

INTERNATIONAL INSTITUTE OF AGRICULTURE

CONTRIBUTIONS TO THE STUDY OF THE PROBLEM
OF NUTRITION

No. 1

INVESTIGATIONS
INTO THE MARGIN BETWEEN PRODUCERS' AND
CONSUMERS' PRICES OF CERTAIN FOODSTUFFS



ROME
VILLA UMBERTO I
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September 15, 1937.

Sir,

I have the honour to present to you the Investigations into the Margin between Producers' and Consumers' Prices of certain Foodstuffs, which is the first volume of the series of the Institute's Contributions to the Study of the Problem of Nutrition, undertaken in response to the initiative of the League of Nations (Mixed Committee on the Problem of Nutrition).

The present Report, in Part I, contains a brief general survey of the problem in its various aspects on the basis of the information collected and studied for a certain number of countries. Part II of the Report contains an exposition of the inquiries made and of the results obtained in the investigation of price spreads in the different countries. The countries for which it has been possible to collect and to present information are Austria, Canada, Denmark, Finland, France, Germany, the Netherlands, Norway, Poland, Switzerland, the United Kingdom and the United States.

It is hoped that, though the material available is rather scarce, and is somewhat lacking in uniformity, this inquiry will throw some light upon a highly important problem, which, though often discussed, has seldom been thoroughly investigated.

The Report was prepared by the Bureau of Economic and Social Studies, under the direction of its Chief, Dr. G. PAVLOVSKY, and was drawn up by Mr. A. EMANUEL, Rédacteur of the said Bureau.

Very faithfully yours,

A. BRIZI
Secretary General.

To His Excellency
Professor GIACOMO ACERBO,
Baron of ATERNO,
President
of the International Institute of Agriculture

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PREFACE

The present Report belongs to the series of studies undertaken by the International Institute of Agriculture in connection with the campaign for the improvement of the standards of nutrition launched by the XVI General Assembly of the League of Nations in September 1935.

The Institute was invited to take part in the work of the Mixed Committee on the Problem of Nutrition set up in accordance with the resolution of the XVI General Assembly of the League, and its co-operation was enlisted by the Committee in the study and discussion of the agricultural aspects of the problem of nutrition.

It was at the International Institute of Agriculture in Rome that the meeting took place, in March 1936, of the Sub-Committee on Food Statistics, to which the Mixed Committee delegated the task of inquiring into the problem of the extension and improvement of the statistical basis of investigation into the problem of nutrition.

In their report, the Sub-Committee on Food Statistics, among the various recommendations they made, laid stress upon the necessity of extending and improving the collection and analysis of price statistics of the different foodstuffs. In this connection, they pointed to the need of closer study of the relations between the wholesale and the retail prices of foodstuffs, and more particularly of protective foods.

The recommendations of the Sub-Committee were fully endorsed by the Mixed Committee on the Problem of Nutrition. When, in October 1936, the XVII General Assembly of the League of Nations decided to continue the Mixed Committee for another year, the co-operation of the International Institute of Agriculture was sought in the study of certain economic and statistical problems bearing upon nutrition in their agricultural aspect.

Among the subjects proposed for investigation, that of the formation of prices of the principal foodstuffs attracted particular attention, this being a question in which both the consumer and the agricultural producer are most intimately concerned.

This is why, in so far as the available data permitted, the investigation in this Report was not confined to the examination of the relations between wholesale and retail prices, but was extended to cover the whole course of the passage of the foodstuffs through the various stages of the process of distribution and transformation from the primary agricultural producer to the final consumer.

The excessive spread between the prices obtained by the farmer and those paid by the consumers of farm products, has long been a stock argument of discussion, and the recent depression has seen it repeatedly brought forward by the representatives of both farmers and consumers. In the highly complex economic organisation of modern society, however, only by means of close study is it possible to determine whether and, if so, precisely to what extent, the costs of distribution and processing, with all the overhead charges, such as taxes, duties etc., can be considered as excessive, and at what particular points in the process of distribution monopolistic tendencies may work to the detriment of the producer or the consumer, or both.

The information on which the Report is based has been obtained in part from the published results of previous national investigations carried out by Government institutions, by official

Commissions of inquiry or by private persons and organisations. In part we have had to arrange for the preparation of special memoranda, containing the information required for the Report, by experts in the different countries for which no material was otherwise available. This latter method was used in preparing the sections for Austria, Denmark, Finland, the Netherlands, Norway and Poland.

In some of these countries no previous studies of the problem of price margins were available, and the memoranda prepared for this Report were the first attempts made in this field of inquiry. Under these conditions, it is quite natural that the information collected was very different both in form and in substance, the methods used and the depth and breadth of the various inquiries varying greatly.

In some cases, there exist more or less important studies bearing on particular commodities or on local markets, which, though often valuable for the detailed investigation of the problem of price formation of the commodity concerned or of marketing conditions in certain localities, do not, on the whole, come within the scope of the provisional survey aimed at in the present Report.

In this connection, we should point to the inquiries recently carried out by the Paris *Institut Scientifique de Recherches Economiques et Sociales*, which bear upon certain fruits and vegetables. The results of these studies are published in a series of volumes "Du producteur au consommateur", of which the first, dealing with peaches, tomatoes, grapes and potatoes in the 1935 season, appeared in 1935. The second volume, on apples, lettuce and cauliflower, in the 1936 season, is under press at the moment of writing. In the United Kingdom, we should refer to the valuable series of reports published in connection with the various marketing schemes, and dealing with the details of marketing organisation. With the distributive margins these reports are only indirectly concerned. We have, however, in the section for the United Kingdom, largely quoted the Report of the Milk Re-organisation Commission. In the United States, besides the material used in the present Report, there are numerous publications bearing upon the organisation of distribution on local markets. In order to preserve the general character of our survey, we have, however, been content to confine ourselves to the useful statistical review directly bearing upon the distributive margins, which was placed at our disposal by the Bureau of Agricultural Economics in Washington. In Germany, the delay in the publication of an important recent investigation into the organisation and costs of marketing of agricultural products, to which our attention was called by the Institut für Konjunkturforschung in Berlin, did not permit us to cover the last few years.

In some countries investigations into the formation of prices of foodstuffs are just being started and no material is available as yet which could be used for the present Report. This is the case of Italy, where the *Istituto Centrale di Statistica* is studying the means by which a close inquiry into the formation of prices could best be accomplished and has started the preparation of adequate statistical data for current inquiry into price relations. In Sweden, the Academy of Agriculture is also engaged in the preparation of an inquiry into this subject.

PART I.

DISTRIBUTION COSTS AND CONSUMERS' PRICES (1)

I. — INTRODUCTION.

Part II of this volume presents short surveys of some of the most important studies in the various countries of the distributive margin in the food trades. Even a casual glance at these studies is sufficient to reveal that, despite the importance of the subject and the interest which it constantly arouses, very few settled conclusions or principles have as yet been elaborated. It is however to be hoped that by placing the results of many studies made in different countries side by side, some contribution can be made to this end. The studies show indeed a great diversity as to the period to which they refer, the scope, the method of approach, the commodities treated, the degree to which analytical or statistical treatment prevails, as well as to the greater or lesser degree of detail. It is therefore evidently impossible to use them to provide direct comparison or contrasts between the different countries. Indeed, direct international comparison cannot be expected to yield very fruitful results capable, for example, of direct application for the purpose of lowering distribution costs. In each country distribution takes its own particular form. The variations in the distances goods are transported, in transport rates, in the type and costs of labour employed, in the degree of preparation of the goods before they reach the consumer—to mention only a few characteristic differences—are so large as to preclude any direct comparison of value. What is possible however on the basis of an international survey of the type made in Part II is the pooling of common principles and the examination of diversities, from which it may be possible to obtain a better general understanding of the nature and importance of distribution costs than from a study of the narrower field of a single country. In this part it is therefore attempted, on the basis of a perusal of the studies in Part II, to bring out certain general principles relating to the "distributive margin", reflecting the experience of many countries, which tend to be inherent in the modern systems of the distribution of consumption goods—or more particularly, of food-stuffs. The sections below deal firstly with the normal nature of distribution costs, secondly, with the question of the degree to which, and the reasons for which, such costs may be excessive, and thirdly, the possibilities of reducing them, and thereby, to some degree, the price of food-stuffs to the consumer.

II. — THE NORMAL STRUCTURE OF DISTRIBUTION COSTS.

Whatever the method of the organisation of the distribution of goods from the primary producer to the consumer, the process of distribution necessarily involves certain costs which, like the costs of production, must in the long run be met by the consumer. The goods must be

(1) In this volume the terms "distribution", "distribution costs or margins" refer in general to all those processes and the costs thereof, through which a given commodity passes on its way from primary producer to consumer. "Distribution" includes therefore not only transport and selling but also the various forms of processing. In a few cases the terms are used in a more restricted sense, excluding processing. It should however always be clear from the text in which sense the terms are adopted.

collected at the farm, transported and delivered to a selling establishment, and sold. These represent the minimum processes necessary in the distribution of goods from rural to urban areas. Many goods, however, require preparation or processing of a more or less complicated kind, as, for example, grain for bread, milk for butter and cheese, the meat carcass for the consumer's joint. In most cases, to these primary distribution costs must be added a normal proportion of waste, due to deterioration in transport or normal perishability and loss of freshness, as for example, in the case of vegetables and most fruits, poultry and eggs, dairy produce and meat.

Different methods of the organisation of distribution bring in further sets of costs, not, of course, necessarily additional, since the particular method of organisation may actually be a means of reducing the totality of distribution costs to a minimum. In the world today there are many forms of organisation, but broadly one may distinguish three main forms, namely the method of open marketing, in which goods pass through the hands of whole chains of independent traders, the co-operative form and the large scale private distributing organisation which is responsible for the whole process of distribution from the farm—which it may even control—to the consumer. Across these main forms may cut numerous other types which have at the various stages of the process something in common with all three. The first type is the commonest of all three, and here again there are many variations, the number of intermediary agents and markets within the same country, between countries and among the different commodities diverging considerably. The co-operative form may be represented by a single co-operative organisation which engages in the whole process of distribution, or by co-operative organisation on the part of the consumers. No form necessarily excludes competition nor, on the other hand, monopoly or monopolistic influences at some stage of the distributive process. Without at the moment going into the question of the efficiency of the various types of organisation, it is clear that the structure of distribution costs will vary very much with the type of organisation which prevails. Where goods pass the hands of several intermediaries various costs will be incurred which are absent in a unitary form of distribution.

In times of agricultural depression, marked by severe declines in the prices of agricultural products, complaints invariably arise both from the side of the producer and of the consumer, that the prices of foodstuffs to the consumers fail to reflect the changes in the prices paid to the farmer. Both farmer and consumer lay the blame at the distributor's door and proclaim the necessity for the elimination of the "middleman". Without examining the justification of the complaint, which rests evidently more on the assumption that the organisation of distribution is inefficient than on its being unnecessary, it is appropriate here to note that, in the light of the foregoing, consumers' prices cannot automatically and to the same degree follow producers' or farm prices. Producers' prices and the costs of distribution may be, and very often are, completely independent of each other. Consumers' prices reflect over the long period both producers' prices and distribution costs. In consequence the higher the proportion of the distribution costs in total costs, the less can consumers' prices reflect farm prices. Thus if distribution costs represent 50 per cent. of the consumer's price, a fall in farm prices of 20 per cent. would result—assuming no change in distribution costs—in a fall in consumers' prices of only 10 per cent. On the other hand, if distribution costs represented only 10 per cent. of the producer's price the consumers' price would fall by 18 per cent. In actual practice, however, only a part of distribution costs remain fixed for a long period; this applies particularly to rents, interest, rates, taxes, freights and the like. A further part will tend to vary with changes in the quantity of produce dealt with, as well as with progress in the nature of the service rendered to the consumer. In consequence, quite apart from the question of middleman's profits, a fall in the producers' price will not be followed by an equal absolute

fall in the consumer's price, but more probably by a lesser fall, though a greater fall cannot be excluded. Over a short period, further, consumers' prices reflect the prevailing conditions of supply and demand and are quite independent of both production and distribution costs. There is thus no rule of thumb method to determine whether consumption prices respond adequately to the primary producer's prices. A proper judgement in this respect always requires a detailed investigation into the flexibility of the various distribution costs, a task which—as will be clear from the survey in Part II of some of the attempts made—is none too easy.

A fact which emerges from all the studies is that distribution costs represent a substantial proportion of the final consumption price of foodstuffs. In the United States they represented 58 per cent. in 1935—in 1932, at the depths of the depression, they reached 67 per cent. In Germany in 1930-31 total processing and distribution costs, calculated, it should be noted, on a different basis, represented 40 per cent. of the value of retail trade in the principal foodstuffs. Though similar figures cannot be quoted for the other countries, it is evident from the study of particular commodities that the proportion is generally high. Thus, in Canada in 1933 the margin between wheat and bread prices represented 82 per cent. of the price of bread. In the United Kingdom, as far back as 1925, nearly 60 per cent. of the price of bread was formed by the expenses other than the costs of flour. In France in 1932 the farm to retail margin on meat could be estimated at nearly 50 per cent. of the retail prices. Even the margin on commodities such as vegetables, which do not require processing, appears to be strikingly high. Thus, in Germany, in 1930-31, of the total retail value, about 51 per cent. was accounted for by intermediate costs. In the cases of eggs and fruit 40 per cent. of the retail value was made up by intermediate costs. In the United States, where, as may be noted above, the proportions of intermediate costs are on the average much higher, the spread stood in 1935 at about 80 per cent. in the cases of commodities such as cabbage, carrots, celery, and often at about 70 per cent. in other cases of fresh vegetables. The reason for these high proportions of intermediate costs in the case of these unprocessed goods appears to lie in the fact that owing to their relatively low absolute value it is necessary for traders and dealers to obtain high margins of gross profit in order to make the business worth while. Thus in the United Kingdom the percentage gross profit on vegetables reached in high class stores a figure as high as 331 per cent. in one case. Even in lower class shops the percentage in the case of the same commodity reached 187 per cent. Further, in the case of vegetables a high margin appears inevitable in order to cover losses on waste goods or goods which have lost their freshness and have become unsaleable.

Distribution costs are not only high but appear, over the long period, to be increasing. In general, compared with before the war, distributive margins are higher not only absolutely—an absolute increase can hardly be a matter of surprise in view of the general increase in values compared with before the war—but relatively to production costs. In other words, distribution costs represent a higher proportion of the final consumer's price.

From the studies in Part II this is best borne out statistically in the case of the United States. In 1933 and 1914 the margin between the value at the farm and the retail value of 58 foods represented 47 per cent. of the retail value. The proportion was at its lowest in 1917, when it reached 40 per cent. Since then it has fluctuated, but after 1929 it never fell below 50 per cent., reaching, as was previously noted, the high point of 67 per cent. in 1932. The same phenomenon is shown in regard to the individual commodities. Thus in the case of beef the proportion rose from 36 per cent. in 1930, to 63 per cent. in 1932-34, falling only in 1935 to 55 per cent. The increase in the case of pork products was even greater, the figures for the same years being 20, 27, 36, 58 (in 1932) and 41. Between 1913

and 1935 the proportion in dairy products rose from 45 to 55 per cent.; in white bread from 77 to 83 per cent.; in potatoes from 41 to 58 per cent.

Figures for the other countries, though not so complete, indicate the same tendency. In France, whereas the farm price of meat increased between 1912-14 and 1932 by 275 per cent., the retail price increased by 455 per cent. In Berlin the price of bread increased between 1913 and the first half of 1929 from 28.5 pfennigs per kilogramme to 40.8 pfennigs, an increase of about 43 per cent. whilst the cost of grain only increased from 14.3 to 18.5 pfennigs or about 30 per cent. In Canada between 1926 and 1933 the wheat-bread spread increased from 67 to 82 per cent. of the bread price. This tendency towards a relative increase in distributive margins was indeed in part responsible for many of the enquiries in the post-war years in the realm of food prices.

From some of the studies it is possible to gain an idea of the relative importance of the various costs incurred in the different stages of distribution in the various countries, as well as the changes and tendencies therein. The expenses in the production of bread may roughly be divided into four classes: the cost of flour, the cost of secondary ingredients, bakery costs, (including profits) and distributive charges proper. In the United Kingdom in 1923 the cost of flour represented about 63 per cent. of the total costs, the other ingredients 5 per cent., baking costs 15 per cent. and the distributive costs about 17 per cent. As the table given in the survey for the Linlithgow Committee's report shows, compared with before the war important changes had occurred, particularly the increase in distributive costs, which in 1914 had represented only about 11 per cent. (1)

In Germany in 1929, the cost of flour represented 57 per cent. of the price of bread of the small Berlin baker, total manufacturing costs 19 per cent., and distributive charges 11.3 per cent. In the United States in 1935-36 the baker's margin appeared to be much higher, representing 71 per cent. of the retail price. Before the agricultural crisis it represented 66 per cent., but, going still further back in 1919-20 it represented only about 44 per cent. In all countries the wheat-flour spread is much less than the flour-bread spread.

Turning to meat, the first table in the section on France indicates that the wholesale-retail price margin is much larger than the farm-wholesale margin. Thus, in 1932, the price at the farm was estimated at 5.74 francs per kg., the wholesale price 6.95 francs and the retail price 11.27, the two spreads representing respectively 11 and 39 per cent. of the retail price. This is also indicated by the example given of the spread on beef in England; in this case the retailer's gross profit represented somewhat more than one fifth of the farmer's net return, whilst the total margin from farmer to wholesale butcher, which includes also the value of the hide and offals, represented only somewhat over one tenth. Again, the figures given in the study of the margins in the vegetable trade in Holland indicate that, here too, the greater part of the distribution costs are incurred at the retail end. Milk indeed appears to be the most important exception to this rule, for the main charges incurred during its journey from producer to consumer are incurred before the retail stage, namely, in sterilising and bottling, functions usually performed today by the wholesale distributors.

(1) It may here be noted that though these figures refer to a period many years back they have not lost their general value. In November 1925 the Food Council set up in the United Kingdom in that year recommended a scale of bread prices in relation to flour prices, which was slightly modified in 1930 and 1932. The original scale allowed a price of bread of 9d. per loaf when flour prices were above 40s. per sack and less than 44s. In the Linlithgow committee's example above, the price of bread averaged 8.95d. and that of flour 42s. 1d. In 1932 the revised scale, necessitated by changes such as the decline in consumption, the increase in paper-wrapped bread etc. showed a price of 9d. per loaf when flour was above 39s. and not exceeding 43s.

Individual items in the costs sheet naturally vary very considerably, not only as between different countries, but even in the same locality of a given town. In some bakeries, for example, modern machinery is employed, tending to reduce the proportion of labour costs; in others, hand methods prevail. In all trades the service offered by different establishments varies considerably. Butter may be sold wrapped or unwrapped, milk in bottles or in the housewife's jug. Some retailers may deliver at the door, others sell from stalls in the market place. The preparation of goods may be carried out centrally by a multiple store organisation or at the single retail shop. All these differences, which can be multiplied almost indefinitely, evidently preclude any general statement as to the importance of the individual cost items. Nevertheless, it may be noted that the modern tendency—particularly marked in North America, but not absent elsewhere—towards a large scale organisation of retail trade, whether in the form of department or multiple stores and consumers' co-operatives, tended to increase the importance of some classes of costs and reduce that of others. The comparison made in the section referring to Germany between the bread cost structures of a large factory and of a small independent baker is instructive in this regard. Whereas the large baker has a definite advantage in production costs the small baker has an important advantage in distribution costs proper. On the other hand, it is also noted in the same connection that a co-operative concern dealing in bread among its other goods has a net advantage in distribution costs proper owing to the fact that total costs are distributed over many commodities.

One of the reasons why distribution costs proper tend to form under modern conditions a higher proportion of total costs lies not only in the costs of transport and in the higher degree of service, but also in the extended use of advertising which has accompanied the growth of the large organisation. And this again has been encouraged by the development of patented goods. Though the large organisation has developed rapidly in the post-war years the fact that it has brought with it many extra costs in the actual selling of the goods may actually act as a check on further expansion. This indeed appears to be the view held by the Canadian Royal Commission on price spreads, from whose report extracts are given in the section on Canada.

Again, as illustrated particularly in the study of Canadian trade, the large organisation tends to have an advantage in the purchase of the raw material, whether flour for bread or fruit and vegetables for canning. In some cases large buyers are given concessions as a matter of course, in others they force them from the producers; and often, the reorganisation of the marketing of agricultural products under State intervention produces a similar effect.

In concluding this section on the normal structure of distribution costs we may refer to the widely held view that the net profits of the trader are responsible for an important proportion of total distribution costs. Without here going into the theoretical question as to whether such profits are the cause or the effect of high consumers' prices, or whether they are excessive, we may note some of the statistical conclusions with regard to profits made by the authorities studied in Part II. It should be noted that such profits are subject to considerable fluctuations. The practice adopted by many trading associations of maintaining more or less fixed retail prices over considerable periods often leads to high profits when raw material prices are falling and low profits, or even losses, when they are rising. Secondly, calculations of net profits are particularly difficult in the case of the small retail trader where often they may represent nothing but his own salary, barely sufficient to enable him to meet his ordinary living requirements. This being said, we may note that in France the retailer's profit on meat, as shown in Table I of the section on France, was calculated, in September 1932, at 8.9 per cent. of the retail price. In bread making in Berlin in 1929 the profits of

the independent bakers were calculated at 9.1 per cent. of the retail price. The Royal Commission on Food Prices in the United Kingdom gave baking profits in 1925 as 8 per cent. of the retail price. Apart from such profits, must be added those of the intermediaries in other stages of the distribution process, including not only those of the wholesalers, but in many cases of other intermediaries according to the nature of the particular market, such as the cattle dealer and the slaughterman in the meat, or the commission salesman as in the vegetable trade in the United Kingdom. According to the Linlithgow Committee's investigations the vegetable commission salesman obtained 10 per cent. of the selling price, whilst the provincial wholesaler's net profits averaged 1.8 per cent. of their sales. In France in the meat trade the gross profit of the cattle dealer plus the slaughterman's profit plus commission and market charges—a large proportion of which are net profits—amounted to 3.9 per cent. of the retail price. These few examples are obviously insufficient to establish the statistical importance of the intermediaries' profits, nevertheless they suggest that in some cases at least net profits form an appreciable proportion of retail prices.

III. — FACTORS LEADING TO EXCESSIVE DISTRIBUTION COSTS AND SPREADS.

From the foregoing section it should not be difficult to see that, under modern conditions, a large proportion of consumers' expenditure necessarily goes to meet not only the expenses of production but also of distribution. Neither this fact, nor the fact that distribution costs tend to increase relatively to production costs, represent in themselves a condemnation of present day economic organisation. Indeed, it may be suggested that such facts are the normal consequence of economic progress, signified by reduced production costs as a result of improved methods and accumulation of capital. In some lines of foodstuffs, particularly, the growth of distribution costs in relation to production costs arises as a result of the inelasticity of demand. On a market which does not expand, improved technique evidently leads to the diminution of total expenditure of resources on production. Another mark of economic progress is the improvement in the preparation of goods for the consumer—the pasteurisation and bottling of milk, the wrapping of butter and bread, the preservation of fruit, the presentation in attractive cartons. Similarly the improvements in transport lead to the shifting of production areas away from consumption areas and an increase in the distances over which goods are brought from producer to consumer. Again, the growth of urban agglomerations—made possible indeed by the improvement of all forms of transport—leads both to large scale centralised distribution and such practices as delivery of goods at the consumer's door. The fact therefore that society uses more of its resources than before in the distribution of goods may indicate rather an obedience to a normal economic law than the neglect thereof.

On the other hand, however, it is clear that factors may arise which tend to exaggerate the proportion of social resources devoted to distribution both absolutely and relatively; and the studies in Part II often do indicate that in particular cases distribution costs tend to be excessive, not justified either by economic law or by the economic interests of the community. Thus the Linlithgow Committee reported on the basis of its detailed investigations, that "the spread between producers' and consumers' prices is unjustifiably wide. Taken as a whole, distributive costs are a far heavier burden than society will permanently consent to bear". In Germany in 1929 investigations into a number of food markets revealed that retail prices were often higher than justified by costs and that in some cases the faulty organisation of the market made the distribution costs themselves excessive. In the Netherlands, a study

of the market for market garden produce suggested equally that distribution costs were excessive. In several of the studies in Part II the analysis of the marketing organisation often leads to the conclusion that improvements leading to a reduction of distribution costs are possible. Thus we may cite in example the report on the reorganisation of milk marketing in the United Kingdom, the study of monopolistic organisations in Canada, and of the agreements among bakers and millers in Switzerland. Whilst referring the reader to these studies for the particular causes leading to such conclusions we may consider here in general terms the type of factors leading to excessive distributive margins and costs.

We might perhaps begin with a warning against the view that a given distributive margin is justified, i. e., not excessive, if it is equal to all the costs incurred in the process of distribution. Because such and such costs have been increased, therefore, (it is argued) such and such a margin is justified. This is indeed a view frequently adopted by distributors or distributors' organisations in presenting their case to public authorities for an increase in prices; and usually if the said authority is satisfied with the evidence as to costs, the request is granted. Yet, on some reflection, it should be clear that this view contains an inversion of cause and effect. On a competitive market a producer or distributor must sell his wares at the market price, *whatever his costs*. If the price over a long period does not cover his costs, then, it is true he will be obliged to abandon the business. If, on the contrary, it exceeds his costs over a long period, he will find it profitable to expand. In other words, under competitive conditions, it is the price which determines whether the costs are justified, and not *vice versa*. In consequence, though it is necessary for solvency that a business undertaking covers its costs, it is not possible to judge whether prices or margins are excessive or otherwise by summing up all the various cost items and noting that prices are greater than this total. Further even should the total of costs equal the price this too is evidently no indication of the lack of excessiveness or otherwise of the price, or, in our problem, of price margins. The true criterion of excessive distributive margins may in fact be sought more directly. Margins may be regarded as excessive from a social-economic point of view whenever they include costs items which are unnecessary for the performance of the given service *to the degree made appropriate by the relative demand and by the available resources*. And this irrespective of whether the demand is that determined by consumers' preferences or by another criterion.

It should be clear therefore that whether costs and margins are excessive cannot be established by the study of the statistics in Part II as much as by a consideration of the general principles relating to the establishment of the costs and margins resultant from the various investigations. Approached in this way the studies in Part II offer many reasons for which distributive margins may be excessive.

It is an elementary economic principle that in a perfectly competitive equilibrium prices would equal costs. It is easy to see that the conditions of a perfectly competitive market are far from obtaining in the distributive process, as indeed in all other parts of the economic system. The market is indeed imperfect from the consumer's side as from the producer's side. It is a notable fact, and one brought out particularly clearly in the study on the bread market in Germany, that prices of foodstuffs of the same type and quality vary considerably not only as between different towns but even within the same locality of a given town. Very often the consumer does not know of these differences; in other words, he does not, before making this purchase, explore the market in the way the retailer does on the wholesale market. Very often he prefers to deal at one shop rather than another. From the consumer's side therefore the levelling influence of the market tends in many cases to be absent. It is difficult to estimate the effect of this on consumers' prices but attention may be drawn to the conclusion in the study of German conditions that an action designed to eliminate such

price differences would reduce the level of prices by at least 10 per cent. In that study it was argued that local price differences reflected less differences in costs than differences in the retailer's earnings. And in the light of what has been said above on the nature of costs it is evident that even differences in costs on a properly competitive market do not justify differences in prices. The remedy however lies chiefly in the hands of the consumer.

The imperfections of the market within the distributive process itself are often of equal importance or even greater importance than the imperfections on the consumer's side. Perhaps one of the most notable features of the collection of studies in Part II is the frequency of references to the possession of monopolistic or quasi-monopolistic powers on the part of distributors or their organisations. Owing to the diversity of periods to which the studies refer we cannot indeed determine how far these powers prevail to-day. In all probability, however, they are stronger to-day than in the earlier periods with which many of the reports deal. The most extreme examples are perhaps offered by the report of the Canadian Royal Commission on Price Spreads, from which it appears that in several food industries there are large corporations which are able more or less completely to dominate the market, to the consequent disadvantage both of the primary producer and of the consumer. In almost all countries, moreover, the majority of traders form associations for their common benefit. Not all of these exert or are able to exert monopolistic influence. On the other hand, many of them do prescribe and regulate the prices at which members may sell their goods, and employ effective sanctions for their enforcement. The prices under such agreements are designed to enable the traders to cover their costs and gain a "reasonable" profit. Another aim is often to prevent fluctuations in raw material prices bringing about similar fluctuations in the price of the final product, in order to prevent irregular and disturbed trade. It is perhaps significant in this respect that, in a number of German towns in which the policy of a steady bread price was pursued, the average level of prices tended to be higher than in towns in which this policy was not pursued.

These almost "natural" imperfections of the market, so old and so general as to be taken almost for granted, are today supplemented in nearly every country by the effects of State economic policy. Often the regulation of agricultural prices has necessitated the regulation of both retail food prices and distributive margins. In other cases—as for example in the United Kingdom—the distributive margin has tended to increase. The report of the Food Council in that country in 1936 stated that "Consumers have legitimate cause for complaint in so far as the Marketing Schemes, which were intended to give primary producers the power to organise and co-ordinate the sale of their produce, confer in addition powers of intervention in the subsequent stages of treatment and distribution which are not the province of producers and of which they cannot be expected to have expert knowledge. The consequent tendency of producers is to seek the co-operation of the intermediaries, who do know the trade, by securing to them minimum margins, which are frequently exceeded and which are not based upon ascertained costs for the specific services to be rendered." In the study of distributive spreads in Austria it is stated that "In the case of those commodities which are subject to State regulation, as are dairy products... the margin between wholesale prices and producers' prices may be wide". It does seem true that with the growth of State intervention in economic affairs the distributive process has ceased to be affected only, or even mainly, by the power of the competitive market.

The growth of the large scale distributive organisation in post-war years is, no doubt, in large part due to the fact that it is able to secure economies of various kinds which are not open to the smaller unit, and consequently to sell at lower prices. The Canadian report also affords instances of this principle. On the other hand, if the growth is such as to give

the large organisation a dominant influence on the market, reducing the influence of competition, then several factors may arise which tend to raise total costs (and, subsequently, prices) which do not at the same time facilitate the restoration of competition. In several instances in Part II the phenomena of "overcapitalisation" and "overcapacity" are cited as being responsible for unnecessarily high prices. It should not require a special knowledge of economic theory to see that such phenomena can only occur in the absence of effective competition. Where competition is perfect the capitalisation and overhead costs cannot determine the price of the produce. The price will be determined on the market by supply and demand. Out of a state of equilibrium the price resulting may be either higher or lower than that necessary to cover the capital charges—interest, amortisation, etc.—of a given enterprise. A firm possessing predominance on the market is however able, and does, fix the price at such a level as to enable it to meet as great a proportion as possible of the capital charges. In such a case, where demand is declining, as for some foods consequent upon changes in consumers' preferences and notions of diet, the decline is accompanied, not, as under competition, by a fall in price, but by a fall in output, whilst price may remain stable or fall only slightly. Under competition "overcapitalisation" and "overcapacity" are disadvantageous only to the producer, under monopoly they often operate to the disadvantage of the consumer.

