured direct from the institutions concerned. The mail and telegraph authorities provide every quarter an index number showing the changes in postage and telephone fees compared with the pre-War period. Information on doctor's fees and the prices of medicines is obtained from the Medical Board (Medicinalstyrelsen).
When the forms have been filled in and returned to the Social Board, they are examined in detail. This examination often leads to a correspondence with the agents, and then errors as to the qualities, for instance, are corrected. On the basis of these price quotations an arithmetical average price for each commodity and each agent-locality is calculated. The arithmetical average prices from all the agent-localities combined are published every month in the Sociala Meddelanden. It may be noted that these average monthly prices are based on weekly reports on butter, eggs, new potatoes, beef, veal, mutton, venison, pork and fresh fish, whereas the average prices of the other articles included in the list refer to price quotations as from about the 15th of each month. In addition to this summary monthly report, special statistics are published at the turn of the quarter (the Sociala Meddelanden of January, April, July, and October), starting from 1923 inclusive, before that year, however, in differently monthly numbers.
It is partly on the basis of these statistics, collected and dealt with in the manner just described, that the Social Board makes its index calculations regarding the changes in the cost of living. There is also needed for this purpose
information on rents and taxes. Inquiries into the housing conditions - so-called "rental budget" - indifferent parts of the country were carried out by the Social Board in the years 1912-13, 1920, 1924, 1926, and 1928, and will be continued at regular intervals. The house-owners had to account for all the apartments in their houses and for all their rents on a form drawn up by the Social Board. Information had to be given as to the rent and also as to whether the house was warmed by means of central heating or by separate stoves in the rooms.
Apart from the city of Stockholm, the last housing census ( 1928 ) recorded 280,535 apartments leased in the open market in 263 localities with a total population of r,883,74I, corresponding to $33.5 \%$ of the population of the entire country - exclusive of Stockholm - at the end of the year 1928. In Stockholm a housing census is taken by the local authorities annually. This regular housing census forms the basis of the continuous calculations of the cost of housing.
During the interval between two successive inquiries information is obtained from the local urban authorities about building activities, the supply of new buildings, and the tendency of rents. On the basis of these less intrusive inquiries it is possible to effect an annual adjustment of the amount of rent included in the cost of living calculations of the Social Board.

## Methods of Calculating the Index.

The month of July 1914 serves as the basic period of the cost of living indices. The basic period is selected partly in order to obtain the highest possible comparability with similar index series in several other countries which, like Sweden, started to calculate continuous cost of living statistics during the Great War. By chance it so happens that the year 1913 may equally well be considered to constitute the basic period of the index series, for exactly the same total expenditure is obtained from the index budget whether the average prices for the year IgI3 or the July 1914 prices are used.

The index calculations of the Social Board are founded on the principle of an unchanged economic standard. The calculations refer to the changes in the cost of living for a worker's or a small-salaried official's family composed of husband, wife, and two children under age with an annual income of about kr. 2,000 before the War. At the turn of each quarter there is calculated the total expenditure to which this standard family's budget should amount, assuming an unchanged consumption. The index numbers are obtained by comparing the expenditure totals thus calculated by the use of an unchanged budget with the corresponding aggregate for July 1914.

The composition of the budget for foodstuffs and fuel and lighting appears from the table given below. It represents the preliminary result of the budget inquiries in 1913 -I4. This index-budget has in all essentials been retained during the whole period in which the cost of living index has been calculated. In 1920, however, some small adjustments were made in this original budget in view of the definitive result of the inquiry of 1913-1914 into domestic expenditure.

Proliminary budget.

| Article $\quad \underset{\text { Quan }}{\text { tity }}$ | $\begin{aligned} & \text { Price } \\ & \text { in tre } \\ & \text { July } 1914 \end{aligned}$ | Quantity consumed according to the index budget | Total cost in kronar |
| :---: | :---: | :---: | :---: |
| Milk, unskimmed . . . . . . I | 15 | 523.33 | 78.50 |
| shimmed. | 8 | 574-04 | 45-92 |
| Butter, first and second quelity (average prica) | 222 | 40.96 | 90.93 |
| Cheese, skim-milk | 119 | 13.03 | 15.51 |
| Margarine . . . . . . . . . | 138 | 19.25 | 26.57 |
| Eggs, new-laid . . . . . . . . . score | 159 | 21.65 | 34.42 |
| Potatoes, last year's harvest . . 51 | 32 | 78.20 | 25.02 |
| Peas, dried . . . . . . . . ${ }^{\text {rg }}$ | 30 | 9.18 | 2.75 |
| Beans, haricot | 46 | - 2.46 | 1.13 |
| Wheat flour. | 31 | 169.10 | 52.48 |
| Rye flour and rye meall (average price). . . . . . . . . . . . . | 24 (21 | 16.218 | 3.89 |
| Rye bread, hard. | $41$ | 100.75 | 41.32 |
| sweat | 38 | 63.05 | 23.96 |

[^22]

To illustrate the method of calculating the index numbers we have inserted in the table the consumed quantities and also the average price of each article in the month of July 1914. The total expenditure on the annual consumption of each category has then been calculated and aggregated.

According to the average prices for the whole kingdom in July 1914 the expenditure on a consumption as quoted above amounted to 727.98. The corresponding total of expenditure in August 1914 amounted to 759.15. In calculating the index numbers from these totals the fractions were discarded, and the expenditure in July 1914 was made to serve as the basis. Thus the figures for July and August were 728 and 759 respectively. The corresponding index numbers were 100 and 104.

The index number calculated in this way refers only to the price changes on the market for foodstuffs and fuel and
lighting. These indices are published every month in the Sociala Meddelanden, starting from September 1916. The need for some gauge of the changes in the total cost of living made itself increasingly felt as the War proceeded and gave rise to violent fluctuations in the prices of all the necessities of life. On the basis of the budget inquiries carried out in the years 1913- 14 a total budget was calculated, which included also the expenditure on rent, clothing, taxes and miscellaneous items. In December 1916 the first calculations were made of the increase in the total cost of living since the outbreak of the War. According to the complete index budget, the expenses of the basic month in 1914 were distributed as follows, the items foodstuffs and fuel and lighting being added:


The cost of a similar budget in December 1916 amounted to kx. 2,784 , implying an increase of $39.2 \%$. Thus a complete cost of living index was obtained, which, on the basis of the habits of consumption and life then prevailing, and of the primary material collected by the special agents, reflected the changes in the cost of living that had occurred since the outbreak of the War. Later on a record will be published of the method of calculating the expenditure on clothing and taxes. Since 1918 these cost of living calculations have been carried out four times a year - on about the Ist of January, April, July, and October. The prices refer to the 15th of the last month of the quarter. The calculations of the changes in the prices of foodstuffs and fuel and lighting are worked out every month, being published in the form of a special index series, called the Social Board's Foodstuffs Index.

As has already been mentioned, some adjustments of the index calculations were made in the year 1920 the de-

## finitive results of the 1913-1914 inquiry into domestic expenditure serving as a basis of calculation. <br> This budget, called the standard budget is as follows:

## The Standayd Budget.



The expenditure on foodstuffs and fuel and lighting for the standard family in July 1914 according to the two different budgets will be seen from the following table:
Expenditure in kronor in July
1914 , according to
the prelimi- the standard
nary budget budget


A'ccording to the standard budget the total expenditure for January 1920 amounted to kr. 2,160.75 - foodstuffs $\mathrm{kr} . \mathrm{I}, 962.47$, fuel and lighting kr . 198.28 . The index number — ${ }_{21}^{26} \frac{1}{26}$ - thus amounted to 298 . In spite of the changes in the composition of the budget the difference in the total of expenditure for July 1914 amounted to only kr. 2. The substitution of the standard budget for the preliminary one could apparently be effected without any serious break in the continuity of the index series. But if the total expenditure for January 1920 is calculated according to the preliminary budget it amounts to kr. 2,238.13 foodstuffs 1,936.42, fuel and lighting 301.71. The index number for January 1920 according to the preliminary budget is thus $30 \%$. However, the difference of 9 points that appears when the two methods of calculation are compared almost exclusively refers to the item fuel and lighting. According to the standard budget the total expenditure on fuel and lighting amounted to kr . 198.28 , but according to the preliminary budget it amounted to kr . 301.71. The index numbers representing the different items in the budget according to the two methods of calculation, work out as follows:


These changes in the method of calculation were carried out on the rst of April 1920 as regards the index calculations of the total cost of living. The index number for that date calculated in the new way amounted to 265. But if the calculations are made in the old way, the index number is 267. The difference amounts to only 2 points, and did not cause the Social Board any special difficulty in connecting, up the series.

A comparison between the two methods in regard to the relative weight and importance of the main items shows
that the items of expenditure foodstuffs, fuel and lighting, and also miscellaneous expenditure weigh relatively heavier in the preliminary budget than in the standard budget.

|  | Foodstufte | Rent | Fuel and lighting | Clothing | Tazes | Miscel. laneous expenditure | $\begin{gathered} \text { Total } \\ \text { ex- } \\ \text { penses } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| The preliminary budget <br> The atandard budget | 43.80 | 15.00 | 4.85 | 10.95 | 6.10 | 19.30 | 100.00\% |
|  | 42.80 | 15.00 | 4.80 | 11.85 | 7.95 | 18.30 | 100.00\% |

The relative cost of rent is equally high in both cases. The total expenditure in the standard budget amounts to
foodstaffis . . . . . . . . . . . . . . . kr. ${ }^{856}$
rent . . . . . . . . . . . . . . 300
tuel and lighting . . . . . . . . . . . . 82
clothing . . . . . . . . . . . . . . 237
tares . . . . . . . . . . . . . . 159
miscellaneous expenses . . . . . . . 366

Total soos
The calculations of the item representing taxes were slightly adjusted at this date, and shall be dealt with later on.
Since the new budget was introduced in January 1920 only very small adjustments have been made, which are of no interest in this connection. A brief summary of the methods of calculating each of the 6 main items of the budget is given below.

Foodstuffs: As stated above, a sum total of expenditure is calculated for each category of goods included in the list. The kronor amount thus obtained is compared with the corresponding total of expenditure for July 1914. The percentage increase from that date up to the present is then calculated. But as not all the foodstuffs included in the budget are entered in the list of articles that is returned to the Social Board once a month (or partly once a week), the balance of the total expenditure on foodstuffs must be made up in some way. Supposing that the trend of prices has been similar for the categories of goods the prices of which are not quoted, the total expenditure on foodstuffs in July 1914 (kr. 856) is increased in the same proportion as the amount spent on the commodities that
are included in the list. This hypothesis is, naturally, more sensible than any other. And some hypothesis must be made as to the movement of the non-reported prices, for otherwise the reported prices could not be used for compiling an index number based on a budget containing commodities, the prices of which are not reported. From a practical point of view this source of weakness of the index calculation may be considered small as the great bulk of commodity prices are reported on.

The calculations are made once a quarter and are based on the price quotations for the final month of the quarter.

Fuel and lighting: The index for these categories of goods is calculated in the same way as that relating to foodstuffs. But as the total expenditure on fuel and lighting, calculated on the basis of the articles quoted once a month, does not include the whole amount of the standard budget, as some less important commodities are not entered in the list, the balance of this sum is made up. As usual, it is assumed that the prices of these categories of goods should rise proportionately to those of the quoted articles. The calculations are made once a quarter.

Rent: The calculations of the expenditure on rent are based on the Rent and Housing Inquiries. On the basis of the data regarding rent conditions obtained as a result of these inquiries particularly relating to the towns, the average rent for two rooms and kitchen is fixed as to this point of time. The average rents in the different localities are weighted according to the number of inhabitants, and even the localities that have not been covered by special inquiries are taken into account. The expenditure on rent, which is calculated once a year (on the Ist April), is determined for the intervening period between two successive rent and housing inquiries by an expert estimate of the changes in the rent level that may have occurred since the last housing inquiry. These estimates are based on certain annual inquiries, carried out by the Social Board, into the building activities in the towns and the principal country boroughs, and also on information obtained from the local financial committees on the tendency of rent.

Clothing: The expenditure on clothing, which in July 1914 amounted to kr . 237, is calculated according to the schedule of consumption given below.

Consumption of Clothing (the Slandard Budget).


As, however, the expenditure on such a schedule of consumption only corresponds to $72 \%$ of the total cost of clothing according to the standard budget, the balance is made up in the same way as were the total sums expended on foodstuffs and fuel and lighting.

The index number for clothing has been calculated in this way since the rst April 1920. Before that date a somewhat different schedule of consumption was applied, based on the preliminary budget of 1913-14. The total expenditure for the basic period then amounted to kr. 219. This item of expenditure is calculated once a quarter.

Taxes: The taxes were formerly (that is to say, before the ist October 1922) calculated only once a year (on the Ist April), and the figures thus obtained then remained unchanged for four quarters, but nowadays the calculations are made twice a year (on the Ist April and the ist October). They refer to the direct taxes that fall due during the calendar year. The kinds of taxes that are taken into account are the crown takes (on income and property), the county rates, and the local rates (these rates are in Sweden of the same type as the above-mentioned
crown taxes). For the period July rg14-January 1919 the barden of taxes was calculated on the basis of an unchanged income of $\mathbf{k r}$. 2,000, corresponding to the total expenditure shown in the index budget for July 1914. After January 1919 it was considered necessary to assume that the income of the standard household, i. e. the income that is calculated to form the basis of taxation, had changed proportionately to the general level of wages. As has already been mentioned, the calculations were formerly made as of the rst April each year, when preliminary information as to the level of wages for the preceding year was available, the bases of public taxation having already been fixed by the Diet of the preceding year. As to county rates, those for the preceding year were not fixed until September. And finally, as regards local rates, on the ist of April information was available concerning the level of the rates, which had been resolved upon in December of the preceding year.

As the Government financial year begins nowadays on the Ist July, a certain change in the method of calculating the item of taxes has become necessary. The bases on which the crown taxes are payable at the end of the year are not fixed by the Diet early enough to enable them to be included in the index calculations on the rst April. The most convenient way of settling the matter has proved to be as follows. The various kinds of rates and taxes are calculated on two different occasions in the year. The local rate figures are adjusted as of the Ist April, and the crown tax and county rate figures on the ist October. Each tax item is included in the calculations for four successive quarters.

The calculations of the local rates are based on the returns showing the rates decided upon in the various localities, which returns are sent in to the Central Bureau of Statistics (Statistiska Centralbyvar) by the local authorities. The county rates are obtained direct from the various borough councils in the kingdom. The Social Board then calculates a weighted average of all the rates and taxes. The rates and taxes of the standard
household are then calculated in the usual way. As has already been mentioned, the annual income of the standard household amounted in July 1914 to about kr. 2,000, and has - from 1918 and onwards - been increased in the same proportion as the general level of wages. The index number for taxes is constructed as the percentage relation between the sum total of the rates and taxes for the year in question and the corresponding 1914 total.

Miscellaneous expenditure: Under this heading a great many different items have been collected, such as furniture and furnishings, washing and cleaning, hygiene, intellectual pursuits, premiums and fees to societies and insurance offices, amusements and sports, travelling, telephone, postage and stationery, also servants' wages. These calculations are made once a quarter and refer partly to prices ruling in about the middle of the last month of the quarter, and partly to tariffs at about the turn of the quarter.

Total index: The total expenditure on each item included in the budget having been calculated, the results are all added together. The total sum thus obtained shows how much money is required to enable our standard household to keep up the same standard of living today as existed before the Great War. If the sum total of expenditure is compared with the corresponding sum of July 1914, an index number is obtained, showing the percentage by which the cost of living has increased since that time.

The cost of living index of the Social Board is not, as it has often been stated to be, an index of retail prices in the proper sense, because there are included in it such items of expenditure as, for instance, taxes, rents, social and insurance charges, which are not retail prices in any sense of the term. But its weighted foodstuffs index may be regarded as constituting a real index of retail prices, though it does not include all the categories of goods that should form part of a general index number indicating the changes in the level of retail prices. '

## The Trend of Pricas and the Changes in the Cost of Living since the Yeay 1914.

The main characteristics of the trend of prices in Sweden, and the manner in which it has affected the cost of living, will be seen from table 21 and the chart 8 (p. 176).

Thus the total cost of living in the second half of the year r93r increased by $58 \%$ as compared with the pre-war period. If we look at the index numbers of the various chief items, we find that the cost of rent increased by $106 \%$; but the cost of foodstuffs by only $28 \%$. As distinct from the other index series, the index number for rent is going up all the time. During the period July 1914-July 1923, however, the rent level did not rise as rapidly as the total price level. But from the latter date up to the ist October ig3I the rent level rose $26 \%$, whereas the total cost of living fell $9 \%$ during the same period. These differences in the trend of prices are due to two important circumstances, one of which is the legislation prohibiting an unreasonable increase in rent. These provisions came into force on the 25th May 1917 and were repealed on the Ist October 1923. As a result of this legislation free competition on the residential market had practically ceased to operate. Control over house rents was entrusted to special Housing Boards (hyresnämnder). The laws were interpreted in different ways and enforced with different degrees of rigour in the 150 odd localities in which they were applicable. In most large towns control was exercised by the Housing Boards in the case of between 20 and $50 \%$ of the apartment flats, but in smaller localities the laws were enforced in relatively few cases, and then they often assumed the character of laws against flagrant usury on the part of the landlords. The effect of the laws was that the production of residential flats came to a standstill, so that there came to be a considerable scarcity, particularly of small flats, when the laws against increases in rent were repealed. And few families moved while these laws were in force. The consequence was that the rent level, which had been

## 172 <br> THE COST OF LIVING IN SWEDEN

Table 21. The Cost of Living Index of the Social Board 1914-1931.

|  | Foodstuffs | Rent | $\begin{gathered} \text { Fuel } \\ \text { and } \\ \text { light- } \\ \text { ing } \end{gathered}$ | Clothing | Taxes | Miscallaneous expenditure | Total expenditure |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1914 Juy. | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 1916 Dec. | 152 | 108 | 168 | 160 | 109 | 125 | 139 |
| 1917 May . | 174 | 108 | 190 | 170 | 109 | 130 | 189 |
| Sept. | 180 | 112 | 240 | 210 | 109 | 150 | 166 |
| 1918 I Jan. | 214 | 112 | 275 | 250 | 109 | 175 | 193 |
| 1 April | 229 | 112 | 286 | 270 | 114 | 185 | 203 |
| 1 July. | 288 281 | 112 | 286 | 285 .350 | 114 | 195 | 219 48 |
| $1919 \pm$ Jan. | 323 | 120 | 381 | 350 | 114 | 225 | 207 |
| 1 April | 327 | 120 | 367 | 320 | 160 | 215 | 263 |
| 1 July | 318 | 120 | 326 | 310 | 160 | 210 | 257 |
| 1 Oct. | 318 | 130 | 294 | 330 | 160 | 225 | 257 |
| 1920 I Jan. | 307 | 130 | 307 | 345 | 160 | 220 | 259 |
| 1 April | 287 | 130 | 333 | 370 | 290 | 230 | 265 |
| 1 July | 287 | 130 | 372 | 390 | 290 | 235 | 270 |
| 1 Oct. | 298 | 155 | 400 | 390 | 290 | 245 | 288 |
| 1921 I Jan. | 286 | 155 | 380 | 355 | 290 | 245 | 271 |
| 1 April | 247 | 155 | 316 | 295 | 372 | 235 | 249 |
| I July . | 231 228 | 155 163 | 264 | 270 250 | 372 | 225 | 336 |
| 19221 Jan | 202 |  |  |  |  |  | 18 |
| 1 April | 184 | 163 | 196 | 225 | 264 | 200 | 195 |
| 1 July | 178 | 163 | 188 | 210 | 264 | 195 | 190 |
| 1 Oct. | 880 | 163 | 183 | 205 | 263 | 195 | 190 |
| 1923 I Jan. | 166 | 163 | 188 | 203 | 263 | 19 | 188 |
| 1 April | 164 | 163 | 188 | 199 | 211 | 188 | 177 |
| 1 July | 158 | 163 | 185 | 196 | 211 | 188 | 174 |
| 1 Oct. | 163 | 178 | 183 | 194 | 201 | 187 | 177 |
| 19241 Jan. | 162 | 178 | 181 | 192 | 201 | 187 | 176 |
| 1 April | 160 | 178 | 183 | 192 | 173 | 185 | 178 |
| 1 July. | 155 | 178 | 182 | 192 | 173 | 183 | 171 |
| 1 Oct. | 164 | 178 | 180 | 19! | 170 | 183 | 174 |
| 19251 Jan. | 171 | 186 | 181 | 192 | 170 | 183 | 178 |
| 1 April | 171 | 186 | 179 | 193 | 162 | 182 | 177 |
| 1 July . | 168 167 | 186 | 177 172 | 191 | 162 | 181 180 | 176 |
| 19261 Jan. | 163 | 188 | 171 | 19 | 168 | 180 |  |
| 1 April | 158 | 188 | 178 | 1188 | 185 | 179 | 178 |
| $\pm$ July . | 156 | 188 | 168 | 187 | 185 | 180 | 172 |
| 1 Oct. | 156 | 188 | 166 | 184 | 183 | 180 | 178 |
| 1927 I Jan. | 155 | 188 | 186 | 182 | 183 | 179 | 178 |
| 1 April | 149 | 198 | 180 | 181 | 184 | 179 | 170 |
| 1 July. | 148 | 198 | 176 | 180 | 184 | 179 | 169 |
| 1 Oct. . | 154 | 198 | 171 | 181 | 184 | 180 | 179 |

Table 21. (Cont.)

| 1928 I Jan. | Foodstuffs | Rent | Fuel and <br> light- <br> ing | Clothing | Taxes | Miscellancous expenditure | Total expenditure |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 152 | 198 | 168 | 182 | 184 | 179 | 171 |
|  | 152 | 199 | 166 | 184 | 183 | 179 | 171 |
|  | 156 | 199 | 164 | 185 | 183 | 179 | 173 |
|  | 154 | 199 | 162 | 186 | 184 | 179 | 172 |
| 1929 I Jan. | 150 | 199 | 159 | 186 | 184 | 179 | 170 |
|  | ${ }_{151}^{158}$ | 200 | 165 | 185 | 187 | 178 | 171 |
|  | 148 | 200 | 161 | 184 | 187 | 178 | 169 |
|  | 150 | 200 | 160 | 183 | 183 | 178 | 170 |
| 1930 I Jan | 145 | 200 |  |  |  |  |  |
|  | 145 138 138 | 205 | 160 159 | 181 180 | 176 176 | 178 178 | 165 |
|  | 136 137 | 205 | 159 | 178 | 176 176 | 178 176 | 164 |
| $\begin{aligned} & 1931 \text { I Jan. } \\ & 1 \\ & 1 \text { April } \\ & \\ & 1 \\ & 1 \text { Juct. }\end{aligned}$ | 132 | 205 | 155 | 177 | 176 | 177 | 161 |
|  | 130 | 206 | 155 | 175 | 173 | 177 | 160 |
|  | 127 | 206 | 153 | 173. | 173 | 176 | 158 |
|  | 128 | 206 | 150 | 170 | 173 | 175 | 158 |

forced down by the laws, now began to rise rapidly. Brisk building activities developed, notably in the large towns and municipalities, being first of all directed to the building of flats consisting of 1 or 2 rooms and a kitchen. As therefore the number of new flats showed such a decided tendency to increase, the quality of the apartments began to change for the better. This change in the quality of the apartments constitutes the second important circumstance that has influenced the trend of rents during these years.

For several reasons this improvement in the quality cannot be entirely eliminated from the index calculations. Thus the rent index reflects the increase in rents that has occurred in Sweden since the outbreak of the War, this including also the rise in the housing standard.

The rise in the index number for taxes in the 2nd quarter of 1920, as indicated in chart 8 , is partly due to the change in the method of calculating the expenditure on rates and taxes as on the rst April that year. The burden of taxes was no longer calculated on the basis of an amount of kr . 2,000 (the income of the standard

Table 23. Prices of Foodstuffe in
Average prices (in orre) of import-


- Maximum prices or prices determined in some other way. - ${ }^{1}$ Up to coke, crushed.

Sweden during the Years 1913-1931.
ant articles ( 100 8re $=1$ krona).

| 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 |  |  | 1931 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3 | 47 | 44 | 35 | 1 | 23 | 24 | 24 | 2 | 21 | 22 | 22 | 21 | 1 |  |
| $\bullet 2$ |  |  |  | 13 |  | 13 | 13 | 12 | $\begin{array}{r} 11 \\ 8 \end{array}$ | 12 8 |  |  |  |  |
| -5 |  | 657 | 496 | 375 | 366 | 374 | 384 | 337 | 339 | 351 | 339 | 284 | 255 |  |
| ${ }_{-} 5$ | -7 | 651 | 486 | 358 | 350 | 350 | 353 | 311 | 306 | 322 | 305 | 265 | 240 | 5 |
| $\bullet 3$ | * | 524 | 389 | 277 | 275 | 289 | 266 | 248 | 236 | 237 | 231 | 195 | 190 |  |
| ${ }^{*} 332$ |  | 374 | 267 | 178 | 187 | 203 | 182 | 174 | 171 | 172 | 167 | 144 | 141 |  |
|  |  | 376 | 293 | 178 | 184 | 178 | 178 | 166 | 148 | 140 | 133 | 138 | 129 |  |
|  |  | 578 | 60 | 320 | 271 <br> 50 | 274 | ${ }^{265}$ | 247 | 232 | 241 | 241 | 211 | 193 |  |
| ${ }^{6} 66$ |  |  | 8 | 48 | 50 | 5 | 50 |  | 57 | 62 |  | 36 | 32 |  |
| ${ }^{1}$ |  | 130 |  | 97 | 72 | 88 | 72 | 58 | 58 | 84 | 87 | 52 | 43 | 12 |
|  |  |  | 71 | 52 | 45 | 44 | 48 | 48 | 48 | 45 | 43 | 42 | 39 | 13 |
|  |  |  |  | 31 |  | 40 | 33 | 28 | 31 | 32 |  | 25 | 24 | 14 |
|  |  |  |  |  | 58 | 48 | 42 | 38 | 43 | 43 |  | 35 | 35 |  |
|  |  | 176 |  | 61 | 53 | 54 | 53 | 53 | 3 | 54 |  | 52 |  |  |
|  |  | 118 | 108 | 86 | 75 | 73 | 7 | 7 | 73 | 75 | 7 | 66 |  |  |
|  |  | 105 | 3 | 73 |  | 64 | 70 | 6 |  | 6 | 6 | 62 |  |  |
|  |  |  |  | 50 | 44 | 46 |  | 48 |  | 4 | 48 | 46 |  |  |
|  |  | 25 | 217 | ${ }^{17}$ | 157 | 156 | 161 | 156 | 154 | 153 | 150 | 145 | 141 |  |
|  |  |  | 113 |  | 77 | 77 | 85 | 79 | 77 | 77 | 76 | 75 | 75 |  |
|  |  |  | 129 | 103 | 209 |  | 212 | 94 | 94 | 94 | 研 |  | 89 |  |
|  | 49 |  | 30 | 175 | 209 | 204 167 | 212 | 210 | 197 | 190 | 189 | 189 | 181 |  |
| $\stackrel{5}{5}$ | 51 | 493 | 37 | 28 | 256 | 247 | 255 | 253 | 240 | 238 | 239 | 238 | 22 | 26 |
| -357 | 312 | 27 | 204 | 155 | 149 | 144 | 152 | 15 | 144 | 140 |  | 145 |  |  |
|  |  | 431 | 310 | 233 | 225 | 223 | 241 | 23 |  | 225 | 23 | 231 | 218 |  |
|  | 547 | 385 |  | 193 | 264 | 181 | 198 | 198 | 183 |  | 187 | 185 | 76 |  |
|  | . 56 | 442 | 348 | 270 | 264 | 239 | 247 | 248 | 242 | 238 205 | 226 | 235 | 210 |  |
| * 404 | *619 |  | $33^{8}$ | 263 | 227 | 204 | 256 | 248 | 199 | 210 | 23 | 217 | 153 |  |
|  |  | 364 | 2 | 204 | 192 | 189 | 236 | 243 | 223 | 213 |  | 227 | 195 |  |
|  |  | 191 | 166 | 140 | 132 | 135 | 132 | 129 |  |  | 12 |  |  |  |
| 317 | 333 | 312 | 260 | 211 | 209 | 212 | 204 | 191 | 18 |  | 198 | 190 | 182 |  |
| 149 | 110 | 102 | 2 | 79 |  | 72 | 78 | 75 |  |  | 688 |  | 68 |  |
| 196 |  | 19 | 119 | 100 | 94 | 100 | ror | 75 | 95 | 22 | 100 | 100 | 68 |  |
| 295 | 244 | 219 | 199 | 169 | 154 | 154 | 5 | 154 | 151 | 152 | 157 |  | 154 |  |
| 145 | 148 | 120 | 87 | 77. | 59 |  | 86 | 66 | 66 |  | 61 |  | 56 |  |
| 100 | 105 | 74 | 65 | 51 | 45 | 46 | 52 | 53 | 50 | 48 | 48 |  | 5 |  |
| - | 223 | 156 | 113 | 97 | 44 | ${ }^{\circ}$ | 98 | 105 | 96 | 95 |  | 4 | 85 |  |
| ${ }^{\circ} \mathrm{92}$ | ${ }_{*} 133$ | ${ }^{\text {-168 }}$ | * 170 | +156 | ${ }^{2} 107$ | 26 | 33 | 72 | 72 | 30 | \% | 45 | - 2 |  |
| 3 | 32 | 31 | 26 | 2 x | 20 | 19 | 9 | 19 | 9 | 18 | 17 |  | 16 |  |
| 14. |  |  | 17 | 5 | 14 | 14 | 15 | 15 | 15 | 15 | 15 | 16 | 16 | $4{ }^{6}$ |
|  | 2310 | 2895 |  | 1400 | 1475 | 31 1450 | 1400 | 1310 | [31 | 29 1300 | 260 | 29 1220 | 165 | 8 |
| 1860 | 1895 | 23 | 1580 | 1075 | 1075 | 1080 | 1055 | 995 | 1010 | 980 | 945 | 20 | 890 | 49 |
|  | - |  | 1286 | 948 | 840 | 782 | 737 | 787 | 794 | 713 | 703 | 688 | 651 |  |
|  |  |  | 703 | 444 | 414 | 389 | 344 | 404 | 383 | 331 | 340 | 323 | 300 | $5{ }^{1}$ |
|  |  | 1177 | 452 | 326 | 310 | 303 | 256 | 254 | 273 | 24 | 24 | , | 214 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

1920 the quotations refer to coles, uncrushed and after that year to


Table 23. Articles of Clothing. Average Prices (in kronor) in the Agent-Places of the Soctal Board

| Articles of clothing | 1914 | $\begin{aligned} & 1916 \\ & \text { Oct. } \end{aligned}$ | 1917 | 1918 | 1919 | 19*0 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | 1930 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Closk and yarn. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Woollen cloth (for women's dresses) per m | 2.50 | 00 | 7.00 | 13.50 | 13.75 | 12.00 | 6.75 | 4.45 | 4.05 | 3.90 | 3.85 | 3.75 | 3-60 | 3,60 | 3.55 | 3.35 |
| Cotton cloth (for women's dresses) pr m |  |  | $1.15$ | $2.50$ | 1.90 | 2.15 |  | 1.05 |  | 0.95 | $0.95$ | 0.90 | 0.85 | 0.85 | 0.85 | 0.80 |
| Woollen yarn pr kg | 6.50 | 20.00 | 27.00 | 50,00 | 45.00 | 36.40 | 16.50 | 11.95 | 10.85 | 10.73 | 11.10 | 10.35 | 10.15 | 10.65 | 10.55 | 9.55 |
| Mon's alothes. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Men's suit, made to order. | 65.00 | 90.00 | 120.00 | 205.00 | 228.00 | 270.00 | 222.00 | 69.00 | 55.00 | 153.00 |  | 151,00 | 148.00 | 8.00 |  |  |
| Men's suit, ready-made | 40.00 | 60,00 | 80.00 | 130.00 | 135.00 | 179.00 | 141.00 | 108.00 | 98.00 | 97.00 | 96.00 | 94.00 | 91.00 | 91.00 | 91.00 | 90.00 |
| Greatcoat, made to order. | 70.00 | 95.00 | 118.00 | 195.00 | 217.00 | 260.00 | 21400 | 166.00 | 51.00 | 147.00 | 147.00 | 145.00 | 143.00 | 143.00 |  |  |
| Greatcoat, ready-made | 40.00 | 60,00 | 75.00 | 123.00 | 130.00 | 167.00 | 131.00 | 102.00 | 93.00 | 89.00 | 90.00 | 88.00 | 85.00 | 85.00 | 85.00 | 85.00 |
| Cotton shirt . . . . - | 2.00 | 3.00 | 4.00 | 7.25 | 7.25 | 7.00 | 4.75 | 3.70 | 3.45 | 3.40 | 3.35 | 3.30 | 3.10 | 3.15 | 3.10 | 3.00 |
| Half-woollen vest . | 50 | 2.50 | 3.75 | 8.00 | 7.00 | 6.00 | 5.25 | 4.25 | 3.70 | 3.45 | 3.40 | 3.25 | 3.10, | 3.15 | 3.10 | 3.00 |
| Hali-woollen drawers. | 1.75 | 2.75 | 4.00 | 8.50 | 7.50 | 6.50 | 5.50 | 455 | 3.95 | 3.70 | 3.65 | 3.50 | 3.35 | 3.35 | 3.35 | 3.20 |
| Woollen socks . | 1.25 | 2.50 | 3.10 | 5.50 | 4.75 | 5.00 | 3.25 | 2.35 | 2.15 | 2.15 | 2.20 | 2.25 | 2.10 | 2.25 | 2.25 | 2.20 |
| Working-blouse | 1.75 |  |  |  | 7.25 | 7.90 | 5.75 | 4.35 | 4.10 | 4.00 | 3.90 | 3.85 | 3.70 | 3.70 | 3.70 | 3.60 |
| Booss. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Dubbed leather | 8.50 | 16.50 | 21.00 | 29.00 | 31.00 | 33.50 | 22.50 | 15.50 | 13.75 | 13.50 | 13.50 | 13.00 | 13.00 | 14.00 | 14.25 | 13.75 |
| Working-boots | 16.50 | 31.50 | 38.00 | 63.00 | 62.50 | 65.00 | 41.50 | 28.75 | 26.00 | 25.50 | 25.50 | 25.50 | 25.25 | 27.00 | 27.50 | 26.25 |
| Box-calf, men's | 13.00 | 19.50 | 26.00 | 39.25 | 40.25 | 44.25 | 31.75 | 22.00 | 19.25 | 18.75 | 18.50 | 18.25 | 18.00 | 19.25 | 18.50 | 18.75 |
| men's | 11.50 | 17.00 | 23,00 | 36.75 | 37.50 | 41.50 | 29.75 | 21.50 | 19.00 | 18.50 | 18.35 | 18.00 | 17.75 | 18.75 | 18.75 | 18.25 |
| Soling and heeling . | 7.00 | 10.50 5.50 | 13.50 6.75 | 19.50 8.25 | 17.25 <br> 9.75 | 19.50 11.15 | 15.50 <br> 9.95 | 12.00 8.00 | 11.00 7.15 | 11.00 6.85 | 10.75 6.75 | 10.75 6.65 | 10.50 6.45 | 11.50 6.55 | 11.25 6.60 | 10.75 6.60 |

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Table 4. The Increase in Rent in Sweden 1913-1908.

${ }^{2}$ Standardized averages, account being taken of the locally varying distribution of the flate according to size.
household before the War), but on that of a figure that corresponded to the average rise in the general level of wages.

The rapid and violent rise in prices that took place during the Great War culminated in the autumn of $\mathbf{1 9 2 0}$. On the rst October the cost of living index number was 281. The prices of the articles for fuel and lighting were quadrupled as compared with the period before the War, whereas foodstuffs prices were almost trebled (298). From 1921 there set in a rapid and comprehensive fall in prices, followed by a stabilization of the price level. From 1925 there was with some unimportant exceptions a slow decline, which towards the end of 1929 assumed the character of a pronounced fall in prices.