Where competition is limited, certain business practices are sometimes adopted which are not in general to the advantage of the consumer. Though the use of trade marks and patents is naturally more common in respect to industrial products than in respect to agricultural products, even in the latter case it facilitates the practice of re-sale price maintenance. Where goods are, for example, canned or prepared in a special way and given a trade name by a single large concern, that concern may sell them to retailers for re-sale at prices fixed by the concern—penalties being applied to retailers who go below such prices. Thus even though retail trade be not monopolised, the large scale wholesaler is able to exert a monopolistic influence on the retail price. In such cases too, the trade name is often the only special feature which distinguishes the commodities from others which otherwise would be its rivals.

Another related factor which increases the total expenditure on distribution is the indulgence in costly advertising campaigns—one of the reasons why the proportion of selling costs to total distribution costs has so often risen. Though it may be conceded that costly advertising campaigns of the "eat more fish" variety may bring not only a gain to the fish producers and distributors but also to the consumer, who may thus be made aware of the deficiencies of his diet, it is more doubtful whether costly campaigns recommending the consumer to eat Brown's fish rather than Jones's fish and *vice versa* works to the ultimate benefit either of Brown and Jones or to the consumer. Where several large firms engaged in the trade in the same product year after year expend large sums in advertising their respective products it is arguable that the total market does not expand in proportion to the expenditure on advertising, the costs of which are ultimately born by the consumer. Such tendencies are perhaps most evident in North America, but are by no means entirely absent from European countries.

Advertising of the second type noted above is a feature not of simple monopoly so much as of the intensified competition between a small number of large enterprises. In Part II criticism is often levied however by high authorities not only against this but against the intensified competition of a large number of small enterprises. Such criticisms are directed particularly against some types of organisations of retail distribution. The main defect of such organisations is that there is an extraordinary amount of overlapping. Particular streets may be served by several retailers situated at varying distances with the consequence that expenses of carriage, of labour etc. are duplicated quite unnecessarily. This may be justified

in those cases where each retailer sells a special type or quality of good, but it can hardly be so where the commodity is of a staple type—for example milk supplied by the same co-operative or wholesale distributor. An agreement among retailers to divide a given area amongst themselves—not, of course, supplemented by an agreement to maintain prices—could not fail in many cases substantially to reduce costs. “It is obvious”, states the Report of the Milk Reorganisation Commission for Great Britain “that the costs of delivery must be greater when a large number of roundsmen are serving the same street; and the costs of equipment, premises and labour and of balancing supplies must all be higher with, say, ten 15 gallon rounds than with one 150 gallon round. We have been furnished... with particulars for a number of towns from which it appears that large numbers of retailers must have rounds of considerably less than 20 gallons and some of them rounds of 10 gallons or less...” It is hardly necessary to add that similar defects are also to be found in other stages of the distribution process.

Not very much information is offered in Part II concerning factors such as indirect taxes, which are, from the point of view of distribution alone, an unnecessary burden. In almost all countries today many foodstuffs are augmented in price in the distributive process through the imposition of sales taxes, excise duties and the like. Some taxes indeed such as dealer's licences, do not affect prices, in that they are fixed charges paid out of income. Sales taxes on the other hand are automatically added to the price of the commodity. In Austria the sugar turnover tax represents 6.56 per cent. of the retail price. In Germany in 1930-31 the consumption tax revenue represented 2.2 per cent. of the total expenditure on foodstuffs and import duties 1.8 per cent. Such taxes are imposed for reasons of financial or agricultural policy. Whether such reasons are sufficient or not is clearly outside the scope of the present study, in which, however, the existence of the burdens of taxation must be noted.

Likewise the data contained in Part II on transport rates and costs is not sufficient to enable one to judge the degree to which these are excessive. In general terms however it may be said that their excessiveness or otherwise depends primarily on the adaptability of the organisation of road and rail services to the individual needs of the particular trade, which evidently vary, for example, as between cattle, fruit or fish. The principle widely adopted by railways of charging “what the traffic will bear” is an illustration of the way in which rates may be excessive on high value goods which cost no more to transport than low value goods. On the other hand transport rates which are rigid and do not respond to seasonal fluctuations may often diminish the efficiency of marketing. The inadequate use of carriage space also increases the unit expenditure on transport.

In the light of the foregoing it may be concluded that though it is not possible to make any statement as to the proportion of distribution costs which are regarded as excessive it is possible on the other hand to assert that there are several reasons to suppose that such costs are not as low as they might be. Bearing in mind that under *competitive conditions* a lowering of distribution costs will in the long run result in lower consumer's price we may, in the next section, briefly survey some of the methods to bring such a reduction in costs about.

IV. — METHODS OF REDUCING DISTRIBUTION COSTS.

The analysis in the foregoing section of some factors which tend to make distribution costs excessive almost automatically suggests some of the directions in which action may be taken to lower them. In most countries at different times certain efforts have been made to this end by consumers' organisations, by central and local governmental authorities, by the

distributors and the producers—in fact, all the parties concerned—either separately or by co-operation amongst themselves. Some methods do not involve any changes in the organisation of distribution, but consist in removing the imperfections of the market—from both the consumers' and the producers' side—which were indicated above as partly responsible for excessive costs. Others relate to the improvement of individual services such as transport and marketing accomodation; and still others involve important changes in the organisation of distribution. Their importance and success naturally vary considerably between countries according to the general state of industrial and agricultural development.

Among the efforts made to reduce retail prices, not involving changes in the organisation of distribution, may be noted the "fair price" campaigns—one example of which is described in the section in Part II relating to Germany. Investigations into various markets had led to the discovery that local variations ascertained in retail prices of similar quality goods were not attributable to differences in the objective conditions—in costs of labour, or transport, or rents. One of the main reasons, instead, was the consumer's lack of knowledge of the market—due either to his preference for a particular retailer or to his desire to shop at the nearest dealer. In consequence it was thought that if a responsible body were to examine the conditions of the market and determine "fair" or "objective" prices and then publish and publicise these by means of the daily press and the wireless, the consumer would be in a better position to judge whether he was paying reasonable prices or not, whilst the retailer who was banking upon his customer's ignorance of the market to charge excessive prices would find a change in policy appropriate. Such a campaign was begun in Germany at the end of 1929 and very shortly had notable effects in reducing the average level of retail food prices and, *ipso facto*, the wholesale-retail margin. It may be suggested therefore that the first imperfection of the market noted in the preceding section need not be regarded as irremovable. However, it is well to point out that in general the retailers who charge excessive prices owing to the customers' lack of knowledge are probably not those who sell in the poorest quarters of a town; a lowering of prices by this method would not necessarily appreciably benefit the undernourished sections of the population.

The problem raised by the second type of imperfection—that of controlling monopoly or monopolistic tendencies in the food trades—is obviously not one that can be treated fully here. We may note however that though in most countries the main forms of monopoly are today tolerated by law, attempts are constantly made—with varying success—to prevent their exploiting their advantages to the full. The chief method—apart from rendering certain practices illegal—to which we may here refer is the setting up of public or semi-public bodies to maintain a watch over the price policies of distributors or distributors' organisations for the consuming public's benefit. In most cases such bodies do not have executive powers but merely the power of reporting to and advising the relevant Ministry as to action which is desirable from the consumers' standpoint. In the United Kingdom, for example, the Food Council was set up in 1925 "To investigate and from time to time to report to the President of the Board of Trade on such questions as by reasons of complaints from persons interested or otherwise appear to the Council to require investigation in the interests of consumers or traders, or are referred to them by the President of the Board of Trade, relating to the supply or price of articles of food of general consumption..." Up to March 1937 it had made 25 reports, referring to bread, tea, milk, market garden produce and meat. At various times when distributors associations have desired to raise their prices the Council has itself investigated the justification of the change proposed. It is of interest to note also that the Agricultural Marketing Acts which have marked a new epoch in British agricultural policy also provided for the setting up of Consumers' Committees with similar functions. It is however

evident that the success of all such bodies depends both on the powers which are given to them and on the consideration they receive at the hands of the final State authorities.

We have seen that the criticism is often made that the increased services rendered to the consumer by the retailer have tended to increase distribution costs considerably since the war; it may be asked therefore whether and in what directions it is possible to eliminate superfluous services. There are indeed many difficulties in this connection, not the least being the necessity for co-operation among retailers. Granted this co-operation however—which should not be impossible of attainment—the retailer might at least restrict two services, namely, the delivery of the goods at the consumers' domicile and the granting of credit. Both of these services to-day are rendered in general indiscriminately to all customers who wish to take advantage of them. In general however not all the customers avail themselves of them; nevertheless, since the general practice is to charge the same prices to credit customers and customers who have their purchases sent home, the cash customers and those who carry the goods home themselves are obliged to contribute to the costs of the services rendered to others. It is clear therefore that at least one important step in reducing such services would be to charge for them. There are indeed psychological difficulties in putting such a system into practice. Whether they cannot be overcome by appropriate public educational campaigns need not be discussed here.

If the consumer is to be encouraged to make an effort to be economical, so too the distributor. In some countries much progress has been made by the individual entrepreneur in reducing costs by the elimination of waste, the better use of labour, transport and space; in others, much ground has to be covered. The smaller retailer, who often takes to his trade because it does not require special training or qualifications, often appears to lack knowledge of the best methods of organising his affairs. The Linlithgow Committee indeed reported, in regard to the fruit and vegetable trade in the United Kingdom that "a large number of retailers lack business training and efficiency in the conduct of their business", and calculated that by improved methods they could reduce prices by "over one twelfth". It does seem that even to-day there is scope for the undertaking of detailed studies of the organisation of small enterprises with a view to the propagation of improved methods.

More radical methods than such as the above have frequently been proposed and put into practice. On the one hand producers have organised co-operatives to carry out the whole process of collection and placing on the wholesale market. On the other hand, retailers attempt to avoid the private wholesale dealers by organising a wholesale co-operative. And again, consumers have joined retail co-operative societies whose aim is to eliminate retail profits from the consumer's price. These co-operative efforts have had an undeniable success in many trades. Sometimes these attempts to "eliminate the middleman" arise spontaneously, quite often however they result from public encouragement in the form either of propaganda and instruction or of more concrete assistance. The co-operative form of organisation evidently possesses certain advantages through the centralisation of marketing and the elimination thereby of many costs which would be incurred if each producer acted independently, marketing his own small quantities separately. Though co-operation has made considerable progress since the war, the question of how far the principle of co-operation can be extended to-day obviously deserves the careful attention of those who are interested in the reduction of distribution costs.

In Part II, in the study of distributive margins in bread in Germany it is suggested that economies could be made if bakers of a given district organised co-operative factories which would manufacture all the standard types of bread, whilst the baker would concentrate his production on the more fancy goods. According to the study from which the suggestion is taken, such methods had already been adopted in Denmark, with considerable success.

This example as well as the post-war trends in the organisation of the distribution of milk suggest that where an important part of the distribution process consists in the transformation of the raw foodstuff, that transformation may most economically be performed centrally and on a large scale.

It will be seen that there are possibilities of appreciable reductions in costs provided that traders learn to co-operate. One of the main reasons for excessive costs noted in the preceding section was the overlapping of retailers' services. Here again the remedy lies in co-operation among retailers—in co-ordinating their activities and dividing up their market. In most cases the large number of retailers in a given area would prevent the assignment of a given number of streets for order business to a single retailer—and co-operation to that degree is hardly practicable. But the assignment of several streets to a group of retailers would probably suffice to reduce overlapping and duplication whilst impeding monopolistic behaviour on the part of those retailers.

Less success has attended the efforts of individual farmers to carry out their own marketing themselves. Though the farmers thus avoid the middleman, the fact that they have to divide their time and resources often tends to diminish their efficiency both on the farm and in marketing. Nevertheless, where a large farmer creates a separate dependent marketing organisation this defect may be overcome. It is however unlikely—except in the case in which distribution costs are a small proportion of the value of the commodity—that a farmer distributing directly his own wares is able to make the economies that concerns can make which are engaged in the distribution alone of the goods of many farmers.

Such methods as the above by no means exhaust the list of possibilities of reducing the costs of distribution. No mention has been made, for example, of the possibilities of direct State action to remove certain indirect taxes and duties, to revise and reorganise transport rates, nor of all the many mechanical appliances which in various countries have been used to economise labour or shop space. That there are possibilities in these directions is almost self evident. The aim of this section has been indeed, not to present an exhaustive list, but to show, by a few examples, that there are sufficient possibilities of reduction of distribution costs to justify the belief which underlay the proposal of the League Committee on Nutrition to the Institute to collect material on the distributive margin—the belief, namely, that research in this field, combined with appropriate action, could contribute to lowering prices of necessary goods to the consumer, and, consequently, to the improvement of nutrition standards. The present report is only a tentative first effort in this direction; if it succeeds in stimulating further enquiry it will have achieved its purpose.

PART II.

THE DISTRIBUTIVE MARGIN IN DIFFERENT COUNTRIES

AUSTRIA (1)

I. — Introduction.

Though the spread between producers', wholesalers' and consumers' prices of foodstuffs has been the subject of much discussion in Austria, the existing scientific literature is scanty (2).

The following study makes use not only of the published studies but of a number of unpublished investigations by the Austrian *Institut für Konjunkturforschung*, as well as of original investigations by the writer. Recently the Austrian *Institut* has made studies of price margins in the trade in some foodstuffs and publishes periodically figures showing the changes in the retail margin as a percentage of the wholesale prices. The table below indicates the average monthly retail margin for ten foodstuffs, as a percentage of the wholesale price, from 1929 until the beginning of 1937.

	1929	1930	1931	1932	1933	1934	1935	1936	1937
January	40	43	45	40	33	30	30	35	27
February	39	43	45	37	33	30	31	36	28
March	34	43	41	36	33	28	31	37	28
April	34	45	41	35	31	31	32	35	—
May	35	46	41	35	34	31	31	34	—
June	45	36	37	31	27	31	28	29	—
July	30	37	31	30	33	34	26	32	—
August	36	40	37	34	33	30	30	32	—
September	37	43	38	34	34	31	31	33	—
October	41	32	40	31	33	31	31	29	—
November	39	40	35	30	33	30	31	30	—
December	41	41	36	33	31	30	34	30	—
Year	38	41	39	34	32	30	30	33	—

Prices of agricultural products in Austria are to a certain extent subject to very stringent government control. Apart from the restrictions on imports, the effect of those on internal trade is very considerable. These latter restrictions relate mainly to dairy products and meat. The price of bread is also constantly subject to State regulation, while that of sugar is determined by the sugar cartel. The prices of other commodities are influenced by taxation or customs duties.

(1) Report prepared by Dr. A. Kozlik, *Österreichisches Institut für Konjunkturforschung*, Vienna. —
 (2) i *Denkschrift der Präsidentenkonferenz der Landwirtschaftlichen Hauptkörperschaften Österreichs über Massnahmen zur Sicherung des weiteren Bestandes der Bergbauernschaft*. — ii *Jahresbericht 1936, herausgegeben vom Österreichischen Kuratorium für Wirtschaftlichkeit*. Verlag Julius, Springer, Wien, 1936. —
 iii *Denkschrift der Landwirtschaftskammer für Kärnten über die Krise der Kärntner Landwirtschaft*, Klagenfurt, 1935.

An important position in the trade in agricultural products is occupied by the agricultural co-operative societies, which also receive very considerable State encouragement. It is due to their action that the margin between the producers' prices and the wholesale prices of those commodities, the trade in which is not subject to state control, is liable to comparatively small fluctuations only and is maintained within moderate limits. On the other hand in the case of those commodities which are subject to State regulation, as are dairy products, or to cartel agreement, as is sugar, the margin between wholesale prices and producers' prices may be wide.

In general terms the following may be said in regard to the development of this margin, or "spread" between producers' prices and wholesale or retail prices: In the case of commodities the trade in which is under control, the difference between the producer's and consumer's prices has considerably increased since 1929, the greater proportion of the increase being, not on the retail trade margin, but on the margin between the wholesale price and the producer's price. A definite factor in the variation in these price margins was the "crisis supplement" of August 1932 which doubled the tax on the turnover of goods (*Warenumsatzsteuer*) in the case of all commodities subject to this tax, with the exception of potatoes, bacon, lard, pig fat and rye flour.

2. — Bread and breadstuff cereals.

The normal bread in Austria contains about 75 per cent. rye flour and 25 per cent. wheat flour. In recent years endeavours have been made to stabilise the price of bread by means of an elastic tariff policy. For other household purposes wheat flour is exclusively used. The retail trade margin of wheat flour keeps within the limits shown in the accompanying table and has increased since 1931. By comparison with the wholesale prices of wheat the extent of the milling margin may be deduced. There have been added to the table the wholesale price for 75 kg. of rye and the same for 25 kg. of wheat, so as to obtain the price for 100 kg. of breadstuff cereals. It is then possible to compare this last price with the price of bread and so obtain an idea of the course of the difference between the price of bread and that of breadstuff cereals.

Years	I Wheat: Price in national wholesale trade (Sch. per 100 kg.)	II Wheat flour: Price in national wholesale trade (Sch. per 100 kg.)	III Spread between wholesale wheat and wholesale flour prices (Sch. per 100 kg.)	IV III as percentage of wheat price	V Wheat flour: Retail price (Sch. per 100 kg.)	VI Spread between wholesale and retail flour prices (Sch. per 100 kg.)	VII VI as percentage of wholesale flour price
1923	36.57	60.54	23.97	65.5	64	3.46	5.7
1924	36.77	64.17	27.40	74.5	65	0.83	1.3
1925	47.35	83.04	35.69	75.4	87	3.96	4.8
1926	40.96	78.23	37.27	91.0	82	3.77	4.8
1927	40.97	71.17	30.20	73.7	75	3.83	5.4
1928	39.59	66.00	26.41	66.7	70	4.00	6.1
1929	33.29	59.96	26.67	80.1	64	4.04	6.7
1930	27.96	59.35	31.39	112.3	65	5.65	9.5
1931	25.40	53.79	28.39	111.8	56	2.21	4.1
1932	33.58	65.25	31.67	94.3	68	2.75	4.2
1933	35.06	70.38	35.32	100.7	73	2.62	3.7
1934	35.67	66.29	30.62	85.8	71	4.71	7.1
1935	36.47	65.15	28.68	78.6	70	4.85	7.4
1936	35.03	64.30	29.27	83.5	69	4.70	7.3

Years	Bread				Small bread or rolls (<i>Kleingebäck</i>)			
	I Bread cereals (1) (Sch. per 100 kg.)	II Price of normal bread in Vienna (Sch. per 100 kg.)	III Spread between prices of bread cereals and of bread (Sch. per 100 kg.)	IV III as percentage of price of bread cereals	V Small bread (<i>Kleingebäck</i>) (Sch. per 100 kg.)	VI Wheat flour (Sch. per 100 kg.)	VII Spread between small bread and wheat flour prices (Sch. per 100 kg.)	VIII VII as percentage of wheat flour price
1923	32.17	51.50	19.33	60.0	103	60.54	42	69
1924	35.05	59.22	24.17	69.0	130	64.17	66	103
1925	42.07	63.72	21.65	51.5	169	83.04	86	104
1926	31.09	57.88	26.79	86.2	169	78.23	91	117
1927	38.55	66.06	27.51	71.4	175	71.17	104	146
1928	39.34	70.42	31.08	79.0	175	66.00	109	165
1929	30.52	63.77	33.25	108.9	168	59.96	108	180
1930	21.94	59.50	37.56	171.2	168	59.35	109	185
1931	25.75	59.69	31.94	124.0	160	53.79	106	196
1932	30.34	65.47	35.13	115.8	160	65.25	95	146
1933	25.68	58.17	32.49	126.5	175	70.38	105	150
1934	26.93	57.36	30.43	113.0	167	66.29	101	153
1935	28.19	60.84	32.65	115.8	167	65.15	102	157
1936	28.00	60.84	32.84	117.3	167	64.30	103	161

(1) 75 kg. rye and 35 kg. wheat wholesale price.

Next in importance after bread are the small bread (*Kleingebäck*) and rolls (*Semmel*) made from wheat flour. There is no weight definitely prescribed for this type. It is left to the individual master bakers to fix the weight so that fluctuations in the prices of flour are equalised by slight changes in the weight, without affecting the prices. The so-called *Kaisersemmel*, the standard roll, had during the years 1923 to 1933 an official weight of 4 hectogrammes (25 to the kg.); since 1934 it has had an official weight of 4.2 hectogrammes (23.8 to the kg.). As the price of small bread per kilogramme is calculated with reference to this standard, the number reckoned may be adjusted with the wholesale price of wheat, in order to trace out the variation in the milling, baking, and distribution margins. The milling margin in the table was deduced by means of comparison with the wholesale price of wheat flour.

Years	Wheat grits				Maize grits			
	I Retail price (Gr. per kg.)	II Wholesale price (Gr. per kg.)	III Spread between wholesale and retail price (Gr. per kg.)	IV III as percentage of wholesale price	V Retail price (Gr. per kg.)	VI Wholesale price (Gr. per kg.)	VII Spread between wholesale and retail price (Gr. per kg.)	VIII VII as percentage of wholesale price
1929	74	64	10	16	68	60	8	13
1930	72	62	10	16	65	58	7	12
1931	66	55	11	20	59	48	11	23
1932	76	66	10	14	57	44	13	30
1933	80	71	9	13	55	38	17	45
1934	77	69	8	12	45	35	10	29
1935	76	67	9	13	46	39	7	18
1936	75	68	7	10	47	41	6	15

In further explanation it may be added that the price of bread is very considerably influenced by the Government, as the large bakeries are subject to control.

The course followed by the wholesale and retail trade margins of the other cereal products of importance for nutrition, namely wheat grits and maize grits (polenta), and by the milling price margin for maize grits is also to be seen from the last table in this section.

3. — Meat.

In Austria pork and beef have a large market, but there is almost no market for mutton. By the legislation on the live stock trade of November 1931 meat prices became considerably higher. In consequence, however, of the great increase in pig-feeding undertaken in the country, there was up to 1933 a severe decline in meat prices, which it was attempted to check by limiting the number of animals placed on the market.

In addition a price maintenance levy (*Preisstützungsabgabe*) was introduced which was utilised for the removal of cattle from the market, thereby keeping up the prices. Since markets in Austria depend for their upkeep on the market fees, as soon as the artificially inflated prices drop, the fees per head tend to rise sharply in consequence of the high fixed costs. In this way the spread between consumers' and producers' prices is considerably widened.

(a) *Pigmeat*. — As below in the case of beef, we consider here the position on the Vienna meat market, which is the ruling market for Austria. The spread and its variations can be reckoned from the wholesale prices for live animals and the wholesale prices for meat. The retail trade margin is also shown in the table.

Years	I Wholesale price of pork pigs, Vienna (Sch. per 100 kg.)	II Wholesale price of pigmeat, Vienna (Sch. per 100 kg.)	III Spread between wholesale pig and pigmeat prices (Sch. per 100 kg.)	IV III as percentage of whole sale pig price	V Retail price of pigmeat, Vienna (Sch. per 100 kg.)	VI Spread between wholesale and retail prices of pigmeat (Sch. per 100 kg.)	VII VI as percentage of whole sale pigmeat price
1929	237	339	102	43	495	15	46
1930	203	292	89	44	483	191	65
1931	173	223	50	29	378	155	70
1932	173	233	60	35	403	170	73
1933	153	217	64	42	357	140	65
1934	127	179	52	41	318	139	78
1935	145	179	34	23	315	136	76
1936	158	197	39	25	332	135	69

The height of the market charges in Vienna is to be seen from the following table taken from the report of the Conference of Presidents.

Selling weight 70 kg.	Schillings
Sale price 70 kg. at 1.25 sch.	87.50
Costs	11.46
Net proceeds	76.04

Analysis of the costs:

	Schillings
Motor lorry transport (8 groschen per kg.)	5.60
Lump payment covering market fees and expenses.	3.00
Litter	0.50
Disinfection.	0.08
Declaration form stamp	0.20
Price maintenance tax (2 groschen per kg.)	1.40
City weighing fee (0.2 groschen per kg.)	0.14
Commission.	0.50
Postage and stamps.	0.04
	11.46
	11.46

Pig fat was not examined, since it is imported for the Vienna market exclusively from abroad.

(b) *Beef.* — The price of beef has a twofold function. On the one hand it is decisive for the income of the breeders, who sell the cattle reared in the highlands for fattening on the plain. It proved however possible to establish only the course of the prices of live animals at St. Mark (the slaughterhouse of Vienna) and not that of the prices of the store cattle, which are decisive for the breeders. On the other hand the price of beef determines the income of the feeders who fatten the cattle. The movement of the spread between the prices of live cattle and the wholesale and retail prices of beef may be clearly seen from the next table.

Beef and Veal.

Years	I Wholesale price of steers Vienna (Sch. per 100 kg.)	II Wholesale price of beef, Vienna (Sch. per 100 kg.)	III Spread between wholesale price of steer and beef prices (Sch. per 100 kg.)	IV III as percentage of wholesale steer prices	V Retail price of beef, Vienna (Sch. per 100 kg.)	VI Spread between wholesale and retail beef prices (Sch. per 100 kg.)	VII VI as percentage of wholesale beef prices
1929	156	264	108	69	344	80	30
1930	147	257	110	75	360	103	40
1931	126	238	112	89	345	107	45
1932	125	248	123	98	322	74	30
1933	117	227	110	94	318	91	40
1934	108	218	110	102	298	80	37
1935	104	188	84	81	280	92	49
1936	117	154	37	32	280	126	82

A complete statement of the market fees and charges taken from the same sources as in the case of pork is given as follows:—

Selling weight 368 kg.

	Schillings
Sale price 368 kg. at 80 groschen	294.40
Costs	43.81
Net proceeds	250.58

Analysis of costs:

	Schillings
Freight per head for a minimum of 12 animals	20.00
Driver's wage	3.30
Cordage, etc.	0.18
City market fee	1.60
City inspection fee	2.00
Gratuity (<i>circa</i>)	0.50
Stall fee and insurance	0.16
Fodder	2.09
Apron fee	0.25
Fee stamps for concession form	0.60
Price maintenance tax (1 groschen per kg.)	3.68
Manipulation fee (0.3 per cent.)	0.89
Bank charge (0.3 per cent.)	0.89
Insurance for internal damage (1 per cent.)	2.95
Commission (1 ½ per cent.)	4.42
Postage	0.30
	43.81

4. — **Fish.**

In the consumption of fish primary importance attaches to sea-fish. Among fresh water fish carp is of special interest, and the course of prices for carp, wholesale and retail, are shown in the accompanying table. Although the retail trade price spread in absolute figures has shown a decline since 1929, in consequence of the marked decline in wholesale prices of carp, relatively there has been an increase in the margin.

Fish.

	1929	1930	1931	1932	1933	1934	1935	1936
Retail price of carp (groschen per kg.)	396	348	302	270	219	212	232	242
Wholesale price of carp (groschen per kg.)	320	288	222	191	164	154	162	177
Margin spread (groschen per kg.)	76	60	80	89	55	58	70	65
Margin spread as percentage of the wholesale price	24	21	36	47	34	38	43	37

5. — **Milk, milk products, and eggs.**

(a) *Milk.* — Up to 1929 a correspondence existed between the price of butter and the price of milk, *i. e.*, the proceeds from milk used for making butter were almost as high as the proceeds from the sale of milk for direct consumption. Then the butter price was forced down by foreign competition, so that the relation between the proceeds from sales of fresh milk and from its transformation into butter was upset. The supply to the market of fresh milk accordingly increased, while at the same time, owing to the economic crisis, there was a marked decline in consumption. Regulation of the milk market supervened. A distinction was made between the price for milk for direct consumption and the price for milk for manu-

facturing purposes. The latter price was fixed at 10 groschen per litre below that of fluid milk. Moreover a quota was from time to time established, in accordance with which each producer might sell a certain portion of his milk as fluid milk and was obliged to sell a certain proportion as milk for dairying purposes. On 17 July 1931 the Milk Compensation Fund (*Milchausgleichsfond*) was set up. The idea was to impose on each farmer who has milk to sell as fluid milk a levy which was to be for the benefit of those farmers who were compelled to allow their milk to be used for butter and cheese making. The levy amounted at first (1931) to 2 groschen per litre, but later, in consequence of the further fall in butter prices, it was raised to 3 and then to 4 groschen. A part of the Milk Compensation Fund was also applied to the purpose of granting premiums on the export of butter, so as to maintain the level of butter prices within the country. The attempt of the dealers to enlarge their turnover by lowering the price of milk led, on account of the pressure on producers' prices, to the Order on Milk Prices of 13 May 1933, which fixed the price of milk by law. The result of this legal fixing of the price of milk was a considerable rise in the trading margin, which for fluid milk rose to 54 per cent. of the wholesale price. At that time a number of small dairies came into being and were able to make profits in consequence of the large trading margin, and their activity further depressed the market of the existing large dairies which had been already affected by the crisis. The large number of dairies in the end tended to the maintenance of the trading margin at a high level, because it was feared that the lowering of the margin would mean working at a loss for many dairies, and there was a general desire to avoid this. In connection with the rise in the trading margin it has of course to be remembered that by the milk regulations of March 1931 compulsory pasteurisation was introduced, and accordingly the costs of processing increased.

The wholesale price in Vienna shown in the table on page 31 is not the producers' price, but the wholesale price for fluid milk paid by the dairies. From this are deducted at present 3 groschen per litre for the Milk Compensation Fund and 1 groschen for the Lower Austrian Milk Compensation Fund, or 4 groschen in all, which has to be paid by the farmer who thus receives 26.5 groschen per litre of fluid milk. At present the farmer may deliver 64 per cent. of his milk output as milk for direct consumption, and must sell 36 per cent. as milk for dairy manufacturing purposes. For this latter type of milk he now obtains from the dairies only 18 groschen per litre, and from the Milk Compensation Fund a supplement of 4 groschen, so that his total price for manufacturing milk works out at 22 groschen per litre. Thus out of 100 litres of milk he sells:

64 litres as fluid milk at 26.5 groschen	16.96 sch.
36 litres as manufacturing milk at 22.0 groschen	7.92 »

100 litres in all	24.88 sch.

so that for milk delivered at the railway siding in Vienna he obtains on the average 24.88 groschen per litre. Out of that there has to be deducted 0.5 groschen per litre for cleaning the cans, 0.5 groschen for the milk stall and 0.5 to 2 groschen for transport, so that some 22 to 23.5 groschen net per litre of milk remain to the farmer. From 1 January 1937 the retail price of milk was lowered from 46-47 groschen per litre to 44-45 groschen. The lowering of the price was achieved exclusively at the expense of the trading margin and had no effect on the producers' price. The present margin of 14 groschen per litre is divided between the dairies (9 groschen) and the retail dealers (5 groschen). Exact information about the trading

margin in the provinces is not available, but it is generally speaking lower than in Vienna; on the one hand, the producers' price is higher and, on the other, the retail price is somewhat lower.