The trend of prices for the categories of goods included in the cost of living statistics will be seen from Tables 22, 23 and 24, which show the average annual prices of foodstuffs, fuel and lighting, clothing, and rent.

To afford a better survey of the changes in the prices during the period 1913-30 we have calculated the percentile increase in 44 important foodstuffs given in the following table. The articles are arranged according to the size of the increase in prices throughout the whole country.

The Percontile Increase in Refail Prices from 1913 to 1930:



According to the cost of living index the expenditure on foodstuffs had increased $38 \%$ during this period. 28 of the 44 articles included in our list show a higher and 16 a lower percentage number. The price of sugar is $33 \%$ lower than before the War, but the prices of all the other articles have increased. The prices of margarine, oats, and haricot beans have shown the smallest rise. The foodstuffs the prices of which have increased less than the average price of all the articles, are: vegetable foods (meal and groats) and. dairy produce (skimmed and separated milk, cheese, butter, and eggs). Both hard and soft bread show a considerably more substantial increase than meal. The prices of animal foodstuffs have advanced more than those of the vegetable foodstuffs. Small beer as a representative of the maltliquors shows the heaviest increase in price. The advance in prices has thus affected the individual necessities in a widely differing degree.

If we compare the prices quoted in Stockholm during the period in question with those in the country as a whole,

## Chart 9. The Percentile Increase in Retail Prices from 1913 to 1930


we find that the advance in the prices of most articles has been less considerable in Stockholm. But this circumstance does not mean that the cost of foodstuffs is now lower in Stockholm. If the average total cost of foodstuffs and fuel and lighting for our standard family throughout the country is fixed at roo, the index number for Stockholm will be found to be about 1 II in 1930. The expenditure on these articles is thus II \% higher in Stockholm than in the country as a whole. In chart 9 the increase in the prices of several foodstuffs has been represented by columns of various lengths. For each article one column indicates the increase in Stockholm, and the other the increase in the whole country.

Table 25 shows how the retail prices of foodstuffs and fuel and lighting have changed in different parts of the country, and Table 26 how the average prices vary from one part of Sweden's far-stretching area to another.

In studying the statistical price-tables here published, we

[^23]Table 23. The Increase ( + ) or Decrease ( - ) in Percentagea of the Average Pricen in Different Parts of the Coantry from 1913 to 1930.

| Axticle | Quan- | Stockholm | East Sweden | Smad- <br> land <br> and the <br> islands <br> Oland <br> and <br> Gotland | South Sweden | West Sweden | The mining districts of Central Sweden | South <br> Nortland | North <br> Nortland | Whole country |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Milk, unskimm | lit. | +50.0 | + 42.9 | + 42.9 | + 35.7 | + 35.7 | + 57.1 | + 60.0 | 62.5 | 50.0 |
| akimmed | , | 20.0 | + 57.1 | + 57.1 | + 71.4 | + 25.0 | + 57.1 | +66.7 |  | + 37.5 |
| separated . | d | +28.6 | + 33.3 |  |  | + 16.7 |  | + 42.9 |  | + 33.3 |
| Butter, first quality | kg | +15.3 +10.3 | +17.4 <br> +24.1 | +18.5 <br> $+\quad 23.6$ | + 14.8 <br> +18.1 | + 21.8 | +21.8 +23.4 +1 | + 26.4 | + 32.9 | + 20.3 +22.8 |
| Cheese, whole-milik. | : | +10.3 +28.9 | + 24.1 +21.0 | +23.6 <br> $+\quad 31.1$ | + 18.1 <br> +16.6 | + 24.9 <br> +16.4 | + 23.4 <br> +12.4 | + 27.4 | + 33.0 <br> +25.2 | + 24.4 <br> +88.9 |
| Margim-milk | - | + 14.8 | + 22.1 | + 12.0 | + 9.7 | + 38.5 | + 23.0 | + 22.2 | +22.0 | + |
| Margarine . | - | + 1.5 | + 3.0 | + 1.5 | + 3.8 | + 2.2 | + 0.7 | $-0.7$ | + 3.0 | + 2.2 |
| Eggs - - . ${ }_{\text {Potat }}$ |  | +30.3 | + 29.9 | + 33.3 | +30.9 +34.9 | + 32.7 | + 33.7 | + 35.8 | + 46.0 | + 32.7 |
| Potatoes, last year's harvest Peas, dried . . . . . | 5 lit . | +33.8 <br> +414.8 | +46.4 <br> $+\quad 3.6$ | +33.3 +16.7 | + 34.5 <br> $+\quad 14.7$ | +50.0 +15.6 | + $\begin{aligned} & \text { + } 6.0 \\ & +12.9\end{aligned}$ | + 53.6 | + 70.6 | + 50.0 |
| Peas, dried Beans, baricot | kg | +14.8 $\pm$ $\pm 0.0$ | $+\quad 3.6$ <br> $+\quad 6.7$ | + 16.7 <br> $+\quad 12.8$ | + 14.7 | + 15.6 +8.5 | $\begin{array}{r}\text { + } 12.9 \\ +6.3 \\ \hline+36\end{array}$ | $+\quad 19.4$ <br> +10.4 | + 39.4 | + 16.1 <br> +8.3 |
| Wheat flour. | ; | + | + 33.3 | + 32.3 | + 28.1 | +33.3 | $+\quad 6.3$ <br> $+\quad 32.3$ | +80.4 $+\quad 31.3$ | +39.2 <br> +36.4 | +8.3 <br> +32.3 |
| Rye meal |  | - 4.2 | + 13.6 | $+\quad 9.1$ $+\quad 2.6$ | + 13.6 | + 14.3 | +20.0 | + 19.0 | + 27.3 | + 13.6 |
| Rye flour | * | +17.2 | +30.8 | + 29.6 | +25.0 | + 30.8 | + 28.6 | + 33.3 | + 44.4 | + 29.6 |
| Groate | : | +17.1 $+\quad 37.2$ | + 5.7 <br> $+\quad 23.8$ | $\begin{array}{r}\text { + } 2.7 \\ +\quad 31.7 \\ \hline\end{array}$ | +27.6 +27.9 | + 5.7 <br> +24.4 | + +8.8 +20.0 | + 11.4 $+\quad 29.3$ | + 10.8 +27.5 |  |
| Rye bread, hard | : | +37.2 +68.4 + | +13.8 +64.9 | +31.7 <br> +60.5 | + 27.9 <br> +48.0 | +24.4 +60.5 +68 | +20.0 +68.6 | + 29.3 <br> +65.8 | + 27.5 +65.0 | + 26.8 +61.0 +6.8 |
| lonf, sweet | ; | + 54.5 | + 71.2 | + 54.3 | + 58.6 | + 80.3 | + 52.3 | + 57.1 | +69.6 | + 63.2 |
| Wheat bread, biscuits | : | $\begin{aligned} & +50.0 \\ & +94.0 \end{aligned}$ | +81.3 <br> +84.2 <br> + | +72.0 +74.7 | $\left\|\begin{array}{l} +66.7 \\ +91.9 \end{array}\right\|$ | +81.5 +109.5 | +101.4 | +101.3 |  | + 53.3 <br> +90.8 |
| loaf, baked with water |  | + +34.5 | +84.2 <br> $+\quad 73.8$ | +74.7 <br> +85.0 | + 91.9 | +8.5 .5 +73.2 | + ${ }^{+10.4}$ | + 92.3 +9.7 | +108.5 +80.4 |  |
| - $\quad$ milk . | - | + 39.8 | $\mid+55.0$ | + 50.9 | + 49.1 | + $72.0 \mid$ | + 42.9 | + 44.8 |  | + 50.0 |



Table 26. Average Prices (In 8re) in Different Parts of the Country during the Year 1930.

| Article | $\begin{gathered} \text { Quan- } \\ \text { tity } \end{gathered}$ |  |  |  |  |  |  |  | 号等 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Milk, unskimme | lit. | 24 | 20 | 20 | 19 | 19 | 22 | 24 | 26 |
| akimmed |  |  | 11 | 11 | 12 | 10 | 11 | 15 |  |
| Butter, first quality | kg | 279 | 276 | 275 | 271 | 285 | 285 | 302 | 311 |
| second - |  | 247 | 263 | 257 | 254 | 261 | 264 | 279 | 282 |
| Cheese, whole-milk |  | 223 | 196 | 219 | 204 | 177 | 181 | 187 | 199 |
| skim-milk |  | 163 | 149 | 149 | 147 | 133 | 139 | 14 | 144 |
| Margarine |  | 139 | 138 | 139 | 138 | $13^{8}$ | 138 | 137 | 137 |
| Eggs . . . . . . | scose | 228 | 204 | 188 | 195 | 195 | 218 | 239 | 257 |
| Potatoes, \|last year's harvest |  | 46 | 41 | 39 | 39 | 42 | 39 | 43 | 58 |
| Peas, dried. | ${ }^{\text {kg }}$ | 31 | 29 | 35 | 39 | 37 | 35 | 37 | 46 |
| Beans, haricot | - | 49 | 48 | 53 | 51 | 51 | 51 | 53 | 62 |
| Wheat flour |  | 39 | 40 | 41 | 41 | 40 | 41 | 42 | 45 |
| Rye meal | - | 23 | 25 | 24 | 25 | 24 | 24 | 25 | 28 |
| Rye flour | * | 34 | 34 | 35 | 35 | 34 | 35 | 36 | 39 |
| Groats . | - | 42 | 37 | 38 | 37 | 37 | 37 | 39 | 41 |
| Rice . . ${ }^{\text {Rye }}$, ired | , | 59 | 52 | 54 | 55 |  | 48 |  |  |
| Rye bread, hard . . . ${ }^{\text {loaf, sweet }}$ | : | $\begin{aligned} & 64 \\ & 68 \end{aligned}$ | 61 | 69 | 74 |  | 59 | 63 |  |
| loaf, sweet sour |  | $\begin{aligned} & 68 \\ & 60 \end{aligned}$ | 65 | 54 43 | 46 35 | 63 49 | 67 54 | 53 | 78 |
| Wheat bread, biscuits | : | 163 | 140 | 138 | 142 | 132 | 145 | 153 | 59 171 |
| loaf, baked with water | , | 74 |  | 74 | 70 | $7{ }^{1}$ | 73 | 5 | 92 |
| ${ }^{\circ}$ milk | - | 116 | 93 | 86 | 79 | 86 | 90 |  |  |
| Beef, fresh, roast . | - | 207 | 193 | 176 | 194 | 185 | 193 | 189 | 190 |
| Veal, roser for soup - | - | 153 | 159 | 150 | 162 | 153 | 160 | 152 | 148 |
| Veal, roast, fattened calf |  | 244 | 235 | 213 13 18 | 241 | 141 | 235 | 258 151 |  |
| Mutton, fresh - | , | 149 299 | 256 | 1306 | 245 | 229 | 141 230 | 151 |  |
| salted. | : | 200 | 190 | 176 | 186 |  |  | 183 | 192 |
| Venison (reindeer) | * | 26 x |  |  |  |  | 255 | 247 | 208 |
| Pork, fresh | - | 247 | 214 | 193 | 192 | 21 | 215 | 220 |  |
| Bacon, Swedish. | * | 246 | 217 | 200 | 217 | 218 | 213 | 235 | 227 |
| Fish, fresh, perch |  | 165 | 128 | 122 | 134 |  | 211 | 118 | 231 83 |
| pire | - | 222 | 195 | 177 | 204 | 178 | 199 | 196 | 136 |
| herri |  | 72 |  | 64 | 80 |  | 65 |  |  |
| sp | , | 73 | 65 | 58 |  | 80 | 69 | 5 | 64 |
|  | , | 146 | 135 | 100 | 57 | 68 | 123 | 119 | 71 |
| haddock |  | 163 70 | 162 63 | 152 70 | 137 68 | 151 | 167 | 172 68 | 140 |
| ling | * | 70 |  |  |  |  | 41 | 36 | 5 |
| Cod, salted | : | 918 | 97 | 107 | 24 | 87 | 95 |  |  |
| Coffee | - | 244 | 250 | 236 | 245 | 241 | 243 | 246 | 249 |
| Suga |  | 42 | 45 | 46 | 44 | 44 | 45 | 47 | 50 |
| Salt | , | 17 | 17 | 18 | 16 | 16 | 17 | 16 | 19 |
| Small beer | 1 | 23 | 16 | 14 | 12 | 15 | 17 | 17 | 22 |
| Petroleum | - | 29 | 27 | 27 | 27 | 27 | ${ }^{30}$ | 29, | ${ }^{38}{ }^{8}$ |
| Wood, birch . ${ }^{\text {dine and }}$ | cbm | 13370 | 1190 855 | 1115 | 1540 | 1415 | 1085 |  | 1030 805 |
| Coal, anthracite | h | 945 | ${ }^{8} 85$ | 815 716 | 1320 655 | $\begin{array}{r}1055 \\ 634 \\ \hline\end{array}$ | 750 | 760 | 814 |
| English. . |  | 316 | 344 | 339 | 266 | 296 | 359 | 361 |  |
| Coke, gas.works. |  | 269 | 244 | 244 | 207 | 228 | 254 | 276 | 36 |
| Eaglish stove | , |  | 288 | 279 | 240 |  | 281 | 87 | 363 |

should not overlook the consequences of State interference with the consumption of foodstuffs during the War period.

Owing to the unexpected length of time the War lasted and to the international blockade there was a serious lack of necessaries in the neutral countries of Europe. In Sweden the scarcity of foodstuffs began to make itself felt at the turn of the year 1916-1917, becoming worse and worse until after the Armistice in the autumn of 1918. As early as in the summer of rgr6 the consumption of certain important foodstuffs, above all sugar and corn and com-products, was limited by State interference. This regulation of consumption was carried out by Folkhushallmingskommissionen (F.H. K.), which was appointed on the 28th September 1g16. The procedure was as follows: all available stores of certain commodities and the rawmaterials from which they were produced were confiscated under the law governing disposal and were paid for by the State at officially fixed prices. The distribution was regulated through an elaborate rationing system. The scope of the control was gradually extended and eventually covered also potatoes, coffee, and other articles. It did not however interfere so much with animal foodstuffs. When the food-control was at its height almost all categories of foodstuffs came within the sphere of activities of the F.H.K.

The local administration was entrusted to special District Boards (livsmedelsstyrelser) - 37 in number - one or more in each county. The municipal organizations were called livsmedelsnämnder, and there was generally one in each commune. After the War this regulation of foodstuffs was liquidated more rapidly and more completely in Sweden than in most other countries. At the turn of the year 1920 -2I the Commission on National Economy was officially dissolved after having ceased its real activities in 1919.

Certain notes have been made at the foot of Table 22, referring to those articles that were affected in one way or another by legal restrictions, so that their average prices are not exactly based on the free fixation of prices.

As has already been mentioned, the official retail price statistics in Sweden go back to 1903, when the special agent

Table 17. Average Prices (in ore) for the Years 1904-1912.

| Afticlo | Quantity | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 19 II | 1912 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Milk, unskimmed skimmed separated | lit. | $\begin{array}{r}13 \\ 7 \\ \hline\end{array}$ | $\begin{array}{r} 13 \\ 7 \end{array}$ | $\begin{array}{r}14 \\ 7 \\ \hline\end{array}$ | $\begin{array}{r} 14 \\ 7 \end{array}$ | $\begin{array}{r} 14 \\ 7 \\ \hline \end{array}$ | $\begin{array}{r} 14 \\ 7 \end{array}$ | $\begin{array}{r}14 \\ 7 \\ \hline\end{array}$ | 147 | 1486 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | 5 |  |  |
| Butter, first quality second | kg | 206 185 | 191 | 201 | 219 199 | 226 | 220 | 222 | 228 | 237 |
| Cheese, whole-milk, unseasoned |  | 185 | 191 | - | 199 | 204 | 198 | 200 150 | 205 | 214 156 |
| average quality, |  | 103 | 107 | 109 | 116 | 119 | 116 | 114 | 111 | 115 |
| skim-milk, Margarine, , highest quality |  | - | - | - | 157 | $\frac{164}{164}$ |  | 48 | 48 | 51 5 51 |
| -average |  | 149 | 157 104 | 159 108 | 157 108 | 19 | 159 116 | 169 125 | 152 116 | 157 122 |
| lowest ${ }^{\circ}$ | - | 10 | - |  | 10 | 19 | 116 | 125 | 116 | 122 <br> 132 <br> 1 |
| Eggs, Swedish, new-laid | score | 129 | 133 | 142 | 150 | 148 | 151 | 149 | 149 | 161 |
| Potatoes, old preserved | 5 lit. |  | 29 | 25 |  | - 32 | $\frac{28}{28}$ | 133 27 27 | 135 29 | $\begin{array}{r}145 \\ 32 \\ \hline\end{array}$ |
| Peas, fresh | , | - | $\underline{29}$ | 25 | 29 | 3 |  | 40 | 48 | 49 |
| Peas, dried Beans, | kg | 27 | 27 | 26 | 27 | 30 | 28 | 29 | 29 | 30 |
| Wheat haricot Swedish, first quality. |  | 40 | 39 | 39 | 40 | 42 | 41 | 46 | 47 | 53 |
| Wheat flour, Swedish, first quality. |  | 27 | 27 | 27 | 28 | 31 | 33 | 32 | 30 | 31 |
| Rye flour : |  | 19 23 | 19 | 19 | 20 | 23 29 | 23 28 28 | 20 | 20 | 22 |
| Groats, oaten, svapour-prepared. |  | 3 3 | 31 | 24 31 |  |  | 28 33 | 26 34 | 25 32 | 27 36 |
| Pot-barley . ${ }^{\text {a }}$, |  | 26 | 25 | 25 | 32 26 | 28 | 28 | 34 | 32 | 36 |
| Rice, first quality, Sarolinas |  | 二 | 57 | 58 | 59 | 59 | 60 | 63 | 64 | 65 |
|  |  | $\overrightarrow{32}$ |  |  |  |  | - | 39 | 39 | 40 |
| Ryo bread, hard, coarse, mpist- |  | 36 | 35 | 31 35 | 32 37 | 35 <br> 41 <br> 1 | 348 | 33 40 | 33 <br> 39 | 35 |
| loaf, swoet | , | 35 | -34 | 35 | 35 | 39 | 39 | 39 | 37 | ${ }_{38}{ }^{48}$ |
| - |  | 25 | 25 | 26 | 26 | 28 | 28 | 28 | 27 | 29 |


| Wheat bread, biscults, average loaf, baked with water | kg |
| :---: | :---: |
| Beef, fresh, roast | * |
| for soup | * |
| Veal, roast, fattened calf | * |
| Moung ${ }^{\text {c }}$ | * |
| Mutton, fresh . . . salted. | * |
| Pork, fresh | * |
| Bacon, Swedish | * |
| American | * |
| Fish, fresh, herrings | * |
| - sprats | * |
| - plaice . | - |
| salted, herrings, first quality. | - |
| - $\quad$ second * | * |
| - sprats. | * |
| - ling. | , |
| - cod | * |
| Coffee, unroasted, Santos, first quality. | * |
| Sugar, lump- | \% |
| Beer, small | 1 |
| Petroleum, Water White | - |
| Standard White | - |
| Wood, birch-) unsawn (per great cord $2.5 \times \mathrm{r} .6 \times\{$ peat- $\quad 0.89 \mathrm{~m}=3.56 \mathrm{cbm}): . . . .\{$ |  |
| Peat . . . . . . . . . . . . . . . . | 100 kg |
| Coal, anthracite . . . | hi |
| Coke, gas-works, uncrushed . | - |
| English, stove . |  |


| 63 | 64 |
| :---: | :---: |
| ]1 | 89 |
| 97 | 74 |
| 102 | 104 |
| 53 | 53 |
| 103 | 105 |
| 105 | 110 |
| 115 | 117 |
| 113 | 113 |
| 31 | 33 |
| 42 | 40 |
| 70 | 71 |
| 36 | 38 |
| 24 | 25 |
| 51 | 54 |
| 1115 | 1115 |
| 61 | 69 |
| 18 | $\overline{16}$ |
| - | - |
| 2180 | 2170 |
| 1660 | 1650 170 |
| - | 322 |
| - | 112 |
| - | - |




|  <br>  |  |
| :---: | :---: |
|  |  |

[^24]institution was established. Table 27 gives the annual average prices of some important commodities during the period 1904-12. The table may serve to complement the price series quoted in the preceding chapters.

## The Cost of Living in Sweden in 1830-1935.

By combining the findings of various enquiries made into the development in past decades of the prices of essential consumers' goods and accounted for in the earlier chapters of this volume with the official retail price statistics from IgO4, we obtain a survey of the changes in the cost of living in Sweden during a period of 100 years. The cost of living index covering, the years $1830-1913$ can in fact without much complication be connected up with the index series of the Social Board. Both index series are based on the same method of calculation, though the number of articles and their qualities differ somewhat. The real difficulty lies, of course, in the important changes that have taken place in the habits of life and in consumption during the past century, due to the considerable improvement in the general standard of living and to the industrial revolution.

For the period 1830-I913 have been used two different budgets in the index calculations. In our attempt to connect up the index series we shall have to introduce two more series, relating to the preliminary budget and to the standard budget.

The expenditure percentages of the main items of the four different budgets appear from the table given below.


[^25]Table 28. The Index Seriee Combined.

| 2 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year | The cost of living index 18301913. $1913=$ 100 | Social <br> Board's prices reighted with the budget $b$. $1913=100$ | Prices weighted with the ISocial Board's index budget. $1913=$ 100 | Social Board's cost of living index excluding taxes.$1913=100$ | The earlier index series as from 1913 written up with the aid of the Social Board's cost of living index exclading tazes. |  | SocialBoard'scost oflivingindexincludingtaxes.July$1914=$100 |
|  |  |  |  |  | $\begin{gathered} 1861 / 70 \\ =100 \end{gathered}$ | $\begin{gathered} 1913= \\ 100 \end{gathered}$ |  |
|  | 87 | - | 85 |  |  |  |  |
| 1905 | 88 |  | 88 |  | 105 | 88 | 84 |
| 1906 | 90 | - | 89 |  | 107 | 90 | 88 |
| 11907 <br> 1908 <br> 1 | 95 | - | 95 |  | 113 | 95 | 90 |
| ${ }_{1}^{1908}$ | 96 | - | 95 | - | 114 | 96 | 94 |
| ${ }_{1}^{1909}$ | 95 | - | 95 |  | 113 | 95 | 94 |
| 1910 | 95 |  | 95 |  | 113 | 95 | 94 |
| 1913 | 94 | - | 93 |  | 112 | 94 | 95 |
| 1912 | 100 |  | 100 |  | 119 | - 100 | 98 |
| $1 \begin{aligned} & 1913 \\ & 1914 \\ & 1\end{aligned}$ | 100 | (July) ${ }^{100}$ | 100 | 100 | 119 | 100 | 100 |
| $1 \begin{aligned} & 1914 \\ & 1925\end{aligned}$ | - | (July) 100 |  | (July) 100 | 121 | 102 | 102 |
| 1915 |  |  |  |  | 139 | 117 | 115 |
| 1916 | - | (Dec) 144 | - | (Dec.) 14 T | 157 | 132 | 130 |
| 1917 |  | $\text { (May) } 160$ | - | (May) 155 | 198 | 166 | 162 |
| 1918 | - |  | - | (Sept) 170 | 276 | 232 | 225 |
| 1919 | - | 282 | - | 268 | 389 | 268 | 261 |
| 1920 | - | 279 | - | 270 | 321 | 270 | 269 |
| 1921 | - | 236 | - | 231 | 275 | 231 | 241 |
| 1932 | - | 188 | - | 187 | 223 | 187 | 195 |
| $1 \begin{aligned} & 1933 \\ & 1924 \\ & 192\end{aligned}$ | - | 173 | - | 174 | 207 | 174 | 177 |
| 1924 | - | 172 | - | 174 | 207 | 174 | 174 |
| 1925 | - | 175 | - | 177 | 211 | 177. | 176 |
|  | 二 | 169 | - | 171 | 203 | 171 | 172 |
| 19 | - | 166 | - | 169 | 201 | 169 | 178 |
| ${ }_{1928}$ |  | 167 | - | 170 | 202 | 170 | 171 |
| 1929 1930 | - | 164 | - | 168 | 200 | 168 | 169 |
| 1930 | - | 158 | - | 163 | 194 | 163 | 164 |
| \|1931 | - | 152 | - | 157 | 187 | 157 | 159 |

The successive decrease of the percentage of foodstuffs. from budget $a(65.0)$ to the standard budget of $I 920(46.5)$ reflects the considerable improvement in the standard of living that has taken place during the period from I830 onwards.

The price indices can obviously be combined in several


Social Board's prices weighted with budget b.

Social Board's cost of living index excluding taxes.
ways. In table 28 are recorded some alternative combinations of the index series calculated on the basis of the prices and the budget figures given in the previous chapters. We may compare the earlier cost of living index for the years $1904-\mathrm{I} 3$, calculated on the basis of the year r913, with the index series that is obtained, if the same prices are weighted according to the index budget of the Social Board. The series composed in this way (column 4) differs very little from the earlier index series (column r). .The tendency as well as the yearly fluctuations are about the same. If we calculate an index for the years 1904-13 by making the cost of living index of the Social Board (column 8) refer to that early period, we obtain a fresh possible basis of comparison. These three series tally
remarkably well, and they may thus be considered to represent the development of the cost of living during the ten years' period before the outbreak of the Great War.

From rgi3 we can compare the index series of columns 3 and 5. The figures in column 3 are based on the prices of the Social Board weighted according to budget $b$, whereas the series in column 5 is constructed from the cost-of-living index of the Social Board - taxes not included. If the series in columns 2 and 3 are combined we get a continuous index series, which compares well with a corresponding series obtained by combining other series in column 4 and 5. These two continuous index series differ inasmuch as the one is based on budget $b$, and the other on the index budget of the Social Board. The result is clearly seen in chart 10.

The differences are unimportant. During the period 1904-13 the series are practically the same. As the prices of foodstuffs increased more rapidly than the general cost of living index during the War period, though they afterwards decreased more rapidly, the index series based on budget $b$ shows a stronger increase during the earlier period and a stronger decrease after the War as compared with the other series, and this is due to the fact that foodstuffs constitute a larger part of budget $b$ than of the Social Board's budget.

As the differences in the series are so slight, we can combine the series in still another way. We can continue the cost of living index covering the years $1830-1913$ from 1913 with the aid of the cost of living index of the Social Board for later years, provided we exclude the taxes from this last series. The basis is the index number of 1913 (II9) and this number is then changed in proportion to the increase that appears from the index number of the Social Board (column 5). In columns 6 and 7, we find the series calculated in that way.

For all practical purposes any of the series can be used, as the differences are so slight. We have thus obtained an index series for the changes in the cost of living in Sweden during the last 100 years.

TABLES

Table A．Index of Cost of Livinglin Sweden 1830－1913．

| צeas |  |  | 2 |  | 3 | 3 |  |  | 5 |  |  |  |  |  |  | 8 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ${ }_{\text {Grain and }}^{\text {peas }}$ |  | $\xrightarrow{\text { Meeal and }}$ graats |  | Potatoes |  | Vegetablefoodstuffs |  | $\begin{aligned} & \text { Beef, veal } \\ & \text { and mut- } \\ & \text { ton } \end{aligned}$ |  | Pig．mat |  | Meat |  | $\begin{aligned} & \text { Dairy pro- } \\ & \text { duce and } \end{aligned}$$\text { egge }{ }^{\circ}$ |  | $\begin{gathered} \text { Meat, dairy } \\ \text { paroucuce } \\ \text { pand egss } \end{gathered}$ |  |
|  | $\begin{aligned} & \text { Bud- } \\ & \text { get a } \end{aligned}$ | Bud- | $\begin{aligned} & \text { Bud- } \\ & \text { get a } \end{aligned}$ |  | $\begin{aligned} & \text { Bud- } \\ & \text { get a } \end{aligned}$ |  | $\begin{aligned} & \text { But- } \\ & \text { get } \end{aligned}$ |  | $\begin{aligned} & \text { Bud- } \\ & \text { get a } \end{aligned}$ |  | ${ }^{\text {But }}$ | $\left\lvert\, \begin{aligned} & \text { get } \\ & \text { get } \end{aligned}\right.$ | Bud- |  | $\begin{aligned} & \text { Bud } \\ & \text { get } \end{aligned}$ | $\begin{aligned} & \text { Bud- } \\ & \text { get b } \end{aligned}$ | $\begin{aligned} & \text { Bud- } \\ & \text { get a } \end{aligned}$ | ${ }_{\text {gud }}^{\text {gud }}$ |
| $\begin{array}{\|l\|l} 1883 \\ 183 \end{array}$ | ${ }^{73} 8.2$ | ${ }^{769 \%}$ | ${ }^{79.3} 8$ |  |  |  | 82．2． | 84.8 | 57，9 | 57.6 | 66．7． | 6.5 |  | 62．7 | 655．6 | 66． |  | ${ }_{64} 6$ |
| （1832 |  | 72．5 |  | 88． 8 | 56． | （ta | ， | 74．6 | （ta． |  | 68．2． |  |  | 65．9 | 66．0 | 6， | 66．7 | 36．， 6 |
| litis34 |  | ce． <br> 68.4 <br> 68.5 <br> 8.5 | \％ 77.9 | 76．0 | 45 |  | ${ }^{64.3}$ | 66．3 | 68．${ }^{\text {che }}$ | cis．${ }^{\text {cis }}$ | 68．5 | 68.6 | cis．2 | ${ }^{65.5}$ | ${ }^{66.3}$ | ${ }_{68.3}^{66.6}$ | 66．9 | 66．2， |
|  |  | 68．5 | 79，4 | ${ }^{80.3}$ | 63．5 | 63．5 | ${ }^{78.9}$ | 72．12 | ${ }_{58.4}^{58.4}$ | 58．6 | 64．4， | 64．0 |  | 64．12 | ${ }_{73.2}^{70.6}$ | 73．2， | ${ }^{69.2}$ | 57 |
| － 18 | ${ }_{88}{ }_{84.2}$ | 73．9， | 80．5 | ${ }^{78.5}$ | 69．9 | 89.5 | ${ }_{89.8}^{75.2}$ | （74， | ${ }^{\text {Crab }}$ | ${ }^{\text {coi．}}$ | 71．9 | 71．6 | cis．${ }^{66.3}$ | \％ | cis． | 76．2， | ， | ， |
| 1839 | ${ }_{78.0}^{88.0}$ | 90．9 | 88．9 | 93．8． | 88．7， | 88.5 | 89．4 | coit | 68．9 | 66．3． | 56．4 | 76．3 |  | 59．3 | ${ }^{74.1}$ | ${ }_{7}^{76.9}$ |  |  |
| ${ }_{18}^{1834}$ | 75．2．2 73 | ${ }_{74}^{78.6}$ | 82．0． | 83．8 | ci．l 6 | 63．71 | 73．919， | 775.6 | 72．4 | 72.8 | ${ }^{73.5}$ | 70．6 | 73．0 | 72．7， | ${ }^{74.5}$ | 751．8 | ${ }_{\text {ches }}^{74.2}$ | 69．6 |
| 18 | ${ }^{7} 9.5$ | 85. | ${ }^{83.5}$ | ${ }^{80} 8$ | ${ }_{4}^{64.4}$ | ＋64．4 | 76．0， | 8． 8 | 33．2） |  |  |  | $7 . .8$ | 77.5 |  |  |  |  |
| （1843 |  |  |  | 37．2． |  | 72．1． | \％85．5 | \％9\％9 | （24．2． | － | 57．31 |  | coit | ${ }^{69.8}$ |  |  | 74．3 | 73，4 |
| 旡1845 |  |  | 78．2． 88.9 98.9 | lis． | ， | S5．2． |  | cis | cois | \％60．1． | 62．6， | 6．2 |  | 62．8， | 77.2 <br> 78.4 <br> 1 | 77.3 | 71．4 |  |
| 边1847 |  | 94．5 | 998．9 | ${ }_{95}^{10.6}$ | 73：4 | 73．2 | 33．2 | ${ }^{923} 9$ | 620．2 | 64．5 | ${ }^{8} 8.3$ | 9．9 | ${ }^{\text {73．0．}}$ | ${ }_{73.8}^{68 .}$ | 78．85 | 78.6 | 35．6 |  |
|  | ${ }_{65.3}^{72.8}$ | ${ }_{6} 7.3$ | \％90．2 | ${ }^{79.8}$ | 77.6 | \％ 77.4 | 76.1 | ${ }^{70.9}$ | ${ }^{77.6}$ | 78．8． |  | ${ }_{74} 7$ | ${ }_{74}^{78 .}$ | \％ 78.6 | ${ }^{78.6}$ | 78.5 | 78．2 | 6 |
| 1885 | 72．4． | ${ }_{79,}^{77.3}$ | 17.1 | \％ 7 \％ 5. | ${ }^{89} 8$ | ${ }^{89} 9$ | 78.3 | 78.5 | ${ }^{70.5}$ | 73．0 | 悗 | 20．2 | 70．2 | \％1：4 | ${ }_{77,0}^{77}$ | 77.0 |  |  |
|  |  | 84.9 | 3． |  | 83.6 | ${ }^{73.6} 8$ | ${ }^{78.5}$ |  | 69.2 |  |  |  |  |  |  |  |  |  |
|  | 90．7 |  |  |  | 87．4． |  | 9．19 |  | ${ }_{74} 7$ | 74.5 |  |  | ${ }^{78.4}$ |  | 78．29 | 78．4． | ， | （ 78.2 |



Table A. (Cont.)


Table A. (Cont.)


|  |  |  | 1 |  | 2 |  | 33 | 14 |  | 35 | 1 |  | 1 |  | 18 | 19 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year | Salted fish |  | Groceries |  | Poodstuffs |  | Fuel | Lighting |  | Cloth ing | Housing |  | Cost of living indez |  | Dr． Amark＇s |  |
|  | $\begin{aligned} & \text { Bud- } \\ & \text { get a } \end{aligned}$ | Bud－ get b | Bud． get a | Bud． get b | Bud－ get a | Bud－ get b | Bud－ gets a and $b$ | Bud－ get a | Bud－ get b | Bud－ gets a and $b$ | Bud－ get a | Bud－ get b | Bud－ get a | Bud－ get b | Food－ stuff index | Gene－ ral index |
| 1891 | － | 81. 80.6 76 83. 80.7 83.0 87.9 93. 107.2 87.0 | 二 | 79.376.7 | 二 | 202．8 | 116.6 | － |  |  | － | 108． 8 | － | 100.798.9 | 110 | 83 |
| 1892 |  |  |  |  |  |  | 179.0 |  | 34.4 | 90 |  | 107．0 |  |  | 101 |  |
| 1893 ．．．．． |  |  | － | 78.0 | － | 94.8 | 712．9 | － | 32.3 | 89 | － | 106． | － | 94.9 | 98 | 75 |
| 1894 ．．．． | － |  | － | 74.969.4 |  | 88.8 | 515.1 |  | 32.5 | 89 | － | 200.4 | － | 90． 5 | 93 | 72 |
| 1895 | － |  |  |  | － | 88.9 | 180.3 | － | 32.8 | 89 | － | 123．6 |  | 91.7 | 92 | 71 |
| 1896 |  |  | － | 68.6 |  | 87.3 | 709.5 | － | 33.4 | 89 |  | 118.6 |  | 91.0 | 9372 |  |
| 1897 | － |  |  | 62.6 | － | 90.5 | 115.3 | － | 38.8 | 90 | － |  |  | $\begin{aligned} & 93.9 \\ & 98.4 \end{aligned}$ | 96 73 <br> 100 77 |  |
| 1898 | － |  | － | 58.6 | － | 95.8 | 284.8 | － | 30.3 | 90 |  | 123.6 |  |  | 100 | 77 |
| 1899 | － |  | － | 57.2 | － | 200．0 | 139.5 |  | 30.7 | 92 |  | 130.9 | － | 108．8 | 101 | 82 85 |
| 1900 |  |  | － | 58.6 | － | 203．7 | 240．9 | － | 33.5 | 92 |  | 224．6 |  | 103.9 | 103 | 85 |
| 189t－0 | － |  |  | 68.4 | － | 95．z | 119.6 | － | 32.6 | 90 | － | 715．${ }^{\text {\％}}$ | － | 96.6 | 99 | 77 |
| 1901 | － | 102.2 | － | 56.2 |  | 201．5 | I 30.8 |  | 33.1 | 9 T |  | $\begin{aligned} & 113.0 \\ & 127.0 \end{aligned}$ |  | $\begin{aligned} & 101.4 \\ & 108.2 \end{aligned}$ | 104 |  |
| 1902 | － | 95.7 | － | 53.7 |  | 202.9 | 120.9 |  | 32.8 | 9 g |  |  | － |  |  | 82 |
| 1903 |  | 99.7 |  | 53.0 |  | 200．7 | 129.8 | － | 33.8 | 92 |  | 135．5 |  | 104．0 | 102 | 82 83 |
| 1904 | － | 93．1 | － | 53.4 |  |  |  |  |  | 93 | － | 127． 1 | － | 102.7 | 104 | 83 |
| 1905 5906 | － | 96.7 101.7 |  | 57.9 56.5 | － | 204.3 | 133.9 |  | 31.4 | 96 |  | 739．： |  | 104.9 107.1 | 108 | 89 |
| 1906 <br> $1907 .$. <br> 908. | － | 101.7 96.3 | 二 | 56.5 55.7 |  |  | $\begin{aligned} & 145.1 \\ & 165.2 \end{aligned}$ |  |  | 9798 |  |  | － | 107.1 112.6 |  |  |
| 1908 | － | 93.7 | － | 57.6 | － | $\begin{aligned} & 708,8 \\ & \text { III.9 } \end{aligned}$ |  | － | $\begin{aligned} & 38.5 \\ & 33.5 \end{aligned}$ |  | － | r44．6 | － | 114.3 | 113 | 89 |
| 1909 | － | 98.9 | － | 58.9 | － | 210．0 | 157．3 | － | 34.5 | 99 | － | 147.7 | － | 113.3 | 113 | 90 |
| 1910 ．． | － | 97.2 | － | 60.3 | － | 209．5 | 149.3 | － | 33.5 | 200 |  | 150.7 | － | 118.2 | 113 | 82 |
| 1901－10．． | － | 97.5 |  | 56.3 | － | 205.3 | 139．0 | － | 32.7 | 95 |  | 137．0 |  | 107.6 | 108 | 87 |
| I911． |  | 97.5 | － | 63.8 | － | 108．3 | 144．6 | － | 32.2 101 <br> 32.4 102 <br> 35.9 103 |  | I | $\begin{aligned} & 744 \cdot 3 \\ & 759.8 \\ & 759.8 \end{aligned}$ | － | $\begin{aligned} & 119.1 \\ & 159.4 \end{aligned}$ | $\begin{aligned} & 125 \\ & 122 \end{aligned}$ | 95 |
| 1912. | － | 104.5 | － | 68.8 | － | ． | 151.9 | － |  |  | 99101 |  |  |  |  |  |
| 1913 ．．．．． | － | 110.31 | － | 66．이 |  | 135．8 | 159.4 |  |  |  |  |  |  |  |  |  |  |

Table B．Commodity Price
 kronor（Sm．Kr．）per cubic metre

|  | 1 | 2 | 3 | 4 | 5 | 61 | 7 | 8 | 9 | 10 | 11 | 12 | 31 | 14 | 25 | 16 | 17 | 18 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year | $\begin{aligned} & \text { 吂 } \\ & \stackrel{\rightharpoonup}{8} \end{aligned}$ | ぶত |  | $\begin{aligned} & 0 \\ & \stackrel{0}{N} \end{aligned}$ |  | $\begin{aligned} & 0 \times 3 \\ & \hline 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & \text { N } \\ & \text { 心 } \\ & \text { 管 } \end{aligned}$ |  |  | $\begin{aligned} & 0 \\ & 0 \\ & \hline \\ & 0 \\ & 0 \\ & \mathbf{O} \\ & 00 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \\ & 0 \\ & 0 \\ & \stackrel{0}{8} \\ & 0 \\ & \hline 8 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \\ & \stackrel{0}{0} \\ & \stackrel{\rightharpoonup}{6} \\ & \mathbf{C}_{2} \end{aligned}$ |  | पsenf 'jeog |  |  |  |  |
| 1830 | 14.9 | 10. | 9.1 | 6.8 | 27.8 | 13.6 |  | 14.6 | 18.2 | 28.5 | 10.0 | 3. |  | 28 | 25 |  |  |  |
| 1831 | 15.8 | 13.2 | 11.0 | 7.5 | 30.4 | 14.6 |  | 14.2 | 17.9 | 29.0 | 12.4 | 3.6 |  | 28 | 27 |  |  |  |
| 1832 | 12.8 | 10.4 | 9.7 | 6.7 | 26.1 | 15.4 |  | 2.8 | 20.4 | 26.5 | 11.0 | 2.8 |  | 29 | 26 |  |  |  |
| 1833 | 11. | $9 \cdot 3$ | $7 \cdot 9$ | 5.7 | 22.0 | 14．1 |  | 12.8 | 17.0 | 22.8 | 9.8 | 2.5 |  | 29 | 27 |  |  |  |
| 1834 | 11.6 | 9.5 | 7.9 | 5.9 | 22.8 | 13.5 |  | 1.4 | 16.9 | 26.3 | 9.1 | 2.5 |  | 28 | 27 |  |  |  |
| 1835 | 11. | 10.1 | 8.8 | 6.5 | 24.0 | 14.4 |  | 4 | 17.9 | 25.8 | 9.7 | 3.1 |  | 29 | 24 |  |  |  |
| 1836 | 11.0 | 9.8 | 9.0 | 7.1 | 21.1 | 13.6 |  | 6 | 19.0 | 28.3 | 9.5 | 3.0 |  | 28 |  |  |  |  |
| 1837 | 12.2 | 10.9 | 9.8 | 3.2 | 20.7 | 14.2 |  | 13.6 | 19.2 | 31.5 | 10.4 | 3.4 |  | 29 |  |  |  |  |
| 1838 | 16.4 | 12.9 | 11.2 | 9.2 | 28.6 | 116.4 |  | －4 | 21.0 | 36.3 | 12.5 | 4.4 |  | 30. | 27 |  |  |  |
| 1839 | 15.2 | 11.1 | 10.3 | 7.9 | 29．0 | 15.5 |  | 12.4 | 22.6 | 634.8 | 11.4 | 3.0 |  | 33 | 30 |  |  |  |
| 1840 | 15.0 | 11.3 | 9.2 | 7.2 | 27.0 | 14.5 |  | 4 | 19.3 | 29.5 | 10.3 | 3.0 |  | 34. | 32 |  |  |  |
| 1831－40 | 13.3 | 10.9 | 9.5 | 7.2 | 25.2 | 14.6 |  | 12.8 | 19.1 | 29.1 | 10.6 | 3.1 |  | 30 | 27 |  |  |  |
| 1841 | 16.1 | 12.8 | 8.5 | 6.2 | 28.2 | 15.4 |  | 10.4 | 18.5 | 27.7 | 11.0 | 3.2 | － | 35 | 35 |  | 37 | 35 |
| 1842 | 16.6 | 13.7 | 9.4 | 6.4 | 31.7 | 17.6 |  | 4 | 19.6 | 27．0 | ． 9 | 3.7 | 39 | 36 | 31 |  | 36 | 37 |
| 1843 | 13.3 | 11.4 | 9.4 | 6.9 | 23.2 | 15.3 |  | 4 | 19.0 | 28.0 | 9.9 | 3.5 | 42 | 33 | 29 |  | 32 | 37 |
| 1844 | 11. | 9.0 | 8.0 | 6.1 | 21 | 13.0 |  | 2 | 16.7 | 27.3 | 9.3 | 2.7 | 40 | 30 | 26 | 18 | 32 | 38 |
| 1845 | 14.1 | 11.5 | 8.9 | 6.61 | 25.9 | 15.3 |  | 2 | 20.2 | 27.8 | 11.3 | 3.1 | 41 | 29 | 25 | 18 | 31 | 37 |
| 1846 | 16.8 | 13.7 | 12.2 | 9.1 | 29.2 | 18.2 |  | 2 | 23.7 | 33.0 | 12.9 | 3.6 | 43 | 32 | 28 | 17 | 33 | 37 |
| 1847 | 16.2 | 13.7 | 12.8 | 9.7 | 28.1 | 17.0 |  | 13.6 | 23.8 | 32.3 | 13.1 | 4.3 | 43 | 33 | 33 | 22 | 34 | 39 |
| 1848 | 13.8 | 10.3 | 9.9 | 7.1 | 24.3 | 13.8 | － | 13.6 | 20.6 | 30.3 | 10.7 | 3.8 | 45 | 37 | 38 | 26 | 39 | 41 |
| 1849 | 12.9 | 9.4 | 8.4 | 6.4 | 22.7 | 12.2 |  | 6 | 18.3 | 26.8 | 9.8 | 3.9 | 46 | 37 | 38 | 24 | 37 | 42 |
| 1850 | 13.6 | 10.7 | 8.9 | 7.1 | 23.4 | 13.8 | － | 12.6 | 18.1 | 27.8 | 10.6 | 4.4 | 59 | 34 | 35 | 22 | 40 | 41 |
| 1841－50 | 14.5 | 11.6 | 9.7 | 7.2 | 25.8 | 15.2 |  | 4 | 19.9 | 28.8 |  | 3.6 |  | 34 | 32 |  | 35 |  |
| 1851 | 14.2 | 12.7 | 10.6 | 8.9 |  |  |  | 12.6 | 18.8 | 30.5 | 11.9 | 4.3 | 58 | 32 | 34 | 22 | 40 | 37 |
| 1852 | 14.7 | 13.5 | 11.5 | 8.7 | 25.4 | 16.0 |  | 14.2 | 20.8 | 30.5 | 13.7 | 4.8 | 58 | 33 | 35 |  | 41 | 36 |
| 1853 | 18.3 | 14.6 | 12.5 | 9.5 | 28.8 | 16.4 |  | 15.0 | 2 I .4 | 29.8 | 14.3 | $4{ }^{\circ}$ | 53 | 32 | 35 |  | 40 | 35 |
| 1854 | 18.7 | 14.7 | 12.6 | 10.5 | 31.9 | 17.2 |  | 4.2 | 21.7 | ． 6 | 14． 1 | $3 \cdot 5$ | 34 | 40 | 41 | 28 | 47 | 46 |
| 1855 | S | 15.6 | 13.6 | 11.9 | 35．2 | 18.0 |  | 17.4 | 22.2 | 32.4 | 15．1 | 4.2 | 6 | 51 | 48 |  | 55 | 51 64 |
| 1856 | 25.2 | 17.1 | 16.1 | 4 | 41.6 | 20 |  | － | 25.6 | 636.6 | 18．6 | $5 \cdot 4$ | 61 | 57 | 53 | 34 | 70 | 64 |
| 1857 | 3 | 14.7 | 14.1 | 10 | 36.4 | 17.6 |  | 17.4 | 28 | 41.6 | 17.2 | 5.4 | 69 | 53 | 51 |  |  | 45 |
| 1858 | 16， 1 | 11.5 | 14.1 | 10.1 |  | 14.2 |  | 14.2 | 22.6 | 32.4 | 13.5 | 4． 1 | 51 | 49 | 51 | 30 |  | 45 |
| 1859 | 14.3 | 10.8 | 10.8 | 9.7 |  | 12.2 |  | 14.2 | 19.6 | 31.6 | 12.3 | 3.4 |  | 43 | 43 | 25 | 51 | 5 |
| 1860 | 16.6 | 12.0 | 12.0 | 10.2 | 26.2 | 14.8 |  | 17.2 | 21.2 | 33.4 | 13.1 | 4.2 | 44 | 47 | 40 | 25 | 51 | 52 |
| 1851－60 | 18.1 | 13.7 | 12.5 | 10.3 | 30.2 | 16.2 |  | 15.6 | 22.3 | 33.9 | 14．4 | 4.3 | 51 | 44 | 44 | 28 | 54 | 47 |
|  | 18 | 14.8 | 13.8 | 10.2 | 31.0 | ， |  | ． 4 | 23.6 | 33.0 | 14.9 | 5.1 | 42 |  | 50 | 26 | 51 | 52 |
| 1862 | 19.5 | 15.9 | 13.6 | 9.7 | 32.7 | 19.1 |  | 17.2 | 24.4 | 33．2 | 15.6 | 5.4 | 57 | 48 | 47 | 23 | 47 | 54 |
| 1863 | 15.6 | 13.0 | 12.0 | 8.8 | 27.0 | 17.0 |  | 14.2 | 23.1 | 32．2 | 14.0 | 4.9 | 59 | 51 | $5{ }^{\circ}$ | 24 | 55 | 53 |
| 1864 | 13.4 | 11.8 | 10.7 | 8.3 | 23.0 | 14.8 |  | 13.4 | 20.4 | 29.8 | 1 | 4.3 | 50 | 49 | 49 | 22 | 43 | 48 |
| 1865 | 13.9 | 11 | 9.9 | 8.4 | 24.2 | 13.7 |  | 14.2 | 18.8 | 29.2 | 12.8 | 3.8 | 43 | 46 | 48 | 26 | 47 | 48 |
| 1866 | 16.3 | 12.8 | 12.5 | 10.3 | 28.5 | 16.4 | 20.8 | 18.2 | 20.2 | 8 | 14.1 | 4.0 | 43 | 49 | $49$ | 23 | 50 | 57 |
| 1867 | 21.8 | 17.6 | 15.0 | 11.4 | 35.8 | 20.7 | 2 | 21.2 | 25.4 | 34.8 | 17.0 | $5 \cdot 8$ | 43 | 50 | 48 | 23 | 47 | 49 |
| 1868 | 23.0 | 19.9 | 18.1 | 13.6 | 3 | 24.0 | 31.4 | 22.6 | 30.7 | 40.4 | 21.5 | 6.7 | 57 | 42 | 45 | 20 | 45 | 4 |
| 1869 | 17.2 | 14.6 | 14.2 | 18.5 | 25 | 18.2 | 25.4 | 18.2 | 26 | 36.4 | 17.1 | $4 \cdot 9$ | 47 | 54 | 60 | 22 | 52 | 5 |
| 1870 | 15.3 | 12.2 | 11.0 | 9.5 | 25.7 | 14．83 | 23.4 |  |  |  | 14.0 | 4.3 | 46 | 58 | 62 | 24 | 50 | 58 |
| 1861－70 | 17 |  | 13 | 10 | 199．6 | $\|17.7\|$ |  |  |  |  |  |  |  | so｜ | ｜ 8 | 23 | 49 |  |

## for the Whole Country．

unskimmed and skimmed，and paraffin；ore per cubic metse of gas；äre per score of eggs； of birchwood and pine and fir wood．

| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26｜ | 27 | 28 | 29 | 30 | 31 | 32 |  | 313 | 35 | 361 | 37 | $3^{81}$ | 391 | 40 | 41 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 荷 | $\begin{aligned} & \text { \% } \\ & 0 \\ & \hline 8 \\ & \hline \end{aligned}$ |  |  |  |  |  |  |  |  | $\begin{aligned} & \text { x } \\ & 0 \\ & \text { ot } \end{aligned}$ | $\begin{gathered} 8 \\ 0 \\ 8 \\ 8 \end{gathered}$ |  | $\left\lvert\, \begin{gathered} \infty \\ 4 \\ \underset{y}{4} \end{gathered}\right.$ | n |  |  |  | $\begin{aligned} & \text { H } \\ & \text { 荷 } \\ & \frac{0}{0} \\ & \dot{B} \end{aligned}$ | $\begin{aligned} & 9 \\ & 0 \\ & 0 \end{aligned}$ |  |  |
| 31 | 51 | 56 | 16.8 | 16. | 38 | 6.6 |  | 86 |  | 5 | 61 | 123 | 154 | 52 | 276 | 82 | 94 |  |  |  | 2.6 | －7 |
| 32 | 55 | 58 | 16.7 | 17.4 | 35 | 6.7 |  | 86 |  | 34 | 59 | 132 | 146 | 50 | 072 | 87 | 99 |  |  |  | 2.4 | 1.6 |
| 33 | 50 | 58 | 17.1 | 18.4 | 36 | 7.2 |  | 85 |  | 37 | 62 | 182 | 144 | 51 | 175 | 88 | 102 |  |  |  | 2.6 | 1.6 |
| 33 | 51 | 58 | 18.7 | 18.5 | 36 | 6.8 |  | 85 |  | 31 | 63 | 178 | 142 | 55 | 572 | 98 | 111 |  |  |  | 2.7 | 1.7 |
| 29 | 48 | 57 | 17.8 | 15.3 | 37 | 7.1 |  | 84 |  | 31 | 62 | 173 | 140 | 63 | 373 | 95 | 9 |  |  |  | 3.0 | 1.9 |
| 31 | 49 | 54 | 16.5 | 15.5 | 38 | 7.4 |  | 86 |  | 38 | 60 | $15^{8}$ | 137 | 69 | 972 | 89 | 5 |  |  |  | 2.9 | 1.8 |
| 32 | 5 I | 58 | 88.5 | 15.7 | 41 | 7.6 |  | 92 |  | 36 | 64 | 155 | 132 | 68 | 871 | 89 | 103 |  |  |  | 3.0 | 1.8 |
| 33 | 56 | 60 | 17.6 | 15.7 | 41 | 7.8 |  | 97 |  | 47 | 69 | 144 | 141 | 67 | 770 | 89 | 103 |  |  |  | 2.9 | 1.8 |
| 30 | 59 | 64 | 22.0 | 22.1 | 43 | 7.5 |  | 98 |  | 48 | 70 | 137 | 141 | 63 | 379 | 92 | 4 |  |  |  | 3.0 | 1.9 |
| 35 | 56 | 64 | 24.6 | 21.4 | 42 | 7.9 |  | 99 |  | 39 | 72 | 144 | 142 | 63 | 388 | 99 | 109 |  |  |  | 3.0 | 1.9 |
| 39 | 53 | 63 | 20 | 17.6 | 41 | 7.7 |  | 96 |  | 36 | 68 | 138 | 143 | 63 | 378 | 107 |  |  |  |  | 2.9 | 1.8 |
| 33 | 53 | 59 | 19 | 17.8 | 39 | 7.4 |  | 98 |  | 38 | 65 | 154 | 141 | 61 | 175 | 93 |  |  |  |  | 2.8 | 1.8 |
| 35 | 49 | 60 |  |  | 39 | 7.9 |  | 95 |  | 3 | 70 | 137 | 139 | 63 | 368 | 105 |  |  |  |  | 3.2 | 1.8 |
| 37 | 49 | 58 | 21 | 18.2 | 37 | 8.8 |  | 95 |  | 37 | 65 | 123 | 137 | 61 | 167 | 99 | III |  |  |  | 3.3 | 9 |
| 28 | 47 | 56 | 20.3 | 17.4 | 3 B | 8.0 |  | 100 |  | 38 | 67 | 115 | 137 | 61 | 165 | 90 |  |  |  |  | 3.0 | 1.9 |
| 25 | 40 | 56 | 19.2 | 16.7 | 31 | ． 2 |  | 93 |  | 37 | 68 | 117 | 133 | 62 | 262 | 84 | 98 |  |  |  | 3．0 | 1.8 |
| 26 | 43 | 58 | 18.4 | 18 | 33 | ， |  | 95 |  | 42 | 64 | 113 | 137 | 62 | 29 | 83 | 6 |  |  |  | 3.5 | 2.0 |
| 26 | 50 | 61 | 18.0 | 14.8 | 35 | 8.1 |  | 97 | 60 | 49 | 63 | $1: 3$ | 133 | 63 | 375 | 87 | 98 |  |  |  | 3.0 | 2.0 |
| 32 | 56 | 65 | 18.3 | 18.6 | 35 | 8.3 |  | 103 | 69 | 46 | 68 | 102 | 131 | 63 | 3 | 98 |  |  |  |  | 3.2 | 2.0 |
| 33 | 57 | 67 | 20 | 18.3 | 35 | 8.2 |  | 107 | 74 | 46 | 63 | 112 | 121 | 65 | 5 | O1 | 115 |  |  |  | 3.4 | 2.0 |
| 29 | 50 | 65 |  | 21.1 | 36 | 8.0 |  |  | 69 | 48 | 66 | 127 | 120 | 65 | 574 | 98 |  |  |  |  | 3.7 | 2.3 |
| 26 | 51 | 60 | 20.2 | 19.2 | 36 | ． 1 |  | 106 | 66 | 49 | 65 | 139 | 110 | 67 | 776 | 95 |  |  |  |  | 3.6 | 2.2 |
| 30 | 49 | 61 | 19.8 | 18.1 | 35 | 8.1 |  |  |  |  | 66 | 120 | 130 |  | 371 | 94 | 5 |  |  |  | 3.3 | 2.0 |
| 29 | 51 | 6 |  | 17. | 37 | 7.9 |  |  |  | 9 | 67 | 127 |  | 65 | 576 | 90 |  |  |  |  | $3 \cdot 5$ | ． 1 |
| 36 | 56 | 65 |  | 17 | 37 | $7 \cdot 9$ |  | 107 |  |  | 65 | 124 |  | 62 | 274 | 89 |  |  |  |  | 3－3 |  |
| 37 | 61 | 70 |  | 20 | 38 | 8.3 |  |  |  | 50 | 67 | 130 | 111 | 63 | 376 | 97 |  |  |  |  | 3.6 |  |
| 45 | 67 | 76 | 23.6 | 20.5 | 41 | 9.2 |  | 122 | 78 | 57 | 66 | 138 |  | 64 | 478 | 135 | 144 |  |  | 7.5 | 3.8 | 2.4 |
| 54 | 71 | 85 | 25.6 | 24 | 47 | 9.3 |  | 128 | 85 | 61 | 78 | 136 | 112 | 69 | 978 | 127 | 137 |  |  | 7.5 | 4.6 | 2.7 |
| 60 | 83 | 94 | 29.7 |  | 51 | 10.3 |  | 148 | 95 | 62 | 89 | 140 | 127 | 73 | 3 | 119 | 127 |  |  | 7.5 | 5.3 | 3．4 |
| 63 | 79 | 90 |  | 24.8 | 47 |  |  | 150 | 95 | 66 | 81 | 140 | 140 | 81 | 174 |  | 133 |  |  | 7.5 | 6.0 | 3.5 |
| 47 | 72 | 81 | 36 | 17.8 | 44 | 11.0 |  | $13^{8}$ | 91 | 57 | 87 | 133 | 133 | 71 | 156 | 2 | 118 |  |  | 7.4 | 4.5 | 2.5 |
| 48 | 65 | 76 | 30.5 | 18.0 | 38 |  |  | 136 |  | 46 |  | $144$ | 125 | 71 | 150 | 109 |  |  |  | 7.4 | 4.1 |  |
| 50 | 67 | 77 | 24.5 | 22 | 34 | 11.8 |  | 137 | 85 | 49 | $86$ | $6$ | 124 | 70 | 046 | 114 | 127 |  |  | 27.4 | 5 | 2.5 |
| ． 47 | 67 | $7^{8}$ | 26.8 | 20 | 41 |  |  | 128 | 83 | 55 | 77 | 137 |  | 69 | 968 |  |  |  |  |  | 4.3 | ． 6 |
| 50 | 76 |  |  | 23.9 | 37 |  | 78.3 | 138 | 87 | 50 | 78 | 159 |  | 68 | 54 | 13 | 124 |  |  | 7.4 | 5.1 | ．9 |
| 52 | 75 |  | 25.9 | 17.3 | 42 |  | 9．3 | 133 | 88 | 45 | 80 | 173 | 117 | 65 | 552 | 106 | 121 |  |  | 27.3 | 4.8 | 2.6 |
| 50 | 66 | 78 | 20 | 14.8 | 38 | 10 | 58.3 | 133 | 85 | 44 | 79 | 174 | 115 | 61 |  | 98 | 117 |  |  | 27.3 | 4.5 | ． 7 |
| 45 | 63 | 76 | 2 | 17.1 | 36 | 10.3 | 37.7 | 134 | 85 | 43 | 82 | 178 | 115 | $5^{8}$ | 8 | 91 | 2 |  | 76.0 | 27.3 | 4.4 | 2.6 |
| 43 | 65 | 75 | 24．4 | 18. | 34 |  | 7.7 | 140 | 90 | 46 | 81 | 176 | 113 | 70 | O 47 | 85 | 108 | 192 | 70.5 | 27.2 | 4.2 | 2.7 |
| 48 | 70 | 80 | 25.1 | 17 | 41 |  | － | 146 | 89 | 45 | 81 | 159 | 110 | 73 | $3{ }^{46}$ | 89 | 109 | 188 | 71.8 | 27.1 | 4.6 | 2.8 |
| 44 | 70 | 84 | 26.2 | 16.2 | 43 |  |  | 139 | 87 | 49 | 78 | 151 | 113 | $71$ | $141$ | 89 | 7 | 183 |  | 7.1 | 4.6 |  |
| 43 | 78 | 90 | 27.6 | 13.0 | 44 | 10 | 48.7 | 145 | 8 | 51 | 78 | 141 | IIO | 69 | 949 | 84 | 103 | 181 | 50. | 26.8 | 4.3 | 2.6 |
| 60 | 89 | 100 | 23.7 | 14.6 | 35 |  | ． 3 | 150 | 104 | 50 | 82 | $137$ | 111 | $17 \mathbf{1}$ | $148$ | 88 | 103 | 178 | 49.3 | 26.4 | 4.3 | 2.4 |
| 61 | 83 | 98 | 25.9 | 18. | 35 |  | 96.7 | 145 | 105 | 48 | 80 | 141 | 112 | $71$ | 145 | 84 | 103 | 176 | 仡 | 25.8 | $4 \cdot 4$ | 4 |
| 50 | 731 |  | 124．6 | $1{ }^{5}$ | 39 |  |  | 14 |  |  | 80 | 15 |  | 68 | 8148 | 93 | 1IE | 187 |  |  |  | 2.6 |

．

|  | $\pm$ | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | ｜ 12 | ｜131 | 184 | 41.51 | 16 | 17 | 18 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year | K <br> 苟 | 涊 | $\begin{aligned} & \text { 蕆 } \\ & \stackrel{5}{4} \end{aligned}$ | $\begin{aligned} & \text { O } \\ & \stackrel{0}{4} \end{aligned}$ |  |  | $\begin{array}{\|l\|l} \text { ơd } \\ 0 \\ \vdots \\ \vdots \\ \vdots \\ \hline \end{array}$ |  |  |  | $\begin{aligned} & 70 \\ & 0.0 \\ & 0 \\ & \frac{5}{2} \\ & 2 \end{aligned}$ |  |  | $\begin{aligned} & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ |  |  |  |  |
|  | 18.7 | 13.2 | 12.3 |  | 29.6 | 15.6 |  | 17 |  | 31 | 14． B | 4.2 | 347 |  | 5959 | 29 |  | 455 |
| 1872 | 20.41 | 14.1 | 13.3 | 10.7 | 32.4 | 17 | 24.0 | 19.6 | 22.5 | 32.3 | 14.8 | 4.8 | 845 |  | $6{ }^{62}$ |  |  | 57 |
| 1873 | 22.01 | 15.2 | 15.0 | 11.8 | 35.6 | 17.9 | 25 | 20.8 | 25.1 | $32.71$ | $16.6$ | $65.6$ | $648$ |  | $\begin{array}{l\|l\|} 62 & 65 \\ \hline \end{array}$ | 30 |  | 759 |
|  | 20.41 | 16.5 | 16.4 | 13.6 | 34－9 | 19.6 | 26 | 20．0 | $027.5$ | $\text { 36. } 1$ | $18.1$ | $16.5$ | $557$ |  | $5265$ | 32 |  | 49 |
| 1875 | 17. | 14.5 | 14.6 | 13.4 | 29.1 | 18.0 | 24.0 | 21.0 | 26.8 | 38.8 | 19．0 | － 5.7 | 759 |  | $\begin{array}{c\|c} 652 \\ 56 \\ 56 \\ 67 \end{array}$ | 30 |  | $4{ }^{71}$ |
| 1876 | 17.71 | 14.0 | 13.9 | 12.6 | 29．2 | 16.8 | 22.0 | 21 | 23.1 | 33．51 | 15.7 <br> 16.4 |  | $\begin{array}{\|l\|l\|} \hline \\ \hline & 60 \\ \hline 66 \\ \hline \end{array}$ | $66$ | $\begin{array}{l\|l\|} 66 & 67 \\ 55 & 65 \end{array}$ | 32 3 3 | 62 | $2{ }^{7}$ |
| 1877 1878 | 19.511 | 14.7 12.8 12 | 14.912 | 12.3 | 32.5 31.6 | 17．2 | 22．4 |  | 24．4 | 32．6 | $5\left[\begin{array}{l} 16.4 \\ 16.3 \end{array}\right.$ | $\begin{array}{l\|l\|} \hline \\ .3 & 5.4 \\ 5.1 \end{array}$ | $\begin{array}{r\|l\|} \hline \\ .1 & 56 \\ 57 \end{array}$ |  | $\begin{array}{l\|l\|} 55 \\ 52 & 65 \\ \hline 62 \end{array}$ | 33 32 3 | 7 63 | 72 <br> 88 |
| 1878 1879 | 16.61 | 12.8 | 13.0 | 10.3 | 31.6 | 16 i | 20.7 | $7 \mid 17.6$ | 24.8 | $32.4$ | $16.3$ | $\cdot 3 \mid 5 \cdot i]$ | $157$ |  | $\begin{array}{l\|l\|l\|} \hline 62 \\ 53 & 64 \\ \hline \end{array}$ | 32 32 | 63 62 |  |
| 1880 | 18.3 | 15.3 | 13.8 | 10.8 | 31.0 | 17.7 | 23.3 | 18 | 22.8 | 30.1 | 16.5 | 5 5． 5 | 59 | 61 | 6157 | 32 | 66 | 65 |
| 1871－80 | 18.8 | 14.3 | 13.9 | 11.6 | 31.4 | 17.0 |  | 19.2 | 23.8 | 33.0 | 16.2 | $2{ }^{5} 2$ | 254 |  | 6363 | $3:$ | 62 | 26 |
| 1881 |  | ， | 14. |  |  |  |  |  |  |  | 17.2 | 24.6 | 654 |  | 5058 | 31 |  | 65 |
| 1882 | 17.01 | 13.8 | 12.3 |  | 31.0 | 16.7 | 22.2 | 16.6 | 21.7 | 30.1 | 16.7 | 74.6 | 652 |  | 776 | 33 | 64 | 73 |
| 1883 | 16.81 | 12.6 | 12.1 | 9.8 | 27.7 | 14.7 | 20.5 | 16.4 | 20.6 | 26.5 | 15.9 | 95.7 | $752$ | $270$ | $\begin{array}{ll} 70 \\ 67 \end{array}$ | 33 |  | $5{ }^{79}$ |
| 1884 | 14.6 | 11.8 | 11.71 | 10.0 | 25.8 | 14.8 | 19.5 | 516.2 | 20.2 | $\begin{cases}26.0 \\ 200\end{cases}$ | 15．1 |  | $\left.\begin{array}{ll} 0 & 51 \\ 6 & 5 \end{array}\right]$ | $\begin{aligned} & 1 \\ & 0 \\ & 06 \\ & 62 \end{aligned}$ | $\begin{array}{l\|l\|} \hline 67 \\ 62 & 66 \\ 64 \end{array}$ | 32 30 | 64 | 66 <br> 63 |
| 1885 | 13.11 | 1.0 | 11.4 | 9.9 | 22.8 | 13.9 | 18．2 | 16.0 | 19．6 | 27.0 | 14．1 | $\begin{array}{l\|l\|} \hline & 4.6 \mid \end{array}$ | $\begin{aligned} & 650 \\ & .0546 \end{aligned}$ | $\begin{array}{l\|l\|} \hline 62 \\ 57 \\ 57 \end{array}$ | $\begin{array}{r\|r\|} 52 & 64 \\ 57 & 62 \end{array}$ | $3{ }^{30}$ | 61 | 163  <br> 0 68 <br> 88  |
| 1886 | 12. | 9.7 | 10.5 9.3 | 8．9 | 21．1 | 12．2 11.7 | 16.8 | 114.6 |  | 24.71 | 12.5 | 55 |  |  | ［ | 29 | 60 | ${ }^{8} 8$ |
| 1888 | 14.31 | 10.4 | 10.2 | 8.1 | 23.8 | 12.8 | 17．2 | 14.0 | 17.6 | 21.412 | 12.6 | 64.2 | 241 |  | 753 | 29 | 59 | 63 |
| 1889 | 14.11 | 11.6 | 10.9 | 8.5 | 26.6 | 15.3 | 19.1 | 15.6 | 19.7 | 23. | 15.8 | $8{ }^{8} 4.8$ | ${ }^{6}$ |  | 66 | 30 |  | 767 |
| 1890 | 15.112 | 12.71 | 12.3 | 9.9 | 25.7 | 16.2 | 20.7 | 16.4 | 2 | 26.9 | 15.3 | 35.1 | ${ }^{1} 57$ |  | 66 <br> 63 <br> 63 | 32 | 68 |  |
|  |  | II．9 | 11.5 |  |  |  | 19.6 |  |  |  | 14.7 |  |  |  |  |  | 63 | 36 |
| 1891 |  |  |  | 9.9 | 27.7 |  | 23.9 | ， |  | ， | 16.7 | ： 6.2 | 54 | 69 | 69 | 29 |  | 73 |
| 1892 | 14.91 | 13.9 | 12 | $9 \cdot 9$ | 25.2 | 18.0 | 23.6 | 18.2 | 22.1 | 26.2 | 16 | 5.6 | 65 |  |  | O |  | 7 |
| 1893 | 12.6 | 10.9 | 10.9 | 9.4 | 21．4 | 14.91 | 19.3 | 16．4 ${ }^{16} 1$ | 19．1 | 22．4 | 13．6 | $6{ }^{6} 5.0$ | － 43 |  | ${ }^{5}$ | ［ 29 | 68 |  |
| 1894 1895 | $1{ }_{12.8}^{10.1}$ | 9.2 10.6 | 9.8 10.3 | 8.6 | 18．9 21 | 13.21 | 15.6 | ${ }_{14.8}^{14.6}$ | 17．6 17.5 | 22.6 | 12．7 13.4 | 74．54 | 533 | 退 63 | 62 | 29 | 63 | 366 |
| 1895 1896 | 12.111 | $1 \begin{aligned} & 10.6 \\ & 10.4\end{aligned}$ | 10.3 10.7 | 7.5 | 21．3 22 | 14.21 | 17．6 | 14．8 16 | 17.5 | 18．8． | 13．4 13.8 |  | － 432 | 60 | 6 | 28 | 64 | $4{ }^{65}$ |
| .1897 | 15.71 | 11.3 | 12.3 | 9.6 | 25.2 | 14.6 | 19.7 | 18.0 | 19.6 | 21.8 | 14.8 | 84.4 | 430 | 60 | 5 | 30 | 66 | ${ }^{6} 7$ |
| 1898 | 16.112 | 12.3 | 12.4 | 9.8 | 26.8 |  | 2 I .2 | 18.8 | 21.3 | 24.5 | 15 | 5.9 | 931 |  | ${ }^{62} 62$ | 32 |  | 72 |
| 1899 | 14.6 | 13.6 | 12 | 9.6 | 24.3 |  | 22.4 | 18.8 | 20.6 | 25．4 |  | 57.1 | 4 |  |  |  |  | 74 |
| 1900. | 14.3 | 13.3 | 1 | 0.3 | 23．4 | 16.9 | 22.2 | 17.8 | 22.7 |  |  |  | 144 |  |  | 30 | 68 | 870 |
| 91－1900 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1901 | 14．5 | 12.2 | 12.1 | 0.2 |  | $5 \cdot 3$ |  |  |  | 24.3 | 16.0 |  | 537 |  | $97{ }^{\circ}$ | 38 |  | $7{ }^{85}$ |
| 1902 | 14.5 | 12.5 | 12 | 10 | 23．9 | 15.8 | 20.6 | 18.2 | 20.7 | 24 | 18.4 | 2. | － 34 |  | 720 71 | 38 | 74 80 7 |  |
| 1903 | 13.6 | 11.9 | 12.2110 | 10.8 | 23.4 | 15.6 | 20.4 | 19.0 | 21.5 | 22 |  | 5.5 | 5 <br>  <br> 35 <br> 37 |  |  | 37 |  | 8 8－ |
| 1904 | 14.31 | 12．6 | 12.210 | 10.8 |  | 15.8 | 20.5 | $1 \begin{aligned} & 19.0 \\ & 19.0\end{aligned}$ | 20．2 | 22.6 | 16.6 | 2.9 <br> 6.6 <br> 5.6 | 6 935 |  | $\begin{array}{l\|l\|l\|} \hline 20 & 74 \\ 70 & 73 \end{array}$ | 40 |  | ， |
| 1905 | $1 \begin{aligned} & 14.5 \\ & 14.7 \\ & \\ & \\ & \\ & \end{aligned}$ | 12．812 13 | 12.511 | 10.5 | 24．619， | 16.4 | 20．6 | 19．0 | 19.6 | 22.2 | 15.8 | 85.1 | 136 | 74 | 7474 | 43 | 87 | 7 |
| 1907 | 15.71 | 14.0 | 13.51 | 11.5 | 23.9 | 17.1 | ， 1.4 | 22. | 21.1 | 21.8 | 18 | 76.0 | 37 | 80 | 0 | 47 |  | 9 |
| 1908 | 16.1 | 14.1 | 13．7 | 10.9 | 27.1 | 19.8 | 23.5 | 22． | 23．7 | 24.7 | 18.7 <br> 17.4 | 76.4 | 437 | 79 | 7 | 47 | 9 |  |
| 1909 | 16.9 | 14.4 | 13.511 | 11.3 10.6 | 27．2 | 18.2 | 23．5 | 20．0 | 22．1 21 |  |  | $\begin{array}{l\|l\|} \hline .4 .7 \\ .1 & 6.0 \end{array}$ | $\begin{array}{l\|l\|l\|} \hline 733 \\ . & 33 \end{array}$ | $\begin{aligned} & 79 \\ & 75 \end{aligned}$ | $\begin{aligned} & 79 \\ & 75 \end{aligned}$ | 46 |  |  |
| ${ }_{1910}^{1901-10}$ | 15.8 | 12.7 | 12.81 | 10. |  | 16.8 | 22.1 | 21．6 | 1.9 | 23.8 | 18.2 |  | $8{ }^{\circ} 86$ | 75 | ${ }^{5} 576$ | 43 | S | 59 |
|  |  |  |  |  |  |  |  |  | 20.5 |  |  |  |  |  |  | 5 |  | 94 |
| 1912 |  | 14.9 | 14.4 | 12.7 | 25.7 | 18.9 | 23.8 | 23.0 | 22.9 | 26.0 | 19.4 | 4.4 | 436 |  | 882 | 52 |  | $2{ }^{4}$ |
| 1913 |  |  | $\mid 12.91$ |  | 26.8 | 19.01 |  |  | 122.6 |  | 9.4 | 46.4 | 34 | 185 | 590 | 52 |  | 1 |