(b) *Cheese.* — In the case of the type of cheese most important for consumption, namely the half-Emmenthal cheese, the wholesale price declined, in consequence of the large surplus production in the country, from 4.39 to 3.10 schillings per kg. while the retail price fell from 5.27 to 3.60 schillings. Since at the same time the wholesale price for manufacturing milk fell, as has been shown, from 36.5 to 22 groschen per litre, a decline of 40 per cent., while there was only a 31 per cent. fall in the retail price of half-Emmenthal cheese, the size of the margin between the milk producer's price and that paid by the consumer of cheese has very considerably increased. The margin in the retail trade has somewhat declined.

(c) *Butter.* — The butter trade is controlled by a combination of large dealers. The price is artificially maintained at a high level by means of a reduction in supplies to the market, large quantities being exported. The difference between the low export prices (at times in 1934 the export price was 90 groschen per kg.) and the high prices on the national markets is covered from the Milk Compensation Fund. The marked decline in the retail margin is to be explained by the intervention of the Government, which practically eliminated direct sale by the producer to the retail dealer, which was formerly the determining factor in the wholesale price, so that the wholesale price is now represented only by the selling price of the large dealers and of the dairies to the retail traders. The retail selling price of butter declined from 1929 to 1936 from 6.48 schillings per kg. to 4.40, a decline of 32 per cent. This decline is thus of the same order as that of the retail price of half-Emmenthal cheese. Since the selling price of manufacturing milk, which is the standard price for the producer, also underwent over the same period a 40 per cent. decline, the result is also in this case a considerable widening of the spread between consumers' and producers' prices. Some modification, however, occurred in this margin. The retail trade margin fell from 1.35 schillings per kg. in 1929 to 40 groschen in 1936, or by 70 per cent., so that there was an increase in the margin between the producer's price (of manufacturing milk), which declined only by 31 per cent., and the wholesale price of butter. Assuming that for making one kilogramme of butter

YEARS	MILK				HALF-EMMENTHAL CHEESE			
	Retail price	Wholesale price	Spread	Spread as percentage of wholesale price	Retail price	Wholesale price	Spread	Spread as percentage of wholesale price
	Gr. per litre	Gr. per litre	Gr. per litre		Gr. per kg.	Gr. per kg.	Gr. per kg.	
1923.	49	39.1	9.9	25	—	—	—	—
1924.	52	38.6	13.4	35	—	—	—	—
1925.	52	36.5	15.5	43	—	—	—	—
1926.	52	36.5	15.5	43	—	—	—	—
1927.	52	36.5	15.5	43	—	—	—	—
1928.	52	36.5	15.5	43	—	—	—	—
1929.	52	36.5	15.5	43	527	439	88	20
1930.	54	36.2	17.8	49	494	419	75	18
1931.	50	33.6	16.4	49	447	383	64	17
1932.	47	33.0	14.0	42	436	384	52	14
1933.	46	30.7	15.3	50	395	338	57	17
1934.	47	30.5	16.5	54	359	308	71	17
1935.	47	30.5	16.5	54	354	288	66	23
1936.	47	30.5	16.5	54	360	310	55	18

25 litres of milk is required, the following is the development of the difference between producers' price of milk and wholesale price of butter: the price of 25 litres of milk for the producers fell from 1929 to 1936 by 3.62 schillings; the wholesale price of butter over the same period, by only 1.13 schillings per kg. Even if the fall in the price of the cheese and other products made from skimmed milk is taken into consideration, there still remains as result a much smaller decline in the wholesale price of butter than in the producers' price for manufacturing milk.

YEARS	BUTTER				EGGS			
	Retail price	Wholesale price	Spread	Spread as percentage of	Retail price	Wholesale price	Spread	Spread as percentage of
	Gr. per kg.	Gr. per kg.	Gr. per kg.	wholesale price	Gr. each	Gr. each	Gr. each	wholesale price
1929.	648	513	135	26	20	17.93	2.07	12
1930.	610	456	154	34	17	14.34	2.66	19
1931.	553	411	142	35	16	12.58	3.42	27
1932.	538	408	130	32	15	12.67	2.33	18
1933.	435	373	62	17	14	11.72	2.28	19
1934.	450	344	56	14	13	11.01	1.99	18
1935.	440	402	38	9	14	11.90	2.10	17
1936.	440	402	40	10	14	11.94	2.06	17

A novelty for the butter market was introduced in the form of the so-called melted butter (*Butterschmalz*). In order to avoid the costly export of butter without depressing at the same time the price of butter on the home market, butter was melted down and the melted butter was sold cheaper as *Butterschmalz* for cooking, first at the retail price of 3.20 schillings per kg. and now at 3.60 schillings. In this way 1 ¼ kg. of butter yielded, with loss of water, one kilogramme of this melted butter, so that the price of butter which was melted down for *Butterschmalz* amounted to 2.88 schillings per kg. retail. The price decline as compared with the retail price of fresh butter in 1929 amounted in this case to 3.60 schillings per kg., or 56 per cent. Thereby the margin between the average retail price of butter, including *Butterschmalz* and the producers' price of milk was also reduced.

(d) *Eggs*. — Owing to the increase in home production, egg prices underwent a severe decline after 1929; this did not however affect the retail trade margin, which has risen since 1929.

6. — Fruit, vegetables and potatoes.

(a) *Fruit*. — Fruit prices are subject to very wide yearly fluctuations which naturally influence the margins. There are besides great differences in prices between the different kinds of any one fruit. The tracing of the spread for the various kinds over the whole period since 1929 is, for example in the case of pears, impracticable, since the price quotations in the returns of the Vienna Market Bureau often refer to different kinds from one year to another. Further, the quotations are frequently given at different times of the year in the separate years, so that owing to the considerable seasonal variations in price there are sources of error in constructing yearly averages. From the different kinds of pears five sorts of national origin were selected and the available data collected. In the case of the other kinds of fruit investigated (Styrian Maschanskaäpfel, indigenous nuts, apricots, cherries

and plums) yearly quotations are given. Finally an arithmetical mean of the percentage spreads was constructed from the fruits investigated, with the exception of pears, and inserted in the tables as trading spread for fruit.

(b) *Vegetables.* — In general the same remarks hold good as for fruit. Those kinds of vegetables were selected which are handled by the trade throughout the year, thus eliminating certain sources of error in the material. A slight defect exists in the data supplied from the Market Bureau, which gives many prices only per piece.

Five kinds of vegetables were taken: cauliflowers, salad cucumbers, cabbage, cooking salad, spinach. From the percentage retail margins of these an average spread (arithmetical mean) was calculated also for vegetables.

(c) *Potatoes.* — In the Austrian economy potatoes are less important as human food than as stock feed, which is their predominant use. Only a fraction of the quantities of potatoes gathered reach the market as table potatoes. There are no available data on prices of fodder potatoes, so that it was possible to investigate the retail trade margin of table potatoes only. A considerable decline in this margin is to be noted as compared with that in the year 1929, as may be seen more precisely from the table.

Fruit.

Pears: Salzburg

	1929	1930	1931	1932	1933	1934	1935	1936
Retail price (groschen per kg.)	82	130	60	—	—	—	—	—
Wholesale price (groschen per kg.)	56	90	35	—	—	—	—	—
Spread (groschen per kg.)	24	40	25	—	—	—	—	—
Spread as percentage of wholesale price	41	45	71	—	—	—	—	—

Pears: Gute Luise

	1929	1930	1931	1932	1933	1934	1935	1936
Retail price (groschen per kg.) .	112	—	90	—	—	57	97	80
Wholesale price (groschen per kg.)	80	—	60	—	—	42	79	55
Spread (groschen per kg.)	32	—	30	—	—	15	18	25
Spread as percentage of wholesale price	40	—	50	—	—	36	23	46

Pears: Pastor

	1929	1930	1931	1932	1933	1934	1935	1936
Retail price (groschen per kg.) . .	—	—	92	113	70	72	90	67
Wholesale price (groschen per kg.)	—	—	62	83	49	54	70	50
Spread (groschen per kg.)	—	—	30	30	21	18	20	17
Spread as percentage of wholesale price	—	—	48	36	43	33	29	43

Pears: Colmar

	1929	1930	1931	1932	1933	1934	1935	1936
Retail price (groschen per kg.) . .	—	—	100	85	70	50	75	55
Wholesale price (groschen per kg.)	—	—	80	52	46	35	60	35
Spread (groschen per kg.)	—	—	20	33	27	15	15	20
Spread as percentage of wholesale price	—	—	25	64	59	43	25	57

Pears: Plutzer

	1929	1930	1931	1932	1933	1934	1935	1936
Retail price (groschen per kg.) . .	—	110	65	100	—	—	—	—
Wholesale price (groschen per kg.)	—	80	40	70	—	—	—	—
Spread (groschen per kg.)	—	30	25	30	—	—	—	—
Spread as percentage of whole- sale price	—	38	63	43	—	—	—	—

Apples: Styrian Maschanske

	1929	1931	1931	1932	1933	1934	1935	1936
Retail price (groschen per kg.) . .	102	121	107	119	72	70	68	78
Wholesale price (groschen per kg.)	78	92	79	75	50	52	53	57
Spread (groschen per kg.)	24	29	28	44	22	18	15	21
Spread as percentage of wholesale price.	31	32	35	59	44	35	28	37

Indigenous nuts

	1929	1930	1931	1932	1933	1934	1935	1936
Retail price (groschen per kg.) . .	210	170	148	121	188	145	130	109
Wholesale price (groschen per kg.)	160	118	107	91	157	108	102	88
Spread (groschen per kg.)	50	52	41	30	31	37	28	21
Spread as percentage of whole- sale price.	31	44	38	33	20	34	38	34

Apricots

	1929	1930	1931	1932	1933	1934	1935	1936
Retail price (groschen per kg.) . .	240	154	160	135	130	80	141	107
Wholesale price (groschen per kg.)	185	110	130	102	95	55	115	82
Spread (groschen per kg.)	55	44	40	32	35	25	27	25
Spread as percentage of wholesale price.	30	40	31	32	37	46	24	31

Cherries

	1929	1930	1931	1932	1933	1934	1935	1936
Retail price (groschen per kg.) . .	155	135	102	110	101	85	150	100
Wholesale price (groschen per kg.)	118	95	68	75	71	64	120	76
Spread (groschen per kg.)	37	40	34	35	30	21	30	24
Spread as percentage of whole- sale price.	31	42	50	47	42	33	25	32

Plums

	1929	1930	1931	1932	1933	1934	1935	1936
Retail price (groschen per kg.) . .	68	90	70	57	55	39	41	50
Wholesale price (groschen per kg.)	48	62	45	34	35	28	30	33
Spread (groschen per kg.)	20	28	25	23	20	11	11	17
Spread as percentage of wholesale price.	42	45	56	68	57	39	37	52

Vegetables.

Cauliflowers.

	1929	1930	1931	1932	1933	1934	1935	1936
Retail price (groschen per kg.)	53	72	63	62	55	54	42	55
Wholesale price (groschen per kg.)	43	52	45	45	42	40	31	43
Spread (groschen per kg.)	10	20	18	17	13	14	11	12
Spread as percentage of wholesale price	23	39	40	38	31	35	36	28

Salad cucumbers.

	1929	1930	1931	1932	1933	1934	1935	1936
Retail price (groschen per kg.)	156	101	86	101	181	95	70	80
Wholesale price (groschen per kg.)	129	73	45	66	137	73	56	60
Spread (groschen per kg.)	27	28	21	35	44	22	14	20
Spread as percentage of wholesale price	21	38	47	53	32	30	25	33

Cabbage

	1929	1930	1931	1932	1933	1934	1935	1936
Retail price (groschen per kg.)	28	23	27	19	20	19	22	18
Wholesale price (groschen per kg.)	20	15	19	13	12	11	16	12
Spread (groschen per kg.)	8	8	8	6	8	8	6	6
Spread as percentage of wholesale price	40	53	42	46	67	73	38	50

Cooking salad

	1929	1930	1931	1932	1933	1934	1935	1936
Retail price (groschen per kg.)	13	13	16	13	14	11	11	12
Wholesale price (groschen per kg.)	9	8	11	9	9	7	7	7
Spread (groschen per kg.)	4	5	5	4	5	4	4	5
Spread as percentage of wholesale price	44	63	46	44	56	57	57	71

Spinach

	1929	1930	1931	1932	1933	1934	1935	1936
Retail price (groschen per kg.)	77	60	8	75	45	35	68	78
Wholesale price (groschen per kg.)	55	38	55	53	28	25	52	58
Spread (groschen per kg.)	22	22	27	22	17	10	16	20
Spread as percentage of wholesale price	40	58	49	42	61	40	31	35

Table Potatoes.

	1929	1930	1931	1932	1933	1934	1935	1936
Retail price (groschen per kg.)	26	21	24	21	19	20	21	18
Wholesale price (groschen per kg.)	14	13	14	13	11	13	15	12
Spread (groschen per kg.)	12	8	10	8	8	7	6	6
Spread as percentage of wholesale price	86	62	71	62	73	54	40	50

Retail Trade Margin, as Percentage of Wholesale Price.

	1929	1930	1931	1932	1933	1934	1935	1936
Fruit	33	41	42	48	40	37	28	35
Vegetables	34	50	45	45	49	47	37	43

7. — Sugar.

The price of sugar in Austria is fixed by the sugar cartel. Owing to various measures arising out of the customs and taxation policies there was a considerable rise in the price of sugar after 1926. Beet prices, on the contrary, were kept fairly constant. At the end of 1928 the price of sugar beet was 4.80 schillings per kg., and the beet growers received a subsidy from the proceeds of the sugar tax, making their receipts up to this price.

The various measures dictated by the customs and taxation policies are very complicated, but they must be briefly described here since they affect the margin between the producers' price for sugar beet and the consumers' price for sugar, in so far as a proportion of the proceeds of the tax was placed at the disposal of the sugar producers.

On 13 December 1928 the duty and the consumers' tax were both raised by 6 gold crowns, the duty from 22 to 28 gold crowns and the consumers' tax from 10 to 16 gold crowns. The proceeds from the increased receipts were made available for the sugar factories.

The raising of the tax is explained by the fact that a raising of customs duties was, by agreement with Czechoslovakia, bound up with a corresponding rise in the rate of taxation; accordingly, after a decision to raise the duty it was necessary also to raise the tax, the proceeds of the increase in the tax being, however, immediately returned to the sugar industry. On 20 December 1929 a proposal was made for a further increase of the duty and of the tax by 6 gold crowns, and again the receipts from the increased tax were made available for the national industry and for beet growing. It has not been easy to ascertain in what proportion the amount realised was shared between the sugar industry and the beet growers, but it is stated that 60 per cent. went to the growers and 40 per cent. to the industry. Later further increases in the duty and in the tax were made, so that the consumers' tax rose to 31 gold crowns. On 9 June 1933 the consumers' tax in connection with the valorisation of the duty was fixed at 35 schillings. According to available data, however, the receipts do not now pass to the sugar industry.

The present price of sugar is governed by the sugar cartel. An analysis of the ruling sugar price according to the various cost items, which also shows the distribution of the difference between beet price and consumers' price, is given as follows:

Crystallised Sugar, Prices in Schillings per 100 kg.

	Schillings	Percentages of retail price
Beets (taking 100 kg. as yielding 14.5 kg. sugar)	34.48	26.93
Processing margin	34.22	26.74
Price ex factory	68.70	53.67
Tax	35.00	27.34
Tax on commodity sales with crisis supplement	8.40	6.56
Freight and crisis supplement	3.65	2.85
Carriage paid at Vienna	115.75	90.42
Wholesale trade margin	3.50	2.73
Ex store Vienna, wholesale	119.25	93.15
Retail trade margin	8.75	6.85
Retail price, Vienna	128.00	100.00

Trade Margins for Sugar (in Schillings per 100 kg. of Cube Sugar).

	1929	1930	1931	1932	1933	1934	1935	1936
Wholesale price carriage paid Vienna (sch. per 100 kg.)	85.23	96.94	113.35	117.08	121.31	121.50	—	—
Wholesale price ex store Vienna (sch. per 100 kg.)	87.42	98.46	115.02	120.46	125.06	125.25	—	—
Wholesale margin (sch. per 100 kg.)	2.19	1.52	1.67	3.38	3.75	3.75	—	—
Wholesale margin as percentage of the wholesale price, carriage paid Vienna.	2.57	1.57	1.47	2.89	3.09	3.09	—	—
Retail price in Vienna (sch. per 100 kg.)	92	105	119	124	127	132	—	—
Retail margin (sch. per 100 kg.)	4.58	6.54	3.92	3.54	1.94	6.75	—	—
Retail margin, as percentage of the wholesale price free Vienna	5.24	6.64	3.46	2.94	1.55	5.39	—	—

The retail trade prices in the provinces show very marked deviations from the Vienna retail price. The price at Bregenz is 20 schillings per 100 kg. higher than in Vienna. As the extra charge made by the wholesale trade for the carriage from Vienna to Bregenz is only 9.25 schillings per 100 kg., the retail trade margin in Bregenz must be decidedly higher than in Vienna. In November 1933 the retail price for sugar was raised 4 groschen per kg. (crystallised sugar to 1.28, cube sugar to 1.32 schillings per kg.) and the retail trade margin in this way considerably increased. On the other hand the price reduction made in January 1937 was made partly on the costs of the retail trade margin. The price was lowered by 6 groschen per kg., of which one groschen went to the reduction of the retail trade margin and the remaining five groschen fell on industry and the growers.

The price of beet is now about 5 schillings per 100 kg. in accordance with an agreement of the beet growers' union with the sugar factories, which runs till 1939. The price has already been for some time at that height. The sum of 5 schillings is the result of a somewhat complicated calculation: for 300 kg. of beet the grower receives the equivalent of 6 kg. of crystallised sugar untaxed ex factory (6 kg. at 0.68 schillings, *i. e.*, 4.08 schillings). From a joint fund of the beet growers and the sugar factories the grower receives after the lapse of a year a sum making up the price to the already mentioned, 5 sch. per 100 kg. of beet.

Finally it must be recognised that the price rise due to the tax represents also a rise in the earnings of all concerned such that the profitableness of beet growing is satisfactory, while the consumer has to assume certain burdens.

CANADA

I. — Introduction.

In the terms of reference of the *Canadian Royal Commission on Price Spreads*, which made its report (1) in April 1935, was included an inquiry into "the causes of the large spread between the prices received for commodities by the producer thereof and the price paid by the

(1) Report of the Royal Commission on Price Spreads. Ottawa 1935.

consumer therefor; and the system of distribution in Canada of farm and other natural products as well as manufactured products... ” The aspect of these problems with which the Commission was most concerned was however the effect of the growth in large scale organisation in industry and commerce particularly on the primary producer and on the small scale distributor. In so far as it was concerned with the results of the tendency towards a larger scale of operations on public welfare in general, it was concerned with prices of consumers' goods—industrial and agricultural—but, it would seem, to a less degree than with the producer and distributor. It was particularly interested in the character, growth and effects of “unfair practices” on the part of monopolistic or semi-monopolistic concerns engaged in buying from, or selling to, primary producers—and, specifically, in such industries as tobacco, meat packing, fruit and vegetable canning, fishing, agricultural implements and fertilizers. In the retail distribution sphere it was concerned with the character and merits of the department and chain stores in relation to the independent retailer. Its concern with the consumer was marked by its interest in unfair practices of some stores, as exemplified by inaccurate or misleading advertising, short weight, in packed goods etc. Thus in spite of its title, the scope of the Report does not correspond exactly to the present inquiry. Nevertheless a certain amount of material contained in the report is of direct interest and is summarized here.

2. — Retail distribution in general.

The outstanding features of retail distribution in Canada in the development of large scale organisation. In the words of the Report “the system in 1900, whereby commodities moved from producer to consumer via the wholesaler and a retail network of thousands of small merchants has given way to the complex system of the present day, in which the wholesaler plays a relatively minor part and the independent retailer is dwarfed by those huge corporate enterprises, department and chain stores, which in 1930 transacted 31.1 per cent. of the total retail trade of the country.” During the years previous to the depression department stores and chain stores expanded rapidly and, in spite of the heavy costs which this expansion brought with it, in the depression itself they were more successful in maintaining their position than independent retailers. Of the retail trade of the country, department stores accounted in 1930 for 12.8 per cent. and chain stores for 18.3 per cent. In subsequent years the total percentage tended to increase somewhat. Further evidence of concentration of trade in large stores of all kinds is offered by the large proportion of the trade done by a small number of firms and, *vice versa*, by the small proportion of trade done by a large number of firms. Thus “in 1930 stores with annual sales of less than \$5,000 formed 38.4 per cent. of the total number but did only 3.6 per cent. of the business. All stores with less than \$10,000 sales per annum constituted 56.6 per cent. of the total number but their share of the total business was only 9.5 per cent.... Stores with sales of \$100,000 or over comprised 2.7 per cent. of the total and transacted 39.3 per cent. of the total business.”

One result has been the transference of functions previously performed by the wholesaler to the manufacturer and the large scale retailer who establish direct contact with each other. Even in food industries direct sales to retailers form a considerable part of the total sales, though here the wholesaler still plays an important part.

Figures given in the Report of the “gross margin”—the difference between the trader's buying and selling prices—as a percentage of sales, indicate that department stores work at a lower percentage than smaller stores dealing in one product. The figures refer to non-

foodstuffs, but, since they are intended to illustrate a general tendency, may relevantly be reproduced.

	Gross margin percent. of sales 1923
Men's and boy's clothing and furnishing stores	32.98
Women's ready-to-wear stores and ladies' tailoring	28.49
Shoe stores	27.73
Furniture stores	30.74
Department stores 1925	25.40

By 1930 the situation in this respect had not substantially changed, but since then it appears that the operating ratios of department stores have advanced sharply, reaching 29.1 per cent. of sales in 1932, the relative advantage of the department stores thus tending to diminish during the period of falling prices. The large scale of operations of the department store evidently largely accounts for their advantage over their competitors. "The purchasing power of a single department store greatly exceeds that of the large majority of independent stores handling the same line of merchandise. This relatively greater purchasing power has enabled department stores to take a commanding position in many markets. There can be no doubt... that the department store has been able in its purchasing to secure better terms, equal or superior goods, and better service, than most independent merchants." But, in addition to the advantages which the department store has possessed as a mass buyer, there appear to have been, in the early stages at least, certain advantages due to the economies of large scale operation.

A certain competitive practice, often adopted by large stores, which sometimes leads to reduction in staple food prices, but to which the Commission take exception as being harmful to business in general and to primary producers, may be noticed, namely, the use of "loss leaders." This practice is the selling of standard goods, among which staple foodstuffs, such as bread, sugar, or butter, at prices substantially below the price prevailing in competing stores, in order to attract customers for other wares. Such a practice however hardly leads to a permanent depression of prices.

Chain stores, or multiple shops, increased enormously in number in the period of economic expansion preceding 1930. Of 8,534 chain units operating in 1930, 4,601 had been established within the previous five years. As in the case of department stores, expansion was checked in the ensuing years of depression. The expansion in chain stores dealing in groceries and meats was particularly marked. In 1930 grocery and meat stores belonging to a multiple organisation accounted for 33.2 per cent. of total sales in this branch. One grocery chain which operated 29 stores in 1924 operated 111 stores in 1933, and similar expansion was noted in other cases. The chain may be of the corporate type operated as a single company, or of the co-operative type in which retailers combine for purposes of purchasing, or again, of the type in which a group of independent merchants affiliate to a single large wholesaler for their buying, advertising and other trading purposes. In every case, the main motive is the obtaining of economies open to large buyers, who are more able to obtain concessions from manufacturers or wholesale dealers than small buyers.

The margin on sales, or the difference between the traders buying and selling prices, again is less in the case of the chain store than in that of the independent stores, though once more the advantage of the large organisation appears to be declining in this respect. Thus, "in the year 1924... the chain stores on the average took out of the consumer's dollar 11.8 cents less than did the wholesale and retail grocer together, and in 1930 their margin was

roughly, 7 cents less. Since 1930, margins for chain grocery stores have advanced and, if independent merchants have not enlarged their margins to the same extent, the difference between the two systems will have become much smaller".

The difference in the selling margin or spread plus the chain stores advantages in purchasing evidently makes it possible for the chain store to sell at lower prices than the independent store. The following figures show chain store prices for a selected food budget as a percentage of independent retail store prices for the same budget.

January 1930	90.8	July 1930.	88.0
» 1931	86.4	» 1931.	81.5
» 1932	86.1	» 1932.	89.7
» 1933	92.1	» 1933.	93.7
» 1934	95.5	» 1934.	94.4

From these figures two points emerge, namely that the chain store prices are consistently below independent store prices, but that the difference has become much less since 1931.

The Commission does not appear to fear the complete elimination of the independent retailer, even in the more populous areas where the department and chain stores have largely established themselves

The factors which made for the expansion of the large organisation in a period of boom actually tend to act as a check on further expansion, particularly in a period of less intense economic activity. The new services which these organisations have introduced have carried with them increased overhead or fixed costs, which check the adaptability of the organisations to adverse conditions. On the other hand the independent retailer has shown an increased vigour in his endeavour to meet the new competition whilst he preserves certain natural advantages such as more personal treatment of customers, lower overhead costs, etc. Between 1930 and 1933 sales of chain and independent stores declined as shown by the following indices:

	Chain stores	Independent stores
1930	100	100
1931	95.7	84.0
1932	83.3	72.7
1933	77.3	69.3

Thus though the initial drop in sales was greater in the case of independent stores, subsequently the sales of chain stores declined more steeply than those of their independent competitors.

3. — Monopoly in food-industries.

The Commission's investigation into Canadian industry revealed that in several cases single corporative organisations more or less completely dominated their respective markets. The power of these organisations often tended, in the view of the Commission, to be excessive and conducive neither to the welfare of the primary producer nor to that of the general public. Among the industries organised on a monopolistic or semi-monopolistic basis and investigated by the Commission were included a small number engaged in the preparation and distribution of foodstuffs, among which were noted above meat packing, fruit and vegetable canning and fishing. Conditions in the meat packing industry are of special interest from the standpoint of the present enquiry.

The meat packing industry is dominated by two large companies which account for 85 per cent. of the value of sales in the industry, which amounted in 1933 to \$92,000,000. In the words of the Report "the disparity in bargaining power between the farmer and these large packers is obvious...; to a large extent, also, the consumer is at a bargaining disadvantage and is in danger of exploitation as uncontrolled monopoly develops." During the depression the value of the output of the industry fell—from 1929 to 1932—by 50.9 per cent., a greater decline indeed than in industry in general. The volume of production declined however only by 7 per cent. whilst production in manufacturing industries as a whole declined by 33 per cent. The sum paid by the packing industry to the producer fell by 56.8 per cent. Nevertheless the net return to the packing industry or the value added by the industry, declined only by 24.5 per cent. In comparison, it is interesting to note that the decline in the value added in all industries was far greater, 41.4 per cent. "It seems clear that the packing industry has been better able to protect its margins than has the primary producer or certain other industries. The corollary is found in the extension by the packer of an increasing proportion of the average sales dollar." "The dominant position of the two large companies... has undoubtedly secured for them some measures of control both over live stock and selling prices for their products... we are not persuaded that prices have been subject to the same fluctuations as might be expected in a more generally competitive field." This conclusion is further strengthened by the fact that the largest company was able to maintain relatively large profits throughout these years in which there was such a steep decline in the value of output.

It may be noted that the meat packing industry effectively assists the large scale organisations in retail trade by granting more favourable terms than to the small independent retailer. Price discrimination appears to be widely practiced by this industry even as between merchants in the same town. It is significant however that the two large packing companies do not engage in price competition with each other. Thus, "for instance, on the formation of a voluntary chain by independent grocers and butchers in Nova Scotia, it was soon found that the packers were quoting the same prices."

4. — Price spreads in the fish trade.

The Report presents the following table of price spreads in the fish trade.

October 1934	Price paid by distributor	Price to wholesaler f. o. b. distributor plant	Wholesaler's price to retailer	Retailer's price to consumer
(cents per lb. processed fish)				
<i>Montreal:</i>				
Cod Fillets	3.26	10	13	18
Haddock Fillets	5.21	12	16	20-22
Cod steak	1.5	5	8.5	15
Haddock (headless)	2.44	5.5	7.5	10-11
<i>Toronto:</i>				
Cod Fillets	3.26	10	13	19
Haddock Fillets	5.21	12	16	22
Cod steak	1.5	5	8.5	15
Haddock (headless)	2.44	5.5	8.5	12

The Commission having examined the nature of the costs involved in the distribution process concludes "that the spread between the price received by the fisherman, by the distributor, by the wholesaler and the price paid by the consumer, while in places large, is not exorbitant *having regard to the conditions that prevail in this industry.*"

5. — The wheat-flour-bread spread.

The following table shows the spread, in cents per lb. between wheat and flour, and flour and bread from 1926-33 as given in the report on the basis of official figures (1). For completeness the price of wheat and of bread calculated per lb. from figures given in the Canada Year-book (1934-1935) have been added. Since the sources are not the same, the total spreads as shown by the prices of wheat and bread do not quite correspond to the spreads as shown in the figures given in the Report. Nevertheless a reasonable notion may be obtained from the table of the size of the spread in relation to the prices of bread and of wheat.

	1926	1927	1928	1929	1930	1931	1932	1933
<i>Price of wheat</i>	2.5	2.4	2.4	2.1	2.1	1.1	1.0	0.9
Spread between:								
Wheat and flour (2)	0.58	0.41	0.40	0.48	0.80	0.63	0.63	0.64
Flour (2) and bread	4.52	4.83	5.04	5.09	5.13	4.69	4.34	4.04
Wheat and bread	5.10	5.23	5.45	5.57	5.93	5.32	4.97	4.68
<i>Price of bread</i>	7.6	7.7	7.7	7.8	7.8	6.2	5.9	5.7

(2) Quantity of flour used in 1 lb. of bread.

As the table shows, in Canada, (as elsewhere) the wheat-flour spread forms only a small proportion of the total spread, which is attributable principally to the baking process. It will be seen that the price of wheat shows a continuous fall through the period given. On the other hand the total spread and the price of bread show two tendencies, firstly a rising one, up to 1929, and subsequently a falling one. The movement is greater in the case of the total spread than in that of the bread price. In the first period the price of wheat fell by 0.4 cents, nevertheless the price of bread rose by 0.2 cents. The rise appears to be entirely due, even allowing for the above mentioned discrepancy in the figures, to the baker's spread, for the milling spread actually declined. In the second period wheat prices fell by 1.2 cents, bread prices by 2.1 cents and the total spread by 1.3 cents. It will be noticed that both the baker's and miller's spread began to decline in 1931.