| 19 | 20 | 21 | 122 | 23 |  | ， |  | 6／27 |  |  | ， |  | 132 | 23 |  | ， |  |  | 38 | 139 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\underset{\underset{\sim}{E}}{\underset{\sim}{5}}$ | $\begin{aligned} & \text { Od } \\ & \text { 品 } \end{aligned}$ | $\begin{aligned} & \text { 朐 } \\ & \text { 8 } \end{aligned}$ | 皆 | 范 |  | 急 |  | 糢 |  |  |  |  |  | $\begin{array}{c\|c} n \\ \hline \end{array}$ | 等哭会 | $\begin{gathered} \text { 불 } \\ \stackrel{\rightharpoonup}{4} \end{gathered}$ |  |  |  | ®o |  |  |
| 6 | 77 |  |  |  | 35 |  | ， | 8155 | 104 | 46 | 84 | 4146 |  | 365 |  | 84 |  |  |  |  |  |  |
|  | 72 |  |  | 19.0 | 37 | 10 | 7.4 | 4158 | 112 | 251 | 90 | 170 | 114 | 460 |  | 8 | 104 |  |  | 25.8 |  |  |
|  | 8 | 9 |  |  | ， |  |  |  | 11 |  | ， | 195 | 113 | 35 |  |  |  |  |  | 25.8 |  | 43.5 |
|  | 88 | 993 | 31.5 | 18.8 | 40 | 11 |  |  |  |  |  | 229 |  | 0 |  | 81 |  |  |  |  |  |  |
| 68 | 94 | \％ | 30.4 |  | 43 | 12 |  | 8191 |  | 58 | 108 | 221 | 108 | 86 | 243 | 80 | 1 | 184 |  | 25.9 |  |  |
| 70 | 9 | 1093 |  | 19.2 | 43 | 12 | 7.6 | 199 | 121 | 156 | 115 | 220 | 105 | 562 | $2{ }^{42}$ | 79 |  | 177 |  | 25.9 |  |  |
| 7 |  | 100 | ， |  | 45 | 13 |  | 194 |  | 59 | 114 |  |  | 5 |  | 76 |  | 177 |  | 25.9 |  |  |
|  | 76 | 87 | 36. |  | 41 | 13 |  | 173 |  | 456 | 2 |  |  | 57 | 7 | 72 | 101 | 174 |  | 25.9 |  |  |
|  | 71 | 82 | 32. |  | 36 | 11 |  |  |  | 5 | 92 | 1190 |  | 57 | 741 | 70 |  |  |  |  |  |  |
| 61 | 81 | 88 | 36.9 |  | 36 | 11 | 6.6 |  | 12 | 450 | 97 |  |  | 55 | 542 | 70 |  |  |  | 25.9 |  |  |
| 64 | 83 |  |  | 19.6 | 39 |  |  | 1176 | 11 | 54 | 100 | 198 | 1 | 60 | 43 | 78 |  | 177 |  |  | 3 |  |
| 61 | 82 |  |  |  | $3^{8}$ |  |  | 182 |  |  |  | 171 |  |  |  | 67 |  |  |  |  |  |  |
|  | 86 |  |  |  | 42 |  |  |  |  |  | 94 | 150 | 1 | 353 |  | 71 |  |  |  |  |  |  |
|  | 84 | － |  |  | ＋ | 11. |  |  |  |  | 99 | 133 | 102 | 252 | 2 | 73 |  |  |  |  |  |  |
|  | 74 |  |  | 15 | 43 | 11 |  |  |  |  | ． 94 |  |  | 5 |  |  |  |  |  |  |  |  |
| 64 | 75 | 84 | 30.1 | 17.0 | 41 | 11.1 |  | 8171 |  | $2{ }^{4} 4$ | 92 | 2132 |  | ${ }^{6} 46$ | 6 | 5 |  |  |  |  |  |  |
| 57 | 7 |  | 28.4 | 14 | 39 |  |  |  |  | 644 | 85 | 1 |  | 3146 | 6 | 51 | 101 | 153 |  | 9 |  |  |
| 54 |  |  | 25 |  | 37 |  |  |  |  | 739 | 84 |  |  | 842 | 2 |  | 95 |  |  |  |  |  |
|  | 7 |  |  |  | 4 |  |  |  |  | 42 |  |  |  |  |  | 48 | 7 |  |  |  |  |  |
| 62 |  | 88 | 20 | 12.1 | 42 |  |  | 174 |  | 38 | 96 | I |  |  |  | 5 | 85 |  |  | 18. |  | 3.2 |
| 61 | 76 | 88 | 28.4 | 18.6 | 41 |  |  | S 174 |  | $0 \cdot 45$ | 93 | － |  |  |  | 59 | 97 | 146 |  |  | ． 4 |  |
|  | 78 |  |  |  | 42 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 64 | 8 |  |  | 12.3 | 40 | 10 |  |  |  | 35 |  |  |  |  |  | 51 |  |  |  |  |  |  |
| 77 | 8 | 9 | 18.1 |  | $4^{1}$ |  |  |  |  | 35 |  |  |  |  |  | 50 |  |  |  |  |  |  |
| 74 | 74 | ${ }^{2}$ | 18.8 | 12 | 40 |  |  |  |  |  | ， | 187 |  | 㤑 |  | 49 |  |  |  |  |  |  |
| 7 |  | 8 | 6 | 13 | ， |  |  |  |  |  |  | 185 |  |  |  | 4 |  |  |  |  |  |  |
| 7 | 6 |  | 19.1 | 12 | ， |  | 4.4 | 172 |  | ， | 97 | 17 | 5 | 233 | 3 | 45 |  |  | 5 | ． 8 |  |  |
| 74 | 76 | 2 | 20 | 13 | 35 |  |  |  |  | 39 | 103 | 156 | 57 | 732 | 2 | 4 |  |  |  | 5.8 |  |  |
|  | － | 9 |  | 13 | 边 |  |  |  |  | 42 |  |  | 60 | 0 |  |  |  |  |  |  |  |  |
| ${ }^{2}$ | 92 | 1022 |  | 14 |  | 11.5 | ． | ， | 133 |  | ＋16 | 116 | 61 | 132 | 23 | 46 |  |  |  | 4. |  | ． 9 |
| 73 | 78 |  |  |  | 39 |  |  |  |  | 38 | 103 | 162 | 65 | 5 |  | 47 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  | 14 |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 113 | 23 | 16.3 | 38 | 11 |  |  |  | 50 | 11 | 104 |  |  |  |  |  |  |  |  |  |  |
|  |  | 2 | 24 | 17.0 | ${ }^{4} 4$ | 11.6 |  |  | 13 | 2 | 2 | ， 99 |  | 633 |  |  |  |  |  | 14. |  | ． 6 |
|  |  |  | 21 | 16. | 40 | 11.6 | ． 3 | ， |  | 9 | 1 | 100 |  | 6 34 |  |  |  |  | 14.8 | 14. |  | ， |
|  |  | 104 |  | 17.3 | ${ }^{4}$ | 112 |  |  |  | ${ }^{43}$ | 11 | 111 |  | 135 | 5 |  |  |  |  |  | $5 \cdot$ | 3.7 |
|  | 102 | 114 |  |  |  |  |  |  |  | 48 | 12 | $1: 3$ |  | 834 | 4 |  |  |  |  |  |  | ．9 |
|  |  | 106 |  | 16.9 | 4 | 12 | 6. | ， |  |  | 4127 |  |  |  |  |  |  |  |  | 3. |  |  |
|  | 99 |  | 23 | 16 | 42 | 12 | 6．2 |  | 139 | 952 | ：133 |  | 51 | $1{ }^{3}$ | 6 |  |  |  |  | 13.5 |  |  |
|  | 05 | 118 | 22 | 1 | 41 |  | 6.0 | 1 | 138 | 85 | 123 | 118 | 63 | 335 | 532 |  |  |  |  | 13. |  | －4 |
|  |  |  |  |  | 41 |  |  |  |  |  |  |  |  |  | $433$ |  |  |  |  |  |  |  |
|  |  |  |  |  | 32 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Table C. Commodity Prices for the Counties.

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C ..... 218
C 5
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Salmon, salted C 17 ..... 242
Milk, skimmed C 17 ..... 242
Cheese, whole-milk C 17 ..... 242

- shim-milk C 17 ..... 242
caraway ..... C 17 ..... 242
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17
Syrup ..... 242
Rice C 17 ..... 242
Tallow ..... 242
Tallow candles ..... C 17 ..... 242
Stearin C 17 ..... 242
Petroleum ..... 242
Coke ..... 242

Table C i. Prices of Wheat.
Stated in ore per kilogramme.



Table C I. (Cont.)


Table C 2. Prices of Rye.
Stated in orre per kilogramme.

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |  | 11 | 12 | 13 | 14 | 25 |  | 17 | 18 | 19 | 20 | 22 | 23 | 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year |  |  |  |  | $\begin{aligned} & \text { 槵 } \\ & \text { 第 } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  | $\left\|\begin{array}{ll} 9 & 0 \\ 0 & 0 \\ 0 & 6 \\ \underset{y}{4} & 0 \\ \hline \end{array}\right\|$ |  |  |  | $\left.\begin{array}{cc} 0 & 0 \\ 0 & 0 \\ 0 & 4 \\ \hline \end{array}\right]$ |  |  |  |
| 1830 | 10.6 |  | 10.2 |  | I |  | 7.8 | 11.4 | 12 | 13 | 12.7 | 9.2 | 9 |  |  | 10.3 |  | 12.7 | 10.2 | 11.1 | 10.6 | 12.4 | . 8 |
| 183 |  | 11 | 12 | \% | 14 | 12 | 11.0 |  | 14 | 13.1 | 12.7 | 133 | 12.3 | 13.1 | 9 | 12.2 | . 5 | 16.5 | 12 | 8 |  |  | 13.6 |
| 1832 |  | 10. | 8 | 12 | 10.8 | 8 | 8.1 | 5 |  | 3 | 8. | 10.4 | 10.1 | 10.2 | II. ${ }^{\text {I }}$ | 6 | 6 | 12.7 | 8 | 12.0 | 12. | 14.6 | 13.6 |
| 1833 | 8. | 8 | 8.1 | 11.9 |  |  | 6 | 7.6 |  | 3 | 8.5 | . | 8.2 | 3 | II.I | 8.2 | 8.5 | 10.2 | 13.2 | . 6 | . 8 | . 1 | 12.1 |
|  |  |  |  | 11.9 | 10. | 10. |  | 8.7 | 8 | 9.3 |  |  | 7.8 |  | 8.5 |  |  | 8 | 10.8 | 10.6 | 0.8 | 11.9 | . 6 |
|  | II | 8. |  | 11.3 | 9.9 | 10 |  | 9.3 | 10.2 | 9.3 |  | 10.0 | 10 | 9. | 12.3 |  |  | 10.4 | 11.9 | 8 | - | 12.7 | 8 |
| 18 |  | 8. | 9.6 | 10.8 | 10 | 8. |  |  | 10.2 | 10.2 |  |  | 8. | 9.9 | 10.2 |  | 8.9 |  | 12.0 | 10.6 | 11.2 | 12.7 | . 8 |
| 1837 | 8 | 10 | 10.9 | 12.7 | 11.9 | 9 | 8. | II. 1 | 11.0 | 12.7 | 12 |  | 8.1 | 10.3 |  | T1.1 | 10.0 | 12.3 | 1 | 10.9 | 12.7 | 12.7 | . 9 |
| 1838 | 13.2 | 1 | 11.6 |  | 12.9 | 12.6 | 10.8 | 11.7 |  | 13.3 | 12 | 136 | 12.7 | 15.9 |  | 12 | 9 | 5, | 1 | 1 | 12.7 | 15.2 | . 9 |
|  |  |  |  |  | 11.2 |  | 8.9 | 8 | 11.8 | 11.0 | 10 | 10.9 | II, 2 | 11.7 | 10.6 |  | 11.9 | 14.6 | $1 \pm .1$ | 12.6 | 11.2 | 12.7 |  |
| 1840 | 11 | 10.1 | 10.3 |  | 12.0 | 10.6 |  | 10.0 | 11.7 | 12.7 |  |  | 10.3 | . 0 | 11.3 |  | 11.9 | 12.9 | 13.5 | 6 | . 4 | 13.6 |  |
| 1831-40 | 10.5 | 9.6 | 10 | 12.8 | 1 | 10.2 | 7 | 1 |  | 11.0 | 10.1 | 10.2 | 9.9 | $10: 6$ | . 0 | 10.1 | 9.8 | 12.7 | 12.6 | 11.8 | 1 I. | 13.3 | 11.9 |
| 1842 | 12.3 | 1 |  |  |  | 11. | 1 | 11 | 12 |  |  | 12 |  |  |  | 12.1 | 12.3 | 12.7 |  | . 6 |  | 2 |  |
| 1842 | 13 | 11 | 15 | 1 | 15 | 12.7 | 11 | 13.5 | 14.8 |  | 12 | 13. |  | 13.6 | 1 | 12.9 |  |  | 14.5 | - | 13.1 | 13.4 | . 6 |
| 1843 | 11 | . 5 | 11. |  |  | 6. | 10 | 12.2 | 12.5 | 10.8 | 1 | 11.2 | 10.6 | 11.2 | 11.9 | 10.7 | 11.4 | 12 | 12.9 | 12.5 | 13.4 | 13.4 | . 4 |
| 1844 | 8.9 |  | 8. | 12.1 | 8.1 | 6.2 |  |  |  |  |  |  |  |  |  |  |  |  | 12.5 |  | 12.7 | 12.1 | 12.7 |
|  | 12 | 12. |  |  |  | 11. | 10 | 10 | 11.9 | 9.2 | 8.9 | 11. | 10.7 | 12.1 | 12.3 | 12.1 | 10.2 | 10.5 | 11 | 13.2 | 13.3 | 12.7 | 3.1 |
| 1846 | 15.5 | 12.6 | 16. | 16. |  | 13 |  |  |  |  | 12.4 | 14.0 | 12 |  | 13.3 |  | 14.6 | 15.9 | 11 | 15.7 | 13.6 | 13.6 | 13.1 |
|  | 13.7 | 11 | I |  |  | 14.3 | 11 | 12.5 | 16 |  |  | 13.1 | 1 |  | 11.2 | 11.7 | 12.2 |  | 14. | 14.4 | 14.0 | 14,4 | 13.6 |
| 1848 |  |  | II | 12 |  | 8.3 |  | 10 | 1 | 10.7 |  |  |  | 10 | 8.5 |  | 8. | 15.3 | 12.1 |  | 11.4 | 12.3 | , |
| 1849 | 8.5 |  |  | I 1.7 |  |  |  | 8.6 |  |  | 8.6 | 8.3 |  |  |  | 8.5 | 9. | 11.9 |  |  | 11.0 | . 7 |  |
| 1850 . |  | 9 | II | 11.9 | 10 | 9.3 |  | 2 | 10.1 | 11.1 | 10.5 | 11.5 |  | 10.5 | 9.8 | 11.9 | 10.7 | 14.4 |  | 10.4 | 11. | 12.1 | 11.9 |
| 1841-50 | IE.5 | 10. 5 | 12.5 | 14.2 | 1 | 10.4 | 10.3 | 11.0 | 12.3 | 5 E .4 | 10.3 | II.2. | 10. | 1.18 | 11.1 | 11.0 | 11.3 | 18.2 | 13.7 | 13.4 | 12.8 | 13.0 | 12.9 |
| 1851. | 11. | 11. | 13 | 13.1 |  | 10 | 11.7 | 11.5 | 12.6 |  | 12 | 12.6 | 1 | 12.2 | YI.3 | 13.9 | 12.2 |  | 12 | 13.2 |  | 13.8 | \% |
| 1852 | 12.7 | 1 | 15 | 13.8 | 14.8 | 12.1 | 12.7 | 12.7 | 14.3 | 14.3 | 13 | 12.9 | 11.7 | 12.7 | 12.9 | 13.9 | 12.3 | 16.2 | 16.5 | 14. 3 | 12. | 13.6 | 13.1 |
| 53 • | 14 | 14 | 16 | 15 | 13 | 13 |  | 13.8 | 15.81 | 14.5 | 13. | 14 | 12.8 | 14.0 | 14.2 | 14.1) | 14.3 |  | 16.31 | 16.1 | 14,0] | 14.8 | 14.0 |

Table C 2．（Cont．）

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 3 | 14 | 15 | 16 | 17 | 18 | 59 | 20 | 22 | 23 | 24 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year |  |  |  |  | $\begin{aligned} & \text { 㧴 } \\ & \frac{8}{2} \end{aligned}$ |  |  |  |  |  |  |  |  |  |  | 运品 |  |  |  |  |  |  | $\begin{array}{\|c} \begin{array}{c} z \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ \hline \end{array} \\ \hline \end{array}$ |
| 1854 | 14.8 | 15.4 | 16.6 | 15.3 | $15 \cdot 3$ | 314.5 | 14.4 | 13.7 | 717.0 | 14 | 13.2 | 213.4 | 13 | 14.4 | 13.1 | 13.9 | 14.0 | 16.5 | 13.4 | 15.3 | 13.6 | 14 | ． 4 |
| 1855 1856 | 16.2 16.7 | 15.8 16.8 | 8.15 .9 <br> 16.0 | ． 16.1 | 15.1 | 14.1 <br> 416.8 <br> 1 | 14.8 |  | 5 17.2 <br> 19.8  <br> 1  | 8 116.5 | 5 14.8 <br> 14.8  <br> 1  | $8{ }^{14.8}$ | 815 | 16.1 | 15.1 | 14.2 | 15.1 | 14 | 15.6 | 16.5 | 16.5 | 17.0 | ． |
| 1857 | 16.7 13.6 | 16.8 | 16.0 | 17.4 | 16.4 | 416.8 | 14.8 |  | 319.8 | 17.8 | 814.7 |  |  | 17 | 15.9 | 16.8 | 15.1 | 18.0 | 19.4 | 17.8 | 17.8 | 18.2 | 2 |
| 1858 | 3 | 10 | 12.3 | 12.2 | 12.3 | 14.6 <br> 10.8 | 9.9 | 14.3 | 3 <br> 7 <br> 712.9 <br> 12.0 | 9 ${ }_{1}^{15.9} 1$ | 13.4 | 10.5 | 5112.8 | 14. | 13.6 | 15 | 12.9 | 15 | 17.7 | 15.9 | 15.3 | 15.7 13 |  |
| 1859 | 10.6 | 610.0 | 11.7 | 11.3 | 10.1 | 9.6 | 9.5 | 10．4 | 412.3 | 312.3 | 39.9 | 9.9 | 9.8 | 10.3 | 10.1 | 8.9 | 9．4． | 12.9 | 12.0 | 11.2 | 12.8 | 13.4 | 13.4 |
| 1860 | 11.7 | 11. | 12.3 | 13.0 | 1.3 | 310.9 | 10.5 | II． 4 | 413.2 | 13.7 | 11.6 | 12.1 | 10.8 | Ir．3 | 11.3 | 11.4 | 10.9 | 12.3 | 12 | 12.2 | 12.8 | 14.0 | 13.4 |
| 1851－60 | 13 | 13.1 | 14.4 | 14.2 | 13.8 | 812.7 | 3.4 | 13. | 14.9 | 14.7 | 12.8 | 13.0 | 12.6 | 13.4 | 12.7 | 13.5 | 12.6 | 14.8 | 14.8 | 14.3 | 14．0） | 14.8 | 15.0 |
| 1861 | 13. | 13.6 | 14.6 | 14.2 | 14.8 | 813.6 | 13.9 | 13.8 | 815.0 | 16.8 | 14．6－ | 16.3 | 13.6 | 14.3 | 14.3 | 15.2 | 14.2 | 15.7 | 16.7 | 15.1 | 14.4 | 15.5 |  |
| 1862 | 16 | 15.0 | 17.0 | 15.1 | 15.4 | 415.2 | 12.4 | 15.0 | $8{ }^{\circ} 16.3$ | 16.9 | 15.7 | 15.7 | 14.0 | 14.6 | 14.8 | 16.8 | 15.8 | 17.7 | 16.8 | 16. | 15.8 | 17.2 | 18.6 |
| 1863 | 12.8 | 10.3 | 13.5 | 14.1 | 14.0 | 10.6 | 10.0 | 13.8 | 813.5 | 514.5 | 13.0 | 12.6 | 11.9 | 12.7 | 12．0 | 13．0 | 12.5 | 12.6 | 15.1 | 13.6 | 14.5 | 15.7 | 15.3 |
| $1 \begin{aligned} & 1864 \\ & 1865\end{aligned}$ | 11.0 9.6 | 10.4 | 10.8 | 12.4 | 12．7 | 11.1 <br> 10.8 <br> 1 | 10.2 | 11.5 | 511.4 | 12.8 | 13.0 | 10.3 | 9.9 | 10.8 | 9.8 | 12.0 | X1，4 | 13.8 | 13.7 | 10.7 |  | 14.5 | 14.5 |
| 1866 | 12.0 | 13.3 | 12.5 | 13.7 | 12.3 | （12．3 | 10．5 | 11.5 | 511.1 | 11.8 | $5{ }^{12.3}$ | 9.7 <br> 12.7 | 9．1 | 11.3 | 9．6 | 13.4 | 9.5 | 11.5 | 11.1 | 10.9 |  |  |  |
| 3867 | 16.3 | 16.4 | 17.5 | 18.2 | 15.5 | 515.4 | 16.6 | 14.8 | 820.0 | 20．5 | 516.8 | 17.2 | 16.5 | 16.1 | 17.8 | 18.6 | 17.2 | 19.5 | 18.9 | 18.6 | 9．2 | 18.8 | 14.5 19.9 |
| 1868 | 19.7 | 18.1 | 18.3 | 21.0 | 20.6 | 18.1 | 18.1 | 17.6 | 620.2 | 20.6 | 19.8 | 22.2 | 17.2 | 18.8 | 19.1 | 21.6 | 19.2 | 20.3 | 22.5 | 20.9 | 20.2 |  |  |
| $\left.\right\|_{1869} ^{1869}$ | 15.1 11.6 | 14.4 12.6 | 13.8 | 13.1 | 12.7 | 13.2 | 12.5 | 14.6 | 815.2 | 14.7 | 14.4 | 14.6 | 13.3 | 14. | 13.4 | 15.2 | 13.8 | 15.9 | 17.8 | 15.4 | 16.0 | 16.1 | 17．1 |
|  | 11.6 13.8 | 12.6 | 12.3 | 13.1 | 12 |  |  | 12 |  | 13．1 | 11.9 | 11.5 | 1 | 11.1 | 11 | 12.0 | ． | 12.7 | 12.7 | 12.5 | 13.2 | 14.0 | 14.5 |
| 1861－70 | 13.8 | 13.5 | 14.1 | 15 | 14 | 13.1 | 12.6 | 13.6 | 14.9 | 15.5 | 14. | 14.3 | 12 | 13.4 | 13.3 | 15.3 | 13.6 | 15.4 | 16 | 14.6 | 15.5 |  | 16.4 |
| 1871 | 12.4 | 12.8 | 15.3 | 14.0 | 13.4 | 412.2 | 12.3 | 2.7 | 713.8 | 14.0 | 12.4 | 12.9 | 11.4 | 12.8 | 11.8 | 13.8 | 12.2 | 13.6 | 14.2 | 13.5 | 13.5 | 14.8 | 15.1 |
| 1872 | 13.0 | 13.9 | 14.8 | 15.2 | 14.3 | 13.7 | 13.4 | 13.5 | 514.9 | 16.6 | 13.5 | 15.4 | 12.5 | 12.4 | 11.7 | 14．${ }^{1}$ | 12.6 | 14.3 | 15.1 | 13.9 | 13.5 | 15.3 | 15．0 |
| 1873 1874 | 13.5 14.8 | 14.6 | 15.3 16.9 | 16.3 | 16.7 | 13.4 | 14.0 | 14.9 | $9{ }^{1} 17.0$ | 16.6 | 15.6 | 15.9 17.1 | 13.7 | 13.5 | 13.8 | 15.7 16.5 | 12.8 | 15.7 17.8 | 14.8 | 14 | 14.4 | 16.8 | － |
| 1875 | 13.3 | 14.3 | 15.0 | 15.0 | 16.7 | 15.2 | 12.6 | 14.2 | 215.5 | 15.7 | 715.1 | 14.0 | 13.4 | 13.1 | 12.9 | 14.2 | 13.1 | 13.6 | 14.8 | 13.8 | 14.4 | 15.1 |  |
| 1876 | 13.1 | 13.6 | 14.8 | 14.1 | 15.4 | ${ }^{13.4}$ | 12.7 | 13.7 | ？ 14.6 | 15.0 | 13.4 | 13.9 | 13.0 | 12.7 | 12.9 | 12.9 | 12.9 | 14.9 | 14.2 | 13.7 | 14.3 | 15.5 | 16.1 |
| 1877 | ${ }^{13.8}$ | 14.2 | 16. | 16.0 | 15.5 | 513.4 | 14.2 | 14.5 | 515.4 | 15.3 | 14.7 | 14.7 | 14.7 | 13.1 | 13.2 | 14.7 | 13.9 | 14.1 | 15.4 | 14.8 | 14.8 | 16.3 | 16. |
| 1878 1879 | 11.8 11.5 | 12.7 <br> 13.2 <br> 1 | 11.9 |  | 13.4 | 11.4 | 10.2 10.4 | 13.8 | 1 13.3 12.4 12.4 | 14．9 | 12.7 18 | 13.6 | 12.7 | 12．0 10.8 | 11.4 | 13.2 | 11.8 | 11.8 | 13.1 | 12.0 | 12.7 | 14.8 | 15.4 |
| 1880 | 15.5 | 15.3 | 14.4 | 16.1 | 15.8 | 813.6 | 14．5 | 12.9 | 16.4 <br> 16.2 <br> 1 | ${ }_{1}^{14.9}$ | ${ }^{1} 116.6$ | 12.3 15.7 | 11.9 15.7 | 10.8 13.3 | 11．5 | 12.0 | 11.8 <br> 15.5 <br> 1 |  | 12.8 |  |  |  | 13. |
| 1．18\％－80 |  |  |  |  |  |  | 14.5 |  |  |  |  |  |  |  |  |  | 15.5 | 14 | 16.3 |  |  |  |  |


|  | 17.6 | 17.4 | 16.1 | 17.8 | 18.2 | 5.9 |  |  | 18 |  |  | 17.4 |  |  | 15.7 | 17.8 | 17.7 |  |  | 1 | . 6 |  | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1882 | II.B | 12.8 | 11.9 | 12.5 | 14.3 | 12.7 | 12.3 | 13.1 | 13.2 | 13.9 | 13.5 | 12.7 | 12.2 | 13.6 | 11.8 | 13.0 | 12.3 | 13.6 | 14.0 | 12.5 | 14.0 | 15.3 | 15,2 |
| 1 | 11.5 | II. 9 | 11.9 | 12.1 | 14.0 | 12.2 | 10,4 | 11.9 | 12.8 | 13.1 | 13.3 | 12.3 | 12,4 | 18.1 | 11.4 | 12.6 | 12.1 | 12.3 | 12.9 | 12.4 | 13.5 | 15.0 | 15.2 |
| 188 | 11.1 | 11.6 | 11.0 | II.9 | 12.5 | 12.1 | 9.9 | 11.1 | 12.1 | 12.5 | 11.8 | 11.9 | 10.9 | 10.5 | 11.0 | 11.7 | 11.7 | 18.0 | 12.3 | 11.8 | 11.9 | 13.3 | 13.3 |
|  | 10.1 | 11.0 | 10.2 | 10.0 | 11.9 | 11.2 |  | 12.0 | 11.2 | 11.6 | 10.9 | 10. 5 | 11.9 | 9.7 |  | 10.9 | 10.6 | 11.3 | 11.6 | 11.2 | 11.0 | 12.4 | 11.9 |
|  |  |  |  |  | 0.6 |  |  |  | 9.7 | 10.5 | 9.5 |  |  | , | 6 |  |  | 8.8 | 10,1. |  | . 0 | 12.1 | 11.4 |
| 7 |  |  |  | 8.8 | 10 |  | 6.8 | 86 |  |  | 8 |  | 5 | 8.0 | 7.7 |  |  | 9 | 3 | 8.3 | . 2 | 10.8 | 10.5 |
| 1888 | 9.7 | 10.9 | 10. | 10.9 | 0.4 | 10 |  | 8 | 11.0 | 10.3 | 9 | 10.2 | 10.1 | 8.6 | 9.8 | 10.3 | 10.2 | 10, 1 | 10.9 | 9.6 | 12.1 | 12.8 | 13.5 |
| 1889 | 11.1 | 12.8 | 11.3 | 11.8 | 12 | 10.6 | 10.2 | 11.8 | 11.9 | 10.7 | 11.8 | 11.5 | 11.7 | 10.6 | 11.1 | 11.2 | 11.0 | 10.8 | 12.7 | 11.5 | . 6 | 13.2 | 13.0 |
| O | 12.6 | 13.8 | 11.5 | 13.5 | 12.9 | 12.0 | 11.9 | 12.5 | 13.3 | 13.2 | 11.9 | 12.8 | 12.9 | 11.2 | 12.3 | 12.7 | 12.4 | 12.8 | . 5 | 13.5 | . 8 | 13.2 | 12.9 |
| +881 | II. 3 | 12.0 | 18.2 | 13.8 | 12.7 | 11.6 | 10.5 | $\pm 1.6$ | 123.3 | 12.3 | 11.7 | 11.7 | 15.7 | 10.8 | 10.9 | 12.8 | 12.5 | 18.6 | 12.5 | 11.8 | 12.3 | 1387 | 4 |
| 1891 |  | 14.8 | 13.1 | 16.7 | 15.0 | 14. |  | 14.4 | 14.3 |  | 14.6 | $15 \cdot 3$ | 15.5 | 13.8 | 15.8 | 15.4 | 15.0 | 14 | 16.5 | 16.0 | 14.8 | 15.5 | . 9 |
| 1892 |  | 13 | 13 |  | 14.3 | 13.8 | 1 | 13.3 | 13.9 |  | 13.7 | 14. 1 | 13.4 |  | 13.7 | 14.0 | 13.7 |  | 15.4 | 15.0 | 12.3 | 14.4 | 14.9 |
|  | 10 | 10. | 11.0 | I | 11.3 | 10.5 |  | 10.5 | 10.5 | 1 |  | 10.5 | 10.6 | 10.9 | 10.3 | 10.3 | 9.9 | 11.0 | 12.7 | 11.0 | 11.3 | 13.5 | 13.3 |
| 1894 |  |  | 3 | 10.0 | 8.9 | 8.7 | 7.5 | , | 8.8 | 10.0 | 4 | , | 8.9 | 8.6 | 8.5 | 9 | . 6 | 9.0 | 9 | . ${ }^{\circ}$ | 10.1 | I1.6 | 12. 5 |
| 1895 . | O. | 11.8 | 12.0 | 11.0 | 10.5 | 10.5 | 9.5 | 10.2 | 10.9 | 10,7 | 6 | 10.1 | 9.9 | 9.2 | 10.3 | 10.2 | 10.3 | 8 | 10.6 | 10.5 | 11.1 | II. ${ }^{\text {I }}$ | 12.3 |
|  |  | 11 | 11.5 | 12.0 | 10.3 | 10.6 | 10.0 | 10.2 | 10. 1 |  | 6 | 9.7 | 10.4 | 9.5 | . 2 | 10.4 | I | 9.8 | $1 \mathrm{I}_{1} 1$ | 10.0 | 11.3 | 11.9 | 12.6 |
| 97 |  | 18.5 | 11.5 | 12 | II. 2 | 11.1 | 1 | 11.3 | 11.5 | 11.3 | 10.4 | 10.9 | 1 | 10.5 | . 0 | 11.0 | 10.6 | 10.8 | 12.0 | 12.0 | 12.4 | 12.3 | . 8 |
|  |  | 12.9 | 12.5 | 13.5 | 11. | 11.3 | - | 11.6 | 12.6 | 12.8 | 11.9 | 12.8 | 12.3 | 11.2 | 12. | 12.6 | 11.6 | 11.3 |  | 12.5 | 12. | 13.2 | 13.6 |
| 1899 |  | 13.9 | 14.5 |  |  | 12.3 |  | 12. | 13.8 | 14.3 | 13.4 |  | 13.3 | . 2 | 12.8 |  | 9 | -4, | 13.9 | 13.5 | 13.5 | 14.1 | 13.8 |
| 1900 | 13.4 | 13.4 | 13.5 | 13.7 | 13.3 | 12.3 | 11.5 | 12 | 13.0 | 15.3 | 12.4 | 13.1 | 12.8 | 12.9 | 12 | 13.4 | 12.7 | 14.0 | 14.4 | 13.5 | 13.7 | 14.4 | 14.0 |
| 91-00 | 12. 2 | 12.3 | 12.2 | 13.0 | [2.0 | 11.6 | 10.6 | 15.5 | 11.9 | 12.4 | 12.3 | 18.9 | 11.8 | 18.3 | 1 | 12.0 | 12.5 | 11.9 | 18.0 | 12.3 | 12.2 | 13. 2 | 4 |
| 1901 | 12.3 | 12.5 | 13.0 | 1.9 | 11.5 | 11.7 | 5 | 11.7 | 11.6 | 12.1 | 11.0 | 11.7 | 12.2 | 4 | 12.2 | 1.8 | . 8 | 12.0 |  | 12.5 | 3 | 14.3 | 14, 1 |
| 1902 |  | 13.5 | 13.0 | 12.1 | 13.2 | 11.8 |  | 12.5 | 11.6 |  | 11.3 | 12.1 | 11.9 | 11.5 | 11.3 | 12.8 | 12.3 | 11. 5 | 13.3 |  | 13.4 | 14.4 | 4.8 |
|  | 11 | 12.5 | 12.0 | E1.7 | 12.4 | 11.6 | 11.0 | 12.5 | 10.9 |  | . 8 | 11.2 | 11.1 | . 0 | 10 | 11.3 | . 0 | 11.3 | 13.3 |  |  | 14.3 | 4.0 |
| 1904 . | 12 | 12. | 13.0 | L2. | 14.0 | 11.5 | 11.5 | 13.0 | 11.8 |  | 11.7 | 12.2 | 12. | 11.2 | 11.5 | 22.8 | 12, 1 | , | 12.9 | 11.0 | 13.6 | 14.3 | 13.9 |
|  | 13 | 13 | 13.0 | 12. | 11.0 | 12. | 12.0 | 13.3 |  |  | 11.8 | 12.8 | 12.6 | II. 5 | 12.8 | 13.1 | 12.8 | 12.0 | 13.6 |  | 13.6 | ${ }^{8}$ | 14.0 |
|  |  | 13. | 14.0 | 13. |  | 13 | 12.8 | 13.4 | 13.5 |  |  |  | 12.7 |  | 12 | 13.1 |  |  | 13.9 | 14. | 13.4 | 4 | 14. 1 |
|  | 14 | 14 | 15.0 | 13.3 | 12.5 | 12.7 | 12.8 | 13.5 | 14.3 | 15.1 | 13.1 | 16.5 | 13.2 | 12.1 | 13.5 | 12.9 | 12 | 13.9 | 15.6 | 14.0 | 14.6 | 14.8 | 6.2 |
| 1908 |  | 15.8 | 15.5 | 14.5 | 14.3 | 13.5 | 12.3 | 13.0 | 13.8 | 14.0 | 12.3 | 14. | 13.0 | 1 | 13.4 | 13.9 | 13.4 | 14.0 | 15.6 | 14.3 | 14.1 | 15.5 | 15.7 |
| 1909 | 15.0 | 15.2 | 15.5 | I5.3 | 14.0 | 13.6 | 13.8 | 14.5 | 14,0 | 14.0 | 13.0 |  | 13.5 | 12,4 | 14.6 | 14.8 | 14.4 | 14.8 | 15.7 | 14.8 | 14.0 | 15.1 | 15.7 |
| 1910 . | 12.3 | 13.1 | 13.0 | 13.0 | 12.2 | 11.7 | 11.3 | 13.8 | 12.7 | 13.5 | 10.9 | 1 | 11.9 | 11.8 | 12,0 | 12.4 | 12.0 | 13.3 | 14.5 | 12.5 | 13.4 | 14.4 | 15.1 |
| 1901-10 | 13, 1 | 13.7 | 13.7 | I3.0 | 12.9 | 12.3 | 15.8 | 13.1 | 12.7 | 13.9 | 13.7 | 18.0 | 12.4 | 11.8 | 12.5 | 12.9 | 12.5 | 13.0 | 14.3 | 13.0 | 18.7 | 14.7 | 14.8 |
| 1911 | 13.3 | 13.4 | 14,0 | 13.5 | . 6 | 13.t | 0 | 13.3 | 13.1 | 12.5 | 11.8 | 13.5 | 13.0 | 13.0 | 13.1 | 13.3 | 12.6 |  | 4.0 | 13.8 | 13.7 | 15.5. | 5.4 |
| 1912 | 15.4 | 16.1 | 16.0 | 15.5 | 14.3 | 14.3 | 13.5 | 14.0 | 15.5 | . 6 | 13.3 | 15.0 | 14.0 | 13.2 | 14.9 | 14.0 | 14.4 | 15.3 | 15.3 | 14.5 | 14.5 | 15.3 | 16.2 |
| 1943. | 13. | 14 | 14.0 | 14. | 13.0 | 13.0 | 12.0 | 13.31 | 12.5 | 13.0 | 11.4 | 12.0 | 12.8 | 11.9 | 11.8 | 12,8 | 12.4 | 13.0 | 13.7 | 13.3 | 13.7 | 15.7 | 15.6 |