In 1926 the total spread represented 67 per cent. of the price of bread, certainly a high percentage compared with some other countries. In the case of Canada however it must always be born in mind that distances are large, particularly from the wheat producing to the bread consumption areas. In 1933 the spread however had increased to 82 per cent., for processing, transportation and selling are not as flexible as the price of the raw material.

The milling industry, which has increasingly been organised on a large scale, appears to suffer to a large degree from overcapacity. Nevertheless "despite excess capacity and the desire of mills to increase production and so lower milling costs by the fuller utilization of their capital, competition had not, prior to 1932, forced prices down as might have been anticipated under such conditions. Indeed in spite of the fact that milling capital had been only half utilized, substantial earnings were maintained by most companies throughout this period..." "The uniformity of price lists issued by milling companies, members of the Canadian National Millers' Association, points to the existence of some form of price understanding throughout this period." For the five largest companies selling and administration costs

(1) Calculated on the basis of 270 lbs. of wheat at Fort William—196 lbs. Flour, Montreal—270 lbs. bread in 69 localities.

amounted, in 1933, to some 35 cents per barrel or 11.3 per cent. of total costs, of which selling costs alone were estimated at between 16 and 20 cents. "When it is considered that a large proportion of the volume is export business obtained at relatively small cost, and a substantial amount is controlled bakery business obtained without any selling cost, it is apparent that the expense of selling in respect to other domestic business is relatively high, probably double the figures mentioned above. For a staple commodity such as flour this appears excessive."

As regards baking, it is noted that though the small independent baker was losing ground up to the depression to the larger organisation, he has tended to regain some in the first years of the depression. "Hard times brought the establishment of numerous small shops opened by bakers who were unable to obtain employment with established companies." Their low operating costs—for the owner-operator was content with a bare subsistence income—enabled them to sell at low prices and the larger plants were forced "to keep their prices low to prevent an increase in the number of such establishments".

The baking industry also appears to suffer from excess capacity and in consequence various competitive devices are adopted, which in general tend more to increase selling costs than to yield a net advantage to the consumer.

DENMARK (1)

I. — Introduction.

The information relating to Denmark is mainly statistical. It concerns the evolution of the margins between the wholesale and the retail prices of certain foodstuffs in the course of recent years. It does not attempt to analyse the final consumer's prices of the products dealt with into its constituent factors. Moreover, it is confined to the wholesale-retail phase, no data being available for the determination of the spread between the prices paid to the original producer and those charged to the final consumer by the retailer.

The evolution of the margins between the wholesale and the retail prices of butter, eggs, plaice, cod and potatoes during the period 1929-1936 are shown in the table below.

Wholesale prices expressed as percentage of retail prices.

Years	Butter	Eggs	Plaice	Cod	Potatoes
1929	86	77	30	46	72
1930	84	66	35	43	65
1931	83	68	35	38	60
1932	83	67	36	39	81
1933	83	75	38	44	65
1934	64	73	42	48	62
1935	82	73	51	47	72
1936	84	73	—	46	74

It may be seen that the spread is particularly marked in the case of fish, while it is smallest in that of butter, this latter commodity being a staple of Danish export trade and having a highly organised market. In the case of fish, there is a characteristic difference between plaice and cod. Though the spread is large in both cases, it is considerably wider for plaice, which is consumed by the better-to-do classes and in which, therefore, increases

(1) Based upon data supplied by Mr. Kjeld Bjerke, of the Danish Statistical Bureau, Copenhagen.

in retail prices, even considerable, can be effected without reducing the effective demand. The retail prices of cod, on the contrary, have to be kept on a low level, as any increase in them is liable to affect sales by reducing consumption.

2. — Dairy products.

Considering in the first instance the development of prices and wholesale-retail margins in dairy products, we find that, during the years 1929 to 1936, they developed as follows:

Evolution of prices and of wholesale-retail margins of dairy products.

(Prices in öre per kg.; margins in per cent of wholesale prices)

	1929	1930	1931	1932	1933	1934	1935	1936
<i>Milk:</i>								
Wholesale	17.3	14.1	12.4	11.2	10.4	11.1	12.9	13.3
Retail	36.6	31.0	29.7	27.6	27.6	28.5	32.0	33.7
Margin	111.6	119.9	139.5	146.4	165.4	156.8	148.0	153.4
<i>Butter:</i>								
Wholesale	308	251	216	185	177	168	199	—
Retail	351	291	252	214	205	250	235	246
Margin	14.0	15.9	16.7	15.7	15.8	48.8	18.1	—
<i>Cheese:</i>								
Wholesale	146	133	123	104	105	96	121	112
Retail	158	151	144	134	134	136	146	147
Margin	8.2	13.5	17.1	28.8	27.6	41.7	20.7	31.2

The wholesale-retail margin for milk is very wide, and it had a definite tendency to increase during the period of the depression of prices, from 1929 to 1933, when it reached its maximum. With the increase in prices since 1934 the margin diminished slightly, though still remaining much above the 1929 level. To what extent the increase in the margin served to swell the retailer's profits, and how far it was absorbed by the increase in services rendered by the retailer or in other expenses, taxes, etc., there is no means to determine.

In butter the margin, though large, is distinguished by great stability, as this should be expected on a highly organised market. A sudden increase in the margin was registered in 1934, which was due to the introduction, in December 1933, of a special levy of 35 öre per kg on all butter sold for home consumption. The levy, however, did not continue in operation after 1934, and in 1935, accordingly, the former price relations were restored.

A characteristic sidelight on the effects of a diminution in retail prices upon consumption is thrown by the comparison of the movement of butter prices, on the one hand, and of the consumption of butter in Denmark, on the other hand, during the period 1929 to 1935. Indeed, the fall in the retail prices of butter would appear to have had the effect of increasing the consumption per head of butter very considerably. Thus, the annual consumption of butter in Denmark per head was as follows:

1929	5.9 kg	1933	9.6 kg
1930	6.1 »	1934	9.1 »
1931	6.7 »	1935	9.4 »
1932	8.5 »		

It will be noted that, in 1934, the rise in retail prices of butter due to the levy which was in operation during that year, would appear to have had an immediate effect upon consumption, and that as soon as the levy was abolished and the retail prices of butter began to fall, the consumption began to recover the lost ground.

The prices of cheese are interesting in so far as they suggest that, for a product which does not belong to the number of staple commodities and has no large-scale marketing organisation, such as that which exists for butter, the wholesale-retail margin has a tendency to increase with the fall in wholesale prices.

3. — Fish.

The movements of prices and the evolution of wholesale-retail margins in the case of fish during the period 1929 to 1936 are shown in the table below:

Evolution of prices and of wholesale-retail margins of fish.

(Prices in öre per kg.; margins in per cent of wholesale prices)

	1929	1930	1931	1932	1933	1934	1935	1936
<i>Herrings:</i>								
Wholesale	25	26	24	18	21	24	23	—
Retail	72	73	70	60	64	65	67	66
Margin	188.0	180.8	191.7	233.3	204.8	170.8	191.3	—
<i>Cod:</i>								
Wholesale	24	23	21	20	21	21	22	—
Retail	64	64	56	57	56	56	58	60
Margin	166.7	178.3	166.7	185.0	166.7	166.7	163.6	—
<i>Plaice:</i>								
Wholesale	54	60	56	55	61	65	81	—
Retail	179	173	162	151	159	154	159	163
Margin	231.5	188.3	189.3	174.5	160.6	136.9	96.3	—

An examination of the above figures gives rise to two observations. The first concerns the width of the margins between the retail and the wholesale prices of fish. This is largely accounted for by the nature of the products which are very perishable. The other observation is that, while the wholesale-retail margins for herrings and cod, though wide, are relatively stable, the retail prices being closely correlated in their movements with wholesale prices, the situation is wholly different in the case of plaice. Here, the trend of wholesale prices is upwards, the prices in 1935 being over 50 per cent. above those of 1929; on the other hand, the trend of retail prices is definitely downwards. The margins accordingly tend to diminish continually, falling from 231.5 in 1929 to a bare 96.3 per cent. in 1935. The explanation of this apparent anomaly would appear to be that, during the preceding period, the retailers have succeeded in raising their prices to the limit beyond which the consumers were not ready to go, even though plaice is generally bought by the better-to-do class. The reaction in effective demand necessitated on the part of the traders a reduction of prices with a view to reviving consumption, even though wholesale prices have been rising.

FINLAND (I)

I. — Flour and bread.

Among the bread cereals rye occupies the foremost place in Finland, wheat being less important. The present notes relating to the distributive margins for flour and bread refer therefore to rye.

The table below indicates for the period 1931-1936, the price paid to the farmer for one kilogramme of unmilled grain, and the difference between this and the prices paid by the consumer for those quantities of flour and bread obtainable from 1 kg. of grain. From the lower part of the table, which indicates the proportion of the consumer's price received by the farmer it will be seen that on the average the farmer receives about three quarters of the retail price in the case of flour, somewhat under one-half in the case of second quality bread and about one-third in that of first quality bread.

	1931	1932	1933	1934	1935	1936
	marks	marks	marks	marks	marks	marks
Farmer's price of 1 kg. rye	1.89	2.18	2.04	1.99	1.93	2.07
Margin between rye and flour (0.95 kg.) . .	0.58	0.66	0.68	0.59	0.61	0.51
Margin between rye and 2nd quality bread (1.3 kg.)	2.31	2.32	2.42	2.32	2.28	2.20
Margin between rye and 1st quality bread (0.94 kg.)	3.76	3.70	3.90	3.93	4.01	3.93
Farmer's price of rye as percentage of price of:						
(1) flour	76.5	76.8	75.0	77.1	76.0	80.2
(2) bread (2nd quality)	45.0	48.4	45.7	46.2	45.8	48.5
(3) bread (1st quality)	33.5	37.1	34.3	33.6	32.5	34.5

During the period 1932 to 1935 the price of rye declined appreciably. On the other hand, the totality of costs and profits comprising the margins between rye and bread did not decline to the same degree; indeed the margin between rye and the more expensive bread actually increased considerably, the farmer's share of the consumer's price falling in consequence from 37.1 per cent. to 32.5 per cent. In 1936 by contrast the total margins in each case fell considerably, whilst a marked rise occurred in the price of rye, the farmer's proportion rising accordingly. Nevertheless, as the second table, indicating variations of various classes of costs in terms of their level in 1931, shows, important groups of costs such as wages and rents tended to decline considerably throughout the whole period.

	1931	1932	1933	1934	1935	1936
Rate of interest	100	104	86	64	61	61
Wages	100	90	89	90	96	—
Rents	100	99	90	84	83	84
Electricity	100	95	95	94	95	91
Wood fuel	100	84	85	87	88	101
Railway rates	100	100	100	100	100	100
Communal taxes	100	117	124	122	121	121

(1) Based on material supplied by Mr. K. M. Soininen, of the Economic Studies Section of the Pellervo Society.

The increases in some costs—such as communal taxes and fuel prices—were hardly of sufficient importance to outweigh the general declining tendency: probably, therefore, the situation of the intermediaries improved during this period.

2. — Potatoes.

The size of the margin between the producer's price and consumer's price of potatoes in the period 1931 to 1936 is shown by the table below. It will be seen that the farmer's price remained fairly stable in the first three years shown, declined sharply in 1934 and then recovered somewhat in 1935 and 1936. The same type of movement is observed in the case of the retail price, with the important difference that in 1935 and 1936 it returned to the same level as in 1931. The margin between the two prices on the other hand rose considerably until 1933, declined somewhat in 1934 and made a recovery to a level some 30 per cent. higher in 1936 than in 1931. The producer's share of the final price thus showed a continuous decline until 1935 and 1936, but even in these years was considerably lower than in the base year. It is of interest to note that in all years the producer's share represented over half of the final price; however, the intermediate costs represent thus a substantial proportion of the total price. Among the factors contributing to this may be mentioned the perishability of the commodity and its bulk in relation to its value, a factor tending to keep transport costs high. These latter costs are always increased in the winter by the necessity of providing heating in the truck. Again, it appears that storage accommodation is not adequate in the consuming centres, a factor tending to increase the risks of deterioration and loss to the intermediaries, particularly since consumers no longer, as formerly, buy large quantities and store them in cellars for the winter, but, living in modern dwellings without much store room, make only small purchases at a time. Lastly the number of intermediaries has increased during the period to which the figures refer, and it seems that in general they have sought to work at a higher rate of profit.

	1931	1932	1933	1934	1935	1936
Average retail price of 1 kg. marks	0.85	0.85	0.92	0.75	0.86	0.85
Average price for 1 kg. paid to the farmer »	0.55	0.49	0.51	0.38	0.48	0.46
Farmer's price as percentage of retail price per cent.	64.7	57.7	55.4	50.7	54.6	54.0
Average intermediate costs marks	0.30	0.36	0.41	0.37	0.39	0.39

3. — Dairy produce.

The table on page 48 indicates the average annual prices received by the producer and the consumer, and the producer's prices as a percentage of the consumer's price, of milk, butter and cheese, during the period 1931 to 1936. The prices of the milk products are given on the basis of the quantity of the product obtainable from 1 kg. of milk.

The size of the spreads between producer's and consumer's prices is indicated particularly by the lower part of the table in which the producer's price is given as a percentage of the consumer's price, the price of each consumption product being compared with the average price of milk received by the producer and with the price of milk of each class.

Examining first the upper part of the table, it will be seen that the average price of milk for butter follows the average price of all milk more closely than the prices of milk for liquid consumption and for cheese manufacture, which is explained principally by the fact that the greater part of Finnish dairies manufacture butter, but only few deal exclusively in liquid milk or manufactured cheese. In all cases it will be seen however that prices rose considerably in the last two years. While in the first four years the price of butter milk was at an appre-

ciably lower level than the average price of all milk, in the last three years the two prices were much closer together. It is interesting also to note that whereas from 1931 to 1934 the producer received a higher price for milk for liquid consumption than for cheese manufacture in the subsequent two years the situation was reversed.

		1931	1932	1933	1934	1935	1936
<i>Average price paid to the producer for 1 kg. of:</i>							
Milk for butter	marks	0.90	0.89	0.94	0.94	1.06	1.08
Milk for cheese	»	0.96	1.01	1.11	1.06	1.24	1.29
Milk for liquid consumption.	»	1.10	1.10	1.12	1.11	1.20	1.23
All milk.	»	0.97	0.96	0.98	0.95	1.08	1.10
<i>Average price paid by the consumer for the quantity obtained from 1 kg. of milk, of:</i>							
Butter	marks	1.18	1.16	1.16	1.17	1.26	1.25
Cheese	»	1.79	1.77	1.72	1.73	1.72	1.81
Milk	»	1.44	1.46	1.44	1.46	1.57	1.56
<i>Producer's price as percentage of consumer's price:</i>							
Average price of all milk as percentage of consumer's price of milk	per cent.	67.4	65.8	68.1	65.1	68.8	70.5
Average price of milk for liquid consumption as percentage of consumer's price of milk	»	76.4	75.3	77.8	76.0	76.4	78.8
Average price of all milk as percentage of consumer's price of butter	»	82.2	82.8	84.5	81.2	85.7	88.0
Average price for milk for butter as percentage of consumer's price of butter	»	76.3	76.7	81.0	80.3	84.1	86.4
Average price for all milk as percentage of consumer's price of cheese	»	54.2	54.2	51.0	54.9	62.8	60.8
Average price for milk for cheese as percentage of consumer's price of cheese	»	53.6	51.1	64.5	61.3	72.1	71.3

The prices paid by the consumer vary also as between the three products. In each case however there is a slight fall in 1933 and an increase in the subsequent years, though in 1936 the increases in butter and milk prices compared with 1931 are more important than the increase in the price of cheese. It is however important to note that the consumer's prices do not increase absolutely as much as the producer's prices in any of the cases. In consequence, as will be seen from the third part of the table, the producer's share of the final price increased in every case, whether measured against the average producer's price for all milk or against the producer's prices for the milk for the separate products. The producer's share of the final price increases in a marked degree in the case of cheese particularly when the price he receives for milk sold for cheese manufacture is considered, the percentage rising from 53.6 in 1931 to 71.3 in 1937.

From the table it would seem that intermediate costs are least—or the producer's share of the consumer's price greatest—in the case of butter, and greatest in the case of cheese. However, the diminution in the intermediate costs for cheese is very considerable. It is interesting to note, however, in comparing the spreads, that though milk for liquid consumption does not require the transformation necessary in the other cases, the intermediate costs appear to be higher than in the case of butter. This appears to be due chiefly to the high costs of transport as well as to certain difficulties in the marketing of liquid milk. The quantities of milk remaining unsold as liquid milk are very high and must be disposed of at very low prices for manufacture. Again, though the milk is not transformed the various processes necessitated by the requirements of hygiene—testing, sterilisation, etc.—are very costly.

Intermediate costs are highest, as noted, in the case of cheese. Here, owing to the fact that cheese has to be stored for many months before it is matured, capital costs are naturally high, whilst the sale of cheese in small pieces implies a loss through dessication and the formation of an outside crust. Again the tendency to consider cheese as an article of luxury more than as a necessity has enabled selling profits to be maintained at a higher level than in the other cases.

In general, in view of the various costs involved the costs of distribution of milk and milk products from farmer to consumer are not be regarded as excessive—even in the case of milk for liquid consumption.

4. — Eggs.

The production of eggs in Finland was given an important stimulus by the introduction in 1929 of an export bounty, and though at first a great part of the increased production was exported subsequently large quantities of the new production were placed on the domestic market. Since about half of the production was exported the level of prices has depended principally on overseas' price levels, but the bounty prevented an excessive decline on the home market.

The following table shows the export price, plus bounty and excluding the bounty, the price paid by the domestic consumer and the price received by the poultry farmer, per kilogramme of eggs, during the period 1931 to 1936.

	1931	1932	1933	1934	1935	1936
Export price plus bounty marks per kg.	18.58	19.08	17.28	15.0	14.79	16.03
Export price, excluding bounty » »	13.58	14.08	13.28	12.32	12.96	14.16
Price paid by consumer » »	16.56	15.49	13.97	13.84	14.65	15.35
Price received by farmer » »	13.64	14.42	13.04	11.13	11.91	12.46
Margin between consumer's and farmer's price » »	2.92	1.07	0.93	2.71	2.74	2.89
Farmer's price as percentage of con- sumer's price per cent.	82.4	93.1	93.3	80.4	81.3	81.2

It will be seen that over the whole period the export value including the bounty declined appreciably more than the domestic price paid to the farmer or the export value excluding the bounty. In fact taking 1931 as 100 the export value equalled 80 and 86 in 1935 and 1936 respectively, the export value excluding the bounty 95 and 104; the price paid to the farmer, 87 and 91; and the price paid by the consumer 88 and 93. The absolute value of the farmer-consumer margin declined heavily down to 1933 but then increased almost back to the 1931 level in 1936. At their highest level—in 1934—margins represented about 20 per cent. of the consumption price; at their lowest—in 1933—6.7 per cent. The margin however does not represent the totality of intermediate costs, since the producer actually obtained a higher average price than the domestic price level—since export prices were, as can be seen from the table, higher. It is also to be remarked that the lower domestic price is in part due to the fact that the domestic market absorbed principally eggs of a quality not considered sufficiently high for export. The totality of intermediate costs for eggs sold in the domestic market was in consequence of this special relation between domestic and export prices higher than as shown in the table and averaged between 3.5 to 4.5 marks per kilogramme. Since however in 1934 the export bounty was reduced, the volume of exports no longer

sufficed to enable all the marketing costs to be covered, and in consequence the costs of marketing on the domestic market increased.

As regards the composition of the costs, the greater proportion is constituted by costs of retail distribution, which are estimated to average between 2 and 3 marks per kilogramme.

5. — Pig-meat.

The relations between producer's and consumer's prices of pig-meat may be deduced from the following table.

		1931	1932	1933	1934	1935	1936
Retail price	marks per kg.	12.91	12.16	12.90	12.80	12.45	12.35
Price paid to producer	»	8.66	8.92	10.93	9.49	9.17	10.58
Margin between producer's and retail prices	»	4.25	3.24	2.87	3.31	3.28	2.77
Producer's price as percentage of retail price	per cent.	67.1	73.4	77.8	74.1	73.7	79.3

It will be seen that the consumer's price fluctuated only in a small degree during the six years 1931-1936. On the other hand, the price received by the producer fluctuated more appreciably, with a definite tendency towards an increase. In consequence the margin also varied considerably, with the opposite, declining, tendency, so that the proportion of the retail price going to the producer shows an important increase compared with 1931.

Among the reasons for a shrinkage of the absolute margin—particularly in 1935—may be mentioned the encouragement of imports and the diminution in the purchasing power of the population, both factors tending to force the distributors to work on a reduced margin.

6. — Beef.

The following table gives the same indications in regard to beef as were given above in the case of pig-meat.

		1931	1932	1933	1934	1935	1936
Average retail price	marks per kg.	8.77	8.01	7.73	8.58	9.47	10.02
Producer's price	»	4.77	4.55	4.66	5.83	6.83	7.00
Margin between retail and producer's prices	»	4.00	3.46	3.07	2.75	2.64	3.02
Producer's price as percentage of retail price	per cent.	54.4	56.8	60.3	67.9	72.1	69.9

It will be seen that from 1931 to 1933 retail beef prices declined appreciably, whilst the decline in the producer's price was insignificant. In the succeeding years however both prices increased markedly. The producer's price, however, to a greater degree than the retail price—particularly as compared with 1931. The margin in consequence declined each year until 1936, the producer thus obtaining an ever increasing share of the retail price. The intermediate costs varying—as will be seen from the table—between 30 and 45 per cent. of the final retail price, may be regarded as low, in view of the costs of transport and slaughter of the live animal, of the preparation of the meat for retail sale and the high risks of loss owing to the perishability of meat. The greater part of the total intermediate costs are the costs at the retail stage, which are estimated to average some two thirds of the total.

FRANCE

I. — Introduction.

A report (1) made to and published by the *Conseil National Economique* in 1933 on the distribution of foodstuffs contains a certain amount of material of interest to the present survey. The report contains estimates of distribution charges of, among other commodities, bread, meat, milk and milk products, poultry and eggs, fish, vegetable and fruits. The following notes are based entirely on this study.

2. — Meat.

The following table indicates the expenses incurred in the distribution of meat from the cattle farm to the consumer. It is based on a theoretical estimate computed by the general secretary of the *Association générale des producteurs de viande* and is necessarily approximative. Nevertheless it serves to indicate the relative importance of the various expenses as well as the degree to which these have increased compared with the pre-war period.

	1912-14	September 1932	Coefficient of increase
	francs	francs	
<i>Price at the farm</i>	1.532	5.74	3.75
Gross profit of the cattle dealer	+ 0.016	0.15	9.39
Transport over 300 kilometres	+ 0.042	0.39	9.29
Commission and market charges	+ 0.020	0.19	9.50
<i>Value et La Villette Market (live animal)</i>	1.610	6.47	4.02
General slaughterman's costs	+ 0.024	0.20	8.33
Slaughterman's profit	+ 0.016	0.10	6.25
Slaughter-tax	—	0.23	—
Return on by-products (to be deducted)	— 0.29	0.75	2.58
<i>Value et La Villette slaughterhouse (dead animal)</i>	1.36	6.25	4.50
Municipal taxes (excise, sanitation)	+ 0.140	0.55	3.93
Transport from slaughter-room	+ 0.022	0.15	6.82
<i>Retailer's buying price</i>	1.498	6.95	4.65
General retailing expenses	+ 0.335	2.27	6.77
Average profit of retailer	+ 0.10	1.00	10.00
Increase through diminution in volume of sales	—	0.65	—
Loss 5 % (drying, odd bits)	0.075	0.40	5.30
<i>Normal retail price of 1 kg.</i>	2.03	11.27	5.55

From this table it will be seen that there has been, compared with before the war, a large increase in intermediate costs, the increase in the retail price being considerably more than the increase in the farmer's price. Or in other words the farmer's share of the final value has diminished from 66 per cent. in 1912-14 to 51 per cent. in 1932.

Many of the intermediate expenses shown in the table appear to be difficult to reduce, and indeed because of this retail meat prices did not follow to the same degree the decline in livestock prices which began in 1931. New types of taxes—the slaughter tax and turnover tax—contributed to this. On the other hand the improved service demanded by the consumer had brought higher charges. Again the diminution in sales volume induced the retailer to

(1) *La Répartition des Denrées Alimentaires*. Conseil National Economique. Paris, 1933.

attempt to obtain the same return on a smaller volume. In 1932 the consequent increase in price was estimated at 20 per cent. It may also be noted that the tendency of the consumer to prefer the more choice cuts results in a fall in the price of the less preferred cuts and a rise in the better cuts.

3. — Milk.

The spread between the retail price and producer's price of milk increased in Paris during the six years 1926-32. In January 1926 the spread amounted to 0.42 francs per litre. In 1932 it had risen to 0.68 francs—an increase of more than 60 per cent. In the first months of 1932 it rose to between 0.70 and 0.80 francs per litre. Of this 0.50 to 0.60 francs were attributable to the wholesale milk distributors, compared with 0.40 francs in 1926. Their expenses naturally included collection, pasteurisation, transport and delivery. A further 0.20 francs—compared with 0.12 francs in January 1926—were attributed to the dairyman.

An investigation into the distributive margins in some of the *départements* in 1931 yielded the following results (in francs per litre).

DÉPARTEMENT	Average purchase price	Costs of collection, processing, and transport	Selling charges, (dairyman's premium)	Total margin
Eure	0.88	0.53	0.16	0.69
Seine-et Oise	0.86	0.56	0.18	0.74
Loiret	0.83	0.59	0.18	0.77
Sarthe	0.66	0.75	0.18	0.93

The margin in each case appears to be high compared with the average purchase price—indeed exceeding the latter considerably—especially in the *département* of Sarthe. Similar figures collected for three Swiss towns are strikingly lower. Thus the margin in Basel—where it is highest—does not exceed 60 per cent. of the farmer's price.

	Zürich centimes	Berne centimes	Basel centimes
Producer's share	22.09	22.70	21.90
Costs of collection and transport	6.91	5.17	7.14
Retail margin	6.00	6.13	5.95
Total margin	12.91	11.30	13.09

4. — Poultry and eggs.

Figures given in the report indicate that in 1932 the total cost of distribution of poultry—calculated per kg. of net weight—from a farm in the central region of France to the market at Les Halles in Paris amounted to 4.75 francs, of which 2.15 were incurred in collection, package and dealer's earnings—the latter amounting to 1.40—and 0.30 in transport. At the wholesale market itself total expenses, amounting to 2.20 francs, were made up principally by the excise duty, amounting to 1.50 francs, and the consignee's commission, which equalled 0.50. Market expenses—unloading and cover—amounted to 0.10 francs. The expenses of transport from station to the market were estimated at 0.10 francs.

From figures supplied by the poultry-keepers it appears that they obtained, in 1932, 51 per cent. of the final consumer's price, the remainder representing the intermediate expenses.

As regards eggs, in 1932 the sale price at the Paris central market was 36.3 per cent. higher on the average than the purchase price from the country dealer (*coquetier*) compared with 25 per cent. in 1930.

5. — Vegetables.

The expenses of distributing vegetables naturally vary with the distance of the growing area from the consuming centre. An authoritative calculation made in 1932 estimated the transport expenses at from 30-60 per cent. of the producers' price in the case of deliveries to the Paris market from Brittany, at from 12 to 25 per cent. as from the Orleans district and between 8 and 15 per cent. as from Seine-et-Oise. At the market itself salesman's earnings represented between nearly 8 and nearly 9 per cent. of the producer's price. The additional charges from the wholesale market to the consumer were made up by transport and the retailer's selling expenses, which varied between 12.5 and 19 per cent. in the former case and 25 and 30 per cent. in the latter.

6. — Bread.

As regards the spread between wheat and bread prices it may be noted that both the milling and baking spreads were fixed by public authority in Paris in 1932 at 14-15 francs and 62 francs per quintal of ground flour and bread respectively. The following table indicates the percentage distribution of the various costs involved in the milling process:

	Percentage 1932
Fixed costs (rents, rates, insurance)	17.14
Salaries	24.16
Amortisation	8.79
Power	15.57
Maintenance and repairs	10.06
Sacking	3.26
Office expenses	2.63
Interest and commercial risks	18.39
	<hr/> 100 <hr/>

The distribution of the costs of baking are illustrated by the following example of a bakery utilising annually 156 metric tons of flour, two-thirds of which in the making of bread and the remainder in the making of small breads, pastries and fancy goods.

	Percentage
Interest on fixed capital	8.46
Rent	5.35
Lighting	1.22
Rates	4.80
Insurance	0.94
Maintenance	3.00
Water	0.23
Salaries of sales staff	8.32
Interest on working capital	0.67
Ingredients	8.57
Heating	12.55
Power	0.39
Salaries of baking staff	44.01
Miscellaneous expenses	1.49
	<hr/> 100 <hr/>

GERMANY

I. — Introduction.

As in other countries, so in Germany, the relation between retail, wholesale and producers' prices of the main commodities of human consumption has been the subject of much discussion and debate. As a result of the situation brought about by the general economic crisis which began in 1929 it became indeed of great practical importance. On the one hand the farmers complained at the rapid fall in the prices they received for their products; on the other, consumers complained that the fall in retail prices was not adequate to compensate for the diminution in purchasing power of the masses of the population as a result of falling wages and increasing unemployment. Producers and consumers alike tended to lay the blame at the door of the trader and intermediary, who, in self justification, pointed to the costs of collection, processing and distribution. In order to clarify the issues raised, the *Reichsforschungsstelle für landwirtschaftliches Marktwesen*, attached to the Ministry of Food and Agriculture undertook a series of investigations into the price relations on various principal food markets. These studies form the principal source of the following notes (1-2).

2. — The importance and composition of the intermediate margin.

The following figures give a rough estimation of the value of retail trade in a number of staple food products, the costs of processing and distribution and the proportion going to the farmer for the year 1930-31 (in millions of Reichsmarks).

Products	Return to the farmer	Value of imports	Processing and distribution costs	Retail value
I. — Field crops:				
Rye	631	—	703	1,334
Wheat	544	384	1,476	2,404
Potatoes	277	22	295	594
Sugar	436	2	1,071	1,509
Vegetables	170	105	319	594
Fruits	240	230	360	830
Mediterranean and southern fruits	—	240	150	390
II. — Animal food products:				
Beef	933	82	513	1,528
Pig-meat	1,340	31	414	1,785
Veal	290	1	116	407
Mutton and lamb	67	2	40	109
Poultry	344	51	308	703
Eggs	250	200	333	783
Milk and milk products	2,191	395	1,339	3,925
Fresh-water fish	135	17	58	210
	<u>7,848</u>	<u>1,762</u>	<u>7,495</u>	<u>17,105</u>

(1) Berichte über Landwirtschaft, Sonderhefte No's 31,35,52. Diel und Vogel "Preisspannen bei landwirtschaftlichen Erzeugnissen. Published in *Deutsche Agrarpolitik*. Veröffentlichungen der Friedrich List Gesellschaft Reimar Hobbing, Berlin 1932. — (2) Also: Sering, *Die Deutsche Landwirtschaft unter volks- und weltwirtschaftlichen Gesichtspunkten*. Berichte über Landwirtschaft, Sonderheft No 50 Berlin 1932.

The total retail value is estimated at RM 17,105,000,000, of which RM 7,848,000,000 went to the farmer and RM 1,762,000,000 abroad. The difference, of RM 7,495,000,000 includes import duties and sugar tax, which then amounted to RM 657,000,000. Deducting this last sum, it is seen that pure processing and distribution costs represented 40 per cent. of the total value of retail trade.

Intermediate costs vary from commodity to commodity. As is shown in the second table, they were highest, in relation to the retail value, in the cases of wheat and rye and lowest in those of meat and fish.

Processing and distribution costs (as a percentage of the retail value).

Produce	Processing and distribution costs
Rye	53
Wheat	56
Potatoes	49
Sugar	47
Vegetables	51
Fruit	40
Southern fruits	35
Meat	28
Poultry	43
Eggs	40
Milk and milk products	33
Fresh-water fish	28
	—
Average	<u>40</u>

In some cases, such as vegetables and fruits, there are no processing costs, intermediate costs consisting entirely of transport and trading costs. In other cases, such as wheat and rye, processing costs are the greater part of the total intermediate costs. Taking all the commodities together, however, a far greater sum is spent on distribution alone than on processing, as may be seen by the following table, showing the division of the total retail value.

	Million R.M.	Percentage
Return to farmer	7,848	46
Payment for imports	1,762	10
Import duties	304	1.8
Consumption-tax	353	2.2
Processing	1,931	11
Distribution: wholesale, and retail trade	4,907	29
	—	—
Total	<u>17,105</u>	<u>100</u>

3. — **The margin between the prices of flour and bread.**

In 1930 the structure of prices on the bread market formed the subject of a detailed and analytical study published by the Reich Ministry for Food and Agriculture (1). Subse-

(1) Brinkmeyer. *Die Preisgestaltung auf dem Brotmarkt*. Berichte über Landwirtschaft. Sonderheft 31. Reichsministerium für Ernährung und Landwirtschaft. Berlin 1930.

quent authoritative literature on this subject consists mainly of summaries of the results arrived at in this study (1), and we also may, therefore, chiefly confine our attention to the material available therein.

It is perhaps however wise at the outset to note certain features of the study which tend to limit its direct applicability to present day conditions. In the first place it refers roughly to the period 1929 to 1930, a period in which both long term and short term forces were driving the grain prices downwards. The problem of this period lay in the failure of bread prices to adjust themselves adequately to the downward movement of grain prices. Secondly, the retail market was then more or less free, in the sense that bread prices were allowed to fluctuate at the dictates of the forces of the market. The State did not fix prices, nor did the voluntary associations or Guilds succeed in stabilising prices over short periods except in a relatively small number of towns. Nevertheless the analysis of, and conclusions in regard to the spread between bread and flour prices are not rendered valueless by the changed circumstances of the present time, by rising grain prices and government regulated bread prices. Such new circumstances may change the size and the trend of the spread, but are less likely to change its causes.

Like most food products, bread is sold at distributing points within easy reach of the purchaser's home. Owing to the nature of the commodity—its weight, the volume it occupies in the housewife's shopping bag, the relatively short period in which it remains fresh—the housewife normally goes to the nearest baker. It may indeed be regarded as generally true that for the purchase of ordinary bread she rarely goes beyond the nearest or next-to-nearest baker. In view of this fact it is not surprising that bakeries tend to be scattered throughout any particular district and that each bakery tends to serve the residents within the small radius of a few minutes walk. In consequence of these basic factors of the market the normal baker's shop tends to be small and independent. This indeed was the case in Germany. According to statistics provided in the authoritative study referred to above, in Germany in 1929 out of 95,800 shops selling bread only some 10,000 were branches of co-operatives or large bread factories, the remainder being small independent bakers. One important consequence of this is that, in spite of the relatively large number of shops in each district there is a notable lack of uniformity both in production and selling conditions. Production conditions vary considerably in regard to the employment of labour and the use of machinery. Selling conditions vary in regard to the type of bread produced and the method of calculating its price—whether by weight or by loaf—and the size of the selling staff. Some bakeries are entirely worked by manual labour, whereas machinery used varies considerably from shop to shop. This lack of uniformity in conditions of production and selling leads naturally to a corresponding lack of uniformity in cost conditions. On the other hand, the tendency among housewives, referred to above, to purchase in the immediate neighbourhood implies a weakening of those market forces which tend to secure an equality of prices. In consequence prices of bread—measured in terms of weight—vary not only from town to town, but also considerably within a given district of a given town. In 1929 most bakers (94 per cent.) were members of the Bakers' Guilds (Innungen). These Guilds did not secure fixed prices, but endeavoured to equalize them as far as possible by publishing from time to time price lists. Nevertheless prices in some districts for similar quality bread showed divergences sometimes amounting to 25 per cent. Thus on 15 May 1929 prices in Magdeburg of ordinary bread varied between

(1) *Vide e. g., Sering, Die Deutsche Landwirtschaft*. pp. 415-419. Diel und Vogel, in *Deutsche Agrarpolitik*, pp. 723-725.

31 Rpf. and 38 Rpf. per kg. In Berlin on the same day prices varied by 9 Rpf and 12 Rpf per kg. for breads averaging 38 Rpf. and 41 Rpf. per kg.

Since for most bakers in given towns the price of flour is the same, such price differences indicated a considerable variation in the price margins and suggested the possibility of the margin being in some cases higher than that justified by actual costs. This hypothesis as the sequel shows, is substantiated by an investigation into actual costs, bread prices and the bread-flour price margins.

The extent and composition of the price margin as regards ordinary bread (1) may be seen from the following average figures of Berlin bakeries calculated in the first half-year of 1929. These figures show the various elements entering into the price of bread sold by Berlin bakers as a percentage of that price. In spite of the diversity of methods practised by bakers, it is generally agreed that these figures accurately show the broad features of the bread cost schedule.

	Distribution of price	Distribution of bakers spread
Cost of flour	57.0	—
Processing	19.0	44.5
Distribution	11.3	26.0
General expenses	3.5	8.5
Profit.	9.1	21.0
	100	100

Thus according to this calculation based on a period in which flour and bread prices were fairly stable costs of flour make up somewhat more than half the price of bread: the spread between the price of the raw material and that of the finished product equalled over 40 per cent. of the latter. The most important item under "processing" is of course labour, which accounts for 25.5 per cent. of the spread. Labour costs also play an important part in distribution costs, representing 10 per cent. of the price spread. Under processing must further be calculated the costs of fuel, power, light, rent and interest for the bakery. The most important distribution or selling costs apart from labour are constituted by the rent and interest on the shop, but small expenses such as packing paper, light and the cost of unsold and stale bread must not be left out of consideration. "General expenses" include taxes, insurance, advertisement and management. In spite of the variations from bakery to bakery in the relative importance of these items in costs, it may be said that generally the cost structure shows the features indicated by these figures, namely, the cost of flour somewhat exceeding the total spread, processing costs being considerably higher than distribution costs and costs of labour of all kind being the largest costs item after the cost of flour.

The above figures indicate the size of the spread between flour and bread prices for a representative small baker. They may be compared with similar figures of a typical Berlin large-scale bread factory manufacturing similar rye-bread.

Cost of flour	49
» » processing	13
» » distribution	20
General expenses	4
Entrepreneurial profit	7
Difference in price	7

(1) Rye-bread with 5 per cent additional wheat-flour.

They represent the costs of producing bread expressed as a percentage of the selling price of the small baker's bread. Here it will be seen that the large producing unit has an advantage both in purchasing its flour and in processing. On the other hand it has a disadvantage in distribution greater than its advantage in production. Nevertheless it has a net advantage and is able to produce cheaper. The reasons for these differences in the relative advantages of small and large scale enterprises are evident. In production the larger enterprise is able to reduce overhead charges but in selling and distributing it incurs higher transport costs. It may be noted that as regards cooperative concerns which distribute bread to their branches, distributing costs are lower than in the case of the private factory, since in the former case bread is only one of many products dealt with. Further it should be recalled that in 1929 night-baking in factories was prohibited. According to some calculations this prohibition raised factory costs by between 4 and 7 per cent.

The above figures indicate the structure of costs in Berlin in 1929. In the preceding period bread prices and flour prices fluctuated considerably. Though the former tended to follow the latter, if indeed somewhat later, in direction, they did not do so in the same degree. In consequence, though the trend of average flour prices in 11 large German towns tended definitely downwards during 1925 to 1929, bread prices actually showed an upward trend. In other words, the bakers' spread increased in this period. In some of the 11 towns in which these trends were observed, bread prices tended to be stable over periods of several months, owing largely to the influence of the Bakers' Guilds in those towns. These towns on the whole produced bread with a higher wheat flour content than the towns with less stable prices, and wheat flour prices indeed fluctuated less than rye flour prices. Partly in consequence of this the bakers spread tended also to be more stable in these towns than in the others, and over the same period it did not have such a pronounced upward trend. The advantage of such a movement to the consuming public however was limited by another fact, namely that throughout this period the level of bread prices and the bakers' spread were both higher than in the case of the towns with less stable prices. In other words, "the stabilisation of bread prices is carried out on the basis of a higher spread."

The question whether costs—other than flour costs—rose in the same degree as the baker's spread called for a detailed investigation of the changes in the various items and the reasons therefor. Further, the relation between costs and the spread could also be illuminated by a study of their variations between different towns. The study on which this section is based approached the general problem from both these angles.

The following table shows the variations in the price of grain, the margin between grain and flour, the baker's margin and the price of bread in Berlin in the period 1924-30 compared with before the war (in Rpf. per kilogramme).

	Cost of grain	Grain-flour margin	Flour-bread margin	Bread
1913	14.3	1.5	12.7	28.5
1924	15.4	3.3	12.5	31.2
1925	18.7	3.2	16.5	38.4
1926	18.4	3.0	16.1	37.5
1927	23.2	2.6	19.2	45.0
1928	21.8	2.6	21.1	45.5
1929 1st half	18.5	2.2	20.1	40.8
1929 2nd half	17.6	2.3	20.8	40.7
1930 1st half	16.3	1.3	20.9	39.0

It will be seen that since 1924 the spread between grain and flour—chiefly the cost of milling—had fallen from a level double that of 1913 to a level below that of 1913. This

stage of the production process had become cheaper during 1924-30—after the inflation—largely as a result of the great overcapacity of the milling industry and the loss of export markets for flour which before the war took one sixth of the total production. Again, since 1924, whereas the cost of flour to the baker (the sum of the first two columns) had fallen by some 6 per cent. the price of bread had actually risen slightly. Compared with before the war the contrast is even greater, for whereas the cost of flour had risen, by the first half of 1930, by only 11 per cent, the price of bread had risen by 41 per cent. Between the same dates the baker's margin had risen by 65 per cent. It should also be noticed that this had been fairly stable, at a high level, since 1927 in spite of a fairly considerable fall in the price of bread.

Several factors which contributed to raise bakers' costs are suggested. In the first place the average baker's market tended to decline in the post-war years compared with before the war. On the one hand there was a falling off in the per capita consumption according to various estimates, by between 8 and 11 per cent. On the other hand, the number of inhabitants per baker declined, as a result of the increase in the number of bakers. According to statistics quoted in the study in 1914 there were 942 inhabitants per baker. In 1929 the number had fallen to 676. These two facts, broadly interpreted, indicated a shrinkage of the baker's market by about one third compared with before the war. Against this decline in the size of the market however must be set the increase in the value of bread, indicated by a rise in price of about 45 per cent. Again, the increase in the number of bakers is attributed largely to an increase in the number of small bakers, which were evidently more adapted to dealing with a smaller number of customers. This factor therefore is not regarded as sufficient to explain the increase in the baker's spread.

A second factor which is suggested is the increase in wage costs. Nominal wages had indeed increased for all classes of labour employed in the bakehouse and in the shop. Calculated per hour, they had risen almost three-fold. This factor too however tended to be partly offset by other factors, particularly the rationalised use of labour, the greater employment of machinery and of unskilled or apprentice labour. Taking all those factors into consideration, labour costs were calculated to be somewhat more than twice as high as before the war. This factor was indeed the most important one accounting for the increase in baker's costs. Most other cost items did indeed increase, sometimes in far greater proportion than labour costs, but since in absolute terms they are far less important they did not have the same influence on total costs. The table below shows the increase in the costs of the various items entering into the Berlin baker's margin.

	Baker's margin in 1914, in percentages	Percentage increase	Margin in 1930 as percentage of 1914
Wages, salaries	27	110	57
Rent	17	30	22
Coal	5	50	8
Paper	2 ½	70	4
Social charges	1	400	5
Taxes	½	900	5
Cleaning, advertisement etc.	3 ½	70	6
Interest, amortisation	4	125	9
Profit	31	—	30
Light and Power, materials	8 ½	33	6
	<u>100</u>		<u>152</u>

Thus according to the figures in this table, the baker's costs increased only by 52 per cent., whilst the price increased by 65 per cent. The former increase also roughly corresponded to the increase in the cost of living index between the same periods. Since this index included to a large degree the same items as in the bakers cost schedule, a check was obtainable on the conclusion that the price of bread was higher than justified by baker's costs by comparing the change in the cost of living in various towns with the change in the price of bread. By this method, too, it was found that this conclusion was substantiated.

The second method of approach noted above, the comparison of local prices and costs yielded similar results, and it is instructive to outline them here.

As regards variations in bread prices in the same district which amounted, as noted above, to between 10 and 25 per cent of the average price, it is fairly evident that these cannot be explained merely by differences in costs. The chief cost element which in any district is likely to vary is that of rent, which reflects the size of the undertaking. Since, however, rent plays a relatively small part in total costs, large variations in rents cannot account for variations in bread prices to the degree noted. The conclusion seems to be evident that the limited degree of competition enables bakers situated in relatively prosperous parts of a district to charge according to the purchasing power of the residents, and thus obtain higher prices, and higher profits, than bakers in other parts of the district.

Prices as between towns show—as may be expected on general grounds—even greater price differences than prices in a given district of one town. Thus average prices for rye-bread in 51 Prussian towns in 1929 varied between 31 Rpf. per kilogramme in the case of Frankfurt-on-the-Oder to 53 Rpf. per kilogramme in that of the town of Flensburg. The latter town falls within the group of towns with population of between 50,000 and 100,000, the former within the group of towns with more than 100,000 inhabitants. Nevertheless the average Flensburg baker had 50 per cent. more customers than the average Frankfurt baker, and in consequence more favourable market conditions in that respect alone. Again, the baker in Flensburg used machinery to a greater extent than his fellow in Frankfurt. Further it is stated that actual cost differences as a result of higher wages, flour costs etc. could hardly exceed 7 Rpf., or only one third of the price variation. In between these two extremes there was a remarkable variety of prices, which—it is asserted—do not vary directly with the size of the town, the height of wages and rents or the cost of flour and fuel.

We may here repeat figures, given for 11 large towns showing average bread prices, flour costs and the baker's margin (in Rpf. per kilogramme) in 1929. The towns are arranged in ascending order of bread prices.

	Price of bread	Cost of flour	Baker's margin
Breslau	34	22	12
Dresden	38	25	13
Erfurt	39	25	14
Magdeburg	39	24	15
Berlin	41	22	19
Mannheim	42	25	17
Frankfurt on Main	43	26	17
Krefeld	44	27	17
Essen	46	27	19
Munich	50	28	22
Cologne	51	26	25

The first conclusion which may be obtained from this table is that the higher prices correspond to higher bakers' margins, and that there is no regular variation of the price trend with the cost of flour. The price of bread varies by 17 pfennigs or 50 per cent. of the lowest price. The baker's margins, on the other hand, varies by 13 pfennigs, or 108 per cent.

of the lowest margin. The lowest prices and the lowest margin occur in Breslau, the highest price and highest margin in Cologne. The cost of flour on the other hand shows much smaller variations, whilst in four towns the cost of flour is equal to or higher than the cost in Cologne though the price of bread is lower. The variations in prices reflect evidently far more the variations in the baker's margin than variations in flour costs.

Once again, the number of inhabitants per bakery does not correspond to the variations in either price or margin. The highest number occurs in Frankfurt on Main (1540) the lowest in Erfurt and Krefeld (600). Again, expenditure on wages cannot account for the picture presented above. Only in Berlin and Cologne were wages per labour unit much higher than in Breslau and Dresden. In Munich they were at about the same level as in these two towns; in the remaining towns sometimes higher and sometimes lower. It is calculated that—on the basis of the 40 per cent. of the baker's spread going to wages of all kinds—with wages in Berlin and Cologne exceeding the average in Breslau and Dresden by 30 per cent. only a difference in the baker's margin of 1 ½ Rpf. would be accounted for (1), instead of actual differences of 6 and 12 Rpf.

The remaining costs—excluding profits—which make up the baker's margin represent some 40 per cent. of the total margin. Important differences between towns are however not likely to arise through differences in the group of costs—amounting to about 14 per cent. of the spread—consisting of interest and amortisation charges, insurance, paper, damage to goods etc. The price of coal, representing a further 6 per cent. of the spread according to the Berlin figures was as high in Breslau and Dresden as elsewhere, except in Munich. But even in this latter case only a small difference in the margin could be accounted for in spite of a 30 per cent. higher price for baker's coal (2). The remaining 20 per cent. of the spread (other than profits) arise from light, power, taxes and subscriptions to trade organisations totalling 6 per cent., rent, 12 per cent., and cleaning, repairs and materials. Here again it is calculated that these last factors, even allowing them to be 50 per cent. higher in Berlin, Cologne, Munich, and Frankfurt-on-Main, than in Dresden, could not account for a difference in margin greater than 1 Rpf. (3). Thus it is suggested on the basis of this examination of the various cost items that the difference in costs between Breslau and Berlin and Cologne cannot exceed 3 Rpf. or between Breslau and Frankfurt, 1 Rpf.—far less indeed than the actual difference in the margin. *It is concluded therefore that the difference consists largely in differences in the earnings of the bakers.*

This conclusion is supported also by a comparison of co-operative store prices with the official retail prices for the same towns for the period January to September 1929 (in Rpf. per kg.):

	Price of private baker	Price in co-operative store	Difference in co-operative price		Excess baker's spread over average of Breslau Dresden
			A Gross Price	B Less dividend	
Breslau	34	34	0	— 1 ½	—
Dresden	38	38	0	— 2	—
Erfurt	40	38	— 2	— 3 ½	1
Magdeburg	40	38	— 2	— 3	2
Berlin	41	37	— 4	— 5 ½	6
Mannheim	42	38	— 4	— 6	4
Frankfurt-on-Main	43	44	+ 1	— 1	4
Krefeld	44	46	+ 2	— ½	4
Essen	46	42	— 4	— 6 ½	6
Munich	50	42	— 8	— 10	9
Cologne	50	42 ½	— 7 ½	— 9 ½	12

(1) 30% × 40% × 13 Rpf. = 1 ½ Rpf. — (2) 30% × 6% × 13 Rpf. = ¼ Rpf. per kg. — (3) 50% × 14% × 13 Rpf. = 1 Rpf.

Comparing the small baker's price with the net price of the cooperative store it is seen that in every case the latter is lower than the former. Further, it is seen that in general the cooperative price is lower than the baker's price the greater the difference in the baker's spread compared with the Breslau-Dresden average spread. These two facts imply also that there is much less variation in the bread-flour price spread in the case of the co-operative than in that of the small independent retailer.

In the light of the general conclusions which have been presented above, it was suggested that appreciable reductions in retail prices could be achieved, not only through changes in the organisation of production and selling but also even with the organisation existing at the time of the investigation. In the latter case, the degree to which prices could theoretically be reduced was indicated by the divergence of prices in various areas from low price areas, consideration being given at the same time to divergences which were necessary and justified owing to necessary differences in costs. For each town as well as each district, it would be possible to establish, by appropriate calculations, justified prices—which would certainly be less than prices obtaining in many towns. Further reductions could also be made if the price of bread were made to follow more closely the price of the baker's raw material, flour. It is to be noted that the failure of bread prices to follow those of flour is a characteristic not only of the towns where bread is expensive, but even of the cheaper towns and the towns where bread prices are fairly flexible. The reductions which could be made by establishing prices on the basis of costs were estimated to average at least 10 per cent., though there would be variations from town to town or locality to locality.

Practically, such reductions could be brought by measures designed to overcome those obstacles to truly competitive marketing which were noted in an early part of this section; for example that bread was sold not only by weight, that it varied in quality, that the housewife does not survey the whole market and is therefore unable to control prices. The method suggested was the regular collection and publication of price statistics not only in the technical press but in the daily and local press. The prices published should not be simply average prices, but actual prices obtaining, particularly in each locality the highest and lowest prices. By this means the purchasing public would have a greater possibility of surveying the market and a better chance of paying lower prices.

At the same time this type of action could be re-inforced if the local authorities were to obtain, currently, from the local bakers associations, the average cost of their members' flour purchases and the price of bread. The regular examination of such and other statistical material by a central statistical bureau would make it possible to determine the justified price spread and the justified price. The publication of such prices and the pressure of public opinion would hasten the levelling out of the price spreads and lowering of bread prices as far as natural economic forces could allow. As we note elsewhere, a campaign of this kind was begun at the end of 1930 with considerable success.

Such methods leave untouched the question of a reorganisation of the methods of production and selling. The analysis however of the variations in the structure of cost as between the small baker and the bread factory, suggests the adoption of an organisation in which the advantages of both these types of producer could be combined to reduce prices. It was seen earlier that the advantage of the large scale independent bread factory over the small scale baker lay in actual production costs and in purchasing flour. Small bakers could obviously share the latter advantage by forming co-operative organisations amongst themselves. Indeed in 1929 one seventh of the bakers' flour was purchased by such organisations, which represented one third of the total number of bakers. Here was clearly scope for further

organisation. As regards the transference of the large scale factory's production advantage to the small baker, it is however clear that the possibility is very limited. The economies of large scale production are not transferable to small units.

Just as it appeared to be open to the small baker to reduce his costs of flour purchasing, so it appeared possible for the large factory to reduce its distributing costs which were seen to be higher than those of the small baker. Two ways were suggested. The first had already been adopted by large scale co-operatives and consisted simply in selling bread only as one of many wares. It was possible therefore to distribute total selling and transport costs between many products. Private factories in producing a variety of goods thus could also obtain the same advantages in distribution as the experience of some Berlin bread factories amply testified.

The second method implies more far-reaching reorganisation in the production and selling of bread, and consequently tends to meet more opposition from the trade itself. Nevertheless, it is certainly of interest to consider it here. The scheme consists in concentrating the ordinary bread production of the small bakers of an appropriately large district—a district of a large town or a medium sized town itself—in a single large factory. The bakers' shops in each district would thus be served by one factory producing the various standard qualities of bread. The factory would not be a private concern, independent of the bakers, but rather a joint undertaking of all the small bakers of the region, who would share in the profits either on an ordinary capitalistic or a co-operative basis, according to capital invested or to the purchases from the factory. The baker himself would not give up production, but would concentrate on the production of the special quality bread and the other products of the pastry, cook's art in which he has special skill. In this way the production costs of bread sold by all the private bakers in the whole district would be substantially lowered. At the same time, the fact that the factory would serve only those bakers in a concentrated area would compensate for the higher transport costs, which, as we have seen, is the disadvantage of the large factory or wholesale co-operative distributing to the many scattered branches or members over large areas. It was estimated that under such a scheme the baker's total costs would be reduced by a least 10 per cent.

An example was given of a town in which such an organisation exists, in Copenhagen. In that town a large proportion of ordinary rye bread was manufactured in special factories and distributed to private bakers who were shareholders in these factories. The bread price resultant from such an organisation was, in 1930, between 35 and 40 per cent. lower than in Berlin, whilst the baker's spread was less than half of that in Berlin, in spite of considerably higher wages of bakers' labour.

All the methods for lowering bread prices outlined above have a common feature in that they seek to stimulate market competition. On the one hand the consumer must be given a better knowledge of the market, on the other, the producers should be able to adopt the varying advantages of their competitors. In these ways, it is argued, reductions in bread prices could be obtained which should average at least 20 per cent. of the ruling levels.

4. — Vegetables and fruit.

Market garden produce reaches the consumer in a variety of ways. The urban consumer obtains his supplies from the small retailer who in turn obtains by purchase on the open and centrally localised wholesale market. In large towns the wholesale market is supplied direct from the various producing regions which may be nearby or may be far off. In general the goods are collected at the farms for the central wholesale markets by the wholesalers who arrange for their

transport and delivery to the market. In post-war years there has been a growth of farmers' co-operatives delivering to the market. In the less large towns supplies may come to a greater degree from the surrounding areas or in many cases, especially as regards imported goods, may be obtained from the larger wholesale markets of the larger towns. In the villages and small consumption centres the small producer may himself sell directly on the local retail market, to which he carries his wares.

These various forms of markets are only to a limited degree interdependent. Owing to the character of the goods, particularly their perishability and their low value, they do not, in general, bear, physically and economically, repeated transport. Consequently large variations in prices between regional wholesale markets do not call for the immediate deliveries from the cheaper to the dearer market. It is only over a long period that such adjustments are made. The ideal equilibrium in which regional prices do not differ by more than transport costs is rarely reached on this particular market. On any one wholesale market there is no lack of competition between the producers of different regions. But the relative lack of competition between the regional markets themselves makes the investigation into prices and price spreads in the group of foodstuffs particularly difficult. Regional markets tend to vary in the type, quality, packing and preparation, in price and the method of distribution to the consumer, of the wares. A study of price margins, contained in a general study of the factors determining prices of vegetables and fruit published by the Reich Ministry of Food and Agriculture in 1931 (1) is therefore chiefly limited to the Berlin market. The results of that study may here be briefly summarised.

The wholesale price margin is the difference between the price at the farm and the price on the wholesale market. This difference must normally cover loading and transport costs, wastage and the wholesalers' selling costs. Transport costs vary very much according to the commodity and according to the distance carried. The freight rates for fruit come under a different schedule from that charged for vegetables.

Some examples may be given of actual prices in October 1930. Thus the wholesale price of savoy cabbage bought in Mecklenburg for 1.60 RM equalled 3.0 RM per 50 kg. The margin is here seen to be 1.40 RM or almost equal the original cost. Nevertheless the greater part went in transport costs, the wholesaler's share of the total spread equalling only 43 pfennigs. Most of this indeed went to meet selling costs, and certainly not much was left in the form of profit.

White cabbage selling at the same price on the wholesale market was bought at 0.90 RM in Holstein and at 1.20 RM in Mecklenburg. This difference in producers' prices corresponded exactly to the difference in freight charges. The wholesale spread amounted to 180 per cent. of the Holstein price but in this case too nearly the whole of it went in transport and wastage costs. Prices at the time of investigation were however particularly low. It should be borne in mind that during times of rising prices a greater proportion of the spread may go to the wholesaler, in so far as transport cost are more or less fixed. Thus the wholesaler's earnings on somewhat higher-priced red cabbage and on turnips formed a higher proportion of the total margin.

The retail market is naturally decentralised and much less competitive than the wholesale market. This alone tends to account for wide variations in retail prices of similar quality goods. A survey of prices in 100 Berlin shops on 18 November 1930 gave a clear indication of this variation. Thus 15 shops sold savoy cabbage at 10 pfennigs per half kilogramme, 44 at 8 pfennigs, 2 at 7.5 pfennigs, 18 at 7 pfennigs, 17 at 6 pfennigs and 4 at 5 pfennigs. Similar

(1) Dr. H. Liebe. *Preisbildung bei Gemüse und Obst*. Berichte über Landwirtschaft, Sonderheft 52. Reichsministerium für Ernährung und Landwirtschaft, Berlin, 1931.

erratic variations were observed also in the case of the other products surveyed, including white and red cabbage, carrots, turnips, onions and spinach; and in the course of another investigation (1) as regards fruits, particularly apples, in which it was observed that many shops were selling medium and poor quality fruit well above the average price for Berlin, and, conversely, many were selling good and high quality fruit well below that average.

Wholesale prices do not vary to the same extent as retail prices. The variations in retail prices indicate principally variations in the retailer's margin. Certain variations in the margin are always normally justified, since wages, rents, transport costs etc. incurred by the retailer vary. Nevertheless a practical demonstration that the spreads do not always correspond to costs was offered by the success of the price reduction campaign begun at the end of 1930. In three months, as a result of publication of fair prices in the daily press and over the wireless, the margin between wholesale and retail prices of many foodstuffs, including vegetables and fruit, was diminished considerably, bringing about an actual fall in average retail prices. Indeed, whilst wholesale prices of savoy cabbage actually rose from an average of 3 RM per 50 kgs. to nearly 6 RM. the retail price first fell from about 8.50 RM to 7.50 RM and then only rose to its previous level. The spread indeed fell from 5.50 RM to under 3.0 RM.

Similarly the spread between wholesale and retail prices of red cabbage fell from over 150 per cent. of the wholesale price to just over 50 per cent. in the last quarter of 1930.

The efficiency of such measures to reduce prices was shown equally in the case of potatoes (2). Whereas average producer's prices had fallen from a high point of 3.94 RM per 50 kg. in 1926-27 to 2.36 RM in 1929-30, retail prices in Berlin had only fallen from 6.09 RM to 4.76 RM. In 1930-31 producers prices continued their fall and fell to an average of 1.79 RM. Retail prices however fell much more than this, going down to 3.62 RM. Over the whole of Germany, the contrast of the movements of producers' and retail potatoe prices was even more striking in 1930-1931. Taking an average of 52 towns, the producer's price in October 1930 averaged less than 2 RM., whilst the retail price average 4.25 RM. In December the former had reached 2.20 RM whilst the latter had fallen to 3.80. In the next few months the upward movement in producers prices continued. In February and March the retailer's price reached the October level again whilst the producer's price was 60 pfennigs higher than in October. In April the producer's, wholesale and retail prices began a sharp rise but the wholesale-retail margin was actually lower in that month than throughout the preceding months. Thus whilst average prices at the farm had risen by 75 per cent. by May 1931 the retailer's spread fell from 1.54 RM to 1.15 RM or by over 25 per cent.

Owing to the fixity of a high proportion of retailer's costs it is not to be expected that the wholesale-retail margin should fluctuate equally with the producer's prices. Nevertheless the marked contrast between the movements of prices and margins in 1930-31 and the preceding period indicates that the downward movement of the spread was largely the result of the price campaign. From 1924-25 to 1926-27 farm prices of potatoes sold in Berlin had risen from an average of 2.44 RM to 3.94 RM per 50 kgs. whilst the wholesale-retail margin increased from 0.75 RM to 1.34 RM. In the following period down to 1929-30 average farm prices fell each year, reaching 2.36 RM. By contrast however the retailer's margin first rose and then only slightly declined, averaging in 1929-30 1.55 RM. The retailer's margin had thus become a considerably higher proportion of the retail price—one third in 1929-30 as compared with less than one-fifth in 1924-25. The price campaign of 1930-31 thus succeeded in reversing the tendencies of the previous years.