[^26]$\because$
＇Table C 3．Prices of Barley．
Stated in öre per kilogramme．

|  | 1 | 2 | 3 | 4 | 5 |  | 7 |  | 9 |  | 11 | 12 | 13 | 14 | 15 | 16 | 7 | 18 | 19 | 20 | 22 | 23 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year |  |  |  | 造 |  |  | $\left\lvert\, \begin{gathered} 8 \\ 8 \\ 0 \\ 5 \\ 0 \end{gathered}\right.$ | $\begin{aligned} & 8 \\ & 8 \\ & \hline \end{aligned}$ |  | 度总 |  |  |  |  | $8$ | $\begin{aligned} & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 8 \\ & 0 \end{aligned}$ |  |  |  |  |  |  |  |
| 1830 |  | 6. | 7.5 | 6 | 10.6 | 9.0 | 6. | 7.7 | 8.8 | ， | 9.5 | 8.2 | 8.2 | 8.7 | 7.7 |  | 8.7 | 10.6 | 11.1 | 8.4 |  |  |  |
| 1831 | 12．31 | 8 | 9.2 | 10.9 | 11.8 | 9.7 | 9．3 | 9.6 | 10.9 | 9.9 | 10.1 | 12.4 | 10.6 | $1 \mathrm{I} \cdot 3$ |  | 10.8 | 11.8 | 11.7 | 13 | 11.2 | 14.1 | 13 |  |
| 1832 1833 | 7.3 | 8.2 5.8 | 9.4 | 10.3 8.3 | ． 1 | 9.3 78 | 8.8 6.8 | 9．1 6 | 7.7 | 8 | 9．1 | 8.9 | 9.3 | 10.8 | 10.1 | 10．2 | 9.8 | 9．3 | 12.2 | 0.7 | 12.1 | 13.5 |  |
| 1834 | 7.3 7.2 | 6.1 | 7.8 | 8.7 | 8.4 | 8 | 6.6 | 6.8 | 3 <br> 6.2 <br> 6.2 | 7.3 | 7.7 | 7.3 | 7.5 | 8.7 | 7.7 |  | 7.9 | 7.8 | 11.4 | 8.3 | 9.9 | 11 |  |
| 1835 | 9.2 | 7.3 | 9．0 | 9.5 | 8.7 | 8.5 | 7.6 | 7.7 | 7.4 | 7.2 | 7.5 | 9.7 | 9． | 9.0 | 8.7 | 8.8 | 9．1 | $7 \cdot 9$ | 10.9 | 10 | 9.7 | 11.5 |  |
| 1836 | \％ 2. | 7.7 | 9.3 | 9．5 | 8.9 | 8.9 | 7.8 | 2 | 8.2 | 7.9 | 7.7 | 8.7 | 8.3 | 9.5 | 9． 5 | 8.8 | 8.9 | $9 \cdot 5$ | 11.4 | 9.9 | 10.6 | 12.3 |  |
| 1837 | 11. | 0 | 10.3 | 11.7 13.1 | 9．6 | 9.1 | 10.2 | 9.4 | 9．1 | $9 \cdot 4$ | 9.4 | 9.5 | 9.0 | 9.5 | 9.0 | 9．7 | 9.4 | 11.3 | 12. | 9.6 | 10. | 12.0 |  |
| 1839 | tI． | 8.3 | 10.7 | 13．1 1.3 | 11.5 11.3 | 11. | 10.2 | 8.3 |  | 10.1 |  | 11.3 10.4 |  |  | 10.3 |  | 10.1 | 12.5 | 13.0 | 11.9 | 12.0 10.8 | 14.2 |  |
| 1840 | 9.3 | 7.5 | 8.5 | 10.2 | － | 6 | 8.2 | ． | 8.7 | 8.8 | 8.9 | 9.2 | 9.5 | 8.9 | 9.0 | 9.7 | 9.0 | $1 \begin{aligned} & 12.5 \\ & 10.1\end{aligned}$ | 12．7 | 9.6 | 10.8 | 12.0 |  |
| 1831－40 | 9.2 | 7.7 | 9.1 |  |  | 2 | 8.4 | 8.3 | 8.5 | 8.6 | 8.7 | 9.5 | 9.1 | 9.7 | 9.2 | 9.7 | 9.4 | 10.0 | 11．9 | 10.1 | 11.0 | 12 |  |
| 1841 |  | 7.2 | 8.7 |  | 8.8 | 8.8 | 7.6 |  | 7.2 | 7.8 | 8.4 | ． | 8.9 | 9.1 | 8.8 | 9.1 | 8.5 | 8.8 |  | 8.7 | 8.5 |  |  |
| 18 | 8.7 | 7.2 | 9.0 | 11.0 | 10.3 | 0.2 | 8.7 | 8.1 | 10.0 | 8.4 | 8.9 | 12.3 | 8.9 | 9.7 | 9.1 | 10.1 | 9.1 | 9.6 | 10.3 | 10. | 9.0 | 9．4 |  |
| 1843 | 8.7 | 75 | － 5 | 11．2 | 11.2 | 8.7 | 8.3 | 8.5 | 59.4 | 9.3 | 9．6 | 9.8 | 8.9 | 9．${ }^{\text {a }}$ | 9.0 | 8． | 9.5 | 9.7 | 10.6 | 10. | 9.1 | 0.0 |  |
| 1844 | 8.2 | 6.9 <br> 7.3 | 7.3 | 9.9 11.6 | 8．8 7 | 7.3 | 7.0 | 7.5 |  | 7.7 <br> 8.1 <br> 1 | 6.4 7.4 | 7.7 8.9 |  | 8.3 0.6 | 7.5 | 8 | 7.8 | 7．8 | 9．4 | 8.4 | 9．7 | 9.7 |  |
| 1845 1846 | 8.5 12.3 | 7.3 9.7 | 8.9 13.8 | 11.6 | 7.7 <br> 11.3 | 11.5 | 7.9 11.4 | 7.7 10.5 | 5． 78.8 | 18.1 | 7.4 12.0 | 8.9 13.7 | 9．6 | 9．6 | 8.7 <br> 13.0 | 11.7 | 81．9 | 11.9 |  | 15. | 10.5 | 11.5 |  |
| 184 | 13.9 | 10.1 | 14.9 | 13.1 | 12.5 | 14.8 | 11.3 | $8 \cdot 9$ | 914.7 | 13.3 | 12.5 | 13.0 | 11.1 | 12.3 | 11.1 | 12. | 12.4 | 12 |  | 13. | 12. | 13.5 |  |
| 18 |  | 8． 8 |  | II． 2 | 11,1 | 9.5 7.7 | 9.3 | 8.1 |  | 9.3 | 8.7 | 10.3 8.2 | 8.1 | 10 | 7.7 |  | 9. | 10.8 | 12.5 | 9．3 | ． 3 | 12.5 |  |
| 1850 | 8.8 | 8.9 | 8.5 | 8.7 9.1 | ． 4 | 8.7 | 8.4 | 6.6 | 7. | 7.3 | 7.3 8.3 | 10．2 | 8.1 | 9.1 9.3 | 7.5 8.4 | 10.0 10.1 | 78.8 | $\underline{9.6}$ | 11.3 | 8．7 | 9．5 | 11.5 |  |
| 2841－50 |  | 478 | 0.7 |  | ， | 9.7 | 8.8 | 8.1 |  | 9.0 | 8.9 | 10. | 9.3 |  | 9.1 | d |  |  |  | 10.4 |  |  |  |
| 18 |  | ． 5 |  |  |  |  |  | ． 3 |  | 10.1 |  |  |  |  |  | 1.5 | 10.6 | 12.1 |  |  |  |  |  |
| 1852 |  | 2 | 12.1 | 12 | 11.5 | 11.6 |  | 9.1 | 12.4 | 11.3 | 11.7 | 11.5 | 10 | 11.1 | 10 | 13.6 | 11.6 |  |  |  |  |  |  |


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Table C 3. (Cont.)

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |  | 17 |  | 19 | 20 | 22 | 23 | 24 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year |  | $\left\{\begin{array}{l} 8 \\ 0 \\ 0 \\ 0 \\ 5 \\ 0 \\ 4 \\ \hline \end{array}\right.$ |  |  | $\begin{aligned} & \text { 若 } \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ |  | $\left\|\begin{array}{ll} 8 & 0 \\ 0 & 0 \\ 0 \\ 4 & 0 \\ 4 \\ 0 \end{array}\right\|$ | $\left\|\right\|$ | $\left\|\begin{array}{ll} 0 \\ 0 & 9 \\ 0 & 0 \\ 0 & 0 \\ 0 \\ 0 & 0 \\ 0 & 0 \\ 5 & 8 \end{array}\right\|$ |  |  | $\left\lvert\, \begin{gathered} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ \hline \end{gathered}\right.$ |  |  |  | $\left\{\left.\begin{array}{ll} 0 & 0 \\ 0 & 0 \\ & \underset{y}{4} \end{array} \right\rvert\,\right.$ |  |  |  |  |  |  |  |
| 1888 | 9 | 10. | 9. | 9.3 | 9.6 | 10.8 | 11.3 | 10.2 | 11.5 | 10.1 | 10.0 | 9.4 | 9.4 | 8.8 | 9.1 | 8.5 | 8.1 | 10.2 | 10.3 | 9.5 | 3 | 13.8 | , |
| 1889 | 11. | 10.9 | 10.7 | 11.4 | 10.3 | 11.1 | 2.0 | 10.4 | 12.2 | 9.0 | 9.9 | 10.9 | 11.2 | 10.7 | 10.5 | 10.3 | 10.4 | 10.9 | 11.0 | 1.0 | 11.9 | 13.7 | 13.6 |
| 1890 | 13.3 | 2.4 | 11.3 | 12.4 | 12.7 | . 3 | . 9 | 12.0 | 12.2 | 11.8 | 11.8 | 13.1 | 13.3 | 11.2 | 11.4 | 12.8 | 13.3 | 11. | 11.9 | 12.5 | 12.3 | 13.6 | 13.2 |
| 1881 |  | 11.8 | 11.2 | 11.4 | 12.0 | 11.5 | 11.4 | 11.2 | 12.3 | 10.9 | 11 | 1.0 | 11.3 | 11.3 | 10.1 | 11.1 | 10.6 | 11.8 | 11.2 | 10.9 | 12. | 13.9 | 13.8 |
| 1891 | 12 | 12.1 | 10 | 11. | 11.7 | 7 | 11.8 | 12.0 | 12.6 | 11.4 | 11.5 | 12.0 | 13.3 | 12.4 | 12.6 | 12.4 | 13.3 | 12.4 | 12.0 | 12.5 | 13.3 | 15. |  |
| 1892 | 13.3 | 12.8 | 12.1 | 12.8 | 12.3 | 12.1 | 12. | 13.0 . | 14.0 | 11.5 | 11.2 | 12 | 13.8 | 12.7 | 11. | 13.0 | 12.5 | 12.8 | 14.3 | 12.5 | 12. | 14.8 | 16.1 |
| 1893 | 10.8 | 10.8 | 10.7 | 10.7 | 12.9 | 11.5 | 11.5 | 10.5 | 9 | 10.3 | 9.5 | 10.4 | 10.4 | 11.5 | 9.8 | 9.9 | 9.5 | 11.7 | 10.3 | 10.0 | 11.0 | 14.0 | 14.8 |
| 1894 | 9.4 | 10.1 | 9.9 | 10.2 | 10.1 | 9.1 | 9.0 | 9.5 | II.I | 9.7 | 8.7 | 9.0 | 9.8 | 9.4 | 8.5 | 8.9 | 9.0 | 10.6 | 10.1 | 9.5 | 10.1 | 11.9 | 3. |
| 1895 | 10.6 | 11,1 | 10.3 | 10.7 | 10.5 | 9.6 | 9.8 | 9.8 | I 1.5 | 9.2 | 8.5 | 9.6 | 0.1 | 10.0 | 9.7 | 9.5 | 9.6 | 11.1 | 10.2 | 10.5 | 11.2 | 11.6 | 4. |
| 1896 | 10.5 | 12.1 | 11.0 | 12.0 | 11.1 | 9.8 | 9.5 | 10. | 12.5 | 10.5 | 9.3 | 10.1 | 10.5 | 10.1 | 10.5 | 9.8 | 9.9 | 10. | 9.8 | 0. | 11.4 | 12.3 | 13.5 |
| 1897 | 12.3 | 13.4 | 12.6 | 12.7 | 11.8 | 12.3 | 13.0 | 11.0 | 14. | 12.3 | 10.6 | 12.4 | 5 | 11.4 | 12.5 | 11.0 | II. 1 | 11.6 | 3 | 13.0 | 12.5 | 12.6 | 13.5 |
| 1898 | 12.8 | 12.3 | 12.1 | 13.2 | 12.3 | 12.3 | 11.8 | 11 | 12 | 13.0 | 11.7 | 13.1 | 12.3 | 12.2 | 12.1 | 11.9 | 12.2 | 12.2 | 6 | 12.5 | 12. | 13.2 | 13.5 |
| 1899 | 11.8 | 11.9 | 11.9 | 13.4 | 12.3 | 12.2 | 11.5 | 11.5 | 12. | 11 | 10.8 | 12.3 | 12.8 | 12.2 | 11,3 | 12.7 | 11.2 | 12 | 12.6 | 13.0 | 13.5 | 13.9 | 14.4 |
| 1900 | 13.3 | 13.9 | 12. | 13.4 | 12.5 | 12.5 | 12.0 | 12.0 | 12.8 | 12.0 | 11.8 | 13.9 | 13.0 | 12.3 | 12. | 12.6 |  | 12.7 | 3. | 12.5 | 13.5 | 13.9 | 4.7 |
| 1891 | 11.7 | 12. | 11.4 | 12.1 | 11.7 | 11.3 | 11 | 11 | 12.6 | 11.1 | 10.4 | 11.6 | 11.8 | 11.4 | 11. | 11.2 | 11.0 | 11.8 | 11.7 | 11.7 | 12. | 13.3 | 14.3 |
| 1901 | 12.2 | 12.1 | 11. | 12 | 11.3 | 12.3 |  | 12.0 | 12.8 | . 5 | I1.1 | 11.8 | 12.8 | 12.2 | 12 | 11.5 | 11.6 | 2. | 13.6 | 11.0 | 13.4 | 4.2 | 7 |
| 1902 | 13.4 | 13.5 | 13.1 | 13.4 | 12.5 | 12. | 12 | 12.8 | 12.8 | 12.0 | 11.3 | 12.7 | 12.5 | 1.9 | 10.7 | 2.6 | 12.0 | 12.8 | 13.8 |  | 13.3 | 14.5 | 6.7 |
| 1903 | 10. | 13.2 | $13: 3$ | 13.3 | 12.3 | 12.2 | 11.5 | 12.0 | 12.8 | 12.0 | 10.8 | 11.9 | 12.0 | 12.5 | 9.5 | 11.1 | 11 | 12.0 | 13.8 | 10.5 | 13.3 | 14. | 15.7 |
| 1904 | 11.0 | 11.8 | 12.6 | 12.8 | 12 |  | 10.5 |  | 13.5 | 13.5 | 11.3 | 12.1 | 12.8 | 11.4 | 10.7 | 12.0 | 11.8 | 12.1 | 12 | 10.0 | 13. | 14.3 | $15 \cdot 5$ |
| 1905 | 11.5 | 12. | 12. | 13.1 | 13.0 | 12.0 | 10.5 | 12.5 | 13.3 | 14 | 10.8 | 11 | 12. | 11 | 12. | 11.4 |  | 12.7 | 13.4 | 11.5 | 13. | 14.5 | 15.2 |
| 1906 | 12. | 13.9 | 12.7 | 13.4 | 13.3 | 12 | 11.5 | 12.8 | 13.3 | 14.0 | 11.6 | 12.8 | 12.8 | 11.9 | 11.9 | 13.1 | 12.3 | 13.1 | 13.3 | 12 | 13. | 14.5 |  |
| 1907 | 13.8 | 14.3 | 13.9 | 14.4 | 13.5 | 12.5 | 13.0 | 13.0 | 13.5 | 14 | 11 | 13.7 | 13.0 | 2 | 12.8 | 12.9 | 12.5 | 13.5 | 15.1 | 12.5 | 14.4 | 14.9 |  |
| 1908 | 13.4 | 14.2 | 14.8 | 14.8 | 13.5 | 13. | 13.5 | 14.0 | 13.1 | 14.5 | 13.8 | 13.6 | 13.3 |  | 12 | 13.4 | 13.0 | 14. | 14.5 | 13. | 14 | 14.7 | 16.5 |
| 1909 | 13.5 | 13.1 | 13.5 | 13.4 | 13.3 | $14 \cdot 3$ | 12.3 | 13.3 | 13.3 | 15.5 | 2.4 | 13.3 | 13.0 | 12.1 | 13.0 | 13.5 | 13.3 | 14.2 | 13.8 | 13. | 14. | 14. | 5 |
| 1910 | 12.0 | 12.5 | 12.7 | 12.4 | 12.5 | 14.0 | 12. | 13.0 | 12.8 | 16.0 | 11.1 | 12.4 | 12. | 11.7 | 11. | 13.0 | 12.8 | 13.7 | 14.0 | 12.8 | 13.4 | 13.7 | 5.9 |
| 1901-10 | 12.4 | 13.1 | 13.1 | 13.4 | 12.8 | 12.7 | 11.8 | 12.7 | 13.1 | 13.6 | 11.3 | 12.6 | 12 | 11.9 | 11 | 12.5 | 12.3 | 13.1 | 13 | 11.9 | 13.5 | 14.4 |  |
| 1911 | 13.3 | 14.3 | 13.3 | 13.2 | 13.0 | 13.5 | 13.0 | 14.0 | 13.8 | 14.5 | 11.8 | 13.0 | 13.8 | 12.3 | 13.2 | 13.8 | 13.3 | 13.7 | 14.3 | 13.5 | 14.5 | 14.8 | + |
| 1912 | 15.0 | 15.6 | 14.6 | 14.5 | 14.1 | 14.5 | 13.5 | 14.5 | 14.5 | 14.5 | 13.3 | 14.5 | 14.0 | 12 | 13.3 | 14.5 | 13.8 | 14.2 | 14.4 | 14.0 | 14.3 | 15.5 | 16.4 |
| 1913 | 11. | 13. | 13 | 13 | 13. | 13.0 | 12.8] | 12.8 | 13.8 | 14.8 | 11.8 | 11 | 11. | [1.0] | 11. | 12. | 12. | 14 | 13. | 12. | 13.6 |  |  |

Table C 4. Prices of Oats.

Table C 4 －Prices of Oats．
Stated in \％re per kilogramme．

|  | ： | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 1 | 12 | 13 | 14 | 15 | 16 | 17 | ：8 | 19 | 20 | 22 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year |  |  | 藓 |  | $\begin{aligned} & \text { 層 } \end{aligned}$ |  |  |  |  | $\stackrel{\circ}{\overbrace{0}^{\prime}}$ |  |  |  |  |  |  |  | $8$ |  |  |  |
|  |  |  |  |  |  | 6. |  | 5.8 | 6.4 |  |  | 6.9 | 7 | 6.4 | 4.8 | 6 |  |  |  |  |  |
| ${ }_{1831}^{1830}$ | 8.9 | 5.9 | 7.4 |  | 8.2 | 7.2 | 5.2 | 7．9 | 6.4 | 7．1． | 6.4 | 7.2 |  |  | 7 578 | 6.6 | 8.3 | 9.4 | ． | 9.0 | ． |
| ${ }_{1832}^{1832}$ | 6.3 | 5 | 6．1． |  | 7.1 | 6．9 | 4.7 | 7.1 4.2 4 | 5．1 | 5.8 | 5.4 | 5.6 | 5.8 | 7．9 |  | 7.5 | 7．4． | 7．8 |  | 9.6 | 3． 2 |
| 1838 | 6.4 | 4.8 | 5.8 |  | 6.4 | 5.5 | 5.0 | 5．2 | 4.6 | 5.0 | 5．4 | 5.9 | 6.7 | 5.8 | 8 6．1 | 5.1 | 6.1 | 6. | 8.5 | 6.4 | ．9 |
| 1835 | 7.7 | 5.5 | 6．5 |  | 6.7 | 5.5 | 5.5 | 6．1 | 5.7 | 5．1． | 6.1 | 7.1 | 7.1 | ． 4 | 46 | 5.6 | ． 4 | ${ }_{7} 6$ | 8.3 | 7.5 | 8． |
| 1836 1837 | 88 |  | 78.8 |  | 7.1 9.0 |  | 5.1 | 8．4 | 5．5 | 5.8 | 6.7 | 7．1 | 3．1 | 7.4 | － 78.4 | 8．7 | 7.1 | 7．7 | 90．3 | 8.7 | 8.7 |
| ${ }_{1838}$ | 11.0 | 8.0 | 8.7 |  | 9.3 | 8.0 | 7.1 | 8.5 | 10.3 | 8.3 | 8.7 | ， | 94 | ． 6 | 68.2 | 8.9 | 9．5 | 10.9 | 2．9 | 10.9 | g．${ }^{\circ}$ |
| 1839 189 | 8.6 | 6.3 | 7.8 <br> 6.8 |  | 8.6 | \％ 7.3 | 6.4 6.4 | $7{ }^{7.1}$ | 8.2 | 7.7 | 7.7 | 6.9 | $7 \cdot 1$ | \％ 4 |  | 8.5 | 7.8 6.3 | 8．3 | 10. | 9.1 | ．1 |
| ${ }_{1831}^{1840}{ }^{180}$ | －9．0． | 6.9 5.9 | 7.8 <br> 7.8 | 二 | 7.5 | ${ }_{6.5}$ | 5.6 | 6.7 | 6.6 | 6.4 | 6.5 | 7.0 | 2.5 | 7.5 | 5.48 | 7.1 | 2.4 | 8.0 | 9.4 | 8.5 | 9．5 |
|  |  |  |  |  |  |  |  |  |  |  | 4.8 | 6.3 | 6.1 | ． 9 | 6.7 | 6.4 | 5.6 | ． |  |  |  |
| 184 | 7.1 | 5.5 | 6.3 |  | 8.3 | 6.5 | 5.4 | 5.5 |  |  | 5.9 | 6.9 | 5.9 |  | 6.4 | 6． | 5．8 |  |  |  | 6.1 |
| 1843 | 7.7 | 5．20 | ， |  | 9.1 | 6.6 | 5.8 4.8 | 5.5 | ． 6 | 6． | 6．7 | 5． | 6． | 6．7 | 7 7.5 | 6.4 | 6．3 | 8.0 | 6. |  | 6．3 |
| 184 <br> 184 |  | 5.2 | 7．8） |  |  | 6.4 | 4．81 | 5.5 | ${ }_{6}^{6.6}$ | 5.6 | ． | 6．7 |  | 7．7 |  | 5.4 | 5.3 | 6.6 | 6.7 <br> 8.0 | 8.5 |  |
| 1846 | 1 I .5 | 7.7 | 10.7 | 0．9 | 8.2 | 9.5 | 7.1 | 7.4 | 9．8 | 8.3 | 8.3 | 9．8 | 8.4 | 9．5 | 5.8 | 8.2 | ， | ， | ． 3 | 8 | ． 5 |
| 1847 8848 | 10.6 | 7.9 | （11．2， | 8.6 | ， | 10.7 | 6.7 5.8 | 7.5 |  | $\begin{array}{r}10.7 \\ 7.7 \\ \hline\end{array}$ | 10.3 5.9 | 9．1 | 7.9 | 2.4 | 4 | 6.4 | 7.8 | \％ 7.6 |  |  | 8．7 |
|  | 7.4 | 5.7 | 6.7 |  | 6.5 | －3 | 5.5 | 5.3 | 6.9 | 6.4 6.4 | 5.4 | 6.1 |  | ， | $7{ }^{4} 5$ | ． | \％ | 6.4 |  |  | 8.0 |
| 5850 | 8.1 | 6. | 7.1 | 7.8 |  | ． 4 | 5.5 | 5.1 |  | 6.7 | 6.3 | 7.7 | 6.9 | 7.7 | 7.7 | 6.7 | ${ }_{6}^{7} 6$ | 7.9 | 4 | ． 5 | 92： |
| 2841－50 | 8. |  |  |  |  |  |  |  |  |  | 6.5 |  |  |  | 7.1 | 6.7 |  | $2.5$ |  |  | 7.4 |
| $\begin{gathered} 1851 \\ 1852 \\ 1825 \end{gathered}$ | 10.6 9.7 |  | 10．2． | $9.6$ |  |  | $\begin{aligned} & 6.7 \\ & 8.3 \\ & 0.6 \end{aligned}$ |  |  |  | $\begin{gathered} 8.4 \\ 7.7 \\ 8.3 \end{gathered}$ | 8．2． |  |  |  |  | $9.8$ | $\begin{aligned} & 9.2 \\ & 8.71 \end{aligned}$ | $\left.\begin{gathered} 9.3 \\ 9.9 \\ 0.9 \end{gathered} \right\rvert\,$ | 8.5 | $\begin{aligned} & 8.9 \\ & 88.2 \\ & 8.7 \end{aligned}$ |

Table C4. (Cont.)

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 22 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year |  |  |  |  | $\begin{aligned} & \text { g } \\ & 8 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ |  |  |  |  |  |  |  |  |  |  | $$ |  |  |  |  |  |
| 1854 | 11.9 | 10.1 | II.3 | 11.5 | 10.1 | 9.6 | 11.9 | 8.5 | 12.0 | 10.8 |  |  | 10.0 |  |  |  | 0.2 | 0.1 |  |  |  |
| 1855 | 13.6 | 11.3 | 14.6 | 12.8 | 11.2 | 10.0 | 11.9 | 9.6 | 13.8 | 12.0 | II. 1 | 11.7 | 10.9 | 12.5 | 11.2 | 10.9 | 11.9 | II. 1 | 11.7 | 12.6 | 13.5 |
| 1856 . | 14.7 | 11.4 | 11.8 | 14. 1 | 11.1 | 12.0 | 11.9 | 10.7 | 13.1 | 11.4 | 10.6 | 12.5 | 12.5 | 13.5 | 12.2 | 13.0 | 12.5 | 12.9 | 14.6 | 14.7 | 13.1 |
| 1857 . | 11.6 | 10.8 | 10.6 | 12.8 | 10.0 | 10.8 | 9.9 | 10.3 | 11.5 | 10.0 | 8.8 | 10.4 | 11. 1 | 12.5 | $7 \cdot 7$ | 10.1 | 10.4 | 12.5 | 13.0 | 11.3 | 12.2 |
| 1858. | 10.8 | 10.3 | 10.3 | II. 5 | 9 | 9.5 | 9.0 | 9.6 | 10.2 | 10.4 | 9.8 | 9.6 | 9.5 | 11.1 | 8.9 | 9.5 | 9.5 | 10.9 | 9.9 | 9.1 | 11.7 |
| 1859. | 11.4 | 10.4 | 10.5 | 11.7 | 8.5 | 8.8 | 9.7 | 9.6 | 11.2 | 9.9 | 9.4 | 8.7 | 9.0 | 10. 1 | 9.9 | 8.8 | 9.2 | . 7 | 9.1 | 8.8 | II. 3 |
| 1860 . | 11.6 | 10.9 | 10.5 | 10.9 | 9.7 | 9.3 | 8.3 | 9.9 | 11.7 | 10.3 | 10.2 | 10.2 | 9.3 | 10.3 | 9.7 | 10.0 | 9.6 | 10.7 | 8.8 | 9.4 | 11.3 |
| 1851-60 | 18.7 | 9.7 | 10.9 | 18.6 | Y0.0 | 9.6 | 9.7 | 9.1 | 11.0 | 10.0 | 9.4 | 10.1 | 9.9 | II. 1 | 9.9 | 9.9 | 10.2 | 10.4 | 10.7 | 10.6 | 11.0 |
| 1861 | 11.4 | 10.3 | 9.3. | 10.6 | 10.2 | 8.3 | $7 \cdot 3$ | 10.3 | 11.1 | 10.8 | 9.8 | 10.2 | 9.6 | 10.9 | 10.4 | 9.5 | 9.6 | 11.8 | 9.4 | 10.4 | II. 3 |
| 1862 | 10.9 | 9.6 | 9.6 | 9 | . 1 | 8.1 | 7.4 | 9.9 | 10.9 | 10.0 | 9.2 | 9.6 | 9.3 | 10.6 | 9.4 | 9.9 | 9.7 | 10.5 | 9.8 | 10.0 | II. 4 |
| 1863. | 8.9 | 8.5 | 8.6 | 9 | 8.1 | 8.4 | 7.6 | 8.9 | 8.9 | 9.1 | $7 \cdot 9$ | 8.8 | 8.6 | 9.7 | 8.0 | 9.0 | 8.3 | 9.7 | 9.2 | 8.9 | 11.6 |
| 1864 . | 8.2 | 8.0 | 8.0 | 8.9 | $7 \cdot 7$ | 7.0 | 7.3 | 8.1 | 8.5 | 8.4 | 7.0 | 8.1 | $7 \cdot 7$ | 8.5 | $7 \cdot 3$ | 8.4 | 7.2 | 9.4 | 1 I .0 | 9.1 | 11.8 |
| 1865. | 8.2 | 10.1 | 8. | 9.3 | 7.1. | 6.4 | 6.6 | 8.6 | 9.3 | 8.9 | 7.7 | 8.5 | 7.8 | 8.9 | 7.5 | $7 \cdot 7$ | $7 \cdot 3$ | 9.4 | 8.1 | 8.2 | 11.8 |
| 1866 . | 11.5 | 11.8 | 11.0 | 10.2 | 9.1 | 8.9 | 7.2 | 9.0 | 10.8 | 10.5 | 9.8 | 11.1 | 9-3 | 9.8 | 10.6 | 9.5 | 9.3 | 10.1 | 1I. 2 | . 8 | 12.6 |
| 1867 . | 12.1 | 12.7 | 12.5 | 12.2 | 11.5 | 11.1 | 8.1 | 10.6 | 11.9 | 12.1 | 10.7 | 11.6 | 10.9 | 10.7 | 9.5 | 10.7 | 9.4 | 11.4 | 9.9 | 10.9 | 13.0 |
| 1868 . | 14.4 | 14.2 | 13.4 | 14.4 | 14.9 | 11.7 | 4 | 14.4 | 14.9 | 14.3 | 13.2 | 14.2 | 11.8 | 13.0 | 12.8 | 13.4 | 12.9 | 14.6 | 13.8 | 11.6 | 12.4 |
| 1869 | 12.4 | 12.5 | 11.8 | 11.9 | 11.5 | 9.5 | 8.4 | 12.2 | 13.5 | 11.2 | 10.5 | 11.1 | 10.2 | II. 5 | 10.6 | 10.6 | 10.9 | 13.3 | 13.0 | 10.7 | 11.4 |
| 1870. | 10.3 | 10.7 | 9.7 | 11.0 | 8.5 | 8.2 | $7 \cdot 3$ | 9.9 | 10.4 | 11.3 | 9.2 | 9.4 | 8.7 | 9.7 | 8.5 | $9 \cdot 4$ | 8.3 | 10.1 | 8.0 | 8.5 | 10.8 |
| $1861-70$ | 10.8 | 10.8 | 10.2 | 10.7 | 9.8 | 8.8 | $7 \cdot 7$ | 10.2 | IY.0 | 10.6 | 9.5 | 10.3 | 9.4 | 10.3 | 9.5 | 9.8 | 9.3 | 11.0 | 10.3 | 9.8 | 11.8 |
| 1871 | 12. | 11.4 | 12.0 | 10.6 | 11.2 | 11.7 | 8.1 | 10.5 | 11.8 | 11. 3 | 10.6 | 11.2 | 10.3 | 10.2 | 10.1 | 11.3 | 10.1 | 9.8 | 9.6 | II. 5 | 11.2 |
| 1872 . | 11.0 | 12.0 | 11.9 | 11.3 | 10.6 | 10.7 | 9.4 | 10.0 | 11.2 | 10.0 | 9.2 | 10.4 | 11.0 | 10.1 | 9.6 | 10.5 | 8.9 | 10.4 | 10.6 | 11.8 | 12.2 |
| 1873 . | 12.5 | 13.0 | 15.5 | 12.8 | 9.7 | 10.4 | 11.9 | 11.7 | 11.6 | 10.6 | 10.3 | 11.0 | 11.1 | 11.5 | 10.9 | 11.0 | 14.2 | II. 3 | 11.9 | 13.3 | 13.7 |
| 1874 | 14.2 | 13.9 | 16.3 | 13.9 | 12.8 | 12. | 13-7 | 13.3 | 14.3 | 12.7 | 13.4 | 13.9 | 12.9 | 13.4 | 12.7 | 14.1 | 12.6 | 13.5 | 12.8 | 15.2 | 14.3 |
| 1875 | 13.6 | 13.6 | 15.5 | 13.6 | 13.6 | 13.2 | 12.5 | 13.2 | 13.7 | 12.3 | 12.7 | 12.7 | 12.7 | 13.2 | 12.3 | 13.3 | 12.2 | 13.6 | 13.3 | 14.9 | 14.4 |
| 1876 | 13.3 | 13.6 | 12.8 | 13.7 | 12.0 | 11.6 | 11.6 | 12.6 | 13.0 | 11.6 | 12.0 | 12.8 | 12.3 | 12.8 | 12.2 | 12.4 | 1.1 .6 | 12.4 | 11.5 | 13.3 | 15.5 |
| 1877 . | 12.0 | 13.4 | 12.7 | 12.4 | 13.0 | 12.2 | 11.6 | 12.4 | 12.6 | 11.4 | 10.6 | 11.5 | 11. 5 | 12.6 | 12.2 | 11.6 | 10.9 | 12.2 | 12.4 | 12.8 | 14.6 |
| 1878 . | 10.7 | It. 2 | 10.2 | 10.3 | 9.1 | $9 \cdot 3$ | 9.4 | 11.2 | 10.3 | 11.8 | 9.5 | 10.7 | 9.6 | 10.2 | 9.7 | 10.5 | 9.6 | 10.7 | 9.9 | 10.0 | 12.8 |
| 1879 . | 10.2 | 10.2 | $9 \cdot 3$ | 9.3 | 0.4 | 8. | 7.6 | 9.8 | 9.3 | 9.9 | 8.5 | 9.3 | 9.1 | 9.3 | 8.5 | 9.4 | 8.9 | 9.8 | 8.3 | 8.5 | 12.8 |
|  | 11. | 11.9 | 10.6 | 10.5 | 0.4 | 9.5 | 8.7 | 11.6 | I1.0 | 10.6 | 10.5 | 10.3 | 11.4 | 10.7 | 11.5 | 10.7 | 11.7 | 10.0 | 10.7 | 10.1 | 13.7 |