(1) The results of this investigation, by Kemmer and Schulz, were published in *Neue Obst- und Gemüsebauzeitung*. Braunschweig, No. 4 and 5, 1931.

(2) A. Vogel. *Preisspannen im Kartoffelhandel*, Berichte über Landwirtschaft, Sonderheft, n. 35, Berlin 1931.

THE NETHERLANDS (1)

I. — Market garden produce.

In 1931 the provincial government of Northern Holland set up a commission of enquiry into the situation of agriculture. The Commission included in its report (2) a study of the margin between producers' and consumers' prices, particularly with regard to market garden produce. The Commission endeavoured to follow up the distribution of vegetables and fruits through the three main stages, namely, purchase by public auction by wholesale dealers, purchase by intermediary wholesalers for sale to retailers, and the purchase by the latter from the wholesaler. The Commission studied the transactions with respect to 564 lots of goods carried out in various towns. The following table indicates some statistical data calculated by the Commission, and shows the auction price—or the price received by the farmer—the wholesale market price and the retail price of certain vegetables and fruits at different times of the year.

Auction, wholesale and retail prices of vegetables.

Month	Product	average auction price cents	average wholesale market price cents	average retail price cents
April	spinach	per kg. 2.96	5.19	8.07
"	rhubarb	" " 4.66	6.40	9.16
May	lettuce	" " 3.01	3.52	5.12
"	haricot beans.	" " 69.62	76.17	86.72
June	prime potatoes	" " 2.26	3.49	5.95
July	pears	" " 11.91	14.74	20.19
"	lettuce	" " 0.94	1.60	3.25
"	strawberries	" " 19.10	24.09	32.33
September	haricot beans.	" " 17.22	20.22	26.86
November	cauliflower	" " 8.40	12.13	16.73
"	pears	" " 7.50	9.72	13.47

It will be seen, from the figures for beans, that seasonal fluctuations may be very large, whilst in this particular case the falls in the wholesale and retail prices are approximately equal to the fall in the auction price. From the table may also be calculated the producer-wholesaler, wholesaler-retailer and producer-retailer margins, which vary between the different commodities.

The Commission also noted that the margin varied considerably as between the different towns to which the investigation referred, that a rise in the auction price inevitably produced a rise in the retail price and that, though there was a clear correlation between the wholesale and retail prices, the correlation was less definite between the auction prices and wholesale prices. Further it noted that the retailer's gross profit, or the margin between his buying and selling prices, was roughly the same in all the lots of goods investigated, thus deducing that the margin was fixed independently of the auction price; and that the margins expressed as a percentage of the purchase price were very high.

(1) Based on material supplied by Mr. C. H. J. Maliepaard of the Netherlands Department of Agriculture.

(2) *Rapport van een onderzoek ingesteld naar de toestanden en omstandigheden, welke van invloed zijn op of samenhangen met het landbouwbedrijf in Noordholland.*

The number of wholesale traders in market garden produce in Amsterdam was found to amount to 400 compared with about 1600 retailers. The former number was regarded as being particularly high in view of the fact that retailers drew some 55 per cent. of their supplies directly from the grower. Though the number of retailers also could be considered high, the Commission was unable to conclude that the high number of traders resulted either in high or low consumption prices. Retailers profits however were not particularly high.

The high number of intermediaries was indeed partly explained by the heavy unemployment prevailing and the relative ease for people without special aptitude or large capital to engage in trading of the kind studied, and partly by the preference of many people for an independent occupation.

It was noted also that the claims by consumers for better service tended to maintain distribution charges, whilst a further factor having the same result was the large percentage of wastage inevitable in view of the perishable nature of vegetables. On the whole the Commission tended to the view that the distribution charges, as shown by the margins, tended to the excessive. Generally it was found that the number of intermediaries tended to increase the further the consumption area was located from the growing region. But though direct sale from producer to retailer was frequently practised it could not be universally practised in a large town such as Amsterdam. It was also considered that to some extent the advantages of direct selling tended to be reduced by the loss of time which the grower must incur away from his farm. The Commission recommended however the creation of local retail markets and the setting up of co-operative buying organisations among retailers as obtained in other branches of trade. Another suggestion was that local authorities should also engage in purchasing at the auctions and retail selling.

2. — Bread.

Again in 1931 the Ministry of Labour, Commerce and Industry set on foot an enquiry (1) into the prices of some foodstuffs, among which was included bread. The purpose of that study was to check the popular view that the final price of consumable goods did not, or only insufficiently, follow a fall in the raw material and wholesale prices. From 1927 to 1930 the price of wheat declined by 62 per cent. whilst the price of bread declined by 22 per cent. The chief reason for the disparity, as revealed by the investigation, lay in the relative fixity of the intermediate costs. A further conclusion was that "understandings" among bakers were frequent. The margin between the prices of flour and bread fluctuated considerably around the norm, but the norm itself remained fairly constant during the period 1927-30. Over a long period the fluctuations were damped through importations of flour. On the other hand the price of bread was observed to follow closely changes in the price of flour. In their final conclusions the authors held the enquiry to have disproved the view that the fall in raw material prices was not sufficiently reflected in the price of bread.

3. — Milk and butter.

A further enquiry under the same auspices was conducted in regard to milk and butter. To establish the size of the margin the wholesale prices taken were those in the town of

(1) *Kleinhandelsprijzen van eenige verbruiksartikelen*. Verslagen en mededeelingen van het Departement van Handel en Rijkverheid 1931.

Vlaardingen, in Southern Holland, situated in the vicinity of the most important production centres, and the retail prices those ruling in some dozen towns.

It was noted that there was a distinct seasonal fluctuation—high prices in the autumn and winter and low prices in the spring and summer—in both wholesale and retail prices. Nevertheless the wholesale-retail margin was not on the whole constant except in The Hague and Rotterdam, and, in less degree, in Amsterdam, Harlem and Utrecht. It appeared however that the wholesale price at Vlaardingen could not be used as a basis of comparison for the whole country.

The following table indicates the spread between wholesale and retail prices for consumers' milk month by month in 1930-31.

Month		Wholesale price florins per 100 litres	Retail price at the Hague cents per litre	Margin florins per 100 litres	Retail price at Rotterdam cents per litre	Margin florins per 100 litres
1930	April	7.60	14	6.40	13	5.40
	May	7.50	14	6.50	13	5.50
	June	7.32	14	6.68	13	5.68
	July	8.31	15	6.69	14	5.69
	August	8.15	14	5.85	14	5.85
	September	9.70	17	7.30	16	6.30
	October	10.00	17	7.00	16	6.00
	November	10.00	17	7.00	16	6.00
	December	9.06	17	7.94	16	6.94
1931	January	9.00	17	8.00	16	7.00
	February	9.00	17	8.00	16	7.00

It will be seen that both the retail price was higher in the Hague in each month (except August) than in Rotterdam by 1 cent per litre. The margin too was higher, in most months by the same amount.

On close investigation it was found that the higher margin obtaining in the winter months were due to the delivery contracts between the producer and purchaser which fixed the price on the farm for determined quantities for periods of a fortnight throughout the year. A different rule applied however to additional quantities. It was asserted in the enquiry that these contracts had an equalising effect, to the benefit both of producers and consumers, since exorbitant prices during the winter, when supplies were low, and damagingly low prices for the farmer in the summer, when supplies were large, could thus be avoided.

The margin in the case of manufacturing milk supplied to dairies was generally lower than in that of consumers' milk, and in general the price of the latter milk followed that of the former.

As the following figures indicate, the movements over long periods of the retail price of milk correspond to those of the wholesale price.

	1923	1924	1925	1926	1927	1928	1929	1930
Wholesale price (per 100 litres)	10.92	11.69	12.07	10.08	9.33	10.30	10.25	9.11
Retail price (per 100 litres)	15.71	16.11	16.33	14.72	14.39	15.15	15.10	13.91
Margin	4.79	4.42	4.26	4.64	5.06	4.85	4.85	4.80

As regards butter it was asserted that in general the wholesale-retail margin was sufficiently constant. The following table indicates, in cents per kilogramme, the size and movements of the margin from 1923 to 1930 in a number of important towns.

	1923	1924	1925	1926	1927	1928	1929	1930
Amsterdam	36	35	36	40	39	38	43	43
Armheim	35	31	29	31	27	28	29	29
Eindhoven	32	32	33	33	34	35	35	35
Enschede	38	34	37	39	37	36	37	37
The Hague	37	34	38	38	33	35	38	37
Groningen	27	24	22	21	23	20	20	22
Harlem	38	40	44	43	40	36	39	38
Leeurwarden	38	33	33	33	33	32	33	32
Maestricht	24	26	24	21	20	24	28	29
Rotterdam	46	39	47	51	41	40	46	42
Utrecht	33	33	34	33	31	31	35	33

The retail price was also found to change rapidly in response to changes in the wholesale price.

NORWAY (1)

Two studies have been made in Norway on the distributive margin in foodstuffs, the first by a committee appointed in 1922 by the Ministry of Agriculture, which reported in 1926, and the second by the Institute of Economic Research of Bergen, published in 1935, and entitled *Handels-savanse og omsetningsforhold for en del landbrukvarer i Bergen* (Profits and marketing organisation of certain agricultural commodities). The results of the first report, which dealt with the years 1923-24, may be summarised in the following table, which shows the elements of the distributive margin from producer to consumer in percentages of the producer's price. The table shows

COMMODITY	Total margin	Packing	Transport	Other expenses	Freight	Wholesale profit	Retailer's gross profit
Butter	19.9	1.6	0.4	0.2	2.6	3.1	12.0
Goat's cheese	37.1	1.5	0.2	0.4	3.1	9.9	22.0
Gouda and Gruyère	42.3	1.2	0.5	0.9	3.6	12.8	23.3
Dutch cheese:							
Fat	55.3	2.2	1.0	0.6	4.6	21.0	25.9
Half and quarter fat	84.5	2.8	1.2	0.5	9.0	25.2	45.7
Eggs	27.3	—	—	2.6	5.4	8.9	12.6
Potatoes	86.6	0.3	1.4	2.2	8.2	25.0	49.3

great variations as between the commodities and in the importance of the various costs. In each case, however, the retailer's margin or gross profit is the largest single element. The figures are in all cases averages, and the actual figures vary considerably about these averages. Thus the spread on butter in the cases investigated varied between 15.8 and 26.2 per cent.; on goat's cheese from 26.7 to 61.0 per cent., and on potatoes from 60 per cent. to 130.7 per cent.

(1) Report prepared by Mr. Paul Barca, Secretary to the Norwegian Central Bureau of Statistics.

The results of the second study, obtained by employing a different method from that used in the earlier study, are given in the table below. Here the margin is indicated as a percentage of the consumer's price.

COMMODITY	Bergen 1934		Oslo 1923		Total
	Margin on purchase from producer	Margin on purchase from wholesaler	Retailer's gross profit	Wholesale gross profit	
Butter (dairy)	11.2	8.5	10.2	2.6	12.8
Butter (farm)	12.3	9.4	11.7	2.6	14.3
Goat's cheese	22.0	15.8	15.7	8.4	24.1
Fat Gouda Cheese	26.4	19.9	15.9	10.9	26.8
Eggs	17.1	12.4	10.2	6.8	17.0
Potatoes	34.6		26.3	13.4	39.7

Agriculture in Norway is organised in numerous small holdings scattered over large areas, and goods are brought to market in small quantities. The variations in qualities and types are very great. Both these facts lead to high transport and selling costs. In recent years attempts have been made to improve this situation by the organisation of co-operative marketing.

A study published in 1934 (1) contained a calculation of the retail bread margin in 1933, which may be reproduced.

	Ore per kg.	As percentage of bread price
Flour	16.0	45.7
Salaries	5.0	14.3
Fuel etc.	3.0	8.6
General expenses	7.0	20.0
Retailer's profit	4.0	11.4
	35.0	100.0

POLAND (2)

1. — Introduction.

The size and the development of price margins of agricultural products attracted attention in Poland of various institutions, as well as of private investigators, mainly in connection with efforts made with a view to improving the organisation of marketing of these products, which was considered to be in many respects defective.

Of the various agricultural products, the two principal breadmaking cereals—wheat and rye—have been more closely studied in this respect than any other commodity. Next came live stock and meat, followed by milk. With regard to other products only fragmentary data are available.

2. — Cereals.

The evolution of the margins between the prices obtained by the farmers for wheat and rye, and those at which these cereals are sold on the wholesale market, during the period from 1927-28

(1) Egil Fenarsen and K. A. Wieth-Knudsen. *Verdenskoigen og det daglige brod.*

(2) This section is based on materials supplied by Dr. Antoni Zabko-Potopowicz of Warsaw.

to 1934-35, are shown in the table below. They are quoted from a study by J. Wisniewski, published by the Polish Institute for Business Research in Agriculture (1).

	1927-28	1928-29	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35
<i>Rye:</i>								
Prices paid to farmers	42.5	33.9	20.3	18.8	22.7	16.4	13.0	13.3
Wholesale market prices at:								
Warsaw	44.1	34.0	22.0	21.7	25.0	17.9	14.4	14.4
Poznan	41.6	32.2	21.8	21.0	24.1	16.4	14.6	14.9
<i>Wheat:</i>								
Prices paid to farmers	51.7	45.3	36.3	27.0	24.6	26.7	18.8	16.8
Wholesale market prices at:								
Warsaw	54.0	47.5	40.7	29.1	27.0	32.1	20.3	18.1
Poznan	49.4	44.3	38.7	26.3	24.4	29.6	18.5	16.3

It should be noted, however, that the wholesale market prices quoted are those ruling in two important centres only, and that, therefore, they can only be considered as roughly representative of the level of such prices, which naturally varies as between different localities. On the other hand, the prices paid to the farmers, as given in the table, represent an average for the whole country. This may involve a certain apparent minimization of the margin, which is much wider in some districts than would appear from the table.

According to some investigations there is a tendency for the margins to increase in the direction from the West to the East of Poland.

Passing to the retail margins, one has to distinguish between rye and wheat, because while rye practically always appears in retail trade in the form of bread, large quantities of wheat are sold by retailers in the form of flour.

With regard to rye, the margin between the wholesale price of the grain and the retail price of bread sold to the consumer must cover the cost of milling, of the transfer of the flour from the miller to the baker, the cost of baking and the profit of the baker, as well as the costs and the profits of the retailer.

The table below shows the contributions made to the final price of rye bread to the consumer by the process of milling and baking, the baker's price for bread being assumed to be the retail price charged to the consumer, in Warsaw and in Poznan, during the period 1927-28 to 1934-35; the source being the work of J. Wisniewski already quoted.

	1927-28	1928-29	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35
WARSAW:								
Miller's margin:								
In Polish zloty	7.00	6.69	7.74	7.08	5.89	4.60	4.34	4.44
In per cent. of wholesale price of grain	15.9	19.7	35.2	32.5	23.5	25.7	30.2	30.8
Baker's margin:								
In Polish zloty	12.18	14.62	12.84	13.93	12.70	11.84	11.52	10.75
In per cent. of wholesale price of grain	33.7	43.0	49.9	57.3	48.1	60.4	73.5	68.9
<i>Total miller's and baker's margins:</i>								
In Polish zloty	19.18	21.31	20.58	21.01	18.59	16.44	15.86	15.19

(1) Wisniewski J.: *Uwagi o przebiegu cen produktow rolnych w okresie 1927-1935*. Prace Instytutu badania konjunktur gospodarczych i cen. T. IV., Warszawa, 1935.

	1927-28	1928-29	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35
POZNAN:								
Miller's margin:								
In Polish zloty.	9.53	5.69	6.08	6.34	5.03	4.19	2.46	2.93
In per cent. of wholesale price of grain	22.9	17.7	27.9	30.2	20.9	25.6	16.9	19.7
Baker's margin:								
In Polish zloty.	14.73	12.54	12.15	13.73	11.93	11.59	11.49	10.93
In per cent. of wholesale price of grain	34.8	40.2	50.1	58.2	47.0	65.1	82.0	73.4
<i>Total miller's and baker's margins:</i>								
In Polish zloty.	24.26	18.23	18.33	20.07	16.96	15.78	13.95	13.86

In the case of wheat, the table has to be constructed somewhat differently, owing to the fact that much of the retail trade is not in bread, but in flour. The table, referring to the same period and based on figures given by J. Wiśniewski in his study.

	1927-28	1928-29	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35
WARSAW:								
Sum of miller's and flour retailer's margins:								
In Polish zloty.	8.80	15.45	15.40	14.62	9.81	5.69	9.23	9.28
In per cent. of wholesale price of wheat	16.3	32.5	37.8	50.2	36.4	17.7	45.4	51.2
Sum of miller's and baker's margins:								
In Polish zloty.	24.70	35.14	24.88	28.62	22.41	17.19	25.03	27.78
In per cent. of wholesale price of wheat	45.7	74.0	61.1	98.2	83.1	53.6	123.2	153.4
Miller's margins:								
In Polish zloty.	6.42	5.47	5.30	7.34	4.77	3.51	3.80	4.23
In per cent. of wholesale price of wheat	13.0	12.4	13.7	28.0	19.7	11.9	20.5	26.0

POZNAN:								
Flour retailer's margin:								
In Polish zloty.	12.80	14.82	9.15	12.51	9.20	5.54	5.41	4.85
In per cent. of wholesale price of wheat	27.4	35.0	23.1	43.0	37.4	18.4	28.0	28.1
Sum of miller's and flour retailer's margins:								
In Polish zloty.	21.74	22.16	13.52	17.01	13.72	8.40	8.45	8.11
In per cent. of wholesale price of wheat	44.0	50.1	35.0	64.8	56.4	28.4	45.6	49.8

The spread between the wholesale prices of wheat flour in the principal towns and the retail prices of bread would appear to be very large in Poland. Thus, according to calculations made by K. Lepa, compared with the conditions prevailing in this respect in England and

France, the Polish consumer is charged a much higher price for the services of baking and retailing (1). This appears clearly from the table below.

	Wholesale prices of wheat flour	Retail prices of wheat bread	Relation between bread and flour prices in percent
	In Polish zloty per kg.		
Poland	0,258	0.60	232.6
England	0,346	0.49	141.3
France	0,455	0.56	123.1

During the last few years a characteristic difference could be observed in the evolution of the share of the millers in the process of price formation in Poznan, on the one hand, and in Warsaw, on the other. In the former town, owing to local conditions, during the depression the miller's share did not increase to any considerable extent in relation to the wholesale prices of grain, while in Warsaw the increase in it was very marked.

Another point worth recording is that, as a general rule, the baker's share in the price of bread showed a much greater stability during the crisis than did the share of the miller.

The various investigations of the spread between the farmer's prices of cereals and those ruling on the markets of the principal towns tend to show the importance of the part played in determining the margin by transport costs. These are naturally especially heavy in the outlying districts, such as Volynia, from where cereals have to be transported to the wholesale markets over long distances. Moreover, in respect of the evolution of the margin during the depression it should be noted that railway freights and transport costs generally displayed considerable rigidity, and their incidence tended accordingly to become heavier along with the fall in the prices of cereals.

An important consideration in determining the actual spread between the producers' prices and those of the larger wholesale markets, such as those of Warsaw or Poznan, is the quality of the grain in which the transactions are made. As these markets deal only in high-grade standardised grain, mostly coming from the larger and better organised farms, which have large quantities of uniform products to dispose of, the spread between the price paid to the producer and that of the wholesale market in this case is relatively small. It is generally much larger on the various country markets, which depend upon local supplies of grain coming from the smaller and less efficient farms and involving considerable additional expenses in cleaning, grading, waste etc. In this respect the position is considerably better in the West of Poland than it is in the East, owing to the more efficient organisation of both production and marketing of agricultural products in the Western part of the country.

The high cost of milling is due to the defects of organisation of the milling industry, which sometimes depends upon middlemen, whose profits must be included in the milling costs. Owing to the wide range of variations in the technical efficiency of the mills, in their location and in the organisation of their grain supplies, in 1930 the costs of milling fluctuated within very wide limits, from a minimum of 3.5 to a maximum of 9 zlotys per quintal (2).

The high level of bakers' costs, according to expert opinion, is largely due to the increase in the number of small bakeries. This tends to increase the number of intermediaries between the miller and the baker, as well as to reduce the efficiency and to increase the costs of baking and retailing operations. The data collected by a Commission of Inquiry into the baking industry, which divided the bakeries into four classes according to size, to the extent of mechani-

(1) K. Lepa: *Nozyce numer dwa*. "Rolnik Econom.", 1936, N. 19, pp. 569-573.

(2) T. Brzeski: *Zagadnienie organizacji zbytu zwierząt rzeźnych w Polsce*, Poznan 1933.

sation and to general commercial organisation, show that the cost of production of one kilogramme of rye bread, according to the four various types of bakeries, was 19, 15, 13 and 9 grosches. The fact that the baking industry involves many rigid items of costs, such as rent, heating, wages and taxes, tends to make this factor of the price spread particularly inelastic.

3. — Live stock and meat.

With regard to live stock and meat the available information is even more scarce than it is for cereals.

The margins between the prices paid to the farmers for their animals and those ruling on the wholesale markets are available for the province of Poznan, for which they have been collected by M. T. Brzeski for the years 1928-29 and 1930-31. They are shown in the table below.

	Average weight of the animals	Average price paid on the spot to producers, in Polish zloty	Average price of the market in Poznan in Polish zloty	Difference between the producers' and the market prices in Polish zloty	Transport and marketing costs in Pol. zloty	Net difference between prices, in Pol. zloty	Margin of net market prices in per cent. of the prices paid to farmers
	in kgs.	Per quintal — Live weight					
1928-29							
Cows:							
Large farmer . . .	500	106.23	163.33	57.10	3.75	53.35	50.2
Small farmer . . .	400	68.60	128.12	59.52	4.51	55.01	80.3
Young Oxen:							
Large farmer . . .	500	124.00	156.24	32.24	3.72	28.52	23.0
Small farmer . . .	400	72.24	124.79	49.55	4.49	45.06	59.8
Calves:							
Large farmer . . .	55	104.36	174.58	70.22	34.52	35.70	34.2
Small farmer . . .	40	81.15	156.53	75.38	46.57	28.81	35.5
Other cattle:							
Large farmer . . .	150	123.76	219.75	95.99	13.27	82.72	66.8
Small farmer . . .	120	102.63	197.78	95.15	16.20	78.95	76.9
1930-31							
Cows:							
Large farmer . . .	500	83.32	115.55	32.33	3.56	28.77	34.5
Small farmer . . .	400	20.10	43.67	23.57	4.09	19.48	96.9
Young Oxen:							
Large farmer . . .	500	77.38	116.41	39.03	3.56	35.47	45.8
Small farmer . . .	400	29.34	55.91	26.57	4.15	22.42	76.4
Calves:							
Large farmer . . .	55	73.90	131.75	57.85	32.06	24.89	33.6
Small farmer . . .	40	37.50	86.14	48.64	43.05	5.59	14.9
Other cattle:							
Large farmer . . .	150	86.32	147.67	61.35	12.30	49.05	56.8
Small farmer . . .	120	72.10	116.78	44.59	14.85	29.79	41.1

This table, based upon information supplied by the Wielkopolski Farm Accountancy Centre of the Ministry of Agriculture, though it gives only an approximate idea of the conditions in a certain region of Poland, would appear to point to the margin being considerably larger in the case of small farmers' cattle. This should be expected, seeing that the small farmer usually sells his live stock through middlemen. Another point which appears from the table, is the marked rigidity displayed by some of the factors which determine the spread, and more particularly of the costs of transport and marketing. The relatively high cost of marketing is largely due to the prominent part played on the cattle market by middlemen.

The margins between the prices of live animals and those of meat in Poland tend to be wide and to vary considerably according to locality. This depends partly on the fact that meat prices in Poland are, as a rule, relatively high, and partly on the wide range of variation in the quality of both animals and meat on the different local markets.

An idea of the range of variation in the margins between the prices of live animals and those of the corresponding kinds of meat in some Polish towns is given by the table below, which shows the prices of meat in per cent. of those of live animals. The figures are taken from an article by E. E. Iwazkiewicz on the conditions of the live stock market in Poland, and refer to the year 1932-33 (1).

	Beef	Veal	Pork
Central Poland:			
Warsaw	231	223	154
Lodz	183	220	—
East Poland:			
Suwalki	217	203	135
Luck	200	207	188
West Poland:			
Poznan	312	246	156
South Poland:			
Cracow	228	178	164
Lwow	162	205	173

Already in its Report on the meat market in Poland, published in 1928, the Commission of Inquiry into the returns and costs of production called attention to the fact that the margins between the prices of meat and those of live animals in Poland are considerably larger than they are in the West of Europe. It saw the reason of it in a less efficient and more wasteful organisation of marketing and in the excessive gains of cattle dealers and butchers (2).

The effects of the depression upon the prices of live stock and of meat can be seen from the following table of index numbers taken from the study by J. Wiśniewski on the evolution of prices (3).

	1927-28	1928-29	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35
<i>Horned cattle:</i>								
Warsaw:								
Wholesale prices	96.9	100.0	83.1	63.0	52.0	44.3	49.6	44.4
<i>Beef:</i>								
Warsaw:								
Retail prices	97.6	100.0	94.2	77.3	53.6	45.5	44.2	43.3
<i>Pigs:</i>								
Farmer:								
Wholesale prices	102.5	100.0	105.5	63.3	45.7	42.7	39.7	27.6
Wholesale market:								
Wholesale prices	103.0	100.0	99.6	59.1	44.3	43.2	38.2	27.2
<i>Pork:</i>								
Warsaw:								
Retail prices	95.3	100.0	102.1	72.4	54.1	48.5	44.7	35.9
<i>Bacon:</i>								
Warsaw:								
Retail prices	103.1	100.0	103.6	66.5	58.4	52.5	51.4	31.0

(1) E. Iwazkiewicz: *Rynek zwierząt rzeźnych w Polsce*, "Rolnik Ekon.", No. 22, 1934.

(2) *Sprawozdanie Komisji Ankietowej badania warunków i kosztów produkcji*, T. VIII, Przemysł i handke mięsny, Warszawa 1928.

(3) Wiśniewski, J.: op. cit.

According to K. Lepa, on October 1928 the farmers near Warsaw received on the average 78.8 per cent of the price paid by the consumer in that city for his meat, which comprised pork, beef and a small proportion of veal. In October 1934 the farmer's share fell to 63.6 per cent.; in 1935 it was 74.3 per cent., and in July 1936 it worked out at 71.9 per cent (1). Such being the position of farmers enjoying a particularly favourable situation, the conditions in the remoter districts were naturally much worse. Thus, according to the data of K. Sobański, referring to the year 1933, of the price paid by the consumer in Warsaw for beef, the cattle breeders of Eastern Poland received only 34.4 per cent. Of the rest, 0.6 per cent. went to the fisc in taxes; 4.7 per cent. to railways in freights; 2.4 per cent. in local rates and duties; 5.1 per cent. in wages. Retailing costs represented 12.6 per cent. of the final price, and the services of middlemen in all the different stages of the passage of meat from the cattle breeder to the final consumer absorbed as much as 40.2 per cent. of the retail price of meat (2).

4. — Milk.

The little information there is concerning the formation of prices of milk in Poland tends to show that the spread between the wholesale and the retail prices of milk is wide and that during the years of depression it tended rather to increase than otherwise.

The following figures, referring to the evolution of the prices of milk in Warsaw during the period 1928 to 1935 are drawn from a recent private investigation of the conditions of milk supply in that city (3).

	1928	1929	1930	1931	1932	1933	1934	1935
Wholesale prices in Warsaw (in gr. per litre)	39	48	38	30	20	16	15	16
Retail prices (in gr. per litre)	44	55	47	40	30	25	24	25
Difference (in gr. per litre)	5	7	9	10	10	9	9	9
Per cent. of the wholesale price	12.80	14.58	23.68	33.33	50.00	56.25	60.00	56.25

According to the same source, it would appear that, of the final price paid by the consumer in Warsaw for his milk, the share of the dairy farmer averaged 29.6 per cent.; transport costs amounted on the average to 20 per cent.; wholesale trade accounted for 34.4 per cent. and the retail distributor for 16 per cent.

SWITZERLAND

1. — Introduction.

The Swiss *Commission d'étude des prix* has published several reports, based on studies it began in 1927, on the prices of foodstuffs, including milk, bread and meat. The following notes are based entirely on these reports.

2. — Milk.

The first of these reports contains a study of production, distribution, and price margins of milk (4) in the winter season 1926-27. Owing to the great diversity of conditions throughout

(1) Op. cit., p. 572.

(2) Sobański, K.: *Kasy Targowe w organizacji rynku rolniczego*. "Przegląd Miesny," 1934, N. 1-2.

(3) M. Jezewska: *Zaopatrzenie Warszawy w mleko*. Praca dyplomowa wykonana w Zakładzie Polityki Agrarnej S. G. G. W., Warszawa 1936, p. 58.

(4) *Die Verschleisspanne im Milchhandel der Schweiz*. Veröffentlichung Nr. 1 der Preisbildungskommission des Eidgenössischen Volkswirtschaftsdepartement.

the country the detailed investigation of the Commission were confined principally to the large towns of Zurich, Berne, and Basel.

The total margin between the producer's and consumer's prices, and its division into the wholesale margin and retail margin in these three towns in March 1927 are shown in the following table.

	Zurich	Berne	Basel	
			At door	At shop
Producer's price centimes per litre	22.09	22.70	21.91	21.91
Wholesale margin »	6.91	5.17	7.14	7.14
Retail margin »	6.00	6.13	5.95	4.95
Total distributive margin »	12.91	11.30	13.09	12.09
Consumer's price »	35	34	35	34
Total margin as percentage of producer's price. . . .	58 %	50 %	60 %	55 %
In summer 1927	48 %	48 %	56 %	51 %

By the wholesale margin is here meant the difference between the price which the producer's co-operative receives and the price at which it is delivered to the retailer by the wholesale co-operative associations. The retail margin is then the difference between the price paid by the retailer and that paid by the consumer. The wholesale margin in general included the expenses of collection from the producers or producers' co-operatives, the weighing, testing, and processing, the transport charges from country to town—or in general, the collection, transport and processing charges. The retail margin includes principally the final distributing charges—either for selling at the shop or with delivery at the consumer's dwelling—of the prepared milk, though formerly, before the growth of co-operatives, it often included the preparation of the milk.

The figures given above for Zurich represent the total distribution costs for milk railed by cooperative organisations over a medium distance from the production areas to Zurich. In the next table are indicated in greater detail the various items comprising the wholesale distributive margin for Zurich.

Of these, the contribution to the crisis fund (of the Central Association of Swiss Milk producers), made in order to meet the risk of maintaining a guaranteed cheese price was not a normal factor of the total margin. Leaving therefore this item out, the total spread in Zurich represented 54 per cent. of the producer's price. Similarly in Bern it represented 46 per cent. and in Basel 55 per cent. for milk delivered at the home and 50 per cent. for milk sold over the counter. This contribution ceased in August 1927. The item cost of equalisation arises from the fluctuations in milk supplies and demands and is a charge made by the distributors to compensate for the loss on milk which has in consequence of the fluctuations to be manufactured.

	centimes per litre
Collection at country depot	0.41
Interest and working costs of depot	0.46
Transport to station	0.78
Rail transport to town	1.03
Contribution to crisis fund	1.03
Cost of equalisation	1.34
Processing and preparation	1.86
Total wholesale spread	6.91

The figures in the first table for Berne indicate the weighted average of the margins for milk, sent by rail and processed by the producers and wholesale co-operatives and for milk drawn directly from the farm. Berne, it should be noted, lies in a region in which milk production was particularly abundant, and consequently costs were lower than in Zurich. Basel on the other hand lies in a region of where milk production is not large, and consequently supplies have to be drawn from more distant sources than in the case of Berne—some 85 to 90 per cent. being brought by rail.

Compared with before the war, several new factors tended to raise the total distributive margin; for example the more thorough testing and preparation of the milk, the growth in the extension of towns through the development in cottage dwellings and garden cities, with the consequent increase in the distance from retailer to consumer. Again delivery by motor van has increased delivery expenses in the town compared with the horse-van, whilst on the average milk is taken from more distant production areas than formerly. Increases in wages and salaries, diminution in hours worked, and increased taxes are further reasons for the increase in the margin. In the report it is estimated that before the war the total margin for Zurich amounted to 7.16 centimes per litre or 38 per cent. of the producers price, compared with 12.91 centimes and 58 per cent. in 1926-27. For Basel the total margin, excluding the crisis fund contribution, showed an increase of 69 per cent. in the case of milk sold at the shop and 60 per cent. in the case of milk delivered at the consumer's house.

Though the commission did not consider that the distributors received excessive returns for their services, it was of the opinion that there was scope for improvement in the organisation of distribution, particularly at the retail stage. A first condition, however, for improvement was that consumers should modify their desire for over elaborate service. Economies could also be obtained through the assignment of given streets to given shops, thus avoiding the overlapping of services whereby the same street is served by several traders. Here again the co-operation of the consumers would be necessary.

3. — Bread.

The report on bread (1) was published in August 1928, that is, before the onset of the economic crisis. It deals with a variety of questions, those of most relevance to the present study being the cost of manufacture and sale, and the effect of agreements among bakers on the price of bread.

In regard to costs the report analyses firstly the costs of a co-operative bakery which was devoted almost entirely to the production of bread, and secondly, the costs of an average-sized private bakery.

Table I indicates the structure of the costs in centimes per kilogramme, in both cases. These figures are not strictly comparable, particularly in the category "other expenses". In the

	Co-operative	Small baker
Flour	35.13	35.13
Salt and yeast	0.31	0.50
Wages	4.33	3.33
Other expenses	2.53	4.50
	<hr/>	<hr/>
Total . . .	42.30	43.46
	<hr/> <hr/>	<hr/> <hr/>

(1) Contribution à l'étude des prix du pain en Suisse. Bern. August 1928.

“ other expenses ” of the co-operative are included social insurances, heat and power, repairs and maintenance and general administration. In those of the small baker are included interest and amortisation, heat, current, lighting. If the rent, amortisation and interest is added to the expenses shown of the cooperative the total expenses would amount to 43.20. The Commission concluded on the basis of its researches that the manufacturing costs of bread in the small private bakery did not differ appreciably from those of the larger co-operative bakery.

As regards selling costs it was noted that the large bakery which manufactured its bread for distribution to various branches selling bread incurred the expenses of transport which were naturally absent in the case of the average size baker selling on the spot. Assuming that both the large and average or small enterprise have similar selling costs it is clear that to be on equal terms with the average bakery the large bakery must have lower production costs. Apart however from those large enterprises with automatic machinery—which did not exist in Switzerland—the large enterprise, as we have seen, did not have an appreciable advantage in production. Further, the assumption made above that selling costs were equal seems not to be justified, in general those of the small baker being lower. Both general expenses such as salaries and rents are normally lower. In general, it should be remarked, the average private baker's shop was part of the baker's flat situated on the ground floor and converted into a shop.

In the period to which the report refers the sales of the co-operative bakeries in many towns were declining. In Zurich for example, the co-operative bakeries were losing the position they occupied on the market before the war and were unable to compete effectively with the private baker. “ They must be glad ” states the report “ that these (private bakers) do not fix their prices lower, otherwise they would suffer losses ”. Among the reasons for the relative decline of the co-operative bakery were given the prohibition of night working and the existence of large overhead charges incurred in the setting up of modern plants at a period in which demand for bread was declining. A further important cause was the growth of the practice of delivery at domicile, in which the private bakers were more forward than the co-operatives.

In regard to agreements among bakers the necessary cohesion among bakers existed through the Swiss Bakers' and Pastry Cooks' Association, an organisation to which most bakers adhered. Each section of the association throughout the country fixed prices which not only members were obliged to observe but also non members. In the event of non observation on the part of these latter powerful sanctions were employed by the Association, which was also helped by agreements with the millers' associations. Whereas the millers' associations pledged themselves not to supply to bakers' not belonging to the sectional organisation, on the other hand the bakers' associations were pledged not to buy from millers not belonging to the millers' association. The failure therefore of a baker or miller to observe the price fixed by the relevant association led to boycotting in the endeavour to prevent his getting the necessary materials or finding a buyer as the case may be. Workers working for any baker or miller “ placed on the index ” would be warned that working for the “ adversary ” of the bakers or millers' association would entail their being treated equally as “ adversaries ”. In view of the powerful weapons which the association were not chary of using it is therefore not surprising that the *Commission d'étude des prix* was able to conclude that the price fixed in the agreements determined the price level of bread.

The Federal Grain Administration, which could intervene in cases of firms being penalized by the associations, regarded the description of “ *gâte-métier* ” applied to such recalcitrant firms as being permissible only if they sold bread at such prices which, if maintained, would be so unremunerative as to put them out of business. It is interesting in the light of the commission's researches that many of the bakers treated by the associations as “ *gâte-métiers* ” did not, on the Grain Administrations' definition, deserve the title.

4. — Meat.

The third report (1) of the Federal Price Commission, published in 1928, examines the distributive spreads in the case of meat. The great variations of the qualities and prices of the various cuts and the practice of marking up the prices of the better cuts to compensate for the low prices of less preferred cuts clearly do not allow a study of the spread in individual items. Distributive spreads can be examined however for whole animals by summing the selling prices of each part and deducting the cost of the original animal. One investigation of the Commission of this kind of the spread on a steer slaughtered in Zurich in December 1927 showed a gross margin of 23.67 per cent. of the purchase price the animal being purchased for 1,032.50 francs and sold retail after slaughter for 1,276.95 francs.

An investigation may also follow the various stages of the process of distribution from the farmer to the consumer, including the marketing, transport, slaughter and sales. The costs involved in marketing from producer to slaughterhouse or butcher were, at the time of the Commission's studies, principally the dealer's licence, the costs of properly maintained stalls as required by the law and the personnel therein. Before the animals reach the slaughterhouse they must be transported; here the costs include transport costs proper, plus insurance, fodder and maintenance of the animals which are not immediately slaughtered, and the cost of labour. Total marketing costs naturally varied very much with the distance to be travelled; broadly, however, within the limits shown in the following table of cattle marketing costs (per head).

Inland transport	frs.	5 to 20
Transport insurance	»	5 to 10
Sales expenses	»	3 to 5
Fodder and waiting charges	»	3 to 6
Remuneration, commission and profits in cattle trade	»	10 to 50
		26 to 91
Total	frs.	<u>26 to 91</u>

The next table shows the expenses involved in an actual case of 13 head of cattle bought at the stall by a wholesale buyer for an important urban slaughterhouse, transported thereto over a medium distance and slaughtered.

Live weight	kgs.	8,645
Purchase price	frs.	14,603
Buying and total transport costs	»	222.50
Commission to buying agent for 3 head	»	80
Dead weight	kgs.	4,379
Selling value	frs.	15,108
Net return over buying and transport costs and commission	»	202.50

It will be seen that in this case the wholesale selling value of the dead animal exceeds the purchase price by 505 francs, or 35 per cent. of the purchase price. Of this sum 322 francs were accounted for by the costs of bringing the animals to the slaughterhouse. The commission of the "buying agent" was however an unnecessary expense, the "buying agent" being a person who buys at the stall selected animals in order to cede them immediately to the wholesale buyer

(1) Die Verarbeitungs- und Verschleisspanne im Fleisch- und Fleischwarenverkehr der Schweiz. Bern 1928.

in return for a commission. Such transactions, which were frequent, were described by the Commission as a superfluous link in the distributive chain.

A large proportion, however, of slaughter animals in Switzerland are not sent by rail but are driven by the farmer into the town and to the slaughterhouse, so that the above transport costs do not enter the picture. Since it was not known what proportion was driven by road, it was not possible to calculate an average figure for costs and profits of the cattle trade. It was noted, however, that in general the cattle dealer held a strong market position in relation both to the farmer and to the purchaser.

The costs of the butcher consisted of wages and salaries for slaughter and preparation, interest and amortisation charges, maintenance costs, inspection charges, water, light and power etc., material such as salt, soda, soap, paper, cord etc. and of general administrative expenses. In some towns, where slaughtering in municipal slaughterhouses is compulsory, the butcher must also pay the separate charges of slaughtering.

These costs were held by the Swiss butchers' association to necessitate an average gross margin on the purchase price of live animals of 15 per cent. when cattle prices averaged 2 francs per kg. live weight, small cattle and calves 2.50 francs per kg. and pigs 2 francs. For prices lower than these the percentage would be greater, whilst higher prices would mean a higher percentage. The price which the butcher must fix for the meat, however, could be calculated only after deduction of the value of the by-products—hides, fat, etc.—which was dependent on world market conditions. The following figures relating to the determination of the price of beef provide an example of the type of calculation the butchers were recommended to make by their associations.

	francs
Purchase price of steer, 810 kgs. liveweight, at 2 frs. per kg. . .	1,620
15 per cent. margin	243
	1,863
Total costs	1,863
Yield from sale of by-products	238.50
	1,624.50
Necessary return on meat	1,624.50

Assuming that the loss of weight from slaughter equals 50 per cent. of the live weight, the price of meat would have to be fixed to average $1624.50 \div 4.01$ francs per kg.

The commission examined in detail the distribution of the total expenditure in 1927 of two co-operative butchers, one (A) an urban, and the other (B) a country butcher. A dealt with a total of 622 carcasses (of which 475 pigs) and B with 418 carcasses of which 118 large cattle, 103 calves and 197 pigs) Both had a staff of 4 persons. The following table indicates the costs by classes in francs and percentages firstly of total costs and secondly of the purchase value.

	A			B		
	Francs	Percentage of total costs	Percentage of purchase value	Francs	Percentage of total costs	Percentage of purchase value
Working costs	7,776	19.0	3.56	6,180	19.9	3.22
Trading expenses	7,098	17.4	3.25	902.9	2.9	0.47
Wages	15,932.6	39.0	7.29	18,740.7	60.5	9.76
Capital charges	9,568.25	23.4	4.37	4,650	15.0	2.42
Various	500	1.2	0.23	520	1.7	0.27
Total costs	40,874.85	100	18.70	30,993.20	100	16.14
Purchase value	218,572.45	—	100	191,989.90	—	100

In the working costs were included those expenses incurred in the carriage of the meat from slaughterhouse to the shop, the cost of the various materials necessary, heat, light, etc. The trading expenses included insurances, slaughterhouse fees and taxes and the fee for meat inspection. In both cases it will be seen that wages formed the largest proportion of costs, whilst they were higher in B than in A. On the other hand the trading expenses were much lower in B than in A, since B was not obliged to have his animals slaughtered at the public slaughterhouse but could slaughter them himself. His "trading expenses" therefore consisted entirely of the meat inspection fees which were absent in A's case. The figures, it should be noted, represent costs and do not show the earnings above these, which depended on the general market situation. These figures may be compared with others showing the distribution of costs and the excess of return over costs (paid as dividend to the members) of four consumers' co-operatives in different towns.

	I (Basel)		II (Geneva)		III (Chur)		IV (Baden)	
	Percentage of		Percentage of		Percentage of		Percentage of	
	Purchase value	Total costs	Purchase value	Total costs	Purchase value	Total costs	Purchase value	Total costs
Working costs	6.56	19.27	4.35	10.52	4.93	32.17	2.51	11.76
Trading expenses	1.86	5.46	—	—	0.88	5.79	1.01	4.70
Wages	19.81	58.14	28.92	69.85	6.54	42.69	9.91	46.37
Capital charges	3.83	11.25	4.66	11.26	0.89	5.85	5.67	26.50
Various	2.00	5.88	3.46	8.37	2.07	13.50	2.28	10.67
Total costs	34.07	100	41.39	100	15.31	100	21.38	100
Gross return over costs (dividend)	8.13	—	6.85	—	4.88	—	1.56	—
Gross return	42.19	—	48.24	—	20.19	—	22.94	—
Purchase value francs	6,568,172		485,896		956,129		521,769	
Total costs "	2,237,561		201,104		146,412		111,564	
Gross return "	2,771,203		234,408		193,059		119,692	

The figures at the bottom of the table indicate the varying size of the concerns. It will be seen that the concern I and II have much higher costs than III and IV and that this is principally due to the high expenditure on wages.

As regards returns of independent private butchers, an examination of the books of 27 firms for the year 1925-26 revealed equally great variations in gross and net returns. The gross return, however, averaged 18.48 per cent. of the purchase value and the net return 7.13 per cent.

UNITED KINGDOM

I. — Introduction.

As far back as 1924 the Departmental Committee on Distribution and Prices of Agricultural Produce—generally known as the Linlithgow Committee—which was appointed "to enquire into the methods and costs of selling and distributing agricultural, horticultural and dairy produce in Great Britain and to consider whether, and if so, by what means, the disparity

between the price received by the producer and that paid by the consumer can be diminished" reported that "the spread between producers' and consumers' prices is unjustifiably wide. Taken as a whole distributive costs are a far heavier burden than society will permanently consent to bear." In November of the same year was appointed the Royal Commission on Food Prices with terms of reference bearing on the same field, namely "to enquire into the conditions prevailing in the wholesale and retail trades in articles of food of general consumption so far as they affect prices, particularly having regard to the difference between the prices received by producers and the prices paid by consumers and to report what action, if any, can usefully be taken". This report dealt with the bread, wheat flour, wheat and meat trades and recommended the establishment of a National Food Council to exercise supervisory powers on the staple food trades. The reports of these two bodies constitute the most authoritative studies in the United Kingdom on the problems of the price spread to date. Subsequent enquiries carried out by the Food Council—established in 1925—tended to confirm the main conclusions reached by the Linlithgow Committee (1).

Further, since 1931 the reorganisation of the marketing of many agricultural products has occasioned a large number of investigations and reports on the organisation of distribution. In the following sections we summarize briefly some of the conclusions of the basic Linlithgow Report of relevance to the present study and as an example of more recent changes describe—on the basis of the Report of the milk Reorganisation Commission of Great Britain, published in 1936—the effect of recent legislation on distributive spreads in the milk market. Lastly, we quote the Report made by the Food Council for 1936 on some of the effects of the Marketing Schemes.

2. — The "Linlithgow" Committee.

The period to which the investigations of the Linlithgow Committee relate was one of severe agricultural crisis, in which the contrast between the movements of farmers' and consumers' food prices was particularly marked. During the war and in the first two years after the conclusion of the peace agricultural prices rose steadily and considerably, the index reaching 292 per cent. of the pre-war base. In 1921 a sharp fall began and continued to the period of the Committee's study.

Average percentage increases in prices.

	1916	1919	1920	1921	1922
Agricultural produce (1911-1913 = 100)	60	158	192	119	69
Wholesale commodity prices (1911-1913 = 100)	63	147	201	86	57
Retail food prices (July 1914 = 100)	62	121	157	126	76

As the first table, showing average percentage increases in agricultural, general wholesale, and retail food prices as compared with before the war, indicates, the decline in prices differed as between the different commodity groups. General wholesale prices fell even more sharply than agricultural prices, but retail food prices, which had not risen to the same extent as agricultural prices, fell less sharply in 1921 and then somewhat more sharply in

(1) See e. g. Report by the Food Council for the year 1936, pp. 8, 12, 21. H. M. Stationery Office. London 1937.

1922. Again, as the second table shows, the prices of the raw agricultural produce and the consumer's foodstuffs did not show in all cases as compared with before the war, an equal increase.

Commodity	Increase in market prices in Sept. 1922 compared with 1911-1913 per cent.	Commodity	Increase in retail prices in Sept. 1922 compared with July 1914 per cent.
Wheat	23	Bread	67
Fat Cattle	58	Fresh Beef	79
Sheep	90	Fresh Mutton	95
Pigs	84	Bacon	98
Eggs	96	Eggs	99
Milk	70	Milk	64
Butter	76	Butter	78
Cheese	41	Cheese	51
Potatoes	1	Potatoes	19

It may be noted also from the table that in some cases, notably eggs milk and butter wholesale and retail prices had increased in almost the same proportions. On the other hand in the remaining cases shown in the table, the increase in retail prices was considerably greater than that in wholesale prices.

The situation was, in these early post-war years, still affected by the control measures adopted during the war, which had led to a weakening of competitive forces in distribution. In 1920 and 1921, according to the Committee, many of the distributive trades were making large profits, "and making them easily." Increasing food supplies and relaxation of control, accompanied by high wages and salaries enabled distributors to make high profits. The revival of competition, however, brought with it a shrinkage in distributors' margins in 1922. "In the year of 1922 distributive margins began slowly but surely to contract. Competition, which had been largely stifled by the operation of control, began to revive, and, although we have noted the tendency of mutual understandings to continue and to retard the normal initiative of the private trader, there is reason to anticipate, in the natural evolution of events, a full restoration of competition."

Nevertheless, as we have noted, the investigations of the Committee led it to the conclusion that the spread between producers' and consumers' prices was unjustifiably wide. In the succeeding period the above mentioned Royal Commission noted that spreads had declined in the industries it investigated though still remaining high as regards bread.

These general remarks may be supplemented by a brief survey of some of the actual data contained in the Committee's studies of the various markets. It must however always be borne in mind that in view of the long period of time which has since elapsed and the manifold changes in the economic organisation of the United Kingdom since the early post-war period, such data bear only a theoretical interest. Nevertheless it is possible to show with their help some of the reasons why the distributive margins then obtained could be regarded as excessive.

3. — Flour and bread.

As regards flour the Committee noted an appreciable increase in the costs of milling and in the costs of transport compared with before the war. Wages had increased by about 100 per cent. whilst hours had been considerably shortened, from an average of 48 to 65 to 44 hours

per week. A further result of the war was the growth in milling capacity of the country. After the war, mills could not be used at full capacity. "It has been estimated that the reduction in output consequent upon this short time working is, in some cases, sufficient to increase the manufacturing costs by 1s. 6d. to 2s. per sack of flour, though this estimate appears to be high." As a result of overcapacity competition between millers necessarily was intensified involving the systematic underselling of rival firms and "the maintenance of costly selling organisations of travellers, agents, stores depots to push sales in any and every direction throughout the country." It appeared that many millers had been selling below production costs as a result. Few firms examined by the Committee showed a profit. The following table shows the distribution of expenses and profits in 1922 compared with 1913 based on returns of 18 companies.

Expenses and Profits of Millers in Great Britain in the Years 1913 and 1922.

	1913			1922		
	Aggregate	Per Sack of Flour		Aggregate	Per Sack of Flour	
Output in sacks of flour	1,546,430	—		1,567,909	—	
Total sales of flour and offals	2,729,395	—		4,356,976	—	
	£	s	d	£	s	d
Gross profit	323,542	4	2.2	593,992	7	6.9
<i>Expenses:</i>						
Salaries and wages	90,714	1	2.1	230,188	2	11.2
Rent, rates, taxes and insurance	16,579	0	2.6	52,453	0	8.0
Power, fuel, lighting etc.	29,101	0	4.5	64,864	0	9.9
Delivery charges (road and rail)	60,094	0	9.3	115,671	1	5.7
Other expenses	100,037	1	3.5	166,227	2	1.5
Total expenses	296,543	3	10.0	629,403	8	0.3
Net profit	26,999	0	4.2	—	—	
Net loss	—	—		35,501	0	5.4

As regards the retail sale of flour the Committee noted that the gross profit of the retailer—which is of course very variable between locality and locality, or even even in the same district—ranged between 10.5 to 24 per cent. "This gross margin should yield a substantial net return to the retailer, whose costs of distribution... were variously estimated at 7.5 to 16 per cent. of the selling price... We are of opinion that in many cases, it would be possible for the grocer and other retailers to sell flour for household purposes at a somewhat lower margin of profit than that which they obtain at present."

Whereas the price of flour in the first months of 1923 exceeded that of 1914 by between 44 and 53 per cent. the average price of bread was between 52 and 51 per cent. higher than the pre-war price. In the previous year indeed the divergence had been greater. But in both cases the price of bread had increased more than the price of flour. It may also be noted that the price of bread showed considerable variations between different regions and districts. "Wide variation is found in the price of bread in different areas and also in that charged by different establishments in the same district... We are informed that the bread sold at higher prices is frequently a different article from the average, and, in such cases also, owing to the almost universal practice of home baking in the localities concerned the output of bakers is small and demand irregular." Methods of bread manufacture and types of bread also varied considerably bringing variations in costs.

The table below shows in detail the average expenses of manufacture of bread in Great Britain in 1923 as shown by figures supplied by some of the leading bakers' associations. The figures in col. 1 are an average of returns, collected for the Committee, of 26 individual farms and 63 local associations throughout England and Wales, col. 2 represents the average of 14 small retail establishments in London, and col. 3 the average of four wholesale concerns. The figures in col. 4 relate to only 10 businesses in different parts of Scotland.

Expenses of Manufacture of Bread in Great Britain, 1923.
(per sack of flour)

	England and Wales						Scotland	
	1.		2.		3.		4.	
	s.	d.	s.	d.	s.	d.	s.	d.
Cost of flour per sack (including delivery)	42	1	43	6	40	3	42	2
Costs of other materials:—								
Yeast	1	9 3/4	1	3	1	4 1/2	—	
Yeast foods	0	7 1/4	0	6	0	4 1/2	—	
Cones	0	5 1/4	0	9	0	4	—	
Salt	0	2 1/2	0	2 1/2	0	2	—	
Grease	0	3 1/2	0	4	0	2	—	
	3	4 1/2	3	0 1/2	2	5	2	1 3/4 (1)
Manufacturing cost:—								
Wages	6	2 1/2	7	0	4	7	8	3 1/2
Lighting, fuel, power	1	7	1	0	1	3 3/4	1	5 1/2
Rent, rates, taxes etc.	1	2	1	6	0	9 1/4	4	7 1/2
Depreciation	0	8 1/2	0	3	0	7 3/4		
Bad debts, stale bread, etc.	0	10 1/4	0	9	0	10 1/2		
	10	6	10	6	8	2 1/4	14	4 1/2
Distribution charges:—								
Wages (roundsmen)	4	9 1/4	2	8	3	9 3/4	—	
Depreciation of vehicles, etc.	0	9	0	1 1/2	0	6 3/4	—	
Shop expenses	1	11 1/2	3	9	—	—	—	
Stable costs	3	1	—	—	1	7	—	
Other expenses	0	5 1/2	0	4	0	5 3/4	—	
	11	0 1/4	6	10 1/2	6	5 1/4	6	1 1/2 (1)
Total costs	66	11 1/2	63	11	57	3 1/2	64	9 3/4
Yield of bread in 4-lb. loaves per sack of flour	92.35		89.5		92		92	
	s.	d.	s.	d.	s.	d.	s.	d.
Average selling price per loaf	0	8.95	0	9	0	8	—	
Proceeds per sack	68	7 (2)	67	1 1/2	61	4	—	
Net profit	1	7 1/2 (2)	3	2 1/2	4	0 1/2	—	

(1) Not separately distinguished. — (2) These figures are based on a yield of 92 loaves per sack. On a basis of 92.35 loaves, the net profit would be 1s. 11d.

The next table shows the change in manufacturing and distribution costs in 1923 compared with 1914.

Expenses of Production and Distribution of Bread in 1914 and 1923 (1).

	1914		1923		Percentage increase
	s.	d.	s.	d.	
Costs of flour	26	10 3/4	42	1	56.5
Costs of other ingredients	1	8 1/4	3	4 1/4	98.8
Manufacturing costs	7	4 3/4	10	6	41.9
Distribution charges	4	9	11	0 1/4	132.0
Total costs	40	8 3/4	66	11 1/2	64.4

From this table it is seen that distribution costs increased in a far greater proportion than the other costs. The figures in the preceding table show considerable variation in distribution costs, and the Committee was of the view that in many towns with high distribution costs these were excessive and could be reduced, with appreciable effect on the price of bread.

The Committee also notes, and condemns the "tendency among local organisations of bakers to bring collective action to bear in the direction of maintaining prices and of preventing underselling. Instances have been brought to our notice where millers have been pressed to withhold supplies from individual bakers who have attempted to sell bread below the price ruling in the district."

4. — **Meat.**

The Committee gives a detailed report on the organisation of the marketing of meat. As regards retailing it notes that "Retailing is the most expensive process and the retailing of meat is no exception. Its relative costliness is due to the multiplicity of services which the retailer renders... The extent of the services, hence also the resulting operative costs, vary considerably between one establishment and another."

And important feature of the retail trade noted is the preference of the consuming public for certain joints of meat and the absence of demand for others. "Unfortunately for the retailer, carcasses of meat must in the nature of things comprise both popular and unpopular joints, and the negligible demand for certain joints of thoroughly palatable meat must react materially on the costs and prices." "In present circumstances the retailer is compelled to seek a higher rate of profit on the joints which meet with a keener demand and are more readily saleable, in order to counterbalance the smaller profits on the cheaper cuts."

(1) These figures may be supplemented by the following taken from the report of the Royal Commission on Food prices.

Price structure of the 4-lb. Loaf as at 31st January 1925.

	Percentage of retail price
Producer	41.25
Handling charges on wheat (loading, unloading, commission, etc.)	50
Transport, wheat and flour	9.50
Milling expenses	5.50
Milling profits	2.75
Baking expenses.	16.75
Costs of sale and delivery	11.75
Baking profits.	8.00

	100

An examination of profits of meat distributors revealed that there had been a relative improvement in their position which was maintained even after the relaxation of control. This "appears to be to some extent due to the partial elimination of competition." "It is a common complaint that... retail butchers operating in certain livestock markets combine... instead of competing one with another in the auction ring... It has been represented to us that retailers having been encouraged to purchase collectively and having learned the advantages of combination, have developed the same tendency in the distributive side of their business...."

The following table shows an example of the various stages through which beef passed and the costs and charges involved in the way from farmer to retailer.

*Carcase of beef, 690 lbs., sold by retailer at average of 1s. 0 3/4 d. per lb.
(best cuts 1s. 9d. to 2s., coarse cuts 6d. to 9d. per lb., 108 lbs. bones and waste).*

	£	s.	d.
Price paid by consumer	36	9	10
Retailer's gross profit	6	6	1
<hr/>			
Price paid by retailer to wholesale butcher at 7s. per 8lbs. stone	30	3	9
Price received by wholesale butcher for hide and offals	3	10	6
<hr/>			
	33	14	3
<hr/>			
		s.	d.
Wholesale butcher's expenses:—			
Droving	1		0
Slaughtering	8		6
Market toll	0		8
Porterage	3		0
	<hr/>		
		0	13
Wholesale butcher's gross profit	0	11	1
<hr/>			
Price paid by wholesale butcher to live stock dealer	32	10	0
<hr/>			
Live stock dealer's expenses:—			
Droving	1		0
Rail charge (150 miles)	15		9
Market toll	0		6
Feeding and lairage	1		3
		0	18
Live stock dealer's profit	0	11	6
<hr/>			
Price paid by dealer to farmer at local market	31	0	0
<hr/>			
Farmer's expenses:—			
Droving	1		0
Market toll	0		6
Auctioneer's charge	7		9
		0	9
Net price to farmer	30	10	9
Net price paid by consumer	36	9	10
Receipt from offals	3	10	6
		<hr/>	
		40	0
			4
		<hr/>	
Difference	9	19	7
		<hr/>	

5. — Poultry.

In its study of the distribution of poultry the Committee noted that “the unreliable nature of the trade and the heavy losses which retailers may at times incur, together with the necessity of selling off stocks at low rates in hot weather, may necessitate a substantial margin of profit at other times when conditions are favourable.” But it also declared that “the profits revealed by the information before us appear somewhat larger than circumstances would warrant. We are there, of opinion that retailers should endeavour to increase their sales of poultry by securing a somewhat lower margin of profit and so convert the poultry trade into less of a “luxury” business than it is at the present time.”

The methods of distribution from producer to consumer, though varying considerably, usually involved several intermediaries and processes with their accompanying costs. Produce could be collected by higglers and grocers or sold at local markets, either by private treaty or auction. Large scale individual producers supplied retailers directly or through commission salesmen in large consuming centres. Small producers frequently sold direct to the consumer either locally or by rail.

Market tolls and most intermediate charges had increased since the war. Retailers arrived at a margin of profit of 20 to 30 per cent. in the case of poultry.

6. — Fruit and vegetables.

The fruit and vegetable industry was “unique in the number and variety of intermediaries who may, at times, be engaged in handling the produce and whose service is that of distribution.” “Occasionally the services, costs and profits of as many as six intermediaries may be interposed between the grower and the consumer. At each stage the produce is handled two or three times by porters or railway employees making, in some cases, as many as sixteen to twenty different handlings, while, between, long hauls by rail or road may increase the tally of distributive charges.” Nevertheless, some three quarters of that produce grown near consumer centres appeared, from diagrams given in the report, not to pass through the hands of more than two intermediaries. On the other hand, of the produce grown in specialised areas over half passed through more than two hands, nearly a third through three, nearly a quarter through four and about one sixth through five intermediate stages.

The prices fetched by this group of commodities often vary very much with the weather and the state and quantity of supplies. Day to day variations in these conditions are as important as seasonal variations in affecting supplies. Growers and distributors alike are confronted with the difficulty of disposing of widely fluctuating supplies in a market which is in itself variable but only moderately adaptable to varying conditions. “The situation would, no doubt, be considerably eased, even in the most prolific seasons, could the consumer obtain direct access to supplies, and were the costs of transport and handling reduced to a minimum. In practice these costs do not vary with the yield, but form a rigid and uniform charge upon each unit of produce. Retail prices are, therefore, not sufficiently reduced to encourage consumers to make any substantial increase in their purchases.” “Prices at wholesale markets do not fully reflect the changes in the returns received by the grower since they include certain charges, born by the grower, which do not vary with the value of the crop.”