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| $\begin{aligned} & \text { OH: } \\ & 0 \\ & \infty \\ & \infty \end{aligned}$ | m"mommoson ¢ |  on on on o o vinus |  |
| GAN |  <br>  |  <br>  |  <br>  |
| $\begin{aligned} & n+1 \\ & 0 \\ & 0 \end{aligned}$ |  os on o w o onvin a |  in oun os is wa bo a |  WHumanconent |
|  |  <br>  |  $\infty 0+\infty+0 \dot{\infty}+i \operatorname{in} \dot{0}$ |  <br>  |


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| 11. | 11.0ㅇ | 10.7 | 12.8 | 13.0 | . 6 |
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| 8.7 | 9.4 | 9.3 | 9. | 9.5 | 12.6 |
| 9.1 | 9.0 | $9 \cdot 4$ | 8.9 | 9.8 | . 8 |
| 9.8 | 9.5 | 9.7 | 9.1 | 9.8 |  |
| 10.1 | 9.8 | 0.6 | 10.4 | 10.2 |  |
| 8.8 | 8.9 | 9 | 9.1 | 9.8 | 1 I .0 |
| 7 | 7 | 7 | , | 7.4 | 1.0 |
| 7.5 | 7.6 | 8.3 | 9.2 | 8.7 | 11.2 |
| $7 \cdot 7$ | 7.8 | . 4 | 8.8 | 9.0 | 10.8 |
| 9.8 | 10.1 | 9.3 | 10.0 | 11.0 | 11.0 |
| 9.0 | 9.0 | 9.1 | 5 | 9.8 | 11.6 |
| 9 |  | 9.3 | 9. 5 | 10.5 | 11.0 |
|  | 9.3 | 10.0 | 9.9 | 11.0 | . 6 |
|  | 0.1 | 9.0 | 9.3 | 9.0 | 0.6 |
| 8.6 |  | 7.8 |  |  | . 6 |
| 7 | 6.9 | 7.0 | 6 | 8.5 | 10.6 |
|  | 7 | 8.0 | 8.4 | 0 | . 8 |
| 8. | - |  | 10.0 | 11.0 | . 0 |
| 9. |  | 9.5 | 10.3 | 10.0 | 1.6 |
| 9. | 9.3 | 10.0 | 10.3 | 10.5 | 2 |
| 10.1 | 9.6 | 10.5 | 11.2 | 10.5 |  |
| 8.9 | 8.8 | 1 | 5 | . 9 | 11.1 |
| 9.9 | , | 10.3 | 11.2 | 10.5 | 13.0 |
| 11. 1 | 10.8 | 10.3 | 11.7 |  | 13.3 |
| 8.7 |  | 9.8 | 11.7 | . 0 | 12.9 |
| 10.4 | 10.0 | 12.0 | 11.7 | 10.0 | 12.7 |
| , | 10.1 | 10.3 | 10.8 |  | 12.8 |
| 10.6 | 10.3 | 11.0 | 11.6 | 11.0 | 13. |
| 11.3 | 10.6 | 11.3 | 12.6 | II.O | 13.7 |
| 10.7 | 8.8 | 11.8 | 11.7 | 10.9 | 13.6 |
| 10.3 | . | 11.3 | 11.5 | 10.8 | 13.7 |
| 1.0 | 9.3 | 11.0 | I1.3 | 10.5 |  |
| 10.4 | 9.9 | 10.9 | II.6 | 10.4 | 13.3 |
| 17.5 | I 0.0 | 12.0 | 11.9 | 17.8 | 14.7 |
| 11.6 | II. 0 | 12.5 | 12.1 | 12.3 |  |

$\xrightarrow{N}$


## Table C 5．Prices of dried Peas．

Stated in 8 re per kilogramme．

|  | \％ | 9 | 10 | 11 | 12 | 20 |  | 1 | 9 | 10 | 11 |  | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year |  |  | 症灾 |  |  |  | Year |  |  |  |  |  |  |
|  |  |  |  |  | 9.8 | 13.0 |  | 13.9 | 13.5 | 15.8 | 13.8 |  |  |
| 183 x | 14.4 | 14.4 | 12. |  | 11.5 | 13.0 | 1873 | 15.2 | 16.9 | 18.7 | 17.1 | 14.8 |  |
| 1832 | 7.1 | 12.2 | 10. |  | 8.6 | 13.0 | 1874 | 16.6 | 18. | 19.0 | 17．2 | 18.5 |  |
| 1833 | 8.5 | 7.5 | 9.2 |  | 8.7 |  | 1875 | 18.4 | 24－2 | 18.8 | 18.5 | 16.3 |  |
| 1834 | 8.1 | 7.6 |  |  | 8.2 | 11.0 | 1876 | 14.2 | 16 | 15.8 | 13.2 | 3 |  |
| 1835 | 8 | 8.8 |  |  | 8.7 | 12.0 | 1877 | 16 | 16 | 15.8 | 13.6 | 14.8 | 16.0 |
| 18 | 8. | 9.5 |  |  | 8. |  |  | 15.7 | 17. |  | 16.0 | 14 |  |
| ${ }^{1838}$ | 13.0 | 13.4 | 10.9 |  | 12.6 | 14 | 1880 | 16.0 | 16. | 17. | 17 | 16.3 |  |
| 1839 | 11.5 | 11.5 | 10 |  | 10.3 | 14.0 | 1871－80 | 15.2 | 16.4 | 16.8 | 15.4 | 146 | 16.0 |
| $1840$ | 9. | 9．8 | 9.1 |  | 8.9 | 12.0 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | 18 | 16.9 | 17.5 | 18. | 15.9 |  | 17.0 |
|  |  | 9.7 |  |  | 10.0 | 12.0 | 1883 | 13.9 | 16. | 17.6 | 16. | 14.4 | 5.0 |
| 184 | 11.5 | 14.6 | 11.3 | 12.2 | 10.4 | 13.0 |  | 14.9 | 14. | 15.3 | 16.2 | 13.8 |  |
| 18 | 9.4 | 9.2 | 10.0 | 7. | 9.8 | 11.0 | 188 | 13.0 | 13.6 | 13.2 | 13. | 12.5 | 13.0 |
| 1844 | 9.7 | 20 | 10.0 | 6.9 | 8.7 | 1 |  | 11.4 | 13.1 | 12. | 11. | 10.7 |  |
| 1845 | 12.7 | 10.8 | 13 | 9，1 | 11.5 | 15.0 |  | ． 1 | 11.5 | 11.8 | 10.7 | 9．3 |  |
|  | 13. | 13 | 13.4 | 12.3 | 13 |  |  | 10.6 | 13.2 | 13.5 | 13.9 | 12.1 |  |
| 1848 | 11.0 | 12 | 10.2 |  | 8.9 | 12.0 | 1890 | 14.5 | 14.1 | 14. | 15. | 15.7 |  |
| 1849 | 9.4 | 12.0 | 9.8 | 8. | 8.8 | 12.0 | 1881－90 | 13.7 | 14.9 | 14.7 | 14.6 | 13.4 |  |
| 1885 | 11.6 | I | 11.5 | 10.7 | 10.5 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | 1892 189 | 17.3 | 16.5 | 14.3 | 16.7 | 15.9 |  |
| 1852 | 11.4 | 10.1 | 13.5 | 12.8 | 11.9 | 13.0 | 1893 | 12.6 | 14.5 | 13.1 | 12.3 | 11.7 | 14.0 |
| 1852 | 13.7 | 13 | 13.9 | 14.1 | 11.5 |  | 18 | 11.7 | 12 | 12. | 11. | 10.6 | 13.0 |
| 1853 | 14．0 | 15 | 14.5 | 13.6 | 12 |  |  | 12.7 | 14.5 | 13.0 | 12.8 | 11.3 |  |
| 1854 | 14.4 | 15.0 | 14.4 | 12.4 | 12.7 |  |  | 14.0 | 15.5 | 13.8 | 10.8 | 12.6 | 14.5 |
| 185 | 15.5 | 13. | 15.4 18.5 | 13.5 | 14.1 | 17.0 | 1898 | 15.0 | 17.0 | 13.9 14.3 | 11.3 | 14.0 | 15.0 |
| 1857 | 17.4 | 18.5 | 15.4 | 18.2 | 14.1 | 20.0 | 1899 | 16.5 | 18.8 | 15.3 | 14.5 | 15.1 | 7.5 |
| 1858 | 12 | 13. | 13.9 | 15.3 | 11.3 | 13 | 19 | 17.6 | 18.4 | 15.6 | 14.5 | 17. | 16.5 |
| 18 | 12 | 13. | 12.8 | 11.5 | 11.5 | 13.0 | 1891－0 | 14．5 | 16 | 14. | 13.4 | ． 9 | 15.3 |
|  | 13.0 84.7 | 13.9 | 14.0 14.6 | 14 | 11.3 20.9 | 13 |  |  | 16.5 | 16.7 | 16.3 | 4.8 |  |
|  |  |  |  |  |  |  | 1902 | 18.9 | 6 | 19.5 | 19.0 | 16.6 | 17.5 |
| 18 | 13.5 | 15.6 | 15.2 | 15.0 | 12.5 | 16.0 | 1903 | 18.0 | 20.5 | 19.3 | 17.8 | 19.0 | 14.0 |
| 18 | 14 | 15.7 | 16 | 15.5 | 14.7 | 17.0 | 1904 | 13.9 | 18.0 | 19.2 | 15.3 | $4 \cdot$ | 5 |
| 1863 | 12 | 14.7 | 14 | 14 | 11.7 | 14.0 | 1905 | 14.5 | 19.8 | 19. | 16.9 | 7.0 |  |
| 1864 | 11.9 | 13.5 | 12.4 | 11.3 | 10．3 | 14.0 | 1906 | 13.9 | 17.6 | 18. | 14.8 | 4 | 7.5 |
| 1865 | 11.2 13.9 | 12.7 | 11.9 | 10.8 | 10.4 | 15．8 17.2 | 1907 | 13.9 | 18.4 | 19.8 | 14.9 | 9. | 7.5 |
| 1867 | 18.8 | 16. | 18.5 | 13.2 | 17.7 | 11.0 | 1909 | 15.3 | 22.0 | 19.1 | 19.0 | 帾 |  |
| 1868 ．． | 20 | 21 | 23.0 | 22.9 | 20.9 | 22.0 | 1910 | 6． | 21.0 | 18. | 17.5 |  |  |
|  | 17.0 | 17.3 | 17.9 | 15.2 | 14.4 | 16.0 | 1901－10 | 15. | 19.6 | 18.8 | 16 | 16.7 | 4 |
| 1870 | 12.6 | 14.1 | 13.7 | 12.7 | ． 3 |  |  |  |  |  |  |  |  |
| 1865－70 | 14.6 | 15.5 | 18.8 |  |  |  | 1911 | $\begin{aligned} & 15.6 \\ & 18.8 \end{aligned}$ | 17.0 | 18.6 | 16.5 18.5 | 19. | 19. |
| 871 ． | 13．2｜ | 13.5 |  |  | 2. |  | 1913 | 16.8 | 22．0｜ |  |  |  | 5 |

## Table C 6. Prices of Potatoes.

Stated in ore per ldlogramme.


Table C 6. (Cont.)


## Table C 7．Prices of fresh Beef．

Stated in öre per kilogramme．

|  <br>  | $\infty \infty \infty$ に | － － I．．．．．．．．．．． | $\mathscr{\infty}_{\infty}^{\infty} \infty_{\infty} \infty_{\infty} \infty_{\infty} \infty_{\infty} \infty_{\infty} \infty_{\infty}$ <br>  ह．．．．．．．．．．．． | ¢ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Q9\％ |  |  |  | Kı¢ wipy | － |
|  |  |  | SN゙ONKNNNKNKNO | C7unos snqourix | $\cdots$ |
|  |  |  | 1 111 |  | － |
|  | ｜｜｜｜｜｜｜｜｜ | ｜｜｜｜｜｜1｜｜ | 111111111111 | K）${ }^{\text {unoo } 28 \text { upyptg }}$ | ＋ |
|  | 1 尤さ111111 | 11111111111 | 11111111111 | prepus | $\cdots$ |
|  |  | 11111 |  |  |  |
|  |  |  |  | Gitanos puerios | 4 |
| Oinfoiforiogoun 8 |  |  | 世 wֹwn whw |  | $\bigcirc$ |
|  | $1\|1\| 1\|1\| 11$ | $1\|1\| 1\|\|\|1\| 1$ | $111\|1\| 1 \mid 1111$ | Kıunoo 8ıoqsaly | － |
|  |  |  | WhwwnminNo | izunos 810qexers | － |
|  |  | ｜ $11\|\|1\| 1\| \mid 1$ | $1\|1\| 1\|1\| 1\|1\|$ | K7unos eiesdd， | $\stackrel{\square}{n}$ |
|  | む |  |  | Kıunos osqəxQ | $\square$ |
|  |  |  |  |  | ¢ |
|  |  |  |  |  | $\infty$ |
|  |  |  |  | $\begin{gathered} \text { Kyunos } \\ \text { 8ıaqreddoy } \end{gathered}$ | 5 |
|  |  |  |  | A7\％noo 810qJ1apy | \％ |
|  | ｜｜｜｜｜｜｜｜｜ | $1\|1\| 1\|1\| 1 \mid 1$ | $1\|1\| 1\|1\| 1\|1\|$ | $\begin{gathered} \text { Kqunos } \\ \text { purpuouraisen } \end{gathered}$ | N |

Table C 7. (Cont.)

|  | 2 | 3 | 4 |  |  | 617 | 9 |  | -12 | 115 | 5116 |  | 17 |  |  |  | 22 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year |  |  |  |  |  | $\square$ |  |  |  |  |  |  |  |  |  |  |  |
| 1871 | 68 61 | 60 | 58 |  | 565 | 5943 | 60 | 6) $5^{8}$ | 5862 | 6260 | 6062 |  | 51 | 59 | 53 | 355 | 69 |
| 1872 | 7563 | 64 | 61 |  | 5454 | 5444 | 62 | 25 | 5558 | 586 | 6664 |  | 57 |  | 56 | 65 | 68 |
| 1873 | 80.63 | 65 | 60 |  | 5455 | 55.45 | 64 | 454 | 515 | 1766 | 6664 |  | 62 | 62 | 68 | ${ }^{61}$ | 71 |
| 1874 | 7069 | 68 | 65 |  | 50 | 52142 | 60 | 50 | 50 | 5769 | 69 |  | 56 | 59 | 63 | 61 <br> 88 <br> 8 | 789898989 |
| 1875 | 6968 | 65 | 64 |  | 6349 | 4949 | 65 | ${ }_{5} 63$ | 6364 | $6466$ | $\begin{aligned} & 66 \\ & 66 \end{aligned}$ |  | ${ }_{6}^{60}$ | 64 | $\begin{aligned} & 75 \\ & 68 \end{aligned}$ | $\begin{array}{l\|l\|} \hline 58 \\ 38 \\ \hline 64 \end{array}$ | 89 |
| 1876 1877 | 7466 | 64 | 68 |  | 59.49 | 49 <br> 61 <br> 57 <br> 47 |  | $\begin{array}{l\|l\|} 57 \\ 53 & 68 \\ 68 \end{array}$ | $\begin{array}{l\|l\|} \hline 68 \\ 66 & 72 \\ 65 \end{array}$ |  | $66$ |  | 63 | 65 | 68 | 566 | 90 |
|  | 7065 6668 | 62 | 58 |  | 61 | 6147 | $\begin{aligned} & 63 \\ & 20 \end{aligned}$ | $\begin{array}{c\|c} 53 & 66 \\ 59 & 63 \end{array}$ |  |  |  |  | 60 64 | ${ }^{68}$ | 5 | 56 | 0 |
| 1879 |  | 65 | 6 |  | 585 | 5 | 61 | 165 | 65 | 60.63 | 63 |  | 6 | 5 | 56 | 6 | 73 |
| 1880 | 6 | 68 | 63 |  | 55.53 | 5345 | 64 | 64 | 6465 | 656 | 6 | 96 | 68 | 4 | 57 | 761 | 59 |
| 1871-80 | 7267 | 65 | 6 I |  | 5754 | 5446 | 63 | 36 | 62 | 616 | 6 | 16 | 6 | 6 | 62 | 2 6 | 77 |
| 1881 | 6 | 65 |  |  | 6062 |  | 58 | 861 | 6160 | 60.59 | 5956 |  | 6 | 48 |  | 559 | 58 |
| 1882 | 7568 | 67 | 63 |  | 62.60 | 60.58 | 61 | 162 | 6262 | 6271 | 7170 |  | 74 | 61 |  | 975 | 77 |
| 1883 |  | 69 |  |  | 666 | 6058 | 62 | 266 | 6670 | 70 | 7573 | 3 | 74 | 64 | 66 | 672 | 82 |
| 2884 | 69 | 68 | 68 |  | 6256 | 5653 | 60 | 50 | 6271 | 1178 | 76 |  | $7{ }^{7}$ | 63 | 63 | 370 | 80 |
| 1885 | 6467 | 67 | 64 |  | 5749 | 494 | 61 | $6{ }^{5}$ | ${ }^{8} 61$ | 166 | 66 |  | 64 | 60 | 59 | 964 | 67 |
| 1886 | 6066 | 65 | 58 |  | 48 | 4138 | 59 | 955 | 5359 | 5959 | 59 |  | 59 | 59 | 55 | 5 | 65 |
| 18 | 5664 | 62 | 56 |  | 4140 | 4937 | 56 | 55 | 54.48 | ${ }^{8} 8$ | 5 |  | 58 | 56 | 54 | 755 | 5 |
| 1888 | 63 | 67 | 54 |  | 5142 | 4235 | 8 | 85 | 59 | 585 | 57.6 |  | 57 | 7 |  | 7 | 8 |
| 1889 |  | 68 | 5 |  | 5449 | 4953 |  | 670 | 2 6 | 65 |  |  |  |  |  |  |  |
| 1890 |  | 71 |  |  | 5449 |  |  |  | 706 |  |  |  |  |  |  |  | 9 |
| 1881-90 | 6467 | 66 | 63 75 |  |  | 5148 |  |  | 616 | ${ }^{3} 163$ |  |  |  |  |  | 869 | 9 |
| 1891 1892 |  | 74 | 75 |  |  |  |  |  | ${ }_{14} 71$ |  |  |  |  |  | $\begin{aligned} & 68 \\ & 67 \end{aligned}$ | 769 | 5 |
|  | 65.73 | 72 | 70 |  |  | $55$ | 66 | ${ }_{66} 71$ | 11 <br> 67 <br> 68 <br> 68 | 68.65 | 63 |  |  |  | 67 | 769 <br> 768 | 9 |
| 1894 | 6664 | 64 | 58 |  | 60.5 | 5050 | 66 | 66 | 6865 | 6560 | 60 |  | 68 | 68 | 60 | - 68 | 69 |
| 1895 | 6362 | 60 | 55 |  | 5850 | 5 | 62 | 266 | 6660 | 606 | 60 |  | 66 | 67 | 60 | O 67 | 70 |
| 1896 | 61.60 | 58 | 53 |  | 5650 | 50 | 60 | ${ }^{\circ} \mathrm{O} 64$ | 6461 | 1.60 | 60 |  | 65 | 65 | 57 | 7 | 1 |
| 1897 | 6760 | 60 | 59 |  | 5750 | 50 | 62 | 2264 | 5463 | 635 | 55 | 8 | $6_{6}^{6}$ | 64 | 56 | 6 |  |
| 1898 | 69 | ${ }^{61}$ | 6x |  | 55 | 55 | 5 | 56 | 66 | 55 | 7 |  | 88 |  |  |  | 5 |
| 1899 |  | 63 |  |  |  |  |  |  |  |  | 68 |  |  |  | 69 | 9 | 4 |
| 1900 | 68 65 <br> 66 65 | 64 | 64 |  | 60 |  | 65 | 568 | 68 | 666 | 6270 | 0 | 68 | 68 | 63 | 368 | 4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 |
| 1902 | 7168 | 69 | 66 |  | 66.6 | 60.62 | 73 | 731 | 170 | 70 | 70 |  | 73 | 73 | 75 | 5 | 73 |
| 1903 | 7170 | 71 | 67 |  | 676 | 6165 | 75 | 75 | 7575 | 7572 | 7275 | 5 | 75 | 77 | 77 | 7 | 74 |
| 1904 | 7471 | 72 | 69 |  | 64 | 6462 | 73 | 73.73 | $\begin{array}{l\|l} 73 & 76 \\ 72 & 76 \end{array}$ |  | $\begin{array}{l\|l\|} 72 & 77 \\ 68 & 79 \end{array}$ | 7 | 78 | 75 | $78$ |  | 75 |
| 1905 | $71{ }^{7} 97$ | 69 | 63 |  |  | $\begin{aligned} & 6 i \\ & 65 \end{aligned}$ | 74 | $4{ }^{4} 7$ | 7775 | 75.68 | $68$ |  | 88 |  | $\begin{aligned} & 70 \\ & 77 \end{aligned}$ | $77$ | 77 |
| 1906 | 77 | 73 | 77 |  | 68.65 | 65 | 75 | 65 | 74 | 70 | $7{ }^{\circ}$ |  |  |  | 87 |  | 87 |
| 19 | 83 ${ }^{8} 82$ | 78 | 75 |  | 7570 | 78 |  | 6 | 74 | $74{ }^{82}$ | 82 |  |  |  | 8 | 3 | 83 |
| 1908 |  | 79 | 78 |  |  |  |  | 87 | 778 | 8680 | 80 |  | 80 |  | 81 | 1 | 81 |
| 1909 | $\left.\begin{array}{\|l\|} 85 \\ 74 \end{array} \right\rvert\,$ | 75 | 738 |  | 71.66 | 66.63 | 78 | \% 73 | 73.84 | 8475 | 7580 |  | 78 | 80 | 75 | 583 | 78 |
| 1901-10 | 7674 | 73 | 69 |  | 70.60 | 6663 | 75 | 37 | 75 | 7775 | 7378 | 87 | 78 | 80 | 77 | 781 | 77 |
|  | 74 | 70 | 63 |  | 666 | 6557 |  | 69.70 | 7077 | $77{ }^{7}$ | 72 |  |  |  | 75 | 580 | 75 |
| 1912 | 6975 |  |  |  | 7170 | 7076 |  | 27 | 7 | 80 | 8 |  |  |  | 2 | 5 | 88 |
| 1913 | \|8718 |  |  |  | 82\| 82 | 82176 | $78$ | 8185 |  | 83 | 83 |  |  |  |  |  | 8 |

## Table C 8. Prices of salted Beef.

Stated in ore per kilogramme.

|  | 1 | 5 |  | 1 | 5 |  | 1 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year |  |  | Year |  |  | Year |  | 莬 |
| 1830 |  | 21 | 1860 |  | 35 | 1887 | 63 |  |
| 1831 | 29 | 21 | 1851-60 | 50 | 38 | 1888 | 58 | 48 |
| 1832 | 29 | 21 |  |  |  | 1889 | 59 | 55 |
| 1833 | 33 | 21 | 1861 | 55 | 43 | 1890. | 65 | 60 |
| 1834 | 32 | 21 | 1862 | 47 | 41 | 1881-90 | 67 | 55 |
| 1835 | 29 | 19 | 1863. | 61 | 38 |  |  |  |
| 1836 | 28 | 19 | 1864 | 62 | 35 | 1898 | 74 | 63 |
| 1837 | 30 | 19 | 1865 | 58 | 35 | 1892 | 74 | 6r |
| 1838 | 32 | 20 | 1866 | 55 | 41 | 1893 | 74 | 57 |
| 1839 | 34 | 24 | 1867 | 55 | 40 | 1894 | 68 | 57 |
| 1840 | 33 | 28 | 1868 | 55 | 37 | 1895 | 63 | 57 |
| 1831-40 | 31 | 21 | 1869 1870 | 65 68 | 53 58 | 1896 1897 | 64 | 55 58 |
| 1841 | 38 | 32 | 1861-70 | 58 | 42 | 1898 | 66 | 60 |
| 1842 | 33 | 29 |  |  |  | 1899. | 70 | 63 |
| 1843 | 32 | 27 | 1871. | 60 | 57 | 1900 | 73 | 70 |
| 1844 | 30 | 22 | 1872. | 62 | 59 | 1891-00 | 69 | 60 |
| 1845 | 28 | 21 | 1873 .. | 66 | 59 |  |  |  |
| 1846 | 32 | 25 | 1874 | 71 | 53 | 1901 | 74 | 70 |
| 1847 | 38 | 29 | 1875 | 61 | 60 | 1902 | 75 | 71 |
| 1848 | 44 | 34 | 1876 | 77 | 61 | 1903 | 77 | 73 |
| 1849 | 45 | 34 | 1877 | 75 | 60 | 1904 | 77 | 72 |
| 1850 | 43 | 30 | 1878 . | 74 | ${ }_{58}$ |  | 74 | 70 |
| 1841-50 | 36 | 28 | 1879. | 74 66 | 58 55 | 1906 | 77 88 88 | 75 |
| 1851 | 40 | 28 | 1871-80 | 69 | 58 | 1908 | 87 | 82 |
| 1852 | 42 | 29 |  |  |  | 1909 | 85 | 80 |
| 1853 | 45 | 29 | 1881 | 67 | 56 | 1910 | 82 | 77 |
| 1854 | 48 | 35 | 1882 | 76 | 58 | 1901-10 | 79 | 75 |
| 1855 | 54 | 40 | 1883 | 74 | 60 |  |  |  |
| 1856 | 58 | 48 | 1884 | 72 | 58 | 1911 | 75 | 72 |
| 1857 | 62 | 50 | ${ }^{1885}$ | 71 | 54 | 1912 | 87 | 74 |
| 1858 | ${ }_{48}^{58}$ | 45 38 | 1886 | 67 | 52 | 1913 . | 98 | 81 |

Table C g．Prices of fresh Mutton．
Stated in öre per kilogramme．

|  | 1 | 6 | 7 | 9 | 10 | $1:$ | 12 | 15 | 16 | 17 | 18 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | － | － | － |  | － | － | － |  |  |
| 1842 | 44 | － | － | － | － | 24 | － | － |  |  | － |
| 1843 | 45 |  |  | － | － | 23 | － | － | － | － | － |
| 1844 | 44 |  |  |  | － | 27 | － | － | － | 二 | － |
| 1845 | 45 | － | 二 | 二 | 二 | 24 | － | 二 | － | 二 | － |
| 1846 | 45 |  | 二 | 二 | 二 | 23 | 二 | 二 | － | － | 二 |
| 1847 | $5{ }^{50}$ | － | － | 二 | － | 22 29 | 二 | 二 | － | 二 | － |
| 1849 | 46 |  |  | － | － | 33 | － | － | － | － |  |
| 1850 | 47 | － | － | － | 二 | 29 |  | － | － | － | － |
| 1841－50 | 46 | － | － | － | － | 26 | － | － | － | － | － |
| 1851 | 48 | － | 31 | － | － | 29 | － | 36 | － | － | － |
| 1852 | 47 | － | 30 | － | － | 28 |  | 35 | － | 二 |  |
| 1853 | 45 |  | 28 |  | 二 | 27 |  | ${ }^{36}$ |  | － |  |
| 1854 | 53 |  | 38 |  |  | 37 |  | 51 | 二 | 二 |  |
| 1855 1856 | 62 70 | － | 50 53 | 二 | 二 | 35 59 | － | 68 | － | － |  |
| 1857 | 74 | － | 38 | － | － | 50 | － | 68 | － |  |  |
| 1858 | 56 | － | 28 | － |  | 45 |  | 45 |  |  |  |
| 1859 | 57 | － | 28 | － |  | 30 |  | 45 |  |  |  |
| 1860 | 61 | $\sim$ | 35 |  |  | 49 |  |  | － |  |  |
| 185： 60 | 57 |  | 36 |  | － | 39 | － | 49 | － | － |  |
| 1861 | 58 | 41 | 44 | 60 | － | 46 | － | 56 |  | － |  |
| 1862 | 74 | 41 | 34 | 52 | － | 42 |  | 56 |  |  |  |
| 1863 | 68 | 35 | 31 | 53 |  | 42 |  | 65 | 二 |  |  |
| 1865 | 56 | 37 | 29 | 50 | － | 35 | － | 43 | － |  |  |
| 1866 | 65 | 37 | 36 | 70 | － | 43 | 50 | 47 |  |  |  |
| 1867 | 62 | 36 | 35 | 65 | － | 43 | 42 | 49 |  |  |  |
| 1868 | 56 | 31 | 29 | 46 | － | 34 | 38 | 44 | － |  |  |
| ${ }^{869}$ | 65 | 38 | 39 | 53 | － | 50 | 59 | 56 | － | － |  |
| 1870 | 63 | 41 | 46 | 58 | － | 56 | 54 | 53 | 二 | 二 | － |
| 1861－70 | 63 | 37 | 36 | 56 | － | 43 |  | 52 | － | $\cdots$ | － |
| 1871 | 69 | 45 | 50 | 68 | － | 58 | 55 | 49 | － | 56 | 50 |
| 1872 |  | 45 | 48 | 65 | － | 53 | 57 | 50 | － | 58 | 57 |
| 1873 | 68 | 53 | 50 | ${ }^{6}$ | － | 56 | 61 | 60 | 二 | 59 | 61 |
| 1874 | 75 | 45 | 45 | 57 | － | 50 | 63 | 70 | 二 | 65 | 62 |
| 1875 1876 | 82 86 | 53 60 | 53 46 | 85 82 |  | 73 64 | 75 71 | 71 70 | 二 | 68 69 | 74 74 |


|  |  | $\infty_{0}^{\infty} \infty_{\infty}^{\infty} \infty$ <br>  8．．．．．．．．． |  …．．．．．．．． |  | 蕆 |  |
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| 888 |  |  |  |  | Kymos puritos | $\checkmark$ |
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| 或萝\％ | ¢ \％＜ |  |  | 2989 | Siunos ejesdda | － |
|  |  |  |  | $1\|1\| 1$ | Szunos osqex ${ }^{\text {a }}$ | $\square$ |
| 旨8\％ |  |  |  | Bivisy | ¢7 unos puepremispa | $\checkmark$ |
| ¢0\％88 |  |  | はysonusingis | Punfucin | Ayunos purimisen | ${ }_{\infty}$ |

Table C 10．Prices of Pork．
Stated in öre per kilogramme．

|  | 1 | 2 | 3 | 14 | 5 | 16 | 171 | 19 | 120 | ＂ |  | $1 / 3$ | 15 | 16 | 17 | 1 | 19 | 20 | 12122 | 23 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year | 号荷 |  |  |  |  |  |  |  |  | 管 | $\begin{array}{l\|l} 0 \\ 0 \end{array}$ |  | $\dot{C}_{8}^{8}$ | 虞品 |  |  |  |  |  |  |  |
| 1830 |  | $3^{8}$ |  |  |  | － | －－ | － |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1831 | 63 | 40 | － | － | － | － | － |  | － | － | 55 | － |  | ${ }_{51}$ | － | － | － |  |  |  |  |
| 1832 | 59 | 34 | 二 | 二 | 二 | 二 | 二 | 二 | 二 |  | 44 | 二 | 二 | 50 48 48 | － |  |  |  |  |  | － |
| 1834 | 55 | 35 | 二 | － | 二 | － | － | 二 | － | 二 | 49 | 二 | 二 | 5 | 二 |  | 二 | 二 | － |  | 二 |
| 1835 1836 | 58 | 35 | 二 | 二 | 二 | 二 | 二 | 二 | 二 | 二 | $4{ }_{4}^{48}$ | － | 二 | 51 52 5 |  |  |  |  | － | 二 | － |
| 1837 | 66 | 37 | 二 | 二 | 二 | 二 | 二 | － | － | 二 | 45 | － | － | 53 | － |  |  |  | － | － | － |
| 1838 1899 | 65 | ${ }_{88}^{38}$ | 二 | 二 | 二 | 二 | 二 | 二 | 二 |  | 63 52 5 | 二 | 二 | 59 57 59 | 二 |  | 二 |  | － | － | － |
| ${ }_{1834}^{1840} \times$ | ${ }_{69} 5$ | 39 | 二 | 二 | 二 | $=$ | 二 | 二 | 二 | － | 50 | － | － | 55 | － |  | － |  |  | － | － |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1841 1842 1843 | 55 | 37 | － 4 | 二 | 二 | － 48 | 二 | 二 | 二 | 二 | 45 | 二 | 二 | 52 50 |  |  | 二 |  | － | － | 二 |
| 1843 1844 | 54 | 34 | 42 | 二 | － | － 55 | 二 | － | － |  | 39 | － | － | 47 | － |  |  |  |  |  |  |
|  | 53 | 34 | 38 | 二 | 二 | － 47 | － | 二 | － | 45 | 49 | 二 | 44 | 44 |  |  | － | 46 | － |  | 二 |
| 1846 1847 | 79 | 45 | 45 | 5 | 二 | 54 | 4 | 二 | 二 | 4 | 46 | ＝ | 47 | 55 | 二 |  | － | 55 |  |  | － |
| 1848 | 64 | 48 | ${ }_{53}$ |  | 二 | 65 | s | 二 | ＝ | 53 | 50 54 | 三－ | ${ }_{48}$ | 63 63 | 二 |  |  |  |  |  |  |
| 2849 | 55 | ${ }_{42}^{42}$ | ${ }_{40}^{44}$ | 4 | － | 558 | 8 | 二 | 二 | 4 | 41 | 二 |  | ${ }_{59}^{52}$ | 二 |  | 二 |  |  | 二 | － |
| 1841－50 | 87 | 39 | － | － | 二 | ${ }_{85}$ | 二 | 二 | ＝ | 47 | 47 | － |  | ${ }_{53}^{59}$ | 二 |  |  |  |  | － | － |
|  | 64 | 40 | 4 | 4 |  |  | 2 | － |  |  |  | － |  | 57 | － |  |  | 55 |  | － | － |
|  | 63 7 7 | 47 | 54 |  | 5 | $\begin{array}{c\|c} 51 \\ 58 \\ 58 \\ 5 \end{array}$ |  |  |  | 48 |  |  |  | $\begin{aligned} & 69 \\ & 72 \end{aligned}$ |  |  |  |  |  |  |  |


| ｜｜｜｜｜1｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜ |  |  |  |
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| Nog nncosich |  | 人 |  |
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| NomgomgN |  |  $\infty$ No6 Nog 8000000 |  |
| $1\|1\| \% \mid$ | $\infty \infty$ | Nog wno wnww wng <br>  | $8.850 \mathrm{NOO}$ |
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| $\\| 111 \mid 10$ | $\infty$ 응NNOM MNO Noo minino Nosio |  <br>  | mさmgmun ANMGOWM |
| 111100 | ¢ |  | がaかomon onkmmon |
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| Womos） |  | N－6\％ | NONON6\％ |
| 111111 |  |  NRN0 N00 NORER | N 운ำ쑹 |
|  |  |  | $\infty \infty+\infty$ $\infty \times \infty \times \infty$ |
|  | nownsoticnos |  | $\infty$ NonNon <br>  |
| ANBMNO | Nos 9 wnungung |  | Non Nom $\infty \infty \infty$ |
|  |  | NNMNYNNDNON <br>  <br>  | m NTM mon <br>  $0_{0}^{\infty} \infty_{0}^{\infty} 0_{0}^{\infty} 0^{\infty} 0^{\infty}$ Mmmmmmm |

## ※

Table C 10. (Cont.)