The costs incurred in the marketing of fruit and vegetables from producer to consumer were divided into three groups, namely (1) those incurred in preparing the goods for the primary market and in conveying them hither (2) those incidental to selling at the market

and (3) the post-market charges, including not only the actual expenses of retailing but also those incurred by any intermediate handling or transport between the primary wholesale market and the retailers. Of the first group, railway rates were the most important charges, and they had increased since the war. In 1923 some reductions had been made, but there could not "go far in the direction of converting unprofitable into profitable marketing." A further factor which kept up marketing costs was the practice of consigning goods first to a large wholesale market and then re consigning to a smaller market, instead of directly thither. Technical features of the railway service were also regarded by the Committee as affording scope for improvement.

Among the second group may be noted portorage, market toll, salesman's commission. The normal commission average 10 per cent. of the selling price. As regards the third group, wholesalers' costs and profits were not regarded as excessive. The gross profits of provincial wholesalers replying to the Committees questionnaires averaged 9.7 per cent. of their sales, and the net profit 1.8 per cent. "However, it is sufficient to observe that at a time when many growers were receiving for their produce less than the costs of production wholesalers as a class, in common with distributors generally, were making a satisfactory, and in many cases, a substantial profit."

Retail costs and charges naturally vary considerably with the nature of the service rendered. Some retailers deliver to the consumer's door, others have only a sale over the counter. In most retail food trades it was noted that a given retailer charged the same price for his goods whether delivered or sold over the counter. This practice, which discriminates effectively against counter-purchasers, is not however easily abandoned, since it appears to be a characteristic of consumer's psychology to note the discrimination more if a higher price is charged for delivery by van than if the same price is charged at the shop as at the house.

Retailers did not in general appear to obtain excessive profits, the trade being extremely competitive. Nevertheless, some retailers worked normally on a lower profit margin than others. The establishments which undertake delivery and other service necessarily work on a relatively high margin of gross profits. The consumer himself is regarded as being in part responsible for high distributing costs. "Representatives of consumers themselves have admitted that a large part of the cost of distribution in such cases must be laid at the door of the consumer, who grows daily more exacting in his demands. His casual and erratic purchases, frequently of small quantities, and his general lack of method are further contributive factors."

The following table reproduces figures showing the percentage gross profit on cost of three classes of retailers, in London in January 1923.

COMMODITY	West-end stores and High Class Shops	Middle Class Suburban Shops	Cheap Market Places and Costermongers
Potatoes, best	120	88	88
Potatoes, inferior.	149	149	87
Brussels sprouts	129	71	43
Cabbage.	200	150	100
Beetroot	100	100	—
Parsnips	331	187	187
Carrots	167	167	129
Onions	155	155	70
Seakale	172	56	—
Dessert apples.	344	106	—
Cooking apples	105	105	—

The Committee noted with regard to the retail fruit and vegetable trade that "evidence suggests that a large number of retailers lack business training and efficiency in the conduct of their business. Figures furnished by certain private traders show that their estimated losses due to such items as unsold goods, "re-selection", losses in weighing and short weight or count, amount to nearly 20 per cent. of the goods purchased. Industrial co-operative societies estimate their corresponding losses at 8 ½ per cent. "It is to be confessed... that if, by improved methods, these private traders reduced their losses to the level of those of industrial co-operative societies they could correspondingly reduce prices to the public by over one twelfth."

Lastly, we may conclude this brief survey of the Report by a further quotation: "We have stated that by exercising the right of discrimination as between retailer and retailer consumers can appreciably assist themselves in present circumstances. So long as they refrain from doing so they must accept a measure of responsibility for high retail charges. Consumers should also realise that their ever-increasing demands for comfort, convenience and service are largely responsible for the high costs of retail distribution today. The retailing of food from a large number of establishments is, in any event, an extravagant method of distribution compared with, say, the system of municipal retail markets existing in many countries abroad; but it is a system which has grown up in response to the consumer's demand."

7. — Milk.

Since 1933 the milk market in the United Kingdom has been regulated by schemes set up under the Agricultural Marketing Act of that year. Four separate schemes—the English, the main Scottish, the Aberdeen and District and the North of Scotland schemes—have been in operation. According to the Report of the *Reorganisation Commission for Great Britain* (1) these schemes have substantially affected retail milk prices and the distributive margins. Under these schemes producers are obliged to sell their milk through a centralized Board—elected by them—which has the power to fix the prices at which the milk may be sold to distributors and manufacturers. Producers now obtain a single price for milk sold for liquid distribution or for manufacture. The general purpose of the schemes was to raise returns to the producers.

The following table shows the wholesale prices for milk for liquid consumption payable to the Board during the three seasons 1933-34, 1934-35, 1935-36.

Wholesale prices payable to the boards for milk for liquid consumption.

SCHEME	1933-34	1934-35	1935-36
	pence per gallon		
England and Wales:—			
South Eastern region	14 ¼	15 ½	15 ¼
other regions	13 ¾		
Scotland (main area)	14	14	14
Aberdeen and district	—	14 ½	14 ¼
North of Scotland	—	14 ½	15

Thus under all the schemes except the main Scottish scheme wholesale prices rose during the period. It should also be noticed in regard to wholesale prices that under these schemes

(1) H. M. Stationery Office. London 1936.

special prices are allowed to institutions such as hospitals and to large scale consumers such as restaurants and hotels. The wholesale prices given above were all higher than the average prices paid by the Boards to the producers, the difference being used to make up for the lower priced milk sold for manufacture and to pay the costs of administration of the schemes.

In the first year in which the English Board regulated the contracts, the Board stipulated that retail prices should be sold at the local "prevailing prices." In subsequent periods the Board was able—through a clause in the wholesale contract fixing the minimum margin—to establish minimum retail prices. In many areas, however, retail prices were higher than the minima. Previous to the inception of the schemes, retail milk prices were tending to decline. In the words of the reorganisation Commission: "Though the schemes have not been solely responsible, there is no doubt that they have been mainly responsible, directly and indirectly, for raising retail prices in most parts of the country and maintaining them in others. On the other hand, it is impossible to say with any assurance that, if there had been no scheme and producers prices had fallen under unrestricted competition, retail prices would have been reduced correspondingly".

The next table shows the trend of retail milk prices before and after the inception of the schemes compared with those of foods in general and the costs of living (July 1914 = 100).

Milk year (Oct.-Sept.)	Retail prices of milk	Retail prices of food	Cost of living
1929-30.	176.8	146.4	160.4
1930-31.	173.7	130.7	144.9
1931-32.	167.3	124.0	144.4
1932-33.	165.7	116.4	139.8
1933-34.	175.2	117.6	140.8
1934-35.	180.9	119.1	142.0

Thus in the first years shown food prices in general fell heavily whilst milk prices also fell, but to a less degree. Since the inception of the milk marketing scheme, food prices recovered only slightly whilst the increase in milk prices was very marked.

Since the schemes, as described above, exercise control over both wholesale and retail prices, distributors' margins are also controlled. The distributors have gained certain definite advantages from the scheme. In the first place, distributors need not fear undercutting in periods of temporary surplus by producer-retailers since these too cannot sell below the established minimum retail prices. Secondly, large distributors who cannot dispose of all the milk they bought for liquid consumption and are obliged to resell for manufacture at the lower manufacturing prices obtain a rebate on that milk, since "under the two main schemes, a large distributor only pays the liquid price for milk sold as such. Small distributors, however, do not share this advantage, largely, we understand, because of the difficulty and expense of checking their accounts."

The number of distributors buying directly from the Boards in England has tended to diminish, many small distributors now purchasing directly from the wholesalers. The development of large scale wholesaling in towns makes for greater accuracy in bottling and processing, while the plant used for the purposes in the large wholesale depots is probably more efficient than that owned by some of the smaller retailers.

The "distributive margin"—the difference between the retail price of liquid milk and the price paid to the Board—was not fixed in England in the first period (1933-34) since it was only stipulated that retail prices should not go below the local "prevailing price". For the

second period, the Board fixed specific minimum margins for different types of area. For London and other large towns the minimum was 10 *d.* compared with a nominal margin of 11 $\frac{5}{6}$ *d.* for the same period in the previous year. For 1934-35 the Board reached a compromise with the buyers... the result of the agreement was to increase both the liquid milk buying price and the distributors' minimum margin". At the beginning of the next period the contract terms prescribed by the Boards included a reduction in the distributors' minimum margin by an average of 5 $\frac{5}{12}$ *d.* over the year. Complaints by the distributors followed and the reduction was reduced to $\frac{1}{6}$ *d.* per gallon.

These nominal margins are those which would obtain if the retail prices equalled the minimum laid down by the Boards. In fact, as far as retail prices exceed these, distributors margins are increased.

"The main effect of the schemes on margins has been to standardise them irrespective of the service rendered."

"It is impossible to show definitely how the changes brought about by the schemes have affected distributive margins. The absence of precise knowledge as to actual margins before the schemes came into force and the variations in England and Wales between actual and minimum margins prevent any close comparison. The opinion that we have formed, however, is that in general the position of distributors has been improved during the period of the operation of the schemes." The greatest gain has probably been obtained by those distributors who have given the least elaborate service". In concluding on the question of margins, the Commission adds: "It is evident that the present disposition of all the Boards is to reduce the margins between wholesale prices and minimum retail prices, but it is too early to see what effect that will have on actual margins."

The Commission makes some important observations on the organisation of distribution. In its own words: "We have formed the opinion that the greatest scope for a general reduction in retail prices lies in the better organisation of the various processes included under these heads (assembly and distributions)."

"Producers frequently point to the fact that the distributive margin, excluding collection and transport costs, is approximately equal to, and often even greater than, the net price which the producer receives. In the absence of comprehensive data on distributive costs it is impossible to say whether this relationship is justifiable but we strongly suggest the desirability of investigation. It is generally accepted that distributors' margins, which are practically uniform in any given area, are determined in relation to the most expensive types of service given, and often in relation to services that are not required by large sections of the population; and further, that the costs of performing the same type of service vary widely between individual businesses. At the same time there is duplication and lack of co-ordination at every stage of distribution. While the current margins may be necessary under existing conditions, we are satisfied that they could be greatly reduced if the trade were reorganised on a more efficient basis.

"In recent years a number of collecting depots have been established at great distances from the liquid milk markets they serve while milk produced nearer the towns is being manufactured... the aim of improvements in transport should be to supply main consuming centres from the producing areas nearest to them and to keep creameries and factories as far as possible in the more remote districts. If it is still necessary to bring any milk long distances to consuming centres, this should be done through suitably placed country collecting and processing depots so as to secure the economies of bulk transport...

"The wholesale organisation of the milk trade in towns is incomplete and haphazard... If all urban supplies were concentrated in central wholesale depots considerable economies could

be made in processing, bottling and the cleaning of bottle and churns. In such depots the daily requirements of retail distribution would be balanced, and unsold supplies manufactured, more cheaply than is possible where each small retailer performs these functions for himself, while satisfactory supplies would be made available for those who engage only in retailing...

“ In the retail fields the existence of a large number of small and scattered rounds is a cause of high costs and of variations in the quality of supplies and services. It is possible to enter the business of retail distribution without much capital or experience and the redundancy that can be seen in most cities and towns to-day is the result. It is obvious that the costs of delivery must be greater when a large number of roundsmen are serving the same street; and the costs of equipment, premises and labour, and of balancing supplies must all be higher with, say, ten 15 gallon rounds than with one 150 gallon round. We have been furnished by the English Board with particulars for a number of towns from which it appears that large numbers of retailers must have rounds of considerably less than 20 gallons and some of them rounds of 10 gallons or less...

“ By way of contrast we have been informed by the Northern Cooperative Society, Aberdeen, that they deliver an average of about 140 gallons on their rounds, each of which is served by a single van attended by several boys. It is understood that the total costs of distribution of this Society which pasteurises and bottles the whole of its supply do not exceed 6 *d.* per gallon. This low cost is ascribed to the large turnover, to the large gallonage delivered per round, to the system of prepayment in use, to the practice of giving only one regular daily delivery and to the fact that some 20 per cent. of the milk is fetched by customers.

“ These figures suggest that a considerable reduction in costs might be obtained by the elimination of redundant units. The very existence of these unnecessary units seems to keep up the margin and tends to increase it. Because of the high costs caused by the duplication of services, many individual distributors are able to show that they need the present margins, or even greater margins, in order to make a reasonable profit. But the effect of any increase in margins must be to attract still more units into the business and so repeat the vicious circle ”.

8. — **Producer and consumer under the Marketing Schemes.**

Lastly we may note some other effects of the new marketing organisation, as expressed by the Food Council in its Report for 1936 (1).

“ We frequently find it necessary to refute the suggestion that consumers object to Marketing Schemes because they are framed to help the producer and the consumer may be required to contribute to that help. We believe on the contrary, that consumers realise the value of successful agriculture to the well-being of the whole community. In our opinion, however, consumers have legitimate cause for complaint in so far as the Marketing Schemes, which were intended to give primary producers the power to organise and co-ordinate the sale of their produce, confer in addition powers of intervention in the subsequent stages of treatment and distribution, which are not the province of producers and of which they cannot be expected to have expert knowledge. The consequent tendency of producers is to seek the co-operation of the intermediaries, who do know the trade, by securing to them minimum margins, which are frequently exceeded and which are not based upon ascertained costs for the specific services to be rendered.

(1) Report of the Food Council for the year 1936, p. 22.

“ In milk we see a tendency to base a minimum margin for distributors upon the cost of the fullest services, and to maintain it even where the services are of the most rudimentary nature.

“ In bacon we see producers and curers pressing for the maintenance of prices to the consumer by a strict regulation of imports, although no returns are available as to the cost of curing and there is consequently no reliable evidence as to the proportion of the consumer's payment which ought to reach the producer.

“ In potatoes, although no specific powers are granted under the Scheme to fix prices, the producers are trying by other methods to secure minimum margins for the wholesalers.

“ We notice in every case where margins are fixed they are minimum and not maximum margins and little attention seems to be paid to the amounts by which they are exceeded. Yet it seems obvious that every unnecessary addition to the price to the consumer checks his demand and reduces the money available for the producer.”

UNITED STATES

I. — Introduction.

An important statistical study of the total spread between the retail value and farm value of foodstuffs has been made by the United States Department of Agriculture (1). The study deals with some 58 commodities purchased by a typical working man's family and covers in most cases the whole period from 1913 to 1935. These 58 commodities account for nearly three quarters of the total family expenditure on all foods; their importance is further indicated by the fact that a large proportion of those not included are imported goods of the type of coffee, sugar, etc. In 1935 the value of these 58 goods, in the quantities consumed by the typical working man's family was 331.63 dollars, whilst the total expenditure of that family on foodstuffs comprising 128 items was calculated at 450.80 dollars. The investigation covers the most important classes of staple goods—meat, dairy and poultry products, cereals, fruits and vegetables—and its lack of all-inclusiveness does not therefore diminish its value for the present study.

2. — “ The farmer's share.”

Table I shows for the period 1913 to 1935 the retail value of those quantities of the 58 goods purchased by the typical working man's family and the equivalent farm values. The “equivalent farm values” are obtained by calculating the quantity of farm produce required to make the given quantities of consumable foodstuffs as purchased by the consumer. The difference between the retail and farm values represents the total costs plus profits involved in the process of delivery from the farmer to the consumer.

According to this table, those costs rose sharply in the period of 1913 to 1920. Since, however, farm values were rising equally steeply, the intermediate costs in 1920 represented the same proportion of the retail value as in 1913. In the early twenties farm and retail values dropped sharply but the margin between them declined to a much smaller degree. The slow upward movement from 1923 to 1926 in retail and farm values was not however accompanied by a proportionate rise in the margin. In 1930 the margin represented 56 per

(1) R. O. Bean and F. V. Waugh: *Price spreads between the farmer and the consumer*. United States Department of Agriculture, Division of marketing research. Washington, July 1936.

TABLE I. — *Value of 58 Foods, 1913-1935.*

(*Estimated retail value and equivalent farm value of quantities purchased annually by a typical American workingman's family*) (1).

Year	Farm value	Retail value	Margin	Farm value as percentage of retail value
	Dollars	Dollars	Dollars	Per cent.
1913	134	252	118	53
1914	137	258	121	53
1915	134	258	124	52
1916	155	285	130	54
1917	223	370	147	60
1918	245	424	179	58
1919	267	470	203	57
1920	272	514	242	53
1921	179	404	225	44
1922	170	374	204	45
1923	173	384	211	45
1924	170	381	211	45
1925	198	410	212	48
1926	202	418	216	48
1927	190	406	216	47
1928	194	407	213	48
1929	195	415	220	47
1930	171	391	220	44
1931	121	322	201	38
1932	88	270	182	33
1933	92	264	172	35
1934	108	295	187	37
1935	138	331	193	42

(1) No allowance is made for processing taxes on wheat, rye, rice, hogs, corn, peanuts and sugar, which, on the quantities of those products included in annual family purchases, amounted to about \$ 2 in 1933, \$ 10 in 1934 and \$ 11 in 1935.

cent. of the retail value, the same percentage as in 1921. But the striking feature of the decennial is that the margin was consistently higher than in the preceding period. In 1930 and 1931 began the catastrophic decline in American agricultural prices. In 1929 the farm value of the 58 foods equalled 195 dollars, the retail value 415 dollars. By 1932 the farm value had declined by 107 dollars, and the retail value showed a decline of 145 dollars, the intermediate charges having declined by 38 dollars. In consequence intermediate charges formed a far higher proportion of the total retail value; or, in other words, whereas in 1929 the farmer obtained 47 cents of the consumers dollar, in 1932 he obtained only 33 cents thereof. Since 1932, with the special measures taken by the United States Government in favour of the farmer, farm prices have advanced more rapidly than intermediate costs. It is indeed a well established phenomenon that raw material prices fluctuate more than those of finished commodities, since intermediate costs are relatively less flexible.

"In general, it appeared that year-to-year changes in the spread between prices at the farm and in city retail stores are due to four factors: (1) changes in hourly wage rates and changes in other cost items; (2) changes in the profits of processors and dealers; (3) changes in the efficiency of the marketing system, and (4) changes in the amounts of processing and in the amounts of various kinds of services".

“ It is difficult to analyze the effects of these factors on price spreads during the period from 1913 to date. However, it appears that changes in hourly wages have been responsible for a large part of the changes that have occurred in the costs and charges for transportation, processing and marketing. Probably during this period there was also some increase in the efficiency of the marketing system which was in large part offset by an increased amount of processing and increased services between the farmer and the consumer. There has been a constant trend throughout the period towards smaller retail units and towards a greater amount of processing and packaging of foods. This, by itself, would tend to widen the spread between the price at the farm and the prices in city stores unless it were accompanied by greater efficiency at some point in the marketing system, making possible savings which would offset the added costs of more processing and packaging ”.

3. — Differences in price spreads.

Spreads naturally vary very much as between individual commodities, reflecting differences in transport, processing or selling costs. Table II shows the spread as a percentage of retail value for each item or group of the 58 commodities for the year 1935.

TABLE II. — *Farm-to-retail spread as percentage of retail value.*

Retail commodity	Spread as percentage of retail value	Retail commodity	Spread as percentage of retail value
Beef	55	Carrots	82
Pork	41	Celery	78
Lamb	44	Lettuce	66
Dairy products (1)	55	Onions	75
Hens	43	Potatoes	58
Eggs	34	Spinach	61
Bread, white	83	Sweet potatoes	70
Bread, rye	86	Peaches, canned	86
Bread, whole wheat	86	Pears, canned	87
Soda crackers	91	Asparagus, canned	69
Flour, white	61	Beans, green canned	84
Corn meal	49	Beans with pork	88
Rolled oats	71	Corn, canned	89
Corn flakes	79	Peas, canned	87
Wheat cereal	88	Tomatoes, canned	86
Rice	70	Prunes	68
Macaroni	85	Raisins	70
Hominy grits	59	Navy beans	45
Apples	67	Beet sugar	72
Lemons	68	Cane sugar	68
Oranges	73	Peanut butter	69
Beans	71	58 Foods	58
Cabbage	82		

Thus it will be seen that the spread varies from 91 per cent. of retail value in the case of the highly processed soda cracker to 34 per cent. in the case of eggs. It appears that the retail price of cereals, canned foods, and fruits and vegetables reflect to a far greater degree intermediate costs than the costs of raw material. On the other hand, among meats intermediate charges exceed raw material costs only in the case of beef, whilst in the case of hens

and eggs intermediate charges are substantially less than the amounts received by the farmer. It is well to bear in mind that, owing to the lesser flexibility of intermediate costs, the higher the spread the less will retail prices reflect the movements of farm prices.

4. — **Spreads on separate commodities.**

The tables at the end of this section all, except Table XII, taken from the Report, indicate the course followed by the farm-to-retail spread in the cases of a number of important foodstuffs during the period 1929 to 1935. Retail values are compared with the equivalent farm values.

Table III shows that whereas the farm value in 1935 was but 0.7 cents higher than in 1913, the retail price of beef had risen by 9.9 cents, the margin having increased by 9.2 cents. In consequence intermediate costs, which represented 36 per cent. of the retail value in 1913, in 1935 represented as much as 55 per cent. A similar situation is observed as regards pork products (Table IV), the retail value having increased considerably whilst the farm value increased by a much smaller degree.

In Table V it is seen that whereas the farm value of dairy produce declined, the retail value actually increased. A different picture is seen, however, in the case of eggs (Table VI), for in post-war years the farm value generally represented a larger proportion of retail value than in 1913. Nevertheless, a marked decline is observable between 1920 and the early thirties in this proportion; in 1935, however, the farm obtained a larger share of the price than in 1913.

The farmer's share of the bread price is naturally much lower than in most other products, but here again his share has in recent years substantially declined, compared both with 1913 and the immediate post-war year 1920. Since 1932, however, a marked upward movement is noted.

Both the farm and retail values of oranges have declined considerably compared with 1920, and whilst the decline in the absolute margin has been large it has not been in pro-

TABLE III. — *Beef.*

Year	Farm value of 2.16 lbs. of beef cattle (1) cents	Average retail price per pound of all beef cuts (2) cents	Actual margin cents	Farm value as percentage of retail value per cent.
1913	12.8	19.9	7.1	64
1920	18.3	33.3	15.0	55
1929	19.8	37.9	18.1	52
1930	16.2	34.9	18.7	46
1931	11.5	28.9	17.4	40
1932	8.8	24.0	15.2	37
1933	7.7	21.0	13.3	37
1934	8.3	22.6	14.3	37
1935	13.5	29.8	16.3	45

(1) 110 lbs. of good grade live beef cattle yields 46.4 lbs. of all retail cuts, giving 2.16 lbs. live weight per pound of retail cuts. — (2) Average retail price per pound obtained by weighting the price of each cut by weights proportional to quantities of those cuts obtained per 100 lbs. of good grade beef cattle. These retail prices probably represent good quality meats obtained from good grade beef steers and are not strictly comparable with the farm price of beef cattle which may include cows, bulls and other low grade stock.

portion to the decline in farm value—consequently the farmer's share was somewhat less in 1935 than in 1920 - or 1930.

Of the three vegetables shown in Tables IX-XI only potatoes were subject to an increase in absolute intermediate costs—as shown by the actual margin. Table XII, which is compiled from figures supplied by the Department of Agriculture gives more detail of the spread involved in the making of bread and shows that both miller's and baker's margins have substantially increased compared with pre-war years. Nevertheless, since 1919-20 the margin began an important decline in 1929-30 and reached a low level in 1932-33. The higher price of bread in 1935-36 was due to a far greater degree to the increase in margins than to the increase in cost of ingredients.

TABLE IV. — *Pork products.*

Year	Farm value of live hogs (1) cents	Average retail price per pound of principal pork products (2) cents	Actual margin cents	Farm value as percentage of retail value per cent.
1913	14.2	17.7	3.5	80
1920	24.7	33.9	9.2	73
1929	17.9	27.4	9.5	65
1930	16.9	26.4	9.5	64
1931	11.2	22.1	10.9	51
1932	6.6	15.7	9.1	42
1933 (3)	6.7	14.5	7.8	46
1934 (3)	8.1	18.2	10.1	45
1935 (3)	16.1	27.3	11.2	59

(1) 100 lbs. of good grade live hogs; yields 52.6 lbs. of principal retail pork products, giving 1.90 lbs. live weight per pound of retail products. — (2) Average retail price per pound obtained by weighting the price of each product by weights proportional to quantities of these products obtained per 100 lbs. of good grade hogs. — (3) No allowance is made for processing taxes per 100 lbs. live weight, which were: 50c, beginning Nov. 5, 1933; \$ 1.00, beginning Dec. 1, 1933; \$ 1.50 beginning Feb. 1, 1934; and \$ 2.25 from Mar. 1, 1934 to Jan. 6, 1936. These taxes are included in the margins as additional costs of processing.

TABLE V. — *Dairy products.*

Year	Farm value of 100 lbs. of milk equivalent (1) dollars.	Retail value of 100 lbs. of milk equivalent (2) dollars.	Actual margin dollars.	Farm value as percentage of retail value per cent.
1913	1.47	2.66	1.19	55
1920	2.80	5.09	2.29	55
1929	2.16	4.19	2.03	52
1930	1.83	3.88	2.05	47
1931	1.37	3.26	1.89	42
1932	1.01	2.76	1.75	37
1933	1.01	2.70	1.69	37
1934	1.20	2.94	1.74	41
1935	1.40	3.13	1.73	45

1) Farm value of 100 lbs. of milk equivalent estimated as equal to value of 49 lbs. wholesale milk plus value of 2.0 lbs. butterfat. — (2) Retail value of 100 lbs. of milk equivalent estimated as the combined values of 15.7 quarts of whole milk, 7 lbs. of cheese, 2.6 lbs. of butter, and 2.5 1 1/2-oz cans of evaporated milk.

TABLE VI. — *Eggs.*

Year	Farm value of 1 doz. eggs. cents	Retail price of 1 doz. eggs. cents	Actual margin cents	Farm value as percent- age of retail value per cent.
1913	21.5	34.5	13.0	62
1920	47.8	68.1	20.3	70
1929	32.1	49.0	16.9	66
1930	25.1	41.0	15.9	61
1931	18.6	31.7	13.1	59
1932	16.0	27.2	11.2	59
1933	15.3	26.0	10.7	59
1934	18.4	29.9	11.5	62
1935	24.1	36.6	12.5	66

TABLE VII. — *White bread.*

Year	Farm value of 97 lb. of wheat (1) cents	Retail value of 1 lb. of bread cents	Actual margin cents	Farm value as percent- age of retail value per cent.
1913	1.3	5.6	4.3	23
1920	3.6	11.5	7.9	31
1929	1.7	9.0	7.3	19
1930	1.3	8.7	7.4	15
1931 . . . . .	.8	7.6	6.8	11
1932 . . . . .	.6	6.8	6.2	9
1933 . . . . .	.9	7.1	6.2	13
1934	1.3	8.1	6.8	16
1935	1.4	8.3	6.9	17

(1) The 42.6 lbs. of flour obtained from one 60 lb. bushel of wheat make 62 pounds of white bread, according to a standard formula, so 97. lb. of wheat are equivalent to one pound of bread.

No allowance is made for the processing tax on wheat, which amounted to 30 c. per bushel from July 9, 1933 to January 5, 1936, or about 0.48 c. per pound of white bread.

TABLE VIII. — *Oranges.*

Year	Farm value per doz. 1/17 of box (1) cents	Retail value per doz. cents	Actual margin cents	Farm value as percent- age of retail value per cent.
1920	20.2	63.2	43.0	32
1929	11.7	43.3	31.6	27
1930	22.4	57.3	34.9	39
1931	10.2	35.1	24.9	29
1932	8.4	31.0	22.6	27
1933	6.4	27.4	21.0	23
1934	10.2	32.8	22.6	31
1935	8.7	31.8	23.1	27

(1) Florida and California oranges have averaged about 17 dozen per box for recent years.

TABLE IX. — *Potatoes.*

Year	Farm value of 1 lb. of potatoes cents	Retail price of 1 lb. of potatoes cents	Actual margin cents	Farm value as percent- age of retail value per cent.
1913	1.0	1.7	.7	59
1920	4.1	6.3	2.2	65
1929	1.6	3.2	1.6	50
1930	2.1	3.6	1.5	58
1931	1.2	2.3	1.1	52
1932 . . . . .	.7	1.7	1.0	41
1933	1.1	2.3	1.2	48
1934	1.1	2.3	1.2	48
1935 . . . . .	.8	1.9	1.1	42

TABLE X. — *Cabbage.*

Year	Farm value of 1 lb. of cabbage (1) cents	Retail value of 1 lb. of cabbage cents	Actual margin cents	Farm value as percent- age of retail value per cent.
1913	1.1	—	—	—
1920	1.1	6.4	5.3	17
1929	1.0	5.1	4.1	20
1930	1.1	5.5	4.4	20
1931 . . . . .	.56	3.8	3.2	15
1932 . . . . .	.65	4.0	3.4	16
1933 . . . . .	.92	3.9	3.0	24
1934 . . . . .	.46	3.5	3.0	13
1935 . . . . .	.73	4.0	3.3	18

(1) Farm value is based upon U. S. seasonal average farm price per ton of cabbage for market.

TABLE XI. — *Peas, canned.*

Year	Farm value of .877 lbs. of peas for canning (1) cents	Retail values of No. 2 can cents	Actual margin cents	Farm value as percent- age of retail value percent
1920	2.8	19.1	16.3	14
1929	2.5	16.7	14.2	15
1930	2.5	16.2	13.7	15
1931	2.5	14.2	11.7	18
1932	2.2	12.9	10.7	17
1933	1.9	13.0	11.1	15
1934	2.0	16.6	14.6	12
1935	2.2	17.1	14.9	13

(1) Farm value is based upon an average of the current and preceding years' seasonal average prices paid growers per ton of shelled green peas for manufacture.

TABLE XII. — *Bread margin: Prices of bread and bread ingredients in the United States.*

Year	Retail price bread (1 lb.)	Cost of bread ingredients		Margin of baker and retailer	Wholesale price of 10.06 oz. flour and 4.11 oz. bran	Wholesale price of wheat, 14.17 oz.	Margin of miller
		Flour 10.06 oz.	Total ingred.				
1913-14	5.90	1.38	2.05	3.85	1.64	1.29	.35
1919-20	10.70	4.16	6.04	4.66	4.70	3.90	.79
1928-29	9.06	2.06	3.02	6.04	2.40	1.70	.70
1929-30	8.88	2.10	3.01	5.87	2.44	1.75	.69
1930-31	8.24	1.57	2.38	5.86	1.80	1.13	.67
1931-32	7.15	1.31	2.00	5.15	1.46	.88	.58
1932-33	6.58	1.25	1.92	4.66	1.37	.80	.57
1933-34	7.85	2.07	2.83	5.02	2.28	1.31	.97
1934-35	8.31	2.17	3.04	5.27	2.48	1.59	.89
1935-36	8.34	2.21	3.15	5.19	2.42	1.72	.70