Table C 11．Prices of Bacon．
Stated in ore per kilogramme．


|  | 1 | 3 | 4 | 5 | 6 | 7 | 9 | 10 | 11 | 12 | 13 | 14 | 25 | 16 | 17 | 18 | 19 | 10 | 21 | 22 | 24 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year |  |  |  |  | $\begin{aligned} & 8 \text { 匄 } \\ & \text { 总苞 } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{aligned} & 8 \text { 总 } \\ & \text { 息 } \\ & 4 \end{aligned}$ |  |  |
|  |  |  |  |  |  |  |  | 67 | 65 | 54 | 57 | 55 | 59 |  | 62 | 62 |  | 65 |  |  | 64 |
| 1830 | 53 | 40 | 40 | 52 | 59 | 61 | 53 | 67 | 65 | 58 | 67 | 65 | 65 | 二 | 63 | 65 |  | 66 | 68 |  | 67 |
| 1831 | 60 | 39 | 44 | 52 | 59. | 61 | 53 | 67 | 62 | 58 | 52 | 6 | 71 | － | 68 | 64 | － | 66 | 71 |  | 68 |
| 1832 | 55 | 37 | 43 | 55 | 59 | 61 | 59 | 67 | 62 | 52 | 53 | 64 | 71 | － | 64 | 64 | － | 62 | 3 |  | 75 |
| 1833 | 56 | 37 | 50 | 55 | 53 | 55 | 53 | 67 | 68 | 52 | 53 | 61 | 66 |  | 4 | 60 |  |  | 73 |  | 5 |
| 1834 | 53 | 38 | 47 | 49 | 53 | 49 | 57 | 67 | 62 | 52 | 56 | 55 | 61 |  | 64 | 58 |  | 59 | 8 |  | 7 |
| 1835 | 54 | 38 | 46 | 47 | 47 | 49 | 59 | 67 | 56 | 51 | 56 | 53 | 59 |  | 60 | 52 |  | 58 | 4 |  | 3 |
| 1836 | 60 | 38 | 49 | 47 | 53 | 49 | 71 | 67 | 65 | 60 | 60 | 65 | 57 | － | 58 | 55 |  | 59 | 72 |  | 76 |
| 1837 | 67 | 39 | 53 | 49 | 53 | 49 | 77 | 69 | 68 | 58 | 65 | 60 | 58 |  | 60 | 58 | － | 69 | 75 | － | 78 |
| 1838 | 76 | 40 | 59 | 53 | 59 | 44 | 77 | 73 | 72 | 58 | 66 | 68 | 61 |  | 65 | 6 |  | 62 | 78 |  | 70 |
| 1839 | 70 | 44 | 53 | 55 | 65 | 61 | 77 | 73 | 72 | 64 | 65 | 64 | 62 |  | 3 | 4 |  | 59 | 82 |  | 8 |
| 1840 | 70 | 45 | 53 | 50 | 65 | 61 | 74 | 67 | 80 | 61 | 60 | 64 | 62. |  | 65 | 60 |  | 69 | 74 |  | 73 |
| 1831－40 | 6 | 40 | 80 | 51 | 57 | 54 | 66 | 68 | 67 | 87 | 60 | 61 | 62. | － | 68 | 60 |  | 62 | 74 |  | 78 |
| 1841 | 68 | 39 | 53 | 49 | 59 | 52 | 65 | 67 | 71 | 58 | 61 | 63 | $6!$ | － | 63 | 61 |  | 59 | 78 | － | 79 |
| 1842 | 54 | 38 | 47 | 49 | 59 | 52 | 65 | 61 | 65 | 64 | 62 | 55 | 58 | － | 60 | 59 |  | 57 | 74 |  | 80 |
| 1843 | 65 | 37 | 49 | 49 | 56 | 49 | 59 | 61 | 62 | 52 | 62 | 56 | 55 |  | 58 | 60 |  | 55 | 70 |  | 74 |
| 1844 | 58 | 37 | 59 | 50 | 53 | 49 | 57 | 67 | 62 | 52 | 61 | 54 | 53 |  | 55 | 59 |  | 50 | 76 |  | 72 |
| 1845 | 66 | 37 | 56 | 53 | 53 | 43 | 60 | 67 | 62 | 58 | 62 | 54 | 52 |  | 59 | 65 |  | 60 | 70 | － | 80 |
| 1846 | 68 | 37 | 56 | 59 | 56 | 49 | 63 | 73 | 68 | 64 | 68 | 67 | 64 | 二 | 73 | 72 | － | 65 | 74 |  | 84 |
| 1847 | 72 | 35 | 55 | 59 | 62 | 61 | 71 68 | 73 | 74 | 64 | 65 | 67 | 64 | 二 | 73 | 78 | － | 70 | 75 |  | 85 |
| 1848 ． | 72 | 35 | 62 | 62 | 65 | 7i | 68 | 73 | 74 | 64 | 65 | 63 | 67 |  | 68 | 72 |  | 68 | 72 |  | 72 |
| 1849. | 68 | 41 | 70 | 62 | 59 | 61 | 63 53 | 70 | 71 | 51 | 63 59 | 63 55 | 59 | 二 | 66 | 65 | － | 64 | 70 | － | 68 |
| 1850 | 62 | 41 38 | 44 | 62 | 59 88 | 61 55 | 53 | 70 | 67 | 55 89 | 69 | 55 89 | 59 |  | 64 | 65 |  | 60 | 72 | － | 77 |
|  |  | 40 | 46 | 61 |  | 61 |  | 68 | 68 | 58 | 60 | 61 | 59 |  | 69 | 68 |  | 68 | 73 |  | $7^{2}$ |
| 1858 1852 | 68 | 40 | 48 | 62 | 59 59 | 61 | 65 | 69 | 68 | 60 | 63 | 60 | 60 | － | 72 | 70 | － | 70 | 77 | － | 75 |
| 1853 | 76 | 57 | 64 | 77 | 71 | 72 | 71 | 71 | 71 | 63 | 64 | 70 | 63 |  | 73 | 72 | － | 78 | 77 | － | 75 |

Table Cir．（Cont．）

|  | ， | 2 | 4 | 5 | 6 | 7 |  | 10 | 13 | 12 | 13 | 14 | 15 | 16 |  | 18 | 19 | 10 | 21 | 22 | ， |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year |  |  |  | $\begin{aligned} & \text { 巽 } \\ & \text { 黄 } \end{aligned}$ |  | ${ }^{8} 8$ |  |  | 品滣 |  |  |  |  |  |  |  | 㮫 |  |  |  |  |
| 1854 |  | 60 | 70 | 67 |  | 78 |  | 5 | 86 | 7： | 70 | 73 | 68 |  | 82 | 78 | － |  |  |  | 85 |
| 1855 1856 | 87 100 | ${ }_{71}^{64}$ | 75 | 77 | 88 | －82 | －97 | 988 | ． 96 | 78 | 75 | 79 | ${ }^{78}$ |  |  | ${ }^{8}$ |  | 88 | ${ }^{8} 8$ |  |  |
|  |  | 70 | 68 | ${ }^{1}$ | 88 | 108 |  |  | 103 |  | 85 | 2 | ${ }^{92}$ |  |  | ${ }^{88}$ |  | 97 | 117 |  | －00 |
| 1858 | 80 | 62 | 61 | 77 | 78 | 77 | 78 | 88 | 92 | 73 | 82 | 8 |  |  |  | 85 |  | 100 | 117 |  | 84 |
| 1859 1860 | 76 | 68 | 59 | 74 | 65 | 72 | 71 | 79 | 83 8 8 | ${ }_{7} 7$ | 77 | 75 | 82 |  | 82 | 83 |  | 73 | 108 | － | 88 |
| 1851－60 | $8{ }^{1}$ | 62 | 63 | 76 | ${ }_{73}^{71}$ | 79 | 80 | ${ }_{83}$ | ${ }_{85}$ | 73 | 78 | 7 | 77 |  |  | 80 | 77 | 61 | ${ }_{98}^{98}$ | － | 898 |
| 1861 | 86 | 67 | 68 | 88 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1862 | 92 | 58 | 82 | 89 | 78 | 77 | ${ }_{96} 9$ | ${ }^{86}$ | ${ }_{92}^{92}$ | ${ }_{87}$ | ${ }_{88}^{82}$ | 82 88 | 79 | 二 |  |  | ${ }_{94}^{99}$ | 93 | $100 \mid$ | － | 94 |
| 1886 | ${ }_{81}^{85}$ | ${ }_{69} 5$ | ${ }^{78}$ | 85 75 | 78 | ${ }^{7}$ | 78 | 82 | 82 82 | 70 | 85 82 | 8 | 76 |  |  | 825 | 82 | 7 | － |  | ${ }^{9}$ |
| 1864 | 76 | 62 | 60 | 75 | 68 | 68 | 79 | ${ }_{81}^{79}$ | 82 | 74 | 8 | 7 |  |  |  | 86 |  | ${ }_{82}$ | ${ }_{98}^{80}$ |  | 88 |
| ${ }_{1867} 886$ | 88 | ${ }_{85}^{67}$ | ${ }^{56}$ | 8 | 77 | 71 | 8 | 85 | 85 | 79 | 88 | 80 | ${ }^{8} 8$ |  |  | 88 | 94 | 82 | 104 | － | ${ }_{88}^{88}$ |
| 1868 | 81 93 | 85 <br> 84 | 85 | ${ }_{76} 8$ | 8 | 88 | 83 | 8 | ${ }^{89} 9$ | 85 | ${ }^{88}$ | 8 | 88 |  |  | 90 | 85 | 86 86 | 112 |  | 90 |
| 1869 | 95 | 92 | 76 | 100 | 97 | 90 | 88 | 96 | 110 | 97 | ${ }_{91}$ | 9 | ${ }_{93} 8$ |  | 89 120 | 194 | 123 | 104 |  |  | 100 |
| ${ }_{1861-70}{ }^{187}$ | ${ }_{86}^{91}$ | ${ }_{73}^{85}$ | 72 | ${ }_{84} 9$ | 87 | ${ }_{76} 9$ | ${ }_{88}$ | ${ }_{88}^{94}$ | 107 | ${ }_{88}^{93}$ | 89 | ${ }_{8} 1$ | ${ }_{60}^{98}$ |  | 112 18 8 | 12 | 115 | 97 | 120 | 135 | \％ 5 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ${ }^{3}$ |  |  |  |  | 93 |
| ${ }_{18}^{1871} 18$. | ${ }^{89}$ | 89 85 89 | ${ }_{80}^{88}$ | $\begin{aligned} & 88 \\ & 83 \end{aligned}$ | 84 | $\begin{aligned} & 88 \\ & 80 \end{aligned}$ | 87 | 86 | 104 | ${ }_{83}^{86}$ | 8 | 88 |  |  |  | 109 | 100 | 85 | 125 | 30 | 103 |
| 1873 | 84 | 84 | 75 | 97 | 9 | － | 82 | 95 | 102 |  | 86 | 85 | ${ }_{88}^{88}$ |  |  | 100 | 100 | 193 | 105 | 223 | O2 |
| ${ }_{18}^{1874}$ | 103 | 74 | 85 | 96 | 95 | 94 | 88 | 104 | 11 | 103 | 90 | 95 | 100 |  | \％ 06 | 100 | 109 | 106 | 110 | 128 | ${ }_{118}$ |
| 1875 1876 | 103 | ${ }_{73}^{82}$ | ${ }_{108}{ }^{68}$ | 106 | 112 | 98 | 96 | 112 | 115 | 106 | 108 | ${ }^{\circ}$ | 106 |  | 113 | 12 | 115 | 106 | 125 | 130 | 5 |
|  |  | $7{ }^{\circ}$ |  |  | 112 | ${ }^{18}$ | 1 | 111 |  |  | 110 | 105 |  |  |  | 118 | 132 | 118 | 123 | 35 3 | 13 |
| 1878 1879 | 73 | 885 | 76 | 8 | 85 | 88 | 82 | 85 | 8 |  | ${ }^{4}$ | 85 |  |  |  | 82 | 80 |  |  | 122 | ${ }_{95}$ |
| 1889 | 75 76 | 86 |  |  |  | 84 8 |  |  |  |  | $\begin{aligned} & 828 \\ & 88 \\ & 88 \end{aligned}$ | 89 |  |  |  | 73 87 | $68$ | 85 | 98 | 115 | 85 |

## Table C 12．Prices of tuskimmed Milk．

Stated in ore per litre．

|  | 1 | 2 | 12 | 19 |  | \％ | 2 | 12 | 19 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year | 華 | $\begin{aligned} & 8 \text { 总 } \\ & \text { 品 } \\ & \text { 㽞 } \\ & \text { E } \end{aligned}$ |  |  | Year |  |  |  |  |
| 1830 | 11.3 | 6.2 | 7.0 | 8.8 | 1872 | 13．1 | 10.9 | 9.6 | 13.5 |
| 1831 | 10.3 | 6.2 | 6.1 | 8.9 | 1873 | 13.4 | 10.7 | 10.7 | 15.0 |
| 1832 ． | 11.8 | 6.2 | 7.3 | 9.8 | 1874 | 13.6 | $\underline{1.15}$ | 10.5 | 16.9 |
| 1833 | 11.2 | 6.2 | 7.0 | 9.1 | 1875 | 15.5 | 11.0 | 11.4 | 16．1 |
| 1834 | 11.1 | 6.2 | 7.9 | 9.0 | 1876 | 16.4 | 11.6 | 12.1 | 16.4 |
| 1835 | 12.0 | 6.2 | 6.5 | 9.9 | 1877 | 17.3 | 11.4 | 12.3 | 16.5 |
| 1836 | 12.0 | 6.2 | 6.6 | 11.8 | 1878 | 17.2 | 11.7 | 12.6 | 15.4 |
| 1837 | 12.5 | 6.2 | 7.4 | 11.1 | 1879 | 16.2 | 10.9 | 12.3 | 11.5 |
| 1838 | 12.1 | 6.2 | 8.1 | 10. | 1880 | 15.2 | 11.0 | 12.1 | 12.0 |
| 1839 | 13.0 | 6.2 | 8.0 | 10.4 | 187x－80 | 14.8 | 11.1 | 11.3 | 14．6 |
| 1840 ．． | 12.4 | 6.2 | 9.1 | 10.3 |  |  |  |  |  |
| 1831－40 | 11，8 | 6.2 | 7.4 | 10．1 | 1881 | 16.2 | 11.4 | 11.8 | 13.1 |
| 184 I | 11.9 | 6.2 | 8.5 | 10.0 | 1882 1883 | 15.6 | 11.3 | 12.2 | 13.0 11.4 |
| 1842 | 11.7 | 7.0 | 8.6 | 10.1 | 1884 | 14.4 | 11 | 12.8 | 11.2 |
| 1843 | 11.3 | 7.0 | 8.1 | 10.2 | 1885 | 14.3 | 11.0 | 12.6 | 10.5 |
| 1844 | 11.4 | 7.0 | 7.9 | 9.8 | 1886 | 14.1 | 10.8 | 12.2 | 10.0 |
| 1845 | 11.3 | 7.0 | 8.4 | 10.0 | 1887 | 12.6 | 10.3 | 12，0 | 10.4 |
| 1846 | 12.8 | 7.0 | 8.5 | 10.1 | 1888 | 12.3 | 10.0 | 12.4 | 9.8 |
| 1847 | 11.6 | 7.0 | 9.2 | 10.2 | 1889 | 12.4 | 9.6 | 11.4 | 10.5 |
| 1848 | 12.3 | $7 \cdot 0$ | 10.0 | 9.8 | 1890 | 12.4 | 9.6 | 10.1 | 11.3 |
| 1849 | 12.3 | 7.0 | 9.8 | 9.9 | 188：－90 | 13.9 | 10.6 | 12.1 | 18．1 |
| 1850. | 11.1 | 7.0 | 9.6 | 9.7 |  |  |  |  |  |
| 1841－50 | 11.8 | 6.9 | 8.9 | 10.0 | 1891 1892 | 12.1 | $\begin{aligned} & 9.6 \\ & 9.7 \end{aligned}$ | 10.3 | 11.1 11.2 |
| 1851 | 10.4 | 7.0 | 8.9 | 10.0 | 1893 | 11.9 | 9.8 | 11.0 | 10.8 |
| 1852 | 10.8 | 7.0 | 8.4 | 10.0 | 1894 | 11.8 | 9.6 | 10.2 | 10.3 |
| 1853 | 11.3 | 7.0 | 8.5 | 10.4 | 1895 | 11.2 | 9.7 | $9 \cdot 4$ | 10.0 |
| 1854 | 13.3 | 8.0 | 9.1 | 11.0 | 1896 | 11.0 | 9.6 | 9.3 | 9.8 |
| 1855 | 14.2 | 8.0 | 10.4 | 14.0 | 1897 | 11.2 | 9.2 | 9.4 | 9.6 |
| 1856 | 16.7 | 8.3 | 10.5 | 12.1 | 1898 | 11.3 | 9.3 | 9.5 | 9.0 |
| 1857 | 17.0 | 9.5 | 14.0 | 13.1 | 1899 | 11.6 | 9.4 | 10.5 | 10.2 |
| 1858 | 15.8 | 10.2 | 10.8 | 13.5 | 1900 | 12.3 | 9.7 | 10.7 | 11.4 |
| 1859 | 15.5 | 10.2 | 10.6 | 13.1 | 1891－0 | 11.7 | 9.6 | 10．1 | 10.3 |
| 1860 ． | 15.3 | 10． 1 | 11.0 | 12.8 |  |  |  |  |  |
| 1851－60 | 14.0 | 8.5 | 9.9 | 11.7 | 1901. | 12.3 | 10.1 10.2 | 10.9 18.2 | 11．8 |
| 1861 | 14.0 | 9.5 | 11.4 | 12.9 | 1903 | 14.2 | 10.2 | 11.3 | 13.0 |
| 1862 | 13.7 | 10.4 | 18.7 | 12.7 | 1904 | 12.8 | 10.3 | 11.3 | 11.9 |
| 1863 | 13.5 | 10.8 | 11.0 | 12.6 | 1905 | 12.5 | 10.2 | 10.9 | 12.5 |
| 1864 | 13.4 | 10.3 | 11.4 | 13.4 | 1906. | 12.6 | 10.6 | 11.3 | 12.8 |
| 1865 | 13.3 | 10.5 | 10.8 | 13.5 | 1907 | 13.7 | 11.2 | 12.1 | 13.3 |
| 1866 | 13.6 | 10.8 | 9.5 | 13.4 | 1908. | 13.7 | 11.5 | 12.4 | 13.4 |
| 1867 | 14.0 | 10.4 | 10.4 | 13.3 | 1909. | 13.8 | 12.0 | 12.5 | 10.9 11.0 |
| 1868 | 14.2 | 11.0 | 10.8 | 13.4 | 1910. | 13.6 | 12.8 | 12.8 11.7 | 11.0 |
| 1869 | 13.9 | 11.1 | 10.5 | 15.0 | 1901－10 | 13.3 | 10.8 | 11.7 | 12.5 |
| 1870 ．${ }^{\text {86，}}$ | 13.3 | 10.5 | 9．9 | 13.9 13.4 |  |  |  |  |  |
| 1861－70 | 13.7 | 10.5 | 10.7 | 13.4 | 1911. | 13.4 13.4 | 12.1 12.5 | 13.8 13.6 | 11.5 11.3 |
| 1872 ． | 13.0 | 10.6 | 9.1 | 13.0 | 1913. | 13.2 | 12.3 | 13.4 | 12.0 |

Table C i3．Prices of Butter．
Stated in öre per kilogramme．

|  |  |  |  | 4 |  |  |  |  |  |  |  | 12 | 13 | 14 | 15 | 16 |  |  | 9 |  |  | 2 | 2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  | 层蚵官 | $8$ |  | 恖 |  |  |  |  | 名息害 |  | 응 |  |  |  |  | $\begin{aligned} & 0 \\ & \hline 0 \\ & 0 \\ & \hline \end{aligned}$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 88 | I06 |  |  |  |  |  |  |  |  |  |  |
| ${ }_{1831}^{1830}$ | 110 | ${ }^{109}$ | 79 |  | ${ }_{78}$ | 81 | 88 | 87 | ， | 78 | 88 | 8 | 94 | 106 | 166 | 79 |  | $7^{8}$ | 83 | 96 | 55 |  |  | 6 |
| 1832 |  | 106 |  |  | 78 |  | 9 | 71 |  |  | 8 | 77 | 88 | 100 |  | ， | 94 | ${ }^{8}$ |  | 82 |  |  |  |  |
| 1833 | 102 | ${ }^{98}$ | 88 |  | 78 | ${ }_{72}^{78}$ | （120 | ${ }^{2}$ |  |  |  |  |  | ${ }_{82}^{4}$ | 32 ${ }_{2}^{4} 8$ | 75 | 848 | ${ }_{78}^{88}$ | ${ }_{94}^{92}$ | 85 |  |  | ${ }_{59} 6$ | 7 |
| ¢ 183 |  | 104 | 97 |  | ${ }_{79} 7$ | 72 | ${ }_{18}$ | 74 | 103 |  | $8{ }^{88}$ | ${ }^{1}$ | 88 | 88 | 88 |  | 88 |  |  |  |  |  |  | 6 |
| 1836 | 9 | 109 | 106 | － | 88 | 86 | 6118 |  | 120 | 88 | $8{ }^{88}$ | 88 |  |  | 4.99 |  | ，94 | 88 | 88 | 88 |  |  | 62 | ${ }^{62}$ |
| 1837 1838 | 105 | 111 | 100 |  | 88 | 101 |  |  | 4 | 88 | ${ }_{8} 100$ |  |  | 106 | ${ }^{6} 112$ | 88 | 106 | 88 | 97 | 97 |  | 88 | ${ }_{74}$ | 7 |
| 18 | 114 | 126 | 106 |  | 88 | 94 | 106 |  | 117 |  | 100 |  | 100 | 06 | 6 | 94 | 100 | 88 | ） | 95 |  |  | 77 | 7 |
|  | 113 | 122 | ${ }_{96}^{98}$ |  | 88 88 | 88 |  | ${ }^{6} 8$ |  |  |  | $\begin{aligned} & 8 \\ & 83 \\ & 83 \end{aligned}$ | 94 | 100 | （100 7106 | 83 | ${ }_{97}^{97}$ | ${ }_{83}^{88}$ | $\begin{array}{r} 100 \\ 95 \end{array}$ | $90$ | 71 67 | ${ }_{78}^{7}$ | 71 67 | 78 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 184 | 10 | 119 | 100 |  | 88 | 8 | 4106 | 91 | 114 | 88 | 810 | ${ }_{4}$ | 94 |  | 0 | 88 |  | 82 |  | 3 | 5 | 82 |  |  |
| 18 | 112 | 114 | 83 |  |  | 9 | 112 | ${ }^{28}$ | ${ }^{6} 122$ | 8 | ${ }^{8} 8$ | 88 | 12 | ${ }^{18}$ | ${ }^{8} 109$ | ${ }^{8}$ | 94 | ${ }_{88}^{94}$ | 82 | 97 | ， | ${ }^{2}$ |  |  |
|  |  | 115 |  | － | ${ }_{84}^{86}$ | 8 | 88 | ${ }^{78}$ | 117 | 88 |  | 88 | 110 | 106 | ${ }^{106} 1106$ | 88 | ${ }_{94}^{92}$ | ${ }^{88}$ | ${ }^{97}$ | ${ }_{108}{ }^{96}$ | 7 | 8 | 78 | － 77 |
| 1846 | 126 | 112 | 93 |  | 88 | 88 | 188 | 8 | 110 |  | 88 | 101 | 99 | 106 | 106 | 9 | 94 | 88 | 碞 | 95 | 73 | 88 |  | 88 |
| 184 | 126 | 117 |  |  | 88 | ${ }^{9}$ | 8118 | 88 | 8115 | 8 | ${ }^{8} 94$ | 10 | 106 |  | 2112 | 104 |  | 94 | ． 94 |  | 78 |  |  |  |
|  | 126 119 | 120 | ${ }_{118}^{18}$ | － | 88 | 104 | $1 \begin{aligned} & 18 \\ & 118\end{aligned}$ | $8{ }^{8}$ | 118 | 112 | 85 | 110 | 106 | 18 | （125 | 108 | 100 | rob | 18 | ${ }_{95}^{93}$ |  | 88 | ${ }_{78}^{84}$ |  |
| 1850 | 132 | 119 | 115 |  |  | 101 | ${ }^{18}$ |  | 123 | 98 | 84 | 115 | 112 | 118 | 8 |  |  | 106 |  | 106 |  |  | 78 |  |
| 1841－50 | 119 | 117 | 100 |  |  | 93 | 3109 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 80 |  |
| 185 |  |  |  |  |  | 101 | 118 | $8{ }^{82}$ | 218 |  |  | 15 | 112 | 124 | 115 | 13 | 103 | 106 | 11 |  |  | 8 |  |  |
|  |  |  |  |  |  |  |  |  |  | 12 | $1{ }^{8}$ |  |  |  |  |  |  |  |  |  | $5$ | $93$ | $\begin{aligned} & 78 \\ & 85 \\ & \hline \end{aligned}$ |  |

Table C 13．（Cont．）

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |  | 9 | 10 | 11 | 12 | 13 | 14 | is | 16 | 17 | 18 | 19 | 10 | 12 | 22 | 23 | 24 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year | $\left\lvert\, \begin{gathered} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 2 \\ 2 \end{gathered}\right.$ |  |  |  |  |  |  | $8$ |  | 后坒 |  |  |  |  |  | $\begin{aligned} & 80 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ |  |  |  |  | 目悹 |  | $\begin{gathered} 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \\ \hline \end{gathered}$ | $\begin{gathered} 8 \\ 8 \\ 8 \\ 8 \\ 8 \end{gathered}$ |
| 1854 | 141 | 135 | 120 |  | 104 | 110 | 177 | 118 | 138 | 123 | 104 | 120 | 128 | 141 | 128 | 123 | 121 | 118 | 121 | 122 | 09 | 106 | 103 | 109 |
| ${ }^{18} 59$ | 153 | 147 | $13^{8}$ |  | 116 | 120 | $1: 3$ | 118 | 145 | 123 | 113 | 117 | 129 | 148 | 132 | 134 | 129 | 118 | 122 | 129 | 112 | 12 |  | 118 |
| 1856 | 15 | 158 | 152 | 118 | 136 | 144 | 140 | 141 | 162 | 163 | 146 | 152 | 155 | 159 | 150 | 172 | 140 | 167 | 124 | 155 | 14 | 121 | 11 | 12 |
| 1857 1858 | 186 | 167 | 159 | 118 | 131 | 166 | 153 | 176 | 152 | 147 | 151 | 157 | 159 | 136 | 153 | 165 | 235 | 142 | 135 | 150 | 118 | 129 | 128 | 129 |
| 1858 889 | 176 | ${ }_{138}{ }^{\text {P6 }}$ | 158 | 124 | 112 | 123 132 | 134 | 118 | 172 | 138 | 126 | ：38， | 151 | 159 162 142 | 145 | 132 | 126 | 130 | 166 | 129 | 130 | 124 |  | 118 |
| 1860 | 163 | 148 | 136 | 124 | 4 | 135 | 129 | 129 | 150 | 139 | 127 | 127 | 171 | 141 | 144 | 134 | 145 | 125 | 123 | 151 | 116 | 53 | 118 | 129 |
| 1851－60 | 184 | 142 | 129 |  | 1 | 8.34 | 132 | 121 | 145 | 137 | 117 | 128 | 140 | 141 | 135 | 132 | 134 | ：26 | 128 | 130 | 208 | 117 | 102 | 15 |
| 1861 | 160 | 155 | 148 | 122 | 18 | 127 | 22 | 129 | 157 | 14 | 120 | 131 | 161 | 129 | 149 | 139 | 130 | 143 | 153 | 146 | 20 | 142 | 117 | 118 |
| 1862 | 159 | 155 | 137 | 118 | 117 | 125 | 158 | 118 | 160 | 123 | 117 | ：3： | 155 | 129 | 135 | 128 | 123 | 123 | 141 | 131 | 18 | $14^{8}$ | 115 | 118 |
| 1863 | 157 | 159 | 145 | 113 | 18 | $13{ }^{12}$ | $\pm 36$ | 118 | 151 | 120 | 115 | 117 | 149 | 135 | 149 | 128 | 131 | 122 | 147 | 131 | 117 | 141 | 18 | 11 |
| 1865 | 161 | 162 182 | 148 | 120 | 17 | 123 | 127 | 143 | 149 | 129 | 113 | 126 | 158 | 153 | 141 | 134 | 127 | 130 | 176 | 135 <br> 138 | 127 | $145{ }^{\circ}$ | 110 | 112 18 |
| 1866 | 159 | 175 | 155 | 137 | 130 | 136 | 114 | 142 | 163 | 145 | 129 | 132 | 154 | 150 | 146 | 145 | 130 | 160 | 176 | 140 |  |  | 118 | 129 |
| 1867 1868 | 144 | 165 | 149 | 145 | 123 | 126 | 116 | 120 | 145 | 130 | 125 | 12 | 144 | 145 | 141 | 131 | 127 | 151 | 176 | 148 | 134 | 155 | 118 | 188 |
| 1868 8869 | 146 | 172 | 160 | 158 | 127 | 140 | 127 | 135 | 167 | 140 | 134 | 132 | 24 | 155 | 155 | ：33 | 129 | 164 | 145 | 44 | 131 | 153 |  | 6 |
| 1870 | 158 | 172 | 167 | 127 | 127 | 133 | 141 | 18 | 165 | 139 | 131 | 129 | 147 | 158 | 157 | 141 | 126 | 169 | 153 | 166 | 129 | 146 | 14 | 23 |
| 186：－70 | 158 | 167 | 182 | 128 | 124 | 131 | 137 | 138 | 188 | 135 | 122 | 129 | 182 | 146 | 148 | 186 | 130 | 146 | 286 | 144 | 126 | 148 | 18. | 118 |
| 1871 | 17 | 176 | 196 | 148 | 147 | 140 | 130 | 125 | 179 | 143 | 136 | 150 | 158 | 159 | 165 | 156 | $13^{8}$ | 156 | 173 | 162 | 130 | 153 | 10 | 129 |
| 1872 | 169 | 174 | 196 | 154 | 140 | 152 | 152 | 132 | 206 | 139 | 135 | 150 | 169 | 158 | 165 | 152 | 143 | 152 | 176 | 169 | 140 | 255 | 1 | 129 |
| 1873 1874 | 181 209 | 178 | 193 | 162 | 156 | 165 | 159 | 163 | 208 | 154 | 155 | ， | 172 | $17{ }^{1}$ | 172 | 164 | 154 | 178 | 182 | 180 | 144 | 173 | 136 | 162 |
| 1875 | 203 | 196 | 217 | 193 | 19 | 182 | 206 | 176 | 227 | 163 | 167 | 197 | 179 | 197 | 174 | ${ }_{18}^{18}$ | 177 181 | 177 | 200 | 201 | 168 | 196 | 165 | 176 |
| 1876 | 199 | 207 | 232 | 200 | 188 | 188 | 204 | 195 | $23^{\circ}$ | 188 | 175 | 208 | 196 | 202 | 213 | 203 | 197 | 196 | 200 | 211 | 166 | 194 |  | 174 |
| 18 | 194 | 207 | 230 | 201 | 186 | 187 | 16 | 177 | 223 | 192 | 172 | $1{ }^{8}$ | 178 | 188 | 200 | 184 | ！9t | 188 | 196 | 202 | 188 | 190 | 167 | 178 |
| 18 | 160 152 | 208 | 232 <br> 197 <br> 1 | 185 136 | 161 | 176 | 134 | 145 | 206 | 156 | 143 | 188 | 172 | 142 | 178 175 | 170 | 167 132 | 153 | 152 129 | 177 | 153 | 178 160 | 134 118 | 128 107 |
|  | 5 | ， |  |  |  |  | 2 |  | 216 | 179 | 12 | 178 | 194 | 176 | 275 | 178 | 32 | 18 | 129 | 191. | 121. | 6 | 1188 | 107 |



Table C 14．Prices of Eggs．
Stated in 8 re per score．

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 | 10 | 11 | 12 | 13 | 15 | 16 | 17 | 18 | 19 | 20 | 22 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year |  |  |  |  | $\begin{aligned} & \text { 冒 } \\ & \text { 总 } \end{aligned}$ |  | 名辟 |  | 底荷 |  |  |  |  |  |  | $\begin{aligned} & 8 \text { 卧 } \\ & \text { 官 } \end{aligned}$ |  |  |  |
| 1830 |  |  |  | － |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1831 |  | － | － | 二 | 65 | 60 | － | 二 | 56 | 55 | 52 | － | 56 | － | 65 |  | － | 63 |  |
| 1832 | － |  |  |  | 65 | 63 | － | － | 59 | 58 | 55 | － | 63 | － | 65 |  | － | 63 |  |
| 1833 | － |  |  |  | 68 | 68 |  | － | 58 | 57 | 53 | － | 63 |  | 65 |  |  | 72 |  |
| 1834 | 二 | 57 | － | 二 | 65 | 67 | $\square$ | － | 60 | 54 | 53 | － | 63 | － | 65 |  | － | 68 | 二 |
| 1835 1836 | 81 | 61 |  |  | 60 65 | 60 |  | － | 55 | 50 | 47 |  | 63 63 |  | 65 |  | － | 70 |  |
| 1837 | 104 | 69 | － | － | 70 | 65 | － | － | 60 | 60 | 66 | 二 | 63 | － | 69 | － | － | 75 |  |
| 1838 | 94 | 61 | － | － | 75 | 67. | － | － | 63 | 62 | 66 | － | 75 | － | 69 | － | － | 81 | － |
| 1839 | 101 | 69 |  | － | 78 | 69 | － | － | 63 | 60 | 58 |  | 75 | 二 | 73 | － | － | 85 | － |
| $1840 \times 0$ | 97 | 65 | 二 | 二 | 65 | 62 |  | － | ${ }^{58}$ | 60 | ${ }_{56} 8$ | 二 | 75 66 | 二 | 74 |  | － | 76 | － |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 73 |  |
| 1841 | 96 | 71 | － | － | 68 | 67 |  |  | 59 | 61 | 59 |  | 69 |  | 74 |  |  | 3 |  |
| 1842 +843 | 88 | 70 | 二 | 二 | 60 | 58 | － | － | 59 | 58 | 53 | － | 63 | － | 68 |  |  | 67 |  |
| 1843 1844 | 88 98 | 73 | 二 | 二 | 63 | 60 |  |  | 60 | 60 | 59 |  | 63 63 | － | 68 |  |  | 75 |  |
| 1845 | ${ }_{8}^{28}$ | 74 |  | － | 68 68 | 63 69 | － | － | 62 | 55 | 50 | － | 63 56 | － | 65 |  |  | 73 77 |  |
| 1846 | 78 | 69 |  | － | 68 | 61 |  | － | 50 | 52 | 5 | － | 58 | － | 63 | 60 |  | 76 |  |
| 1847 | 97 | 66 |  | － | 70 | 78 |  | － | 53 | 55 | 58 | － | 63 | － | 65 | 65 |  | 90 | － |
| 1848. | 90 | 66 |  |  | 65 | 70 |  |  | 52 | 50 | 159 |  | 63 | － | 62 68 | 63 |  | 67 |  |
| 1849. | 91 | 66 66 |  | － | 63 60 | 65 60 |  |  | －54 | 59 | 59 | － | 69 69 | 二 | 68 | 64 |  | 73 |  |
| 1841－50 | 89 | 69 |  |  | 65 | 63 |  |  | ${ }^{58}$ | 85 | 58 | － | 69 64 |  | 67 | 78 |  | 73 | 二 |
| 185 | 9 | $66$ | － | － | $67$ | 58 | 二 | － | 5 | 52 | 60 | $=$ | 68 | － | 6 | 71 | － | 92 | － |



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 － 우우ㅇㅑㅜㅇ







Table C 14．（Cont．）

|  | $\pm$ | 2 | 3 | 4 | 5 | 6 | 7 | 9 | 10 | 12 | 12 | 13 | 15 | 16 | 7 | 8 | 19 | 20 | 22 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year |  |  |  |  | $\begin{aligned} & \text { 若 } \\ & \text { 葿 } \\ & \end{aligned}$ |  | $\begin{aligned} & 80 \\ & \text { 吕 } \\ & \text { 苞 } \end{aligned}$ |  |  |  |  |  | $\begin{aligned} & 8 \text { 苟 } \\ & \text { 品 } \end{aligned}$ | $\begin{aligned} & 80 \\ & \text { 品茄 } \end{aligned}$ |  | 悹突 |  |  |  |
| 1888 | 96 | 94 | 88 | 70 | 86 | 80 | 87 | 84 | 85 | 86 | 93 | 97 | 102 | 89 | 110 | 101 | 120 | 114 | 129 |
| 1889 | 94 | 83 | 100 | 72 | 84 | 86 | 82 | 86 |  | 77 | 85 | 100 | 92 | 82 | 89 | 95 | 111 | 94 | 121 |
| 1890 | 103 | 93 | 102 | 75 | 91 | 83 | 87 | 98 | 80 | 89 | $9{ }^{\circ}$ | 101 | 95 | 86 | 99 | 100 | 112 | 104 | 130 |
| 1881－90 | 104 | 86 | 82 | 75 | 90 | 82 | 84 | 91 | 83 | 81 | 89 | 93 | 98 | 92 | 100 | 95 | 113 | 103 | 130 |
| 1891． | 108 | 103 | 100 | 73 | 91 | 86 | 86 | 10 | 82 | 82 | 91 | 103 | 97 | 87 | 105 | 103 | 118 | 104 | 129 |
| 1892 1893 | 98 | 98 | 92 | 75 | 90 | 92 | 77 | 96 | 86 | 85 | 92 | 10 | 93 | 92 | 100 | 98 | 100 | 103 | 140 |
| 1893 | 99 | 100 | 91 | 88 | 89 | $8_{8}^{88}$ | 77 | 95 | 88 | 83 87 | 98 | ${ }^{105}$ | 93 | 101 | 108 | 99 | 113 | 104 | 140 |
| 1894 1895 | 98 | 103 | 83 | 84 87 | 97 | 888 | 880 | 95 | 88 | 87 84 8 | 99 | 108 | ．92 | ${ }^{98}$ | 109 | 106 | 110 | 97 | 130 |
| 1896 | 89 | 95 | 88 | 82 | 88 | 89 | 85 | 90 | 89 | 82 | 99 | 109 | － 88 | 109 | 112 | 110 | 108 | 100 | 134 |
| 1897 | 99 | 99 | 96 | 90 | 100 | 89 | 93 | 95 | 84 | 91 | 104 | 114 | 99 | 107 | 116 | 120 | 110 | 109 | 135 |
| 1898 | 100 | 100 | 100 | 95 | 105 | 105 | 97 | 100 | 94 | 97 | 107 | 115 | 111 | 121 | 120 | 124 | 125 | 118 | 143 |
| 1899 | 102 | 108 | 110 | 112 | 108 | 104 | 90 | 111 | 97 | 98 | 112 | 117 | 120 | 123 | 122 | 113 | 119 | 125 | 149 |
| 1900 ． | 116 | 98 | 105 | 12 | 116 | 93 | 99 | 107 | 99 | 97 | 119 | 125 | 119 | 127 | 125 | t26 | 125 | 120 | 152 |
| 189：－0 | 100 | 101 | 96 | 89 | 98 | 93 | 88 | 100 | 89 | 89 | 102 | 110 | 102 | 107 | 113 | ז10 | 114 | 109 | 139 |
| 1901 | 100 | 110 | 103 | 102 | 116 | 100 | 105 | 111 | 98 | 109 | 114 | 118 | 120 | 125 | 124 | 121 | 120 | 128 | 136 |
| 1902 | 105 | 111 | 105 | 105 | 115 | ${ }^{89}$ | 97 | 108 | 10 | 97 | 110 | －118 | 114 | 121 | 122 | 121 | 115 | 123 | 135 |
| 1903 | 102 | 112 | 109 | 105 | 113 | 106 | 93 | 109 | 96 | 101 | 114 | 117 | 111 | 117 | 120 | 125 | 114 | 115 | 125 |
| 1905 | 112 | 118 | 112 | 100 | 115 | 198 | 94 97 | 118 | 104 | 107 | 111 | 115 | 117 | 125 | 125 | 131 | 123 | 133 | 140 |
| 1906 | 121 | 120 | 115 | 112 | 129 | 110 | 102 | 118 | 110 | 108 | 119 | 122 | 125 | 123 | 125 | 122 | 123 | 125 | 135 137 |
| 1907 | 120 | 122 | 120 | 120 | 124 | 112 | 120 | 119 | 113 | 114 | 116 | 121 | 123 | 125 | 130 | ：31 | 133 | 140 | 140 |
| 1908 | 125 | 125 | 122 | 120 | 125 | 118 | 115 | 125 | 120 | 112 | 119 | 125 | 125 | 130 | 131 | 133 | 135 | 145 | 145 |
| 1909 1910. | 135 | 130 | 126 | 124 | 127 | 125 | 124 | 124 | 115 | 119 121 | 125 | 135 | 137 | 135 | 140 | 137 | 140 | 150 | 157 |
| 1901－10 | 128 | 118 | 114 | $11 \%$ | 120 | 108 | 106 | 118 | 108 | 120 | 117 | 122 | 13 | 123 | 130 | 130 | 132 | ${ }_{1}^{148}$ | 148 140 |
| 1911 | 131 | 125 | 122 | 122 | 118 | 122 | 117 | 125 | 115 | 115 | 115 | 127 | 129 | 139 | 133 | 130 | 132 | 148 |  |
| 1912 | 138 | 1220 | 128 | 125 | 146 | 120 | 115 | 129 | 125 | 131 | 125 | ${ }_{138} 13^{\circ}$ | 140 | 130 | 138 | 134 | 140 | 150 | 153 |
| 1913 | 138 | 127 | 133 | 130 | 13： | 129 | 129 | 129 | 120 | 171 | 130 | $12^{8}$ | 147 | 740 | tio | 127 | $1{ }_{12}$ | Yeo | re\％ |

Table C 15. Prices of Blrchwood.
Stated in lronor per cubic motre.


## Table C 16. Prices of Pine and Fir Wood.

Stated in kronor per cubic metre.

|  | ¢ |
| :---: | :---: |
|  | ${ }_{\text {¢ }}^{\text {¢ }}$ |
|  |  |
|  |  |
| 11111111111 11111111111 11111111111 111111111111 |  |
|  | $\underbrace{\substack{\text { Yimo }}}_{\text {graquedo }}$ |
|  |  |
|  | \% |
|  |  |
|  |  |
| \%out ơ¢ ¢ |  |
|  | $\begin{array}{\|c\|} \hline \mathrm{Kiunos} \\ \text { pueporsrerso } \\ \hline \end{array}$ |
|  |  |
| +t ¢ ¢ ¢ ¢ ¢ ¢ |  |

Table C 17. Various
Stated in ore per


Commodities.
kilogramme, litre or hectolitre.


(Cont.)


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## Table D. Sources of primary information.

In the following list are not included the official marhegding scales and the quinquennial reports on the economic conditions from the county authorities. With this two important exceptions the list presents all sources containing pricoseries for a fairly large number of commodities. Excluded from the list are, therefore, sources only giving a price-series for a singular commodity or scattered price-data not forming continuous price-series and, finally, informations in more general terms on the price conditions in a district fe. g. definite statements that during a period the markegang scales in a county are a certain percentage too (ow). That kind of price-informations are especially important during the first two decades of the period.

## Stockholm City.

Coniract prices. (1) Allmänna barnhuset $1830-19 \times 3$. (2) Eira sjukhus $\mathbf{1 8 3 0}$ 1913. (3) Stockholms hospital, Konradsberg 1861-1913. (4) S:t Eriks sjukhus 1866--1913. (s) Stockholms sjukhem 1868-x913. (6) Kronprinsessan Lovisas Várdanstalt 1888-1913. (7) Frimurarbarnhemmet 1830-1905. (8) Centralfängelset 1852-1982. (9) Kronbhäktet à Langholmen $\mathbf{1 8 5 2 - 1 9 1 2 \text { . ( } 1 0 \text { ) Straff- }}$ och arbetsfängelset à Norrmalm $\mathbf{8 6 6 5 - x 8 9 5}$. (xi) Serafimerlasarettet 1830 x913. (x2) Norta korrektionsanstalten $1830-1850$. ( 13 ) Sappörkompaniet 1859-1866. (14) Pontonierbataljonen 1867-1879. (15) Andra Livgardet 1858-1879. (16) Svea Livgarde 1858-1879. (17) Livgardet till häst 18581879. (18) Svea artilleriregemente 1858-1879. (I9) Garnisonssjukhuset 1830 -1913. (20) Marinforvaltoingen 1833-19:3.

Newspaper prices. (21) Aftonbladet 1830-1912. (22) Nya Dagligt Allehanda 1830-1912. (23) Stockholms Dagblad 1830-1910. (24) Dagens Nyheter 1866-1900. (25) Tidskrift för lantman 1880-1913. (26) Svenska lantbruket och dess binäringar 1855-1864. (27) Nordisk Mejeritidning 1892-1913.

Pricas from private sources. Prices from retailers: Buying prices (28) A 18 1885-1902. Selling Prices (29) A 16 189x-x913. (30) A 17 1858-186r. (31). A 19 1887-189x.

## Malmohns county.

Contract prices. (1) Allmänna sjukhuset, Malmठ $\mathbf{x} 860-1913$. (2) Hospitalet, Malmö 1866-19x3. (3) Fattigvárdsanstalten, Malmठ 1830-1913. (4) Straffoch arbetsfangelset, Malmठ̈ $\mathbf{2 8 5 1 - 1 9 1 x .}$. (5) Husarregementet Karl XV, Malmö 1865-1877, Ystad, Hälsingborg; and Angelholm 1866-1877. (6) Lasarettet, Hälsingborg 2879-1913. (7) Fattigvardsanstalten, Hallsingborg $\mathbf{1 8 3 0 - 1 9 1 3 .}$ (8) Malmöhus Lảns Sjukvàrdsinrättning, Lund 1830-1983. (9) Hospitalet,
 Landskrona $2900-1913$. (12) Tvéngsarbetsanstalten, Landskrona $8853-19 \times 1$. (x3) Vendes regemente, Landskrona 8858 - 1874 . ( x 4 ) Lanslasarettet, Ystad 1878-1983. (15) Fattigvardsanstalten, Ystad 1856-1913. (16) Lasarottet, Angelholm 1870-1913. (x7) Lasarettet, Horby $1879-1913$.

Newspapar prices. (18) Tidskrift för lantmin, Malmó s880-1913. (19) Svenska lantbruket och dess binäringar, Malmö, Hälsingborg, Landskrona, and Ystad 1855-8863. (20) Allmănna Oresundsposten, Hälsingborg $\mathbf{1 8 5 7}$
1862. (21) Halsingborgs Dagblad, Halsingborg 1882-1905. (22) Landskronaposten, Landskrona 1854-1862. (23) Lunds Veckoblad, Lund 1889-1895.

Prices from pritule sources. Retailers' prices: Buying prices (24) M 14, Malmö 1892-1913. (25) M 15, Malmö r878-1906. (26) M 16, Malmö 1874-19r3. Selling prices (27) M 2, Hälsingborg 188ı-1900. (28) 3 3, Lund 1880-1913.

## Kristianstad county.

Coniract prices. (i) Lānslasarettet, Kristianstad 1853-1913. (2) Vendes a artilleriregemente, Kristianstad 1858-1879. (3) Länslasarettet, Simrishamn 1863-1913.

Newspapper prices. (4) Skanska posten, Kristianstad x842-1913. (5) Svenská lantbruket och dess binäringar, Kristianstad 1855-1864. (6) Nya Simrishamnsbladet, Simrishamn 1865-1869.

## Bleldinge county.

Corlract prices. (1) Fattigvàrdisanstalten, Kirliskrona 1840-1913. (2) Tvángsarbetsanstalten, Karlskrona 1889-1912. (3) Marinregementet, Karlskrona 1871-1879. (4) Lanslasarettet, Karlshamp 1884-1913. (5) Fattigurdsanstalten, Karishamn 1831-1885.

Newspaper prices. (6) Blekinge Lāns Tidning, Karlskrona $1870-1875$. (7) Svenska Lantbruket och dess binäringar, Karlskrona, Karishamn and Sölvesborg 1855-1856. (8) Karishamns Allehanda, Karlshamn 1873-1900.

## Smaland.

Contract prices. (1) Fattigvardsanstalten, Jönköping 1869-1881. (2) Hospitalet, Väzjö 186x-ig:3. (3) Sjukstugan, Värnamo 1867-1885.

Newspaper prices. (4) Jönköpingsbladet, Jönköping 1844-1913. (5) Jönköpingsposten, Jöoköping 1844-1913. (6) Svenska lantbruket och dess binäringar, Jtunköping, Gräma and Eksjơ 1855-1864. (7) Gränıa Tidning, Gränna 1857-1884. (8) SmAlandsposten, Växjб 1884-1905. (9) Svenska lantbruket och dess binaringar, Växjo 1855-1860. (10) Eksjor-Nässjo Tidning, Eksjö 1895-1904, Năssjö 1895-1896, 1901-1904.

## Kalmar county

Contrect prices. (1) Fattigvárdsanstalten, Kahar 2840-x913. (2) Länslasarettet, Borgholm 1831-1913. -

Newspaper prices. (3) Kalmarposten, Kalmar 1842-1905. (4) Barometern, Kalmar 1842-1905. (5) Svenska lantbruket och dess binäringar, Kalmar, Oskarshamn, Văstervik and Vimmerby 7855-1864. (6) Oskarshamnsposten, Oskarshamn 1865-1899. (7) Västervilusposten, Västervik 1834-1905. (8) Tjusts Tidning, Vimmerby $1843-1845$, $8880-190 x$. (9) Olandsbladet, Borgholm 1868-1878. 3
Prices from pripate sources. Retailers' prices: Selling prices (10) H 5, Kalmar 1865-1895. (1i) H 2, Västervik 1898-1909. (12) H 9, Vāstervik 1886-1902. (13) H 17,_Borgholm 1878-1913.

## Gotland county.

Consract prices. (i) Hospitalet, Visby 1858-1913. (2) Gotlands Artilleriregemente, Visby 1862-1879.

Newspeper prices. (3) Gotlands Läns Tidning, Visby 1852 -19r3. (4) Gotlands Allehanda, Visby 1852-19:3. (5) Svenska lantbruket och dess binäringar, Visby 1856-1858, 1864 .

Prices from private sowrces. Retailers' prices: Selling prices (6) Visby 1857 1880.

## Halland county．

Contract prices．（i）Straffängelset，Varberg 1853－1894．（2）Kronoarbets－ stationen，Borghamin 1853－1894．

Newspaper prices．（3）Hallandsposten，Halmstad 1866－1893．（4）Svenska lantbruket och dess binäringar，Halmstad，Varberg $1857-1862$ ．（5）Faiken－ bergs Tidning，Falkenberg 1876－1881．（6）Varbergs Tidning，Varberg 1857－ 1862.

Pribes from private sources．Retailers＇prices；Buying prices（7）N 2，Hahn－ stad 1865－1897．（8）N 3，Lindhult 1830－1913．Selling prices（9）N 2，Halm－ stad $5865-1897$ ．（ 50 ） $\mathrm{N}_{3}$ ，Lindhult $1830-1880$ ．

## Gothenburg and Bohus county．

Contract prices．（1）Sahlgrenska sjukhuset，Gothenburg 1830－19r3．（2）Hol－ termanska sjukhuset，Gothenburg 1gor－1913．（3）Hospitalet，Gothenburg 18，3－1913．（4）Centralfängelset，Gothenburg 1830－1908．（5）Nya Varvet， Gothenburg 188i－1907．（6）Göta artilieriregemente，Gothenburg，and Kari－ sten 1859－1879．（7）Husarregementet Karl XV，Gothenburg 1865－1877． （8）Lasarettet，Uddevalla 2878－1913．

Newspaper prices．（9）Göteborgs Handels－och Sjöfartstidning，Gothenburg 1832－1913．（土o）Tidskrift för lantmän，Gothenburg 1881－1913．（II）Svenska lantbruket och dess binǎringar，Gothenburg 1855－1864．（22）Nordisk Mejeri－ tidning，Gothenburg 1896－1901．（13）Bohuslänningen，Uddevalla $1866-1905$.

Prices from private sources．Retailers＇prices：Buying prices（14） 0 7，Gothen－


## Alvsborg county．

Contract prices．（1）Isasarettet，Vänersborg 1883－1910．（2）Hospitalet Vänersborg 1905－1913．（3）Lasarettet，Borås $1880-1913$.

Newspaper prices．（4）Tidning för Vänersborg stad och län，Vänersborg 1844－ 1904，Alingsàs 1846－1863．（5）Alingsấs Veckoblad and Alingsàs Tidning， Alingsás 1865－1913．（6）Borás Tidning，Boràs 1848 －1913．（7）Ailvsborgs läns annonsblad，Troilhättan 189z－1895．（8）Ulicicehamns Tidning，Uiricehamn 1846－1907．（9）Amālsposten，Amâl 1846－1893．

Prices from private sources．Retallers＇prices：Selling prices（土）P 4，Borás 1882－1905．（1i）P 5，Trollhättan 1872－1913．

## Skaraborg county．

Courtract prices．（i）Lasarettet，Mariestad 1888－19I3．（2）Garnisonssjuk－ huset，Karlsborg 1880－1905．（3）Göta artilleriregemente，Karlsborg 1859－ 1879.

Nerospaper prices．（4）Lidköpings Nya Tidning，Lidköping 1842－1907．（5） Svenska lantbruket och dess binäringat，Lidköping，Skara，Hjo，and Falköping 1857－1864，Mariestad 1855－1864，Skövde 1859－1864．（6）Mariestads Vecko－ blad，Mariestad 1843－1913．（7）Skara Tiduing，Skara 1839－1897．（8）Skövde Tidning，Skơvde 1858－1872．（9）Tidning för Falköping，Falkoping 1857－1913． （ro）Hjo Veckoblad，Hjo $\mathrm{x}_{8} \mathbf{4 7}-1876$ ．

Prices from private sowrces．Retailers＇prices：Buying prices（in）R 6，Lidköping 1878－－1913．Sellíng prices（12）R 13，Falköping $1867-1892$ ．（ I 3 ）R 19，Järpăs 1852－1890．

## Ostergobtland county．

Contract prices．（ I ）Kurhuset，Norrköping 1831 －1913．（2）Tvangsarbets－ anstalten，Norköping 1830－191ヶ．（3）Lasarettet，Linköping 1835－1913． （4）Lasarettet，Söderköping $1890-1913$ ．（5）Hospitalet，Vadstena $1860-19 \times 3$ ．

Nasaspaper pricè. (6) Norrköplags Tidntogar, Norrmbiping 1830-1835. (7)

 Norrköping 1835-1864, Linköping 1832-1913, Vedstena 1845-1849. Motela 185I-1854. ( y 0 ) Svenska lantbruket och dess Magrintar, Norrikbping, Linkotping and Soderklping 1855-1864. (ix) Motalaposten, Motala 1860-x 8 ge. (12) Söderköpingsposten, S8derkôping r886-1904. (13) Vadstena Län Tidning, Vadstene 1875-1897. (14) Nyare Skăpninge Tidaing, Sky̆nninge $\mathbf{1 8 6 8 -}$ 1883.

Prices frown private sources. Retallers' prices: Buying prices (15) E 21, Motala 1886-1901. Selling prices (16) E 2, Linköping 1886-1888, 1902-1905. . (ry) E 21, Motala 188i-1901. Prices from industrial works: (x8) E 25, Finspang 1835-1899.

## Sodermanland county.

Courtract prices. (1) Hospitalet, Nykiping 183o-1913. (2) Fattigvaredsanstalten, Eskilstuna 1866-1875.

Nowspeper prices. (3) Soxdermanlands Lāns Tidining, Nykiping 1830-18;8, 1874-1896. (4) Eskilstuna-Kuriren, Eskilstuna 1879-1913. (5) Svenska lanthruket och dess błnäringar, Strängnäs 1898-1860, Encilstuna $\mathbf{1 8 6 0 - 1 8 6 3}$. (6) Eskilstuna Tidning, Asen 1881-1882, Foda and Valla 188o-1884. (7) Södermanlands Tidning, Gnesta 1880-1884.

Prices frome private someces. Retailers' prices: Buying prices (8) D 10, Eskilstuna 1869-1913. Selling prices (9) D ro, Eskilstuna 1878-rgr2.

## Stockholm county.

Conkryct prices. (1) Lövenströmska sjukhuset, V5sby 1830-1913. (2) Svea artilleriregemente, Vaxholm $\mathbf{1 8} 88-1879$. (3) Vaxholms fästning, Vaxholm s876, $\mathbf{1 8 7 8}$. (4) Gränsposteringen, Grisilehamn $\mathbf{1 8 6 7 - 1 8 6 9 . ~}$

Newspaper prices. (5) Norrtalje Tidning, Norrtalje 1880-1883, 1892-1905. (6) Svenska lantbruket och dess binäringar, Norrtilje $\mathbf{5 8 6}-1864$.

## Uppeala coninty.

Contract prices. (i) Akademiska sjukhuset, Uppsala 1868-1913. (2) Hospitalet, Upptala 1875-1913.

Nevspaper priccs. (3) Uppsalaposten and Uppsela Nya Tidaing, Uppsala 1845-1912. (4) Svenska lantbruket och dess binäringar, Uppsala 1855-r864. (5) Uppsala lảns hushallaingssällskaps berăttelser, different districts within the county 1855-1912.

Prices from private sources. Prices from industrial works: (6) C 5, Söderfors 1830-1880.

## Örebro county-

Coniract prices. (1) Lasarettet, Orebro 1879-1910. (2) Fattigvardsanstalten, Orebro 1841-1910. (3) Fattigvirdasnstalten, Nora 1862-1913.

Newspaper prices. (4) Nerikes Allehanda, Orebro 1845-1909. (5) Svenska lantbruket och dess blnäringar, Orebro, Askersund, Nora 1855-1864, Lindesberg 1855-1835. (6) Askersunds Tidning, Askersund 1857-5865. (7) Nora Stads och Bergsiags Tidning, Nora 2866 -1983. (8) Bergslagens Tidning, Lindesberg 1890--1897.

Prices frow privede sources. Retailers' prices: Buying prices (9) T 6, Örebro 1866-1897. Selling prices (10) T 7, Orebro 1870-1896. (ix) T 8, Orebro 18951903. Prices from industrial works: (12) T 10, Striberg 1847-1875. (13) T 11 , H6gfors 1834-1845.

## Vhatmanland county.

Contract prices. (i) Lasarettet, Västetas 1894-1913., (2) Lasarettet, Köping i868-1981. (3) Fattigvardsanstalten, Köping 1850-19:3. (4) Lasarettet, Norberg 1900-1913.

Newspaper prices. (5) Västmanlands Lảns Tidning, Västerks 1847-1902, (b) Svenska lantbruket och dess binăringar, Vāsterás 1855-1864, Köping 185y1864, Arboga 1855-1863. (7) Köpingsposten, Köping 1856-1913. (8) Arboga Tidning, Arboga 185x-1913. (9) Sala Tidning, Sala 1861 -1900. (10) Eskilstune Tidning, Stensjö 1880-1884.
Prices frow private sources. Retailers' prices: Buying prices (ix) U 15, Skultuna 1884-1913. Selling prices (22) U 16, Vastanfors $1877-1899$. Prices from industrivil works: (53) U 20, Hallstahammar $\mathbf{1 8 4 9 - 1 9 0 0 . ~ ( 1 4 ) ~ U ~ 2 x , ~ S e g l i n g s b e r g ~}$ 8830-1913.

## Varmland county.

Contract prices. (8) Fattigvardsanstalten. Karistad 1866-1913. (2) Hospitalet, Kristinehamn $\mathbf{8 8 8}$-19×3. (3) Fattigvardsanstalten, Filipstad $\mathbf{8 6 6 2 - 1 9 1 0 .}$

Newspaper prices. (4) Karistads Tidning, Karlstad 1880-1923. (5) Svenska. lantbruket och dess binäringar, Karlstad 1855-1863, Kristinehamn 1856-1863, Filipstad $\mathrm{xB}_{55}-\mathrm{x85} 8$. (6) Värmlands Allehanda, Kristinehamn $\mathbf{1 8 7 2 - 1 9 1 3 .}$ (7) Kristinehamns Allehanda, Kristinehamn 1856-1863. (8) Filipstads Stads och Bergslags Tidning, Filipstad $1852-1855$, $\mathbf{1 8 6 6 - 1 9 0 5}$.

Prices from privale sources. Retailers' prices: Buying prices (9) S 17, Filipstad 18jo-1910. Selling prices (10) S 18, Karlstad 1890-1910. Prices from industrial works: (xi) S 20, Lesjöfors 1830-1910. (12) S 21, Sälboda 1845-1885. (13) ..S 22, Eda 1883-1899. (14) S 23, Gustafsfors 1830-1909. (15) S 24, Munkfors :1887-1913.

## Kopparberg county.

Contract prices. (1) Lasarettet, Falun 1830-1913. (2) Fattigvàrdsanstalten; Falun 1857-1983.

Nasspaper prices. (3) Dalpilen, Falun 1855-1906. (4) Svenska lantbruket och dess binäringar 1855-1864. (5) Södra Dalarnas Veckoblad, Hedemora x88x-1882. (6) Kopparbergs lăns hushallningssallskaps berättelser, different districts within the connty 1874-1912.

Prices from private sources. Prices from industrial warks: (7) V ro, Stora
 1853-1876. (10) V 13, Snöán 1830-8866. (xi) V 14, Nyhammar 1830-x883. (x2) V 15, Hagge 1830-1844. (13) V 16, Langshyttan 1883-1908.

## Gavleborg county.

Coniract prices. (x) Lasarettet, S8derhamn $\times 89 \mathrm{x}-1904$.
Nemspoper prices. (2) Gävleposten, Gāvle 1830-1907. (3) Svenska lantbruLet och dess bināringar, Gāvle $1855-2862$.

Prices from prioate sources. Retailers' prices: Selling prices (4) X y, Bergvik 1857-1905. (5) X 3, Ockelbo 1868-x9x3. (6) X 4, Sandviken 1861-1913(7) X 7 , Farsbacka 1877-1913.

## Jamtland county.

Condract prices. (x) Lasarettet, Ostersund r895-1913.
Prices from prioule sources. Retailers' prices: Buying prices (2) Z 4, Ostersund
 prices (4) $Z_{2}$, Ostersund $\mathbf{x 8 8 8 - 1 8 9 3 . ~ ( 5 ) ~} Z_{3}$, $O_{\text {stersund }} 1862-1893$. (6) $Z_{1}$, Husi $8862-1892$. ( 7 ) 26 , Hede 1854-1876. (8) 27 , Hammerdal 1870-1913. (9) 2 8, Lilhärdal $1875-1877$, 1885-1897. (10) $Z$ 10, Glissjöberg 1880-1883.

## Vasternorriand county.

Comiract prices. (1) Lasaretfet, HËrnösand 1885-1923. (2) Hospitalet, Häraösand 1865-1983. (3) Lasarettet, Sundsvall 1870-1907. (4) Svea artilleriregemente, Harnösand 1858- $\mathbf{1 8 7 9}$.

Neaspapa prices. (5) Sundsvallspasten, Sundsvall $1878-1904$.
Prices from private sowress. Retailers' prices: Buying prices (6) Y 2, Sundsvall 1888-1912. Selling prices (7) $Y$ 5, Harnbisand 1896-2905. (8) Y $x_{3}$ Sundsvall '189r-1913. (9) Y 2, Sundsvall 1888 -1912. (10) Y 4, Sundsvall 1893 -19ría (ix) Y 9, Ornsköldsvik 1874-1913. (22) Y 1x, Bjärtrà r889-19io.

## Vasterbotten county.

Contrect prices. (1) Lasarettet, Umed 1869-1907.

## Norrbotten county.

Consach pricos. (1) Lasarettet, Lulek 1879-19r3. (2) Hospitalet, Pites 1894-1933.
. Prices from privale sowrces. Retailers' prices: Selling prices (3) BD x, Kalix 1874-1893. (4) BD 4, Kiruna 1902-1913. (5) BD 5, Gällivare 1892-1899.


[^0]:    - Concerning the role of saving and consumption of capital in a study of cost of living, ef. Myrdal, "Sparandets plats i en realinkomstberakming", Ekooomisk Tidstrift, 1929, pp. 157 et seq.

[^1]:    ${ }^{2}$ Sach a comparison between incomes does not of course show the relation between psychic satisfactions received by means of these incomes It may be mentioned in passing that if regard be paid to the "law of diminishing utility of the income" this consideration ought logically to bring about manipulations of the calcolated "real income" and not enter as early as in the calculations of the cost of living index. This guestion does not, therefore, entangle the present problem.

[^2]:    ${ }^{1}$ Even in the cases where the commodities in such a barter were valued in terms of money, these "prices" may be without interest, because it is inherent in the dual nature of such exchange that the determination of the price would be to some extent arbitrary, whether the price was too high or too low for the two sides of the transaction.

[^3]:    3-311489. 1.

[^4]:    ${ }^{2}$ Sweden is divided into 24 ldn and Stockholm City. The term "county" has been used as a translation, because the English "county" (n. b. not the American) is perhaps the nearest equivalent as to size and administration.

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[^6]:    ${ }^{1}$ En svensk prisindex for aren 1860-1913, Kommersiolla meddelanden, Vol. III, no. 18, 1921.

[^7]:    a Dr. Hoijer has already made a division of the whole Kiagdom into "naturally coherent agricultural districta".

[^8]:    5-811489. 7.

[^9]:    ${ }^{2}$ Cf. Wohlin, N.: Spannmálspriser och spannmalstullar i Sverige 1873-1903, Ekonomisk Tidskrift 1915.

[^10]:    ${ }^{2}$ Wages did not fall to the same extent. There were often complaints that labourers could maintain their standard of living with less work, owing to the lower price of grain, and that in consequence less labour was offered and wages were kept up.

[^11]:    ${ }^{2}$ We refer to the following official investigations: The investigation made by the Statistical burean of the City of Stoctholm into the coot of living of persons of small means in Stockholm in the years 1907-1908 (published in the series Stockholm Statistics, No. X: I) and the investigationa, conducted by the Social Board, into the cost of living in the whole kingdom of industrial workers in 19x9-14 and 1923-23 and for agricultural labourers in 1920 (published in the official statistics and in the "Sociala Meddelanden").

[^12]:    ${ }^{2}$ Gnstavus Adolphus 1624 bestowed upon Uppsala University more than 300 small-holdings (hemunan) of which about 200 still belong to the University.

[^13]:    ${ }^{2}$ Stockholm list of houses to let (Slockholms hyreslista) is a publication advertising dwellings to let, edited by Stockholms Intecknings Garanti Aktisbolag twice a week since Oct. 1882. The number of rooms and the rent asked were always included.

[^14]:    ${ }^{2}$ Compare the parallel problem of work in the family in the production of finished goods from purchased raw materials, and our reasons for taking prices of raw materials instead of prices of finished articles as price terms in our calculations, and for not counting the value of work within the family as income in our calculation of real wages. cf. supra. PP. $14-15$.

[^15]:    ${ }^{1}$ We have then the working class in view. The improvement of public services (to a large extent payed for by the more prosperous classes) actually means a higher standard of life for the workers. If we had included all the taxes in our calculations this tendency ought rightly to be balanced by a term of correction with the effect of lowering the cost of living and raising the real income. But if we now exclude from our calculations of cost of living a relatively growing part of the total taxation (the direct tares) and at the same time in our calculations of real income refrain from subtracting the corresponding income, which is also mostly a growing part of total income, it means that we get a downward bias in cost of living and a somewhat still greater upward bias in real income. The tendency of the two last montioned measures would, therefore, work against the first mentioned tendency, i. e. work in the same direction as the retionally motivated torm of correction.

[^16]:    1 En svensk prisindex för aren 1860 -1913. Kommersiella Meddelanden, Sept. 1921. From 1860. Both indices have been reduced to the basis $186 \mathrm{x}-70=100$. See also Chart 3, p. 141.

[^17]:    ${ }^{1}$ See op. cit. p. 1261.

[^18]:    T The prices used for constructing his foodstuff index are mainly averages for the whole country of the mavkegang-scales, a material which we have also nsed, although only as a supplementary source of information. As we have pointed out earliar, our investigation of other sources for price-statistics has confirmed Amark's view, that the markegdngscales are fairly reliable price observations. A comparison between our price-series contained in Table C and the country-averages of the mavhe-gdng-prices used by Amark shows a remarkable conformity. The slight differences between the two types of price-series are quite easy to explain: the mavkegdng-scales have a tendency to keep lower as being nearer to actual wholesale prices, and move sometimes one year beforo because they are fixed in the autumn after the harvest (the last characteristic also marks Amark's foodstuff index).

[^19]:    ${ }^{2}$ Detaljpriser och indexberakningar aren 1915-1930, av K. Socialstyralsen, Stockholm 1933.

[^20]:    IThe price quotations for potatoes in quantities of 1 hectolitre and 5 litres are then considered to refor to only one category of goods.

[^21]:    ${ }^{2}$ Butter, eggs, new potatoes, beef, veal, mutton, venison, pork and fresh fish.

[^22]:    I In the calculation of the average price the price of rye flour is given a donble weight as compared with the price of rye meal. This average price is then multiplied by the quantity number.

[^23]:    13-311489. 1.

[^24]:    ${ }^{1}$ Brazilian coffee, - ${ }^{\text { Per hectolitre. }}$

[^25]:    ${ }^{1}$ The item "taxes" has been eliminated in order to secure comparability with budgets $a$ and $b$.

[^26]:    .